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SUB-SECTION: INTERNATIONAL BUSINESS

THE EVOLUTION OF FOREIGN DIRECT INVESMENT THEORIES: HOW CAN INSTUTIONS RELATE?

Zsuzsanna Bényei
University of Debrecen, Faculty of Economics and Business, Debrecen, Hungary
benyei.zsuzsanna@econ.unideb.hu

Abstract:
Theories of Foreign Direct Investment (FDI) have evolved over the past few decades. There are theories which try to explain the motivation behind investments, and there are others to explain why companies go abroad. To understand the motivations of firms in today's economic environment, we have to trace the evolution of these theories. At first, researchers tried to explain capital movements with trade theories. However, because of the strict conditionality, they only explained a small part of FDI. To extend the validity of the models, researchers started to examine investments from the firms' point of view. The models evolved from Vernon's product life cycle model, through Hymer's monopolistic advantage model, to Dunning's eclectic theory. These firm-based theories highlighted the importance of entrepreneurs. Dunning's theory includes the statements which featured in previous models. We can find monopolistic advantage, localization and internalization models in this argument. This study is an attempt to relate the issue of FDI to institutions. There is a rapidly growing literature on the subject of new institutional economics, which indicates that the effect of institutions can appear in any economic situation. These effects can be shown in Dunning's theory, too. The consensus view seems to be that institutions play a significant role in ownership, in localization and in internalization advantages. Consequently, we can find them in the other models, too. The purpose of this paper is to identify the main trends in FDI theory and highlight how institutions can relate to them.

Keywords: Foreign Direct Investment, International Trade, Institutions

JEL classification: E02, F02

1. Introduction

In the last few decades, the issue of FDI has been receiving more attention. Since World War II, foreign direct investment has expanded rapidly, especially in the last few decades. The national barriers to capital movements were mostly removed after the war (Barrel and Pain, 1997), so free movement of capital could start. With this change, a new type of firm has emerged: the multinational enterprise (MNE). Since then, research in this field has multiplied. Researchers are interested in understanding the motivations behind this investment.
A consensus has emerged on the importance of FDI, especially on its effect on economic growth. The first attempts to explain FDI were related to already existing trade theories. In Section 2 we can see how these theories handled the mobility of capital. As time went by, the theories became more and more complex. The emergence of MNEs called for a new approach to this topic. This was the point at

which firm-based theories started to appear. These models will be presented in Section 3. There is also a rapidly growing literature on the subject of new institutional economics. According to North (1990:3), institutions are a "humanly devised constraint that shape human interactions". So it is argued that they also affect the investment decisions of the company. After a brief discussion of these theories we consider the possible relationship between the model and the institutions. In Section 4 we close the argument with conclusions and some further research questions.

2. International trade theories

In the last few decades, foreign direct investment has become more important than international trade. However, the origin of foreign direct investment theories lies in trade theories. These theories examine the macro level, arguing that FDI is simply an international capital movement. So the main question is where capital goes and why.

The first trade theories failed to explain international capital movements. *Ricardo (1817)* and *Smith (1776)* described international trade as the consequence of economic differences. These economic advantages may come from countries' differences in terms of factors (labour or capital). These theories are based on two countries, two products and the mobility of factors at a local level. Thus they do not even allow for FDI flows. Economists tried to extend these theories and explain FDI activity in its portfolio form (Hosseini, 2005). The portfolio theory still cannot capture the complexity of FDI and the production of MNEs (multinational enterprises).

The second trade related model was based on factor proportions and relative factor endowments. This theory extends the concept of comparative advantage with the costs of production (Morgan and Katsikeas, 2005). *Heckscher* and *Ohlin* argued that a country would export those goods and services that make use of their abundant factors. The model considers two countries, two products and three factors. The classical Heckscher-Ohlin theory was also unable to explain international investments because it assumed that factors are immobile. That assumption was relatively correct before World War II. However, in the new monetary system (the Bretton Woods system) the restrictions on capital flows were eliminated. The first attempt to expand the classic Heckscher-Ohlin model was the work of *Robert Mundell* (1957). The model stated that commodity movements are a substitute for factor movements. Mundell's theory suggests that capital flows out from countries which are relatively rich in capital to those that are relatively poor. If two countries have the same production function, then their returns of capital will be different. According to this theory, this was the only factor generating capital flows. When capital flows balance returns, they can substitute trade.

However, trends in investments showed a different pattern. Direct investment has mostly tended to take place within developed countries, from capital-rich countries to other capital-rich countries (Barrell and Pain, 1997). These trends called for an alternative explanation of trade and investment flows (Leontief, 1966).

Institutions have not appeared in the trade theories. As we can see, they are mainly based on two factors, capital and labour, and they have only explained

capital flows with factor endowments. When these models emerged, research into institutions was at a low level.

There was one more model related to trade theories. *Vernon* (1966) tried to solve the Leontief paradox by placing emphasis on the timing of innovation and the effects of scale economies. However, this theory approached the topic from the point of view of enterprises, so we cannot describe it simply as a trade theory. Vernon (1966) originally analysed the foreign direct investment from the United States to Western Europe after World War II, stating that there are four stages of the production cycle: innovation, growth, maturity and decline (Denisia, 2010). During the first stage American companies only served domestic markets, but after the War growing demand pushed the product cycle to the next stage. In the growth stage US companies began to export. They had the advantage of technology. The maturity phase started when manufacturers standardized their products, and EU firms began to imitate US products. US firms lost their technological advantage, so they had to relocate production to local markets to maintain their market share (Denisia, 2010). This theory successfully explained the production of some goods (such as PCs), but over the years it has lost its predictive power. There is another problem with this theory: it only argues that if the foreign market is large enough, FDI will replace exports (Nayak and Choudhury, 2014)

3. FDI theories based on firms

This group of theories concentrates on enterprises. These models differ from the previous ones in another respect. They highlight the differences between portfolio investments and FDI, recognizing that the role of the entrepreneur plays a large part in explaining international activities (Morgan and Katsikeas, 1997).
The first model was developed by Hymer (1976). This model proposed that foreign direct investments are associated with the international operations of firms. Hymer's *monopolistic advantages* theory suggests that MNEs have a specific advantage, which is indispensable for the performance of FDI. Foreign firms also suffer disadvantages compared to local firms, so they need this special advantage to compensate. Hymer has dealt with the problem of information cost for foreign firms, and the different treatment of government or currency risk (Denisia, 2010).
These advantages can be explained by market imperfections (Morgan and Katsikeas, 1997). Hymer stated that FDI means transferring knowledge and other firm assets, and not just capital mobility (Sethi et al, 2003). According to Hosseini (2005:532) the model argued that the firm has two motivations to invest abroad: to remove international competition and to increase the returns arising from the firm's special advantages. Although Hymer's model could not completely explain the operations of MMEs, his idea about market failure was formalized and developed in later models. Kindleberger (1969) and Caves (1971) extended Hymer's theory.
Kindleberger stated that a special advantage is useful in the case of market imperfection and it can include technology or management expertise (Nayak and Choudhury, 2014:6).

The second group of these theories are the *internalization theories*. The basis for these models was developed by Ronald Coase (1937). He argued that firms reduce transaction costs. If we extend this theory to the international operation of the firm, the question is why firms keep production internal.
Erdey (2005a) summarized emerging costs in international production. If we do not keep production inside the firm, we face two major problems: dissipation of knowledge and dissipation of goodwill. These costs are related to the intangible assets of the firm. There are some other problems with international production. The hold-up problem can occur if the parties behave in an opportunistic way. We may have to face the principal-agent problem if there is an information asymmetry strengthened by geographical and cultural distance.

Buckley and Casson (1976) argued that the firm will chose international production if the benefits compensate the costs. Their theory had three assumptions: firms maximize their profits in an imperfect market, when the market in intermediate productions is imperfect, there is an incentive to bypass them and create internal markets, and internalizations of markets leads to MNEs (Nayak and Choudhury, 2014:6). According to their theory, the following can result in internalization: a long time lag in the co-ordination of resources, discriminatory pricing to exploit market power, unstable bargaining situations, the buyer's inability to estimate the price, and government interventions. These problems are types of market imperfections (Nayak and Choudhury, 2014:7).

Theories based on *location choice*[1] separate vertical and horizontal foreign direct investments. Horizontal FDI means that the firm makes the same products in different countries. It is mainly the subsidiaries who supply the local market. Vertical FDI is when the firm locates the different stages of production in different countries. This occurs when the company is trying to maximize efficiency by utilizing the differences in relative factor endowments, government policies or regulation (Erdey, 2005b). Location theories attempt to explain why the firm chooses a foreign country for production (Helpman, 1984). The first models argued for the role of factor endowments. These vertical models separated the firm's operation into two parts: headquarter services and production. A horizontal model developed by Markusen (1984) concentrated on the multi-plant economies of scale. The knowledge-capital model combines horizontal FDI motivations with vertical FDI motivations. The theory developed by Markusen et al (1996) assumes two countries, two factors, and two goods. The model predicts that horizontal FDI occurs when countries are relatively similar in factor endowments and the cost of trade is high. However a significant difference in factor endowments leads to vertical FDI, because the factor price differentials stimulate fragmentation.

These are the three main types of firm-based FDI theories. They differ from the previous ones in several aspects; the main difference is that they concentrate not only on macroeconomic factors, but on microeconomic variables. This leads us to a complex theory, which incorporates the previous models' results. We will discuss the role of institutions in this theory, because it includes the three previous models.

[1] The discussion of the location choice theories is based on Erdey (2005b).

Dunning (1993) created a model to determine the necessary and sufficient conditions for foreign direct investment. The model - called *eclectic paradigm* - suggests that there are three essential conditions. FDI can only occur if the firm has all of these advantages.

The first is ownership advantage (O), which is basically similar to the previous concept of monopolistic advantage. It could be a product or a manufacturing process, or special know-how. Furthermore, the advantage could be reflected in skills (marketing, managerial etc.) or in the corporate culture. At this level we can easily recognize the importance of institutions. Formal institutions such as laws, regulations, patterns or trademarks have a significant effect on gaining an ownership advantage. Informal institutions, such as a well-functioning corporate culture, could be an advantage (Dunning and Lundan, 2008:583). The second necessary advantage is localization advantage (L). This reflects the firm's choice to go abroad. In the first theories the main localization advantages were natural resource endowments, the costs of the various factors, or the size of the market. According to Dunning (2001), any factor could be a locational advantage if it has an impact on the profitability of the firm in the foreign country. In the last few decades, with the growing literature of new institutional economics, it has become clear that institutions play a crucial role in this area. This role could include a wide range of relevant formal institutions such as laws, regulations, political institutions, and contract enforcement, but informal institutions matter, too. There is a slowly growing literature on the role of culture, traditions, and religion (Dunning and Lundan, 2008).

Dunning's third advantage is the internalization advantage. This is an answer to the question of why companies keep production internal. According to Dunning (1993), this means that firms try to avoid or reduce some transaction costs. This internalization advantage could occur because of the nature of the production. If there is a special knowledge, which is difficult to transfer, the firm could choose not to licence it. Or the firm could have concerns about its reputation, as was discussed earlier. As was argued by Dunning and Lundan (2008:587), "the institutions play a major role in determining the complementary or substitutability of the different organisational modes", which represent different combinations of market-led and hierarchical coordination. Institutions are major determinants in the transaction costs in or out of the company. These institutions could be formal (intra- and inter-firm contracts) or informal (codes, trust-based relationships).

The co-operation of the three advantages consists of the following: ownership advantage is needed to compete with local firms, internalization advantage must appear to keep this ownership advantage within the firm, and if these are both available, locational advantage helps to choose between exporting and FDI (Dunning 1993). The eclectic (OLI) paradigm is the most widely acknowledged theory of foreign direct investment. The acceptance and success of this model is based on its complexity, because this theory attempts to summarize the previous model's statements. Dunning also described the forms of foreign direct investment: it could be resource-seeking, market-seeking, efficiency-seeking or strategic asset-seeking (Sethi et al 2003).

4. Conclusions

The evolution of the foreign direct investment theory has not reached its conclusion. As new theories and new approaches arise we can observe the complexity of the topic. As new firm-based theories took the place of trade theories, the role of factor endowment declined. As we have seen, relative factor endowments and factor prices have a role in localization theories, but their importance has decreased. At the same time, researchers have discovered the significance of other factors, one of which is the institutional environment. The literature on the relationship between foreign direct investment and institutions is constantly growing. A further research question could involve informal institutions. This area offers some interesting ideas about the relationship between culture and investment.

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FORTRESS EUROPE BREACHED: POLITICAL AND ECONOMIC IMPACT OF THE RECENT REFUGEE CRISIS ON EUROPEAN STATES

Adrian-Ioan Damoc
Academy of Economic Studies, Department of International Business and Economics, Bucharest, Romania
Adrian_ioan_damoc@yahoo.com
Adrian.damoc@stud.ase.ro

Abstract: *The onset of the Syrian civil war, the expansion of the military influence of the Islamic State in the Middle and Near East and the ongoing conflicts in Africa has caused a significant number of refugees from the affected areas to flee towards Europe, generating a migrant crisis that has proven itself a contentious issue among European states as they struggle to find a solution to house the refugees and integrate them within the different host societies while also managing internal political debates and pacifying internal reluctance regarding the immigrants. The recent terrorist attacks in Brussels as well as various incidents associated with areas where refugees are concentrated have worsened the problem as European states fear security issues associated with the mostly Muslim population that seeks asylum within their borders. Beyond humanitarian, political and security concerns, the economic impact of the crisis upon European states has been varied. The immigrants have been seen both as blessings in disguise for the aging workforce of some European states and a potential financial burden on the economies of others in terms of social welfare costs and risks of increasing the local unemployment rates. Not only that, but the refugee problem has given way to a clash between two opposing viewpoints within the European Community: on the one hand, states who have sought to facilitate the accommodation of asylum-seekers on their territories, and on the other, states who have taken a tough approach to stem the flow of refugees within their borders and have rebuked the solutions thus far proposed by the EU. The present paper seeks to investigate the political and economic effects of refugees on host countries in Europe with a focus on the perceived division between countries that have welcomed immigrants versus those who have sought to restrict the number of refugees entering their countries.*

Keywords: refugees; Europe; Islam; immigration; geopolitics; security

JEL classification: F15; F19

1. Introduction

The humanitarian crisis brought about by civil wars in the Middle East and the military actions of the Islamic State has been the subject of much controversy and many hectic debates among European states.

The topic has been examined before in economic literature, often with a focus on particular countries in particular contexts. One attempt to assess the impact of refugees on host countries comes from the United Nations' Refugee Agency – the UNHCR – following the situation in Rwanda (UNHCR, 1997). The UNHCR estimated that a large inflow of refugees leads to competition between them and

the local citizens for limited resources such as housing or healthcare. The paper notes potentially significant macroeconomic impacts, such as increasing the rate of unemployment by competing with native citizens on the local labour market, or altering aggregate demand and the flow of goods entailing difficulties in applying structural adjustment initiatives or inflationary effects (UNHCR, 1997). At the same time, the potential economic benefits on host areas are also acknowledged in the paper, as incurred by international aid, the creation of employment or the development of infrastructure, but at the cost of the government's willingness to bear the cost of accommodating the refugees. The authors of the paper touch on the social implications, namely negative effects such as the potential animosities aroused by ethnic differences between the migrants and the local communities, the allocation of social aid to migrants that would normally be unavailable to locals, or the increase in crime and security risk, as well as potential benefits in the form of skills and assets that immigrants bring that could steer the host community towards cultural and economic development (UNHCR, 1997).

A similar conclusion is reached by Karen Jacobsen (2002), who examined the implications of an increase in refugee, and similarly found that while in the short term an increase in the inbound flow of refugees may put pressure on a the resources of the developing countries hosting them, with appropriate assistance and humanitarian programmes they may benefit from the assets refugees bring. Jennifer Alix-Garcia and David Saah (2008:1) examined the impact of the refugee flow from Rwanda and Burundi in 1993 and 1994 on Tanzania, the country they'd fled to, finding that effects tend to be positive in rural areas and negative in urban ones. The reasons proposed by the authors to explain this difference in the distribution of the impact were that the increased demand brought about by the population increase leads to rural producers selling their goods at a more advantageous price while buyers from the urban areas see a decrease of their incomes due to the price increase (Alix-Garcia and Saah, 2008:13-21).

Last but not least, the Institute for Market Economics (IME) in Bulgaria (1999) assessed the economic and social impact of asylum-seeking refugees on Bulgaria, providing some insight into why Bulgaria, at the time, demonstrated reluctance towards accepting refugees: a *quid pro quo* against restrictive immigration treatment it received from Western countries, and a lack of proper popular and institutional support for any initiative (IME, 1999:6). Due to the lengthy bureaucratic process that refugees undergo in the attempt to be integrated in the host labour market, the IME explained that many refugees turn to opportunities in the shadow economy, bypassing fiscal regulations, and even when granted equal rights on the labor market as local citizens, they still have difficulties to face in finding employment due to an array of factors such as language barriers, a lack of a social network and of relevant local experience (IME, 1999:20-21). It was assumed (IME, 1999:24) that Bulgaria's efforts towards European integration would render it in a better position to accept asylum-seeking refugees; yet, in light of the recent refugee crisis, the reaction of the Bulgarian government has been mixed at best with regards to refugees.

Given the currently existing framework, the impact of refugees on host countries can be summarized thusly:

- An increase in aggregate demand which can lead to inflation as well as stimulate the development of markets where the increase is strongest.
- A rise of the unemployment rate as the foreign refugees compete with the native labor force for a limited amount of available jobs.
- An increase in the public sector expenditure as governments need to house refugees, provide them with basic social insurance and healthcare services as well as mitigate their ecological impact.
- In the long run, successful integration of migrants within the social fabric of the host country can lead to positive economic effects due to the human capital that they bring.

In this paper, we will provide an overview of the potential impact and challenges that the recent waves of migrants fleeing from regional conflicts in the Middle East and Africa may have on European economies with a focus on the differences between countries that have been more welcoming of refugees and those that have displayed a marked reluctance towards them.

2. Background of the refugee crisis and the EU's response

The crisis began in 2015, when Europe saw a steep increase in the number of refugees seeking asylum. Most of these refugees came from areas affected by conflict, namely Syria, Afghanistan, and Iraq being the top three sources of fleeing citizens seeking safety and shelter on European territory, as reported by Eurostat (2016). A total of 1,255,600 asylum claims were submitted to EU countries, of which over 441,800 in Germany, 174,400 in Hungary and 156,100 in Sweden, according to the same source. This was a rise of almost 200% compared to the previous year, when a then-record over 625,000 applicants were registered in the European Union (Eurostat, 2014). Despite this, the highest number of asylum applications in relation to local population was registered in Hungary with almost 1,800 migrants per 100,000 native citizens, with Sweden and Austria coming 2nd and 3rd, respectively ('Migrant crisis: Migration to Europe explained in seven charts', 2016).

The European Union's response was a ten point plan designed to increase border control, enhance security checks and filters in order to better manage the refugee inflow as well as combat smugglers and human traffickers (European Commission press release, 2015).

The most controversial point, however was the relocation initiative employed to more evenly distribute the pressure of housing refugees among the member states of the EU, proposing the application of quotas in order to accomplish this goal. The suggestion was approved by the European Parliament with a total of 449 votes for and 130 against ('Parliament agrees on binding refugee quotas', 2015).

While Germany received a high number of immigrants due to its Basic Law which stipulates the right to asylum for humanitarian reasons (which was later amended to accommodate the possibility to impose quotas should the need arise) Hungary, on the other hand, built a border barrier in conjunction with the Czech Republic, Slovakia and Poland to prevent illegal entry to immigrants and boost control over the inbound flow of refugees. Slovenia sought a similar course of action, creating a border barrier of its own to halt the advance of the refugees. Slovakia, Poland, the Czech Republic and Hungary, collectively part of an alliance known as the

Visegrad Group, have all rebuked the quota plan, deeming it unfair to the host states as well as to the refugees (among whom, it was argued, Ukrainians fleeing the conflict in Donbass should be counted), as well as ineffectual ('EC failed in solving migration, quotas make no sense - Czech PM', 2016), compounded by the fact that asylum-seeking refugees would relocate to another destination, as several Syrian refugees relocated to Germany from the Czech Republic ('Malí Syřané se měli léčit v Motole, rodina obratem odjela do Německa'. 2015). The Paris attacks worsened concerns and proceeded to further divide the EU member states, with growing fears of terrorists entering European territory posing as refugees.
Slovakia has expressed its disapproval by filing a lawsuit against the EU to the European Court of Justice in Luxembourg over its decision to relocate around 120,000 immigrants, with the Slovakian Prime Minister calling the mandatory quotas "nonsensical and technically impossible" as reported by POLITICO ('Slovakia files lawsuit against EU's refugee relocation', 2015).
An interesting aspect to analyze is whether the difference in attitudes between the welcoming states, on the one hand, and the reluctant ones, on the other, is based mainly on economic considerations, or rather on political undertones.

3. Projected economic effects of refugees on host countries

An analysis conducted by the International Monetary Fund has been carried out to determine the potential economic consequences of the refugee crisis. Aiyar et al. (2016) have foreseen in the short term an increase in GDP growth, due to the increase in aggregate demand, to the fiscal expansion required to accommodate refugees and to the workforce growth when the latter enter the labor market, while long term effects depend on the extent to which refugees are successfully integrated in the labor market (Aiyar et al, 2016:11-15). According to the same source, the average budgetary expenses for the immigrants may increase by 0.05% to 0.1% of the GDP compared to the previous year, while the GDP itself may grow by a projected 0.09% and 0.13%, with a more concentrated effect on the countries receiving the most applicants, namely Austria (0.5%), Sweden (0.4%) and Germany (0.3%) (Aiyar et al, 2016:13).
Considering the ideal scenario of successful integration of the immigrants in the labor market, the authors predict an overall increase of the average GDP of the EU by 0.25% by 2020, with increases between 0.5 and 1.1 percent for the main destination countries previously cited. Alternatively, failure to successfully accommodate asylum-seeking refugees in the host countries is predicted to result in a 0.4% decrease of e the GDP per capita including refugees, and government debt as well as the unemployment rate will rise (Aiyar et al, 2016:14). Similar to previous research, Aiyar et al. conjecture that the integration of refugees in the host state's labor market is typically slow in the beginning as determined by the lack of language skills and relevant job experience as well as length of the application process in some countries, which is especially true of refugees from less advanced economies, such as the current surge originating from Iraq, Syria or Afghanistan (2016:15-16), resulting in a wage and employment gap between refugees and natives.
Another analysis has been conducted by the Organization for Economic Cooperation and Development (OECD), who noted (2015:1) a projected increase in public spending for the following two years in Germany (by 0.5 percent), Austria (by 0.3 percent), Hungary (by 0.1%) and Sweden (by 0.9 percent) which in the

short run should increase aggregate demand by 0.1 to 0.2 percent of the GDP. Similar conclusions regarding the potentially beneficial effects of the migrants have been reached in a study performed by the European Parliament (2015), which noted that the migrants may address the negative demographic trend in most EU states as well as bring innovation and entrepreneurship to the local economies. The same study highlights the ageing of the European population as one of the most serious challenges faced by the EU, with a low fertility rate that generates long-term concerns regarding the maintenance of social security systems as well as healthcare, as the ration of active people to those over 65 is expected to decrease from 4 to 1 in 2013 to 2 to 1 in 2060. The paper also notes that despite the "weak but positive" (2015:7) economic effects, it is difficult to make predictions regarding the economic consequences due to the sheer complexity and dimensions of the refugee inflow.

Researcher Joakim Ruist (2015) looked into the fiscal cost of refugees in Europe and based on the case of Sweden, estimated a net redistribution from the native population to refugees of 1.5% of the GDP, and that the economic burden can be offset by rapid integration in the labor market. Ruist highlighted that refugees tend to be overrepresented in certain types of public spending such as social assistance, language training, crime and justice or labor market policy.

4. Policies vs. Politics

As noted above, while Austria, Germany and Sweden have been quite accepting of refugees, Hungary, Slovakia, Poland and the Czech Republic have been extremely reluctant, denouncing the attempt as unfair and ineffective, with implications that the mandatory quotas are an infringement of their sovereign right to control the immigration inflow. Yet, given that, as previously explained, there are potential economic benefits to helping refugees adapt to their new home in a given country it is worth to consider the differences in outlooks.

It has been noted that Germany's population decline may well weigh heavily in Germany's acceptance of immigrants settling on its territory. With an estimated population decline by 8 to 13 million people by 2060 (2015), given the number of deaths constantly overtaking the number of births, and thereby a decline of the active workforce, as it is expected that people within the age bracket of 20 to 64 will make up 50% of the population (from a current share of 60%), the arrival of refugees, most of whom are young, can counteract that effect since, as reported by Euractiv.com (2016), 46% of German employers have trouble recruiting. Moreover, the refugee pressure forces a raise in public spending in Germany, which would have positive effects both on the German economy and on the Eurozone thanks to the improvement of the infrastructure, the stimulation of domestic demand as well as an increased output and regional spillovers (Elekdag and Muir, 2014).

As Sweden has a similar problem with the ageing of its populations, economists from the Swedish bank Nordea suggested a growth of Sweden's GDP by 0.5 percent, thanks to greater investments in the building industry or in the educational sector to help train refugees to be more easily assimilated in Sweden's society, with any prospective impact on the labor market unlikely to materialize before 2017, according to Swedish news outlet *The Local* (2015). In a 2015 paper, Eriksson and Folster (2015) argue that the fiscal impact of immigration is small, and that the migrant influx may actually lead to positive economic effects such as increased exports, a deepened specialization of labor

and a diversification of the skills available on the job market, estimating that without immigration, Sweden would see a decline in wages of over 3 percent. The authors also note that in Sweden, migrants have proven to be especially beneficial to native economic entities, citing IKEA's use of immigrants to counteract the labor shortage.

Given the prospective economic benefits that housing asylum-seeking refugees in the long run provided successful integration, the reasons behind the refusal of Hungary, Poland, Slovakia and the Czech Republic to integrate larger numbers of refugees appear to be grounded in social and political concerns. It should be noted that both Sweden and Germany have significant proportions of their populations; Germany's Federal Statistical Office reported in 2015 that 16.5 million citizens (or 20.3% of the total population) have an migrant background, while in Sweden, over 14% of the population consisted of foreign-born citizens according to the OECD (2012).

In contrast, in the case of the countries of the Visegrad alliance, the same indicators point to much lower figures, such as 0.7% for Slovakia, 0.8% for Poland, 4.1% for Hungary and 6.4% for Czech Republic. It is also worth noting that while, according to the Pew Research Centre (2015), both Germany and Sweden house some of the largest Muslim minorities relative to the total population of any European country, namely 5.8% (about 4.8 million people) of Germany's total population and 4.6% of Sweden's citizens, Poland, Slovakia, the Czech Republic and Hungary all have the smallest Muslim minorities (below 0.1%). On this point, there have been press statements from government officials from some of these states explicitly stating that the integration of Islamic refugees in their societies is, if not downright impossible, then extremely difficult, especially in the fallout of incidents featuring refugees such as the large-scale attacks in the German city of Cologne involving robbery, sexual assault and battery on New Year's Eve and in particular, the Paris shootings of November 2015 by Islamic extremists.

For instance, Hungary's Prime Minister, Viktor Orban, stated last year in no uncertain terms that accepting Muslim refugees would spark security and societal risks such as "terrorism, criminalism [sic], anti-Semitism and homophobia", according to the *Business Insider* (2016) and that Muslim refugees are not welcome in Hungary, invoking Hungary's right to autonomy in managing the flow of refugees ('Hungarian PM: We don't want more Muslims', 2015), his country's history under Ottoman rule and incompatibilities between Islam and the Christian roots of European culture as grounds for his position ('Hungary's Orban invokes Ottoman invasion to justify keeping refugees out'', 2015).

In a similar tone, Czech president Milos Zeman said that integrating Muslims in European societies is extremely difficult due to their core values differing too much from those of European population, cataloguing the attacks in Cologne to "Muslim culture" and considered that Middle Eastern asylum-seekers have caused the creation of ghettos and radicalized Muslim neighborhoods in the countries that welcomed them, according to the British newspaper *Express* (2016). Last but not least, the Slovakian Prime Minister has voiced his government's refusal to allow the formation of a united Muslim community in Slovakia, rebuffing multiculturalism as a viable objective, more pungently so due to Slovakia's socially conservative outlook with a large Catholic population ('Slovakian Prime Minister warns country will stop Muslim refugees from entering', 2016).

Beyond negative perceptions caused by past clashes between Christians and

Ottomans, a commentator wrote for *The Guardian* (2015) about several probable reasons why Central and Eastern European Countries have pronounced themselves against receiving immigrants and accepting the quota system: fears regarding the effect on their economies that refugees might have in light of their own economic issues or their own self-perceived status as "second class citizens" hence the desire to assert their sovereignty against the EU's rules. The author also notes the importance of ethnicity and culture in how countries from these regions define a nation, beyond politically established conventions, with ethno-cultural homogeneity being vital to a state's integrity, given the disintegration of Yugoslavia and Czechoslovakia.

Given these assessments, we can also further deduce the rationale behind the refusal of Central and Eastern European countries to accept refugees versus the more welcoming Western nations. As their societies are ethno-culturally homogeneous and conservative, integrating refugees with quite different values and religions would be very difficult to achieve and would require a large amount of political will and dedication as well as economic resources. It is very probable that accommodating significant numbers of asylum-seekers would be met with resistance by the respective societies which may take the form of violent protests or attacks on the foreigners, thereby jeopardizing societal security.

Not only that, but the difficulty in accepting refugees would lead the latter to relocate to more welcoming countries in other regions; as such, the countries that first received them would function as transit points, and therefore these countries would not benefit from the long-term economic benefits by refugees in the form of assets, innovation, entrepreneurship and human capital, but would have to put up with the short-term challenges of providing them with housing, food, healthcare and a minimum of social security, while also combating potential increases of the crime rate, political discord and stemming black market operations. As a result, politicians have a strong incentive to acquiesce to their voters' stance and take a hard-line approach to controlling the passage of refugees on their territory and rejecting any quota imposed from without.

5. Political consequences

Beyond any economic effects and the refusal of Central and Eastern Europe to accept quotas, refugees have yielded a social and political reaction even from the very countries which, as stated previously, have been more welcoming of them. In Germany, violent protests spurred by the anti-Islam group PEGIDA occurred in the city Dresden as 8,000 people expressed their disapproval for the government's stance on accepting refugees, one of over 200 rallies in the course of a few months. Similar movements occurred in Calais, France and in the Czech capital of Prague where 2,200 people, both supporters and opponents of PEGIDA, have clashed, as detailed by *Reuters* (2016).

Such feelings have been noted in electoral preferences across several European countries where far-right factions have risen significantly in popularity. In France, the National Front, headed by Marine Le Pen, has managed to win 6 of 13 French regions with 28% of votes in its favor 'National Front stuns Europe's political elites' (2015). Although they failed to secure any region in the second round of voting, it stands as proof of the increase in popularity of the right-wing, nationalistic, anti-immigration, eurosceptic, economically protectionist French party. In Germany's recent local elections in March 2016, *Reuters* (2016) has pointed out that Angela Merkel's party, the Christian Democrats, conceded significant ground to the anti-

immigrant party Alternative for Germany. In Austria, a similar strain on public acceptance of refugees allowed Norbert Hofer of the far-right faction Freedom Party of Austria to achieve victory in the first round of presidential elections held on April 24, 2016 according to *Politico.eu*. Last but not least, the Swedish right-wing group called the Sweden Democrats have reached, as figures provided by Swedish news agency *Metro* (2016), an all-time high of 28.8% of favorable opinions in January 2016, a 5-point increase from their standing in December 2015, and 7 points above the next political faction.

The political consequences of the refugee inflow, in the form of an increase in prominence for right-wing factions may have stark consequences for the future of European integration. Marine Le Pen is known for her eurosceptic stance, having once called the EU "the death of economy, our social welfare system and our economy" and promised to hold a referendum to pull France out of the EU should she emerge as president, says *Euractiv.com* (2015). Also, *Politico.eu* shed light on a request by the National Front to Russia for a €27 million to fund its campaign, hinting at potentially close ties between a National Front-led French government and Russia. In the same vein, the Alternative for Germany was reported by *Spiegel* (2016) to harbor strong xenophobic, anti-European and pro-Russian sentiment.

6. Conclusion and outlooks on further European integration

The paper has sought to investigate whether the refugees have a significant economic impact on the host countries. Through the examination of existing literature as well as using open-source information, the economic effects tend to come in both boons for the host countries as well as challenges, especially with regards to long-term integration in the local society and labor market. The extent to which the advantages can be capitalized upon would depend on the ease with which the asylum seekers' integration in the social and economic fabric of the recipient country is carried out. That may serve as an explanation as to why countries like Poland, Hungary, Slovakia and the Czech Republic, with conservative societies and politics, would face difficulties in achieving this goal, and thus fail to keep refugees within their borders for long enough to be able to reap economic benefits.

An extension to the above is that the more rigid public resistance becomes, the stronger the impact on local politics, as seen in France, Austria, Germany and Sweden, the most sought after countries by refugees. As such, should right-wing groups come to politically dominate the major players in the EU, it is foreseeable that this would have an impact on the future path of European integration. With anti-EU sentiments upheld by leaders of the far-right in Germany and France, for instance, this is likely to lead to foreign policies that would hinder if not halt the expansion of the EU, and it would cause a division between EU states based on differing outlooks that would hamper decision-making and the formulation of coherent common EU policies on external problems, while domestically, integrative efforts such as the expansion of the Schengen space could be jeopardized, for instance by powerful boycotts leveled against it. Economic protectionism would lead to restrictive commercial policies would weaken the EU's position within the World Trade Organization, especially if actors such as France or the UK were to exit the EU. Closer ties with Russia, especially in terms of energy diplomacy, compounded with weakening integration, would probably lead to an increase in bilateral agreements between EU members and third parties

were they to come to see the EU as unviable for their national interests.
To conclude, the refugee crisis may well have long-term political, social and economic consequences for the European Union, and it is through properly managed humanitarian aid, concerted effort and political will that such a crisis can be handled to prevent its worst outcome.

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AGEING WORKFORCE IN ROMANIA – PERSPECTIVES OF AGEING WORKFORCE POLICIES IN EAST EUROPEAN COUNTRIES -

Radu Florea
Department of Sociology, Faculty of Sociology and Social Assistance, University of Bucharest, Bucharest, Romania
radu.florea88@gmail.com

Abstract: *This paper tries to encompass the effects that modern industrialization of East European countries has one the working population over the age of 50. Policies and procedures that multinational corporations have proved to be difficult to follow for the ageing population in Romania; the fact that western companies have introduced specific procedures on performance appraisal and organizational development is proven to be hard to understand and follow by the ageing population of Romania. One of the core topics of the paper discusses the effects that different cultural perspectives-between Western corporations and the human capital from East European countries- may have on the ageing workforce. The fact that Western corporations are becoming an important presence in Romania's national economy can cause major social problems for workers over the age of 50 because of the aforementioned cultural differences. Western companies generally have specific working methodologies which need to be internalized by their personnel. Considering the fact that Romania is mainly an ageing country, Western corporations depend on workers over the age of 50. In this regard, foreign companies need to adapt their training programs and general working procedures for them to be understood by workers that are accustomed to other organizational systems.*
As mentioned in the paper, unemployment rate remains constant for workers over the age of 50, but their performance declines compared to other age categories. This aspect shows that, even if workers over the age of 50 manage to keep their current position in a Western company, they do not excel in their tasks, relying heavily on cultural values that companies may enlist, like the promotion of retirement from the company.
Adapting Romania's ageing workforce to the standards of multinational corporations represents a key element in obtaining sustainable growth and encouraging companies to locate an operational branch in the country.

Keywords: ageing workforce, working population, collective mentality

JEL classification: J14- Demographic Economics

1.Introduction

Ageing is considered one of the most important concepts in recent sociological paradigms. Ageing is a natural process that affects not only individuals, but their peers, and society as well (Johnson, 2005). At a societal level ageing is of high interest in areas of research regarding demography, culture, wellbeing and workforce. The fact that societies start aging – as a result of the improved standards of life all around the world- affects the performance of companies oriented on high speed production on which the economy of some states is based upon. Production in multi-national corporations is automated in a high degree but

the fact remains that workforce is required on every level of manufacturing, support, management etc.
Developed workforce is shrinking at a frightening rate; in Europe the working population is already decreasing in major countries like Germany, France, Italy and Austria (Leibold & Voelpel, 2006) - about one million immigrants are necessary in Europe to supply the lack of youthful workforce needed.
As a result of these changes, global competition for skilled workers and creative talents is quickly increasing. In 2030 the labour available will be at about half of the labour needed worldwide for sustainability. From a corporate perspective the need of reinventing company values for re-adapting older workers to the new production tendencies is also increasing.
Since the recession Romania's economy has been dependent on the multi-national West companies - in 2011 Nokia brought 1% of Romania's GDP-. It is quite clear that as a country, Romania depends on companies with foreign capital. Only in the automotive industry there are 11 thousand persons that work in companies with foreign capital.
Studying organizations from a cultural perspective shows that ageing is a serious problem for the human capital of corporations (Samorodov, 1999). Ageing not only refers to decreased general performance in the work field (on an operational level) but also includes significant cultural differences between the values promoted by a company and the way they are perceived by the ageing human capital. A few examples of how ageing affects organizational commitment or organizational culture can be seen in almost every company in Romania that is headquartered in Germany. German companies are very resilient in hiring people that have exceed a certain age because the manner in which the corporations function is based on fast paced work and immediate learning of operational procedures. People which are considered old in the work field find it much more difficult to find a job in a multi-national corporation, and in some cases people who get old get fired because they are not able to accomplish their tasks quick enough. Ageing in Romania represents a problem for blue collar workers because the downturn economy isn't well enough established as to sustain workers that from a certain age are less productive then younger workers.
The study conducted by Alexander Samorodov regarding ageing and labour markets for older workers shows that strictly from a demographic perspective the working field isn't adapted for the consequences of an ageing society.
Samorodov acknowledges that in terms of structure, the world can still be divided in the young population of the developing countries and the ageing population of the industrialized developed countries (Samorodov,1999). Romania is considered a developing country so the active working population that is of interest for multinational corporations focused on industry is the young population.

2. Culture aspects regarding ageing workforce in Romania

The population formed by people over the age of 50 and under the age of 65 (retirement age in Romania) are considered in this paper ageing workforce population according to Marius Leibold (Leibold & Voelpel). The main problems which occur with old age are considered stereotyping, unfair policies, prejudices and cross generational cultural differences.
The greatest difference between youthful population and ageing population in work environments are basically culture related and can be clustered in the following (Anderson & Anderson):

•Work environment- in modern corporations it is perceived different between age groups.
•Market skill requirements- experienced (but aged) workers are left aside for the young generations that can move faster and with less effort in order to achieve an optimum workflow.
•Company strategies- companies don't have the tendency to hire ageing personnel; the only case in which corporations tend to hire ageing workers is if one of the main goals is to promote social responsibility and equity; in this case one of the core values might be encouraging retirement from the company.
•The norms and values of an organization- these cultural aspects can differentiate between age categories on aspects like promoting staff members based on subjective criteria.
•Encouraged behaviour within the company- collective behaviour helps strengthen ideas, values and the whole culture of an organization: stereotypes are formed based on the fact that older workers are a minority, and the group dynamics reject minorities even in a work related context.
•Collective mentality- strongly related to encouraged behavior within the company, the collective mentality represents the values that stay behind each group action; discriminating older workers comes generally from group mentalities in organizations.
•Technological changes- workers over 50 years tend to accommodate harder to operational changes in production, and in business policies.
Companies are focused on reducing costs, outsourcing human resource services as payroll or personnel administration, downsizing investing in technological development of machines and other similar aspects. In most cases cost efficiency has been achieved by corporations. However, the world is entering a new era of unavoidable cost escalations especially because of the increasing costs for skilled workers. The fact that ageing human capital is ignored in the construction of an organization's culture, purpose mission and goals will be felt by every corporation in the years to come.
An interesting fact about workers over the age of 50 in Romania is the manner in which they respond to corporate view on work. After the events of December 1989 the Romanian industry slowly collapsed. During the communist period there were no private organizations in Romania. The first organization to be considered an employer was the Romanian National Employers which dated back to 1924. In 1991 the legal framework was partially adjusted in order to allow the formation of organizations that employed personnel based on subjective criteria in the public sector. The fall of the Romanian industry created an ambiguous context in which work was perceived differently in every region of the country, and small and medium business flourished. The corporate environment came with a very different take on the work itself and working conditions that were offered by a company. This made older workers adapt in a slower pace to the cultural difference – between Romanian personnel and foreign management- and to being supervised by younger people.

3. Workers over the age of 50 in Romania

The Report for Sustainable Work and Ageing Workforce (2011) made a lot of assumptions regarding ageing workforce in Romania visible and problematic by comparisons to other countries, not so focused on developing foreign industry sectors.

The conclusions of the study show the following aspects:
•Workers over the age of 50 cannot work well in night time shifts and cannot have a very fast pace like younger workers
•Workers over the age of 50 need a slower pace rhythm in production
•Workers over the age of 50 encounter difficulties in balancing personal life with professional life.
•Women over the age of 50 find it especially hard to solve their personal problems being more focused on their work.
•Training and career development also proves to be a problem for workers over the age of 50. Not being receptive to learning and improving their skills makes them expendable for the employer and also makes them emotionally frustrated.
• 40 % of women and 10% of men over the age of 55 encounter problems working under pressure; this percentage is slightly higher than the percentage of people over 50 but under 55. Among people over 50, 10% of men and 15% of women completed fixed-term employment contracts and a quarter of these people have a history of more than five years in the organization in which they presently work. The feeling of insecurity employment among women is increasing between 40 and 50 years and for men between 45 and 49 and 50, and 54.
The indicators suggested by the sustainability report are : working in different shifts (or only in night shifts) work in tiring or uncomfortable positions, fulfilment of strict deadlines , imbalance between work and other commitments, reduced freedom of action at work, reduced career prospects and job insecurity. These elements create problems of different types for older blue collar workers; approximately 29% of all employees over the age of 50 would prefer to work fewer hours than they actually do at the current moment. Blue collar workers have an even higher percent, depending on the industry they work in.
One third of employees with ages between 50 and 54 believe that they won't be able to work up to age 60 or will not have the same job until that age. This perception is more common among women that do manual labour requiring a medium level of qualification (about 55%) and for women with professions that require a low level of qualification (about 54%) in comparisons with men that have a medium degree of qualification (about 25%).
The lack of a balance between work and private life and the low social support that older workers receive are the main reasons given in the report for the desire to reduce the length of the working program.
Comparisons between east European industrialized countries show that some countries have the same sets of working conditions which are perceived by older workers as being unfavourable. In these countries employment rates decreased significantly from age 45; workers over the age of 50 report more frequently lack of satisfaction of working conditions.

	Male		**Female**		**Total**	
	RO	EU	RO	EU	RO	EU
15-24	30.3	39.2	25.7	33.4	28.0	36.4
25-49	82.5	85.9	70.8	69.4	76.7	77.7
50-64	54.2	61.4	41.5	42.8	47.5	51.9
65+	18.5	5.7	13.9	2.2	15.8	3.7
Total	57.3	59.6	45.7	43.6	51.3	51.3

Source: Eurostat

The employment rate in Romania corresponds to the European average, being slightly lower for men than for women. The rate of ageing active population (over the age of 50) is smaller than the average in the EU (47.5 % in Romania compared to 51.9 % in the EU). The highest incidence of older employees can be found in the sector of public administration, education, health and other services (one fifth of the employees of this sector are aged 50+).
The previous statement (that industrialized countries like Romania have less ageing working force then west European countries) being validated on the data presented.
Table 2: Unemployment rate (i.e. unemployed persons as a percentage of the active population of the same age) of Romania and the EU by age class and gender) (%)

	Male		**Female**		**Total**	
	RO	EU	RO	EU	RO	EU
15-24	25.1	18.4	18.7	18.7	22.3	18.5
25-49	87.3	7.5	5.4	9.5	6.4	8.4
50-64	6.3	7.1	2.9	7.3	4.7	7.2

Source: Eurostat

Romania has a lower general unemployment rate than the European average regarding workers over the age of 50 (4.7% in Romania compared to 7.2% in EU). In general, the duration of unemployment increases with age but for the older persons it rather stays constant.
This indicates that industrialized countries like Romania make use of ageing workforce generally out of necessity. If corporations from the west establish plants in Romania the manpower needed for maintaining production can make the general unemployment rate drop – and with it the rate of unemployment among older potential workers.
The Government Emergency Ordinance 144/2005 stipulates that: Employers who hire unemployed persons over 50 years of age or unemployed single parents who are the sole income earners and supporters for their dependants are relieved, for a 12 month period, from the payment of the contribution to the unemployment insurance budget, directly proportional to the number of unemployed persons hired, and on the other hand, receive for each of these persons, amount of money equal to a minimum gross wage if the employer keeps them on the payroll for at least 2 years.
According to the previous quoted ordinance the workers over the age of 50 are considered as persons with disabilities – a perspective of the state-. Persons with disabilities have tax deduction and other benefits according to their disability. Old age is therefor treated as a social handicap; in a previous chapter of this paper it was shown that from a cultural perspective of the company, old age may be considered a disability – from a group dynamic point of view- especially in the case of blue collared workers. The fact that the state has a specific taxation policy for employers who hire ageing workforce shows that the government has a distinct concern for integrating older people in the work field.

4. Measures for helping older workers

The current measures dealing with older workers are: recruitment, training (technical and communication skills- time management, conflict management etc.) The most useful and important measure which the state/government can take is the redeployment for older workers. [Re] deployment is conducted to maintain and to raise the workforce's performance and the quality of the

products/services promoted by a specific company. The primary advantage that older workforce has to offer is discipline in task execution (at the expense of speed of execution) and experience (either on specific tasks or generally in the work field).
Training and career development for older workers can compensate for the lack of initiative that is specific to blue collars over the age of 50. Training programs, as lifelong solutions are programs of development for people who are receptive to learning and want to improve their skills so they can compete with the youthful generations in their careers.

5. Conclusions

This paper tries to encompass the characteristics of ageing workforce in Romania and the measures the government has to take for redeploying blue collar workers over the age of 50 on the market.
Cultural cross-generational differences in companies has been an important problem for the last 10 years in Romania; also the fact that west corporations bring hundreds of millions of dollars in developing an infrastructure for sustainable plants in Romania is an indicator that they are here to stay. The fact that ageing workforce is not yet a real concern for corporations is well known; but in ten years the way that organizations operate here in Romania will be re-evaluated strictly on this aspect: the fact that Romania's population is getting older. Investors that have established working plants here will soon realize that ageing workforce is a matter of importance for the wellbeing of companies of the product/or service they develop and of society as a whole.

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ECONOMIC IMPLICATIONS OF THE NEW MIGRATION WAVE IN EUROPE

Irina Ionescu; Larisa Luchian
Doctoral School of Economics and Business Administration (Department of Economics, "Alexandru Ioan Cuza" University"), Iași, Romania
Jarulzica@yahoo.com
Luchian_larisa@yahoo.com

Abstract: *The new European migration wave poses extreme consequences for the balance of the European Union, as it was showed by the last trimester of 2015 and the first trimester of 2016.The German politic, unanimously adopted by all state members, is seeing some serious cracks, especially in economic terms. This paper aims to look at the real economic implications the migration wave has upon the European Union and determine whether the influence of such a high number of migrants might help the Union diminish its economic debts or, on the contrary, will most likely pose a threat to the system. The extensive literature in the field is highly up to date, which determines the research process to be one relevant for future inquiries. Already, Europe finds itself in one of the most risky situations after the World War II – protecting its boarders from the outside, as well as from the inside. Latest terrorist attacks that took place in Europe (in Paris two times, in Ankara, as well as in Brussels) confirm that the continent is on the verge of losing the fight against terrorism, as the phenomenon seems to already propagate within its own foreign communities. The latest terrorism actions were conducted by European citizens of foreign ethnicity, which can only make one wonder what will the main effect of embracing even larger foreign communities of migrants, within the heart of Europe, be in the upcoming years. The paper will also look closely at one of the most foreseen negative effect of massive migration in Europe – the possible resurgence of terrorism in the area. Albeit the differences between various European communities is striking, European authorities must find a way to determine everyone cope as one, or else the future of the European Union's borders as they are today is in danger. The qualitative methodology used in the present article focuses on a relevant literature, as well as specific data received and interpreted from reliable first-party sources: International Monetary Fund, Eurostat, Global Terrorism Index, Global Terrorism Database, OECD, etc.*

Keywords: migrants; European Union; economy; terrorism; economic implications.

JEL classification: F51; J15

1. Introduction

Migration waves represent a common effect of the 21st century globalisation process, as well as a rather encountered phenomenon, especially during and after the World War II. The market liberalization within the European Union determined, in the present era, around 27 million foreign nationals to live in the most developed 15 European countries (Kerr & Kerr, 2011). The largest migration comes from North African countries, Pakistan, Turkey, and India, with foreign citizens mostly residing in France, Spain, Germany, Austria, and the UK.

However, the “Arab Spring” began in 2010 brings a whole new type of migration waves into discussion, as civil wars deepen in conflict zones like Syria and Iraq. Moreover, the imminent terrorist menaces coming from extremist organisations such as the Islamic State or the Boko Haram changed the population dynamic, around the globe, in the past five years. Being in a permanent state of fear and anxiety, hundreds of thousands of people from the MENA region (Middle-East and North Africa) decided to “go west” with a clear purpose: arrive to a wealthy European state. The debates regarding a possible refugee exodus coming to Europe have become quite steamy, ever since the “first wave” of migrants forced the borders of France and illegally passed to the United Kingdom, in the summer of 2015.

The newest and most delicate problem Europe is confronting with nowadays was vastly debated, both by European authorities, as well as international organizations such as United Nations. According to Eurostat data (extracted on September 16th, 2015), the number of persons seeking asylum in the EU-28 countries rose up to 85% in the second trimester of 2015, as compared to the same period from 2014 (Eurostat, 2015). As reported in spring 2016 (Eurostat), a record number of 1.2 million people applied for asylum in European countries, in 2015 alone. Syrians, Afghans and Iraqis represent the main citizens that looked for protection in the European countries, as they were trying to make their way to the Promised Land of Germany. Data from the same report shows that around 363,000 Syrians arrived to Europe applying for asylum, while Afghans counted for more than 178,000. Migrants originating from Kosovo, Albania, Pakistan, Eritrea, Nigeria and Iran also arrived to Europe, seeking the refugee status or simply illegally pushing the continent’s boarders by sea or by land.

An interesting dynamic strategy of the migrants requesting asylum in Europe is that they focus on countries that already have large ethnic minorities, like Spain and France. Spain counts for over 800,000 legal Moroccans, making the North-African nation the second largest foreign community, after Romanians. Moreover, taking into consideration France’s large ex-colonies throughout the world, it is estimated that approximately 12 million now-French citizens come from different ethnic groups (Algerians, Moroccans, Tunisians and Turks) (French National Statistic Institute, 2008).

The European Council on Refugees and Exiles, along with other treaties signed by all EU-28countries, claims that Germany hosted, in 2015 alone, over 800,000 migrants, while France and the UK counted for 650,000. However, not all countries are willing to host refugees for more than three months, claiming they do not have the necessary financial means to provide food, shelter, and professional orientation and counselling for everybody. On the other hand, extremist parties across Europe already started to retaliate against Germany’s policy to shelter and integrate the two million migrants. These parties claim that migrants, in their vast majority coming from Muslim countries, cannot adapt to the culture and customs of Europe and pose a threat to the European population. They do not speak any European language, come from states where gender inequities are high, and are not willing to integrate in the new society. Moreover, many migrants do not seem to want to find a job, but instead choose states with advantageous social policies, such as Germany, Austria, Norway or Sweden.

2. Short term effects of migration in Europe

The latest migration wave from the MENA region to Europe induces important effects on the economy, both on the long term, as well as on the short term. An article published by Rakesh Sharma (2015) counts for three major short-term effects: an increase in social sector spending, an alteration of the local labour market, and an increase in the aggregate demand. Housing estimative up to three million migrants/ refugees by 2017, European countries deal with a significant financial effort.

Continuingly promoting the "Wohlstand für Alle" ("Prosperity for All") politic, Germany represents the country that has put on almost most of the efforts on housing, sheltering, feeding, counseling, and even educating foreigners. Country reports on 2015 show that Germany spent over 21 billion EUR just for sheltering and trying to integrate the refugees in the German society. However, determining small communities to embrace large refugee communities of a different religion proved to be a failed charity lesson, since countless cities across Germany reported that refugees became un-submissive to the local authorities and even violent with the locals, engaging into robberies and assaults. News of the New Year's sexual assaults and robberies in Köln, by Syrian and Pakistani asylum seekers, spread across the world, as the most important publications (including BBC, The Guardian, CNN) talked about the impossibility of many migrants to adjust to European customs and the rules of the country they are now residing in.

Apart from the obviously high social sector spending, host countries also encounter, on the short term, an alteration of their labour markets. As part of the integration politic, host countries might encourage migrants to join the local labour markets. Skilled refugees might end by competing with inhabitants for local jobs and even displacing them, which would lead to a temporary increase in the unemployment sector. However, in the case of countries with aging population (such as Germany, Austria, France, The Netherlands and the Northern countries), migration could increase the number of working-age members of the economy, also determining an increase in the local GDP. Moreover, migrants are willing to apply for jobs that locals usually refuse, which are paid less, and even require a higher risk factor. It is the case of UK, which deals with over 6,6 million migrants from and outside Europe (The Migration Observatory, 2015). Here, migrants are usually taking over the poor sector of the market, with jobs ranging from the fields of constructions to retailing, and cleaning. The UK scenario is relevant to all large European economies swallowing millions of migrants yearly.

The third short-term economic impact of the migrant wave counts for an increase in the aggregate demand. New comers represent potential new markets and services that can revive local economies, and even boost incomes and national GDPs. In order to diminish their home sick and keep in touch with their cultural heritage, migrants and asylum seekers will look for local products, shops, and even churches or schools, which will attract new funds and create new jobs.

However, by looking at the examples of Lebanon or Jordan, both developing countries, the economic short-term effects of a large number of migrants are mainly negative to the local economies. The demands for energy and food supplies have lead to a "disastrous" outcome for Lebanon's economy. As a World Bank report shows, "the influx of Syrian refugees cost the local economy $2.6 billion between 2012 and 2014" (Rakesh Sharma, 2015). An IMF study (June 2014) has also proved that the economic effects of the Syrian civil war on Jordan

have been undeniably negative, especially in the trade balance field. Because of the conflict and the refugees residing in the country, combined exports to Europe and Turkey dropped by 30% in Jordan, while the local inflation increased by 0,6%. Overall immediate economic aspects are rather negative to all developing countries that received a large number of migrants in a short period of time. Another IMF report (January 2016) suggests that, for some EU countries, the expenses managing asylum seekers could increase up to 0.1% of GDP in 2016. However, these figures are theoretical, since there cannot be any precise forecast on the total number of migrants arriving to Europe by the end of the year. Table 1 shows the fiscal burden for the top EU countries receiving migrants and refugees in 2014 – 2016 (first quarter).

Table 1: Fiscal costs for asylum seekers, per EU country, between 2014 and first quarter of 2016

Fiscal Cost of Asylum Seekers, 2014 – 2016			
	2014		**2015**
2016			
Austria	0.08	0.16	0.31
Belgium	0.07	0.09	0.11
Croatia	0.002	0.09	0.11
Cyprus	0.003	0.012	0.012
Denmark	0.24	0.47	0.57
Finland	0.09	0.13	0.37
France	0.05	0.05	0.06
Germany	0.08	0.20	0.35
Greece	n.a.	0.17	n.a.
Hungary	0.0	0.1	0.0
Italy	0.17	0.20	0.24
Luxembourg	0.05	0.09	0.24
Netherlands	0.10	0.18	0.23
Serbia	0.0	0.06	0.1
Spain	0.006	0.006	0.03
Sweden	0.3	0.5	1.0
United Kingdom	0.015	0.016	n.a.
Simple average		0.07	0.14
0.22			
GDP-weighted average		0.08	0.13
0.19			

Source: IMF estimates based on authorities' information in EU countries and/ or other sources. For 2016, the values given are estimated and may vary.

Although the effects of such politics may not be extremely relevant for GDPs on short and medium terms, on long terms, any additional costs could lead to a series of macroeconomic unbalances.
According to the same IMF report, the European Commission is struggling with the migrant crisis by its own, proposing to boost the central resources, specifically destined for refugees in the 2015 – 2016 budget. Thus, the former 1.7 billion EUR, or approximately 0.01% of EU's GDP should reach a staggering 9.2 billion EUR,

or little under 1% of the GDP. The additional required money should consist of relocated resources from other parts of the central budget. The newly-formed budget for refugees should suffice covering the costs that member countries spent for supporting migration, including provisions, counselling and sheltering. In addition, a high amount of money would be paid to extra-communitarian countries, like Turkey, in order to relocate a large number of migrants from EU borders to Turkey and determine all non-Syrian asylum seekers to return to their home countries.

On the other hand, as opposed to the negative short-term effects and the fiscal burden for certain EU countries, the migration wave could lead to a population increase of about 0,15% (IMF, January 2016) in the following year. Since the major population of Europe is aging, this could boost local economies and determine the appearance of new jobs, as more migrants could join the working forces in their adoptive countries. It is estimated that a refugee will take up to two years to become eligible for work in the European space (three in Germany), giving already certain communication and cooperation skills. Since the vast majority of migrants consists of youngsters, this could mean that Europe will see a shortage in its unemployment rate, as migrants are more willing to take lower-paid jobs at the beginning. However, migrants will start contributing to their host country's GDP only a few years after their permanent establishment. In the years immediately after their arrival (thus, on short term), migrants are less likely to obtain a job, resulting in a high unemployment rate among them. As they accumulate more information about their new hosting country and learn the language, they will actively participate in the economic field, by picking up jobs natives would originally consider turning down. Discrimination could still apply, especially for female migrants and refugees coming from an Eastern culture, which may lead to significant gaps on earning and employment rate between migrants and natives.

This adds to the fact that, on average, asylum seekers from the current migration wave, especially originated from Iraq, Afghanistan, Syria, Somalia, former Yugoslavia or Eritrea, are less educated than the natives, and even than other immigrants. With only a secondary degree and almost no college degree, migrants from these areas are less likely to smoothly integrate in their new society and become active members of it. This statement is also proven by an OECD research (2015), showing that the unemployment gap between immigrants and natives is of 10% or more in countries like Spain, Greece or Belgium. On a similar note, in Europe's biggest economies like France or Germany, there is also a significant educational gap between the children of natives and those of immigrants, which could perpetuate future long-term unemployment rates, and even cause dissensions.

Whatever the case, Piketty (2013) considers that the current migration crisis Europe is confronting with represents "an opportunity [...] to jump-start the continent's economy".

3. Long term effects of migration in Europe

On the long run, most economists and policy makers consider migrants may produce large financial benefits for the host countries. Investment opportunities, new products and an entirely new market sector represent the most appealing economic side effects of opening the boarders and welcoming refugees, asylum

seekers and migrants. Obviously, the most challenging part is to help newcomers to integrate in the economic circuit and become productive for their house countries. Germany, the top destination for thousands of migrants takes up to three years before allowing migrants to seek for a job and become active members of the community, meanwhile the state must provide shelter, food supplies, medical care, counselling and trainings. According to Robert Meyer, marketing professor at Wharton, there are two types of people found in almost all migration waves across the world. The highly skilled migrants usually count for the economic type of migration, allowing educated and valued individuals to seek better remuneration in Western countries. On the other side of the tunnel, one can find the "opportunity seeker" migrants, the humanitarian migrants and the ones who are not sufficiently trained to prosper in a capitalist economy. The latter have little to no education and, as previously noted, are willing to take up any jobs and opportunities encountered, thus not representing a menace for country natives in terms of labour. By mixing these two highly distinctive migrant communities, the long term effects of migration will be positive for home countries, as the first category will determine market competition and give valuable, highly trained professionals, while the latter category will opt for low-key jobs, with minimum to medium wages, not posing a threat to the educated natives who are striving for medium to high annual incomes.

On the other hand, according to the same IMF 2015 report refugee surge in Europe, immigration could affect "the use of fiscal resources by natives" (p. 27). On the short term, allowing migrants to enter the working field could cause a rise in the unemployment rate, as the home economy is not ready to receive so many new workers on the market. Moreover, highly educated migrants could take over of some of the "native" jobs, causing natives' unemployment rate, and thus, a wage lowering. Furthermore, this wage lowering will be translated into fewer economies, which could affect commercial bank policies, by forcing banks to lower their interest rates in order to encourage consumption and savings.

The so-called "welfare shopping" represents a concept many migrants from the current wave are seeking in Europe. Migrants specifically target countries with generous benefit systems, which can allow them to live a rather decent living without contributing too much to the local economy. Again, one of the most "generous" countries in Europe is Germany, without a doubt the country with the most asylum requests on the continent. Here, migrants are not allowed to work until after three years and even after, if they find a job, they will be taxed as all other migrants in the society, meaning less than natives. Moreover, if migrants lose their jobs, they are subject of further welfare benefits, determining, yet again, a lower fiscal contribution to the state and a possible diminish in the country's GDP.

In order to discuss the net fiscal impact of migrants, it is crucial to take a glimpse of their age-structure. Young and old migrants have a smaller net contribution to the state, while mid-age active migrant population offers more net contributions to the budget. However, this new migration wave showed an incredible amount of youngsters taking the Western route, as opposed to elders or women. An UN Women report (2016) claimed incredible gender disparities in the over one million refugees and asylum seekers. Out of these, approximately 25% are children and toddlers, while only 17% are women, leading to an overall male exodus of 58%. This gender disparity could be helpful for Europe's aging population and decreasing number in the active population, since most of the

refugee men are over 18 and ready to work. On the other hand, cultural barriers and language misunderstanding leads to little to none migrant integration in the working field until after three years from their first arrival.

Another important aspect is that women are highly unrepresented in this current migrant wave. Counting around 170,000, female representatives are even less likely to easily integrate within the new housing country as they possess little communication skills, and are often under the influence of their group's male leader. Moreover, since the vast majority of refugees and asylum seekers are of Muslim religion, women have, often by default, a diminished role in the society and are deprived of education and, therefore, the possibility to join the market labour force. As a result, housing countries have to provide long-term welfare benefits and spend additional amounts of money for training courses for those willing to integrate in a Western society.

Last, but not least, different types of migrants share different types of privileges in selected Western countries. Apart from the regular intra-communitarian migrants, exclusively relocating for better paid jobs, humanitarian migrants have yet to be statuary defined by the societies. Each status comes with its own perks and downsides, including work permits, employment conditions, wages, access to welfare and public services, or permanent settlement chances. This results in a scruffy, continuously updating policy plan and budget which could lead to extra costs throughout the years. In addition, the already one million-plus migrants seeking for a better life in Europe may even apply, in the following years, for a family reunification programme, which could determine an increase in the already high number of asylum seekers.

4. Security risks

With imminent terrorist menaces such as the Islamic State or Boko Haram, the current migration wave coming from the MENA region raises serious security problems for European inhabitants. Over one million other migrants are expected to reach Europe by the end of 2016, out of which nearly 320,000 will lead straight away to Germany. Around 40% of the asylum seekers come from the hot spots of conflict, Syria, Iraq, Afghanistan, Nigeria and Pakistan. The population exodus coming from Turkey to Greece and, then, spreading towards Western and Northern countries has already damaged the image of numerous EU countries, creating divergences among policy makers. Many countries have already shut down their borders (including Hungary and Serbia), which could determine migrants to seek for alternative routes to reach countries in the West. Many governments impugn the migrants' easiness to request for asylum and apply for a refugee status. According to international regulations, a person is entitled to become a refugee and ask for asylum in the immediate vicinity of his/ her home conflict zone, whereas the vast majority of asylum seekers come from Asian and Northern African countries. Meanwhile, the wealthy Gulf relatives such as Qatar, Kuwait, Saudi Arabia and Bahrain refuse to accept Syrian refugees, forcing them to seek shelter in countries with more permissive legislatives. Under these circumstances, one is entitled to ask for the real reasons why countries with similar cultural and historical background are shutting down people fleeing away from war zones.

The clash of civilisations between the Eastern, Muslim world and the Western, European model seems to be at its peak with thousands of migrants arriving into Europe, but still holding on to their home mentalities in terms of gender equality,

state aid and job opportunities. With conflicts deepening by the day between European natives and refugees, Muslim by majority, it comes as no surprise why religious radicalism allures more adepts daily. What is more important, it seems that Europe is not only confronting with serious security issues when it comes to the current migrants, but also has problems with its own citizens, descendants of former migrants, currently at their second – third generation in Europe. Radicalism seems to have taken over Europe, with recent terrorist attacks from Paris, Brussels or Ankara, proving that terrorist cells are planning a long-term staying on the continent.

On a recent briefing media (The Guardian, 2016), NATO's top commander, Philip Breedlove, claims that current refugees are susceptible to ISIS' hunting for sympathisers across Europe. Adding to the fact that ISIS already threatened, in 2015, to flood Europe with over 500,000 refugees as a "psychological weapon" (Dailymail; Independent), the NATO commander's claims seems to fuel security uncertainties across the continent. President Obama already announced that the United States is ready to accept 10,000 Syrian refugees in 2016, while Australia and Canada openly agreed to receive refugees and integrate them. However, few of them are considering the option of travelling over the Atlantic, maintaining Germany as their primary option when escaping from their civil wars at home. Since ISIS continues to spread across the Middle East boarders and take over new cities rapidly (Brisard; Martinez, 2014), more and more people are afraid that refugees only represent the perfect way to mask terrorists and send them freely to settle in an overly permissive Europe.

More and more politicians abroad consider that the recent terrorist attacks spree in Europe is the result of a terrorist menace coming from outside the continent's borders, and is most likely going to intensify in the following years with the migration flood. However, as tempting as it may be to blame the foreigners, the vast majority of terrorist attacks within Europe in the last years have preponderantly come from inside the continent, from Europe's own citizens, converted to radical Islam and being linked to deadly terrorist groups like Al-Qaeda or the more recent Islamic State. The racial hatred is most likely going to grow even more inside European boarders, with large Muslim communities from Germany, France, Spain or Belgium only having to suffer from isolation, alienation, and even possible future racist policies that will discourage and reduce to the minimum their involvement in the social life. The shy policy conducted now by Western states to offer Turkey financial aid to send back all non-Syrian refugees will not determine terrorist to pack their bags and swim back to the MENA conflict zones, but will only show how little Europe is really prepared to efficiently fight against terrorism. By sending away all asylum seekers and shutting down the boarders the European Union could diminish its financial costs, but will not fight against the terrorism flagellum.

International organisations like United Nations High Commissionaire on Refugees systematically fail to give supporting solutions to the problems, and to help migrants integrate in new societies, meaning that the ultimate solution seekers remain the most influent policy makers in Europe. Defending human rights in a continent that is most likely to become a conflict hot spot in the next years seems like the last concern of those who see the refugees as the ones responsible for bringing terrorism in Europe. Thus, instead of banning foreigners to enter it, Europe should rather look on its own citizens and ban their access to jihadist preachers and prevent them from travelling to war zones where they could easily

enrol in terrorist groups. Sure, there is no certainty that among the chaos created by the migration flow terrorist groups are not sending their own representatives, but the true danger lies within Europe's own citizens rather than a myth-fuelled shadow coming from Islam and claiming a worldwide caliphate.

5. Conclusions

The refugee crisis represents, without a doubt, the most challenging problem Europe had to face in the last two decades. Humanitarianly speaking, refugees fleeing from their war zone homes should be allowed to start a new life away from the danger, in a safe environment, and should be helped by those in power. However, it seems that European countries, alongside Canada, the US and Australia represent the only powers willing to take on such a responsibility, while the wealthiest countries in the Middle East, with strikingly similar culture and history and religious heritage turn away their backs on their own people. Economically speaking, Europe is facing a possibility of over two million refugees entering its borders until the end of 2016, which highly impacts national budgets, confusing all economic sectors. Short-term effects could be disastrous to European developing economies and seriously concerning for stable economies such as Germany, Austria, Sweden or Finland. Long term effects will most likely impact the population dynamic, boosting Europe's aging population, determining the appearance of new economic sectors, investments and consumers, as well as a considerable increase in the labour active population. Adding up, European countries willing to receive a high amount of asylum seekers from the Middle East will most likely amortise the costs of sheltering and caring after them in a long term, while having to face costs of up to 20 billion EUR per year on the short term.

However, apart from the obvious economic implications, the social implications of the new refugee wave seem far more dramatic. Europe already faces imminent terrorist menaces and receiving another million Islam practicing people could shake up the already existing dissensions between various European religious confessions. A nation majorly built on Christian beliefs seems impossible to understand the Islamic world of most asylum seekers where human rights and gender equality are not thoroughly respected. The conflict bubble already exists in the large European capitals like Madrid, Berlin, Brussels or Paris where Muslim communities exist, but to add the pressure of nearly other two million people of the same confessions seems too hard to handle for extremist parties in Europe, as well as for ordinary citizens who feel threatened.

Last, but not least, Europe fears for the safety of its own citizens, trembling in the face of new terrorism rage casted by jihadists. Shutting down boarders will not solve the problem, but nearly ban foreigners to establish within the continent for a short period of time. European leaders should find real solutions for the terrorism spread and prevent its citizens from being allured into radical groups.

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THE DECREASE OF THE WORLD CRISIS EFFECTS ON THE BUSINESS ENVIRONMENT

Camelia – Elena Ivan
Academia de Studii Economice din Bucuresti, Romania
Economie si Afaceri Internationale
ivan.cameliaelena@gmail.com

The current economic crisis has abolished temporary solutions that have dominated the world economy since mid 1980s. Profits were not created by production but by movement and change. Laissez-faire market fundamentalistsof the last 20 years have failed the test of reality. Financial deregulation created the premises for the accumulation of risky positions which have pushed the global economy into a debt deflation that can only be countered by government debt inflation.. Based on this observation, the present paper reviews some aspects of the relationship between the economic and financial crisis and the global economy. These issues consist of analyzing the impact of the global crisis on the global economy and in particular on the EU economy and implicitly on that of Romania and also the economic signals of the mitigation of the effects of the crisis on the business environment. The economic crisis has surprised the European Union member states in full construction of the welfare state. Under these conditions, most of the EU countries have launched anti-crisis measures with short-term effects. The measures to stimulate the economy have consisted of an increase of public spending with the aim of preserving existing jobs and creating new ones. The total impact of the financial crisis is still hard to predict. As the largest financial crisis since the Second World War, there is currently a great uncertainty considering high risks of falling. The European Union Member States will be affected differently depending on their exposure to influences from the outside, the specific characteristics of the country and the needs of the population. This study highlights the impact of the global crisis on the EU economy in general and on that of Romania in particular, the effects of economic recovery measures adopted by the European Commission and the Governments of the member countries of the European Union, and the first signs of economic recovery, both at EU level and the Romanian economy level. It was concluded that there are good chances for breaking the current economic order. The shape of the future economic policy will depend more on the vision of the managers than on the influence of the so-called objective factors. What will replace it will not only depend on the "objective" circumstances, but also on the ability of those left to implement their own views on an economy based more on need than on profit to replace the financially determined accumulation over the last twenty years.

Keyword: economic crisis, economic recession, economic recovery

JEL classification: E23, E32, E65

The impact of the global crisis on the global economy

In the tenth decade of the twentieth century and the first decade of the twenty-first century, the cyclic and non-cyclic crises which affected the international trade and the world economy increased, the peak of the crisis being first recorded in the US, by the housing crisis which began in 2006, later exported to Europe starting with

the year 2008.
When speaking of the global crisis we take into consideration two types of crises: financial and economic. The financial crisis is the functioning of the banks, the access to credit, the re-crediting and the economic crisis comes under the stagnation or the falling of the industrial production, services, exports. Without access to credit and foreign investment, the financial crisis has turned into an economic crisis, the industry, the services, the exports, the imports have begun to decline in most European countries.
The current economic crisis has abolished the temporary solutions that had dominated the world economy since the mid 1980s. Profits were not created by production but by movement and change. Laissez-faire market[2] fundamentalists of the last 20 years have failed the test of reality. Financial deregulation have created the premises for the accumulation of risky positions which have pushed the global economy into a debt deflation that can only be countered by government debt inflation.
The world economic crisis has surprised the EU states in full construction of a welfare within the Union. Large budget deficits and exacerbated public debt have laid the groundwork for the installation and the spread of the crisis. The need to counter them have prompted the European officials to adopt policies of budgetary austerity and to implement measures to stimulate the economy. For this purpose, most of the EU countries have set themselves on anti-crisis measures with short-term effects, the main aim being rather to reduce budget deficits than to implement sweeping reforms. The measures to stimulate the economy have consisted in adopting programs of "investment", in fact public spending geared towards strategic areas aimed at enabling the preservation of jobs or the creation of new ones.
In what concerns the economic agents, the economic crisis has manifested itself through collective redundancies, closure of business units, wage cuts and increasing of the retirement age and increasing of taxes such as VAT.
The financial crisis triggered in the US and which has affected most of the world countries is the direct effect of the fact that no progress has been made in the sense of equalizing economic conditions in the functioning of the international financial system. According to John Bari, the international financial system "represents the backbone of the economic development of all the nations"[3].
The financial and capital market globalization is a very controversial process mainly due to repeated financial crises that had shaken the world economy culminating in the actual financial crisis which broke out in 2000 in the United States. The repeated financial crises generated losses to the entire world economy because given the liberalization and increasing interdependence among nations, hence the external vulnerability, "the phenomenon of the crises contagion through various transmission channels (international trade, exchange rates, foreign direct or capital investment , political links , economic crime, etc.)

[2] Laissez-faire is an economic system in which transactions between private parties are free from government interference such as regulations, privileges, tariffs, and subsidies.
[3] Bari Ioan (2003) 'Contemporary Global Issues' Editura Economică, Bucureşti, 2003, pag. 110

increased"[4].
While anticipating events is difficult at any level of probability, it seems that the injections of funds made so far have recovered to some extent the stability of the banking system. Although the housing boom in the US and a number of European countries has proved to be a speculative bubble, it did not end up in loans so large as to shut down the financial system of industrialized countries. It should also be kept in mind that if mortgages are not paid in full the homes on which they were committed are not totally worthless.
In assessing the costs of stabilization we have to pay attention to the baseline values as were the 700 billion dollars attached to US guarantees. The guarantees include three different types of expenses. Firstly, there is a direct financial assistance of banks. This is a real cost. Secondly, there are guarantees on loans. These are real costs only if the loans made henceforth are not returned. These are measures to increase confidence and they are not expected to bring significant current expenditures. Thirdly, there is a direct government loan to ensure the flow of money in the financial markets. It will become a real cost if interest rates on loans are unrealistically low or if the loans are not returned.

The impact of the global crisis on the Romanian economy
Regarding the effects of the crisis on the Romanian enterprises, they are found to have been seriously affected by the measures imposed, such as the introduction of the flat tax, the VAT increase, which resulted in the freezing of the activity of many companies, the bankruptcy of others or the entry into the insolvency proceeding and / or the reorganization procedure, the voluntary closure of companies, the rising unemployment, the lower living standards, the decreasing of supply and demand, the decrease of consumption, the decreased public confidence in the anti-crisis measures proposed and approved by the Government, the decrease of economic productivity.
In Romania, in two years of crisis (2009 -2010), it is estimated that there were 200,000 companies which closed down, over 300,000 people were laid off, the wages in the public sector were reduced by 25% and the VAT increased from 19% to 24%. Other 200,000 companies ceased operations and the phenomenon of illegal payments to employees exploded during the crisis. The changing of the Labour Code in 2011, through the implementation of strong measures to sanction operators that use labor unregistered at the Territorial Labour Inspectorate (including prison) led to the establishment in the first three months of application of no less than 480,000 jobs.
The global economic downturn affected all Romanian companies, from the largest to the smallest. Moreover, access to funds that banks could have provided to the business environment was locked by the state. Basically, through the Ministry of Finance which borrowed from private banks almost all the money supply in the market in order to pay public sector salaries and pensions, the Government blocked the national economy indirectly. Thousands of companies across the country waited for an unreasonable long time the VAT refunds to which they were entitled and which the IRS was delaying to carry out, exceeding the deadline months in a row. Instead, for every invoice issued, but not received, the state still

[4] Bari Ioan (2003) 'Contemporary Global Issues' Editura Economică, Bucureşti, 2003, pag. 111

obliged companies to pay VAT, decapitalizing them and pushing them into bankruptcy. The establishment of the flat tax, which was to be paid even by companies that did not report profit determined 120.509 companies to suspend their activity in 2009.
At national level, we can talk about the internal and external factors influence on financial indicators of the year 2009, as follows:

- The depreciation of the national currency; it equaled or even exceeded in size the substantial discounts of the largest car sellers that displayed promotional prices and 30-40% discounts;
- The transactions of new cars registered a significant recoil; the decreases of volumes were 50% or even 60% over the same period last year, some car dealers being forced to close their showrooms and lay off some employees.
- The level of Romanians' real income was also affected by national currency depreciation: those who had rates to pay felt the strongest currency shock. The amounts to be paid were not to be neglected anymore, the rates increasing from quarter to quarter even by 30%, while nominal incomes remained flat or even declined in terms of rising unemployment. This could only lead to arrears and overdue, liquidity problems in the short term, the growth of terminated leases, a flood of requests to reschedule payment obligations.

The global crisis had an impact on the international trade of Romania influencing the two processes: the imports and the exports. The need to reduce the trade deficit and the decline in domestic demand led to a substantial reduction of imports, the decreases being recorded both in relation to the EU member states and to countries outside the EU. And the export volume decreased as a result of lower demand in the economic downturn context, taking into account the impact of the currency depreciation.
In Romania, according to statistics (Eurostat http://epp.eurostat.ec.europa.eu/, balance of payments, central bank statistics, http: //www.bnro.ro/Balanta-de-plati), the goods and services trade was in decline during the peak of the crisis (2009), being in line with economic developments.
Tabel 1

The evolution of the services balance and the trade balance in EU countries

1000 mil. EUR

EU average	Period (years)					
	2006	2007	2008	2009	2010	2011
Services Balance	71	87	71,3	67,2	85,4	109,1
Goods Balance	-163,3	-154,9	-222,5	-85,7	-127,8	-140,7

Source: date Eurostat, http://epp.eurostat.ec.europa.eu, 20.12.2012, Code: tec00044; 20.12.2012,
Cod: tec00045, http://epp.eurostat.ec.europa.eu/
In the goods sector, the values have increased starting 2010, in 2011 the increase recovering the fall of 2009, in full (at the import), and going beyond it at the export.

As for services, the decline continued in 2010 as well, the revival starting with the year 2011, but without reaching the value of 2008, neither at export or import. It is noteworthy that, consistently, the trade balance in the goods sector was weak, the deficit decreasing in the years 2009-2011 by lowering the import under the effect of reducing the consumption during the crisis, but also by restrictive lending conditions.
The service trade balance was constantly overabundant, with only the exception of 2009.
It can be seen that the resumption of the flow of services was inferior of that in the goods sector and with a delay of one year (2011 as opposed to 2010).
Continuing a negative rate of services trade in 2010 as well meant the restricting of the services share in Romanian exports; hence the services export represented only 17.6% of the exports of goods in 2010 and 16,2% in 2011 as opposed to 25.8% in 2008. As such, the volume and value dynamics of the international services trade of Romania express the strong impact of the global financial and economic crisis in the years 2009 and 2010, the recovery in the year 2011, failing to recover the decline from 2009 and 2010.
Because of its extraordinary character, it is very difficult to estimate how deep the financial crisis will be, how long it will last or what negative effects it will have on the real economy. This forecast is based on the assumption that the functioning of the financial markets will gradually recover in the coming months and that the negative effects of the crisis on the financial sector and the economy will persist over a long period of time. The european business environment will certainly be marked by the economic crisis and some of the most predictable impacts will be on the political, economic, social factors and the business ethics.
The total impact of the financial crisis is still hard to predict. As being the greatest financial crisis since the Second World War, there currently is a great uncertainty considering high risks of falling. EU Member States will be affected differently depending on their exposure to outside influences, the specific characteristics of the country and the needs of the population.

The decrease of the effects of the world crisis on the business environment
In the context of unsafe global conditions, the economic recovery is becoming more and more dependent on domestic demand. The latest economic forecasts confirm that the EU has been having a moderate recovery in the context of low oil prices and very flexible monetary policy. In the years 2015 and 2016, it is expected that the economic activity in the EU should increase at 1.9% and, respectively, 2.0%, after an increase of 1.4% in 2014. In the euro area, in 2014, 2015 and respectively 2016 the growth rates of real GDP correspond to a level of 0.9%, 1.6% and 1.8% respectively. Although the consumption has recently strengthened, domestic demand remains modest, partly due to significant pressure related to deleveraging in several Member States. This is reflected in the low rate of inflation and in the current account surplus increase of the euro area, which is expected to grow again in 2015, also amid a decline in oil prices since mid-2014 and the lower exchange rate of the euro[5].

[5] Commission of the European Communities, Communication from the Commission to the Council and the European Parliamente, Bruxelles, 26.11.2015
http://ec.europa.eu/europe2020/pdf/2016/ags2016_alert_mechanism_report_ro.pdf

The European Union has more than 20 million SMEs and about 50 000 large firms. Although in 2014, the business climate for the SMEs improved, it is still at an appreciable difference in relation to the situation before the crisis. The evolution of the business climate for the SMEs - determined by the UEAPME (The European Association of Craft, Small and Medium Enterprises) is enlightening in this regard.

The European Union recorded a positive trend in 2014 as opposed to 2013. However, the production levels and the employment of human resources have not reached pre-crisis levels. Notable in this regard is the situation in the EU's manufacturing industry, with a decisive role in the evolution of the European economy.

In this respect, Business Europe - the European Employers' Association - considers that the European Union is losing its competitiveness. The main causes that generate this situation are:

• The overall level of taxation with a share of GDP, which is higher by 50% compared to the US and 30% to Japan;

• The average level of taxation of low income is 40% higher than in the US and Japan;

• The administrative requirements for starting a business are 3 times larger than those of the US and other developed countries outside the EU, which is reflected in higher consumption of time and money;

• The energy prices in the EU are too high; for example, electricity prices in the EU are twice higher than those in the US and Russia, and 20% higher compared to those in China;

• The gap between the EU and its competitors, in the research and development field, amplifies, the intensity of these expenditures in the GDP being lower than that in the US, Japan and South Korea;

• The performances of the educational and training system in the EU are lower than those of its top 10 competitors, which progress more quickly;

• The access to funding is restricted, the bank loan volume of the EU companies falling on average by 10% in 2013 as opposed to 2012.

Romania is an EU member, with a high degree of integration within it, and as a result, the business environment in Romania and its performances are in a considerable degree subject to the status of the business environment, events and performances of the European Union.

The year 2014 was marked by a return of the Romanian business environment. According to the National Trade Register Office (NTC) in the first five months of this year, the number of companies that became insolvent was decreased by 13.47% compared to the same interval in 2013 at 11.030 companies.

In 2014, 7531 companies were dissolved, with 26.29% less than in the year 2013 and 7546 companies have suspended operations, down by 29.49%.

Although in figures things seem to be heading towards the better, business people are still skeptical, and the years of crisis have placed a significant impact on the way in which they make decisions and act in the context of concluding commercial transactions. It must not be forgotten that between the baseline recovery moment of the economy and that when the entrepreneurs resume to invest and trust in future developments at least 18 months of sustainable financial results of their companies must pass. Or, if many Romanian companies have increased their turnover in 2014, the profitability has not yet improved for most, mainly due to the difficulties of the bill collection from business partners.

The increase of the Romanian economy in 2014-2015 helped to recover the decreases recorded in the period 2009 - 2010 and to a slight recovery of the gaps existing between Romania and the EU Member States. These increases have also helped to improve fiscal policies starting with the year 2016, which is expected to be a bubble of oxygen to all economic sectors and especially for the business environment.

Conclusion

The current crisis has been one of the most significant international events since the mid 1970s and 1980s. The created economic order following a turbulent decade is about to fall apart. What will replace it will not only depend on the "objective" circumstances, but also on the ability of those left to implement their own views on an economy based more on need than on profit to replace the financially determined accumulation over the last twenty years.

AN ANALYSIS ON CHINA'S ECONOMICAL GROWTH PERSPECTIVES

Larisa Luchian (Mocanu), Irina Ionescu
PhD Students, Economics, Alexandru Ioan Cuza University of Iași, Romania
luchian_larisa@yahoo.com
Jarulzica@yahoo.com

Abstract: *The current paper aims to give an overview upon the evolution of the Chinese economical growth over the past two decades. By combining two types of analyses, the paper would also like to look on China's economical growth perspectives in the past two decades. Thus, in the first part of our study we illustrate the results of a descriptive, critical, subjective and qualitative analyses on the main macroeconomic indexes used in determining the economic performance of a country (GDP, GDP per capita, imports and exports). The second part of the paper consists of a quantitative analysis of China's economical growth, which combines the results of a time series econometric modulation for the GDP macroeconomic variable, and the resulted forecast based on the previously determined pattern. We based our study on a period of time dating from 1990 to 2014, suggesting that China registered a positive evolution both in terms of GDP and GDP per capita, as well as in terms of commercial exchanges, as a result of an economic reform gradually applied. Moreover, in order to determine China's position within the current hierarchy of power centers, the G7 states (USA, Japan, Great Britain, France, Germany, Canada and Italy) were also introduced in the analysis. In terms of GDP, the United States was an absolute global leader until 2014 when it was outrun by China. As for the quantitative analysis, the period of time taken into consideration was also between the first trimester of 1990 and the third trimester of 2014, the observed values having a trimestral frequency. The final part of the study shows the results of the GDP forecast based on the previously determined ARMA pattern, as well as the forecasts given by the main international organizations (IMF and OECD), claiming China's worldwide supremacy in terms of GDP, both on a short term (until 2020 - IMF), as well as on a long term and a very long term (until 2045, when Canada will swipe first places - OECD). The main conclusions which can be drawn by this study claim that, despite the slowing down of the GDP increase rate, China became a worldwide leader. Nonetheless, in order for China to keep its status, it must continue its ascending path from the past few decades and reorient to improve its global competitiveness and to ensure its economic sustainability.*

Keywords: economical growth, economic performances, Gross Domestic Product, Gross Domestic Product per capita, forecast.

JEL classification: C51; F63; N15

1. Introduction

Since the beginning of its economic reform in 1978, the Chinese economy envisioned remarcable growing rates. During the past three decades (1978 – 2007), China's annual increasing rate of GDP per capita rose, on average, with 8.6 percentage points annually (Ding and Knight, 2008). For a country of China's demographic dimensions, consisting of a fifth of the world's population, this represented an unexpected and without precedent progress.

The literature in the field offers a wide variety of studies and empirical analyses on China's economic performance, presenting different approaches of its economic increase. Thus, we identified three potential empirical approaches: the mathematical definition of the increase, the modulation of the structural increase, and the informal increase regression. Unlike the first two, the third approach allows introducing certain explanatory variables of the economical growth's fundaments, as well as the future determining factors. However, we did not encounter any explicit theoretical frame to coordinate the empirical studies regarding the economic performance of a country.

Ever since the classic ages, the economical growth patterns were of great interest for many renowned economists. Keynes's patterns, as well as their direct descending – the neo-keynessists – claim that, in order to maintain a stable economy, one requires the use of macroeconomic policies and the direct intervention of the state to ensure balance and stimulate the economic growth. On the opposite pole one encounters the neoclassical patterns, claiming that the steadiness of an economy will determine an implicit balance.

One of the most capitalized patterns of economic growth found in the empirical analyses is the neoclassic one developed by Solow-Swan (Moroianu, 2012). This pattern takes into consideration the increase of productivity, whereas the newly built capital is more valuable than the old one due to technological improvements. This economic growth pattern shows in which way the increase of the saving rate, the increase of population and technological progress can influence the economic performances of a country, in a given period of time.

Based on this particular growing pattern, authors such as Chen and Fleisher (1996), or Li (et al, 1998), illustrate that the rhythm of China's economical growth in the past three decades determined a different increase of GDP per capita rates, based on the country's regions. Thus, in geographical regions where the population's increase rate was lower, the GDP per capita increasing rate was bigger, and vice versa. This is why the increasing investments in physical and human capital represented the key of the country's economical growth and its external opening point.

Based on a co-integration Pedroni test of the Arellano-Bond estimator, Yao (2006) reviewed the impact of exports and foreign direct investments on the economic growing rate between 1978 and 2000. This establishes the existence of certain simultaneous relations between foreign direct investments and the GDP growing rate, as well as between exports and GDP, mentioning that the interaction of these three elements leads to a vicious circle, with positive outcomes regarding China's opening grade and economical growth. Thus, the results of his analysis indicate that both exports and foreign direct investments significantly contribute to improving China's economic performances.

Démurger (2001) evaluated the relation between the infrastructure's development rate and China's economical growth based on the method of smallest squares in two stages and on a fix effects pattern, concluding that reduced levels of transport and telecommunications infrastructural developments negatively impact China's economic performances.

Analyzing the impact of the financial sector's development on China's economical

growth between 1985 and 1999, Hao (2006) claims that loans' spread negatively affects the economical growth if they are not awarded based on commercial criteria. This idea is poached and polished by Guariglia and Poncet (2006), who demonstrated that financial distortions represented a hindrance in terms of the Chinese economical growth between 1989 and 2003. The side effects of these financial distortions gradually diminished as a result of the progressive reforms applied in the banking system ever since China became a full member of World Trade Organization, in 2001. The same authors consider that a significant role in reducing the negative effects of an adverse financial sector is offered to the foreign direct investments.

2. Macroeconomic indexes used in determining China's economical performances

In order to assay to determine China's economical performance in the past three decades, we opted for choosing a series of indexes such as GDP, GDP per capita, exports and imports, these four being the most suggestive in appreciating a country's economical growth.

Although we intended to capture the evolution of these indexes starting with the year of 1978, the period of time offering full available data is between 1999 and 2014. The data was processed from the World Bank's registers and has an annual frequency. Based on the data obtained we created a graph regarding the evolution of these two indicators between 1990 and 2014, by using Eviews 7.

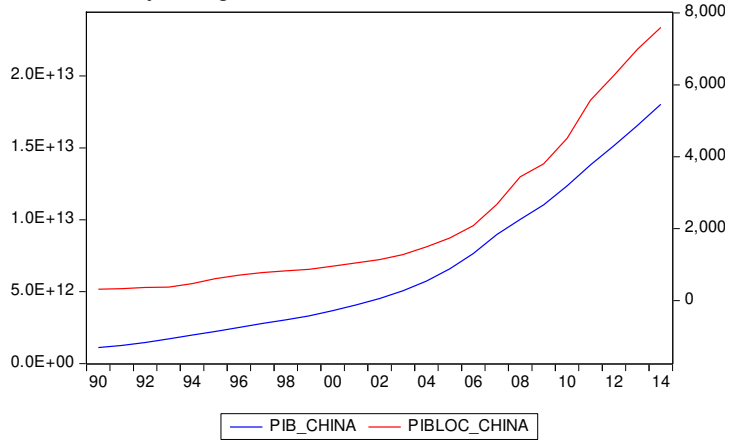


Figure 1. China's GDP and GDP per capita evolution between 1990 and 2014
Source: authors' representation in the Eviews program, based on data collected from World Bank Indicators

Figure 1 shows an ascendant evolution for China both in terms of GDP, as well as GDP per capita, between 1990 and 2014. Between 1990 and 2002 the growing rhythm is steady and somewhat reduced in comparison with the 2004 – 2014 period of time. This is due to gradually applying economical reforms. As of 2004, the economical growth rhythm increased, the trend being suggested by a growing ascent.

In order to bring into prominence China's economic evolution in comparison with other analyzed states (USA, Great Britain, France, Germany, Canada and Italy), the authors also capitalized on the data offered by World Bank, for the 1990 – 2014 period of time.

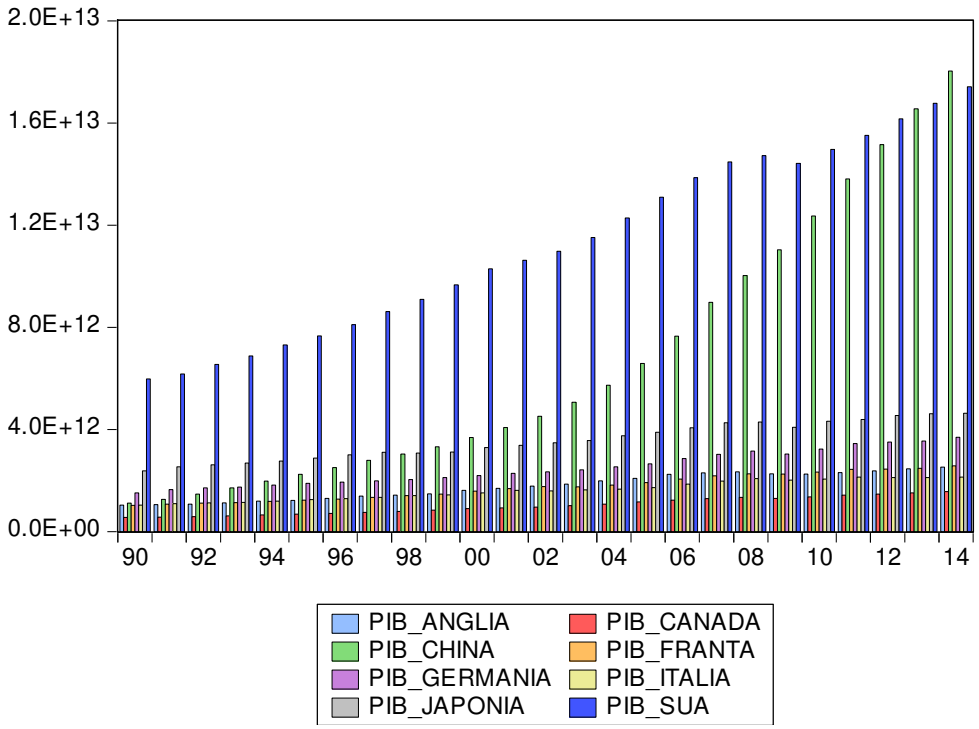


Figure 2. GDP evolution and G7 states, during 1990 – 2014
Source: authors' representation in the Eviews program, based on data collected from World Bank Indicators

The aforementioned representation stresses the major discrepancies between the United States and China on the one hand, and England, Germany, Japan, Canada, France and Italy, on the other hand. Judging by its GDP, the United States was an absolute worldwide leader until 2014. The following year brought China for the first time on the top of the international classification of states, based on their GDPs. Japan scored the second place after US, during 1990 – 1998, surpassed by China in 1999. Looking inside the old continent, Germany scored, throughout the analyzed period of time, the highest GDP rates, becoming an absolute European Union leader. Canada was G7's country which scored the lowest GDP values.

The following image illustrates the evolution of China's commercial trades, during 1990 – 2014.

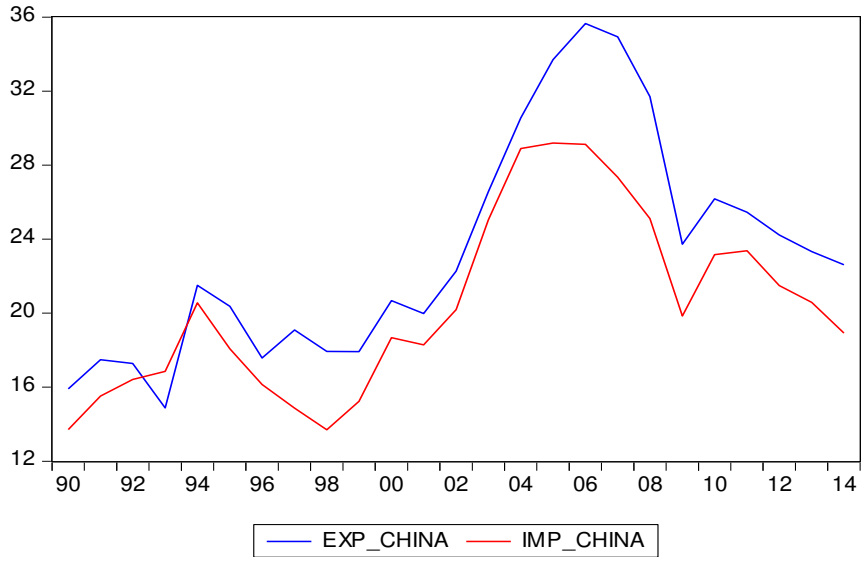


Figure 3. China's imports and exports evolution, during 1990 – 2014
Source: authors' representation in the Eviews program, based on data collected from World Bank Indicators

The third figure illustrates that, apart the period between 1992 and 1994, when the balance of commerce was adverse, China's exports outcome its imports, resulting in a glut in terms of the trading balance. The time between 2002 and 2007 is characterized by a remarkable increase, both in terms of exports, as well as of imports. 2008 is marked by a sudden drop of commercial trades, as a result of the worldwide financial crisis. Nevertheless, China's trade balance remains superfluous. After the 2008 mark, China's trade balance was fluctuant, with periods of increase and decrease.

3. A quantitative analysis on China's economical growth perspectives

The purpose of this section is to present the results of econometric modulation of the time series for the GDP macroeconomic variable, in terms of China's economy. Because this is an un-steady time series, we used several statistic tests in order to turn it into a stationary series. After applying the tests, this time series turned into a stationary one and 1st degree integrated. Thus, in order to determine the ARMA pattern, we used the Box-Jenkins procedure.

3.1. China's GDP modulation

In order to create a time series, we used the GDP macroeconomic variable, between the first trimester of 1990 and the third trimester of 2014. The values of this time series were observed using a similar, quarterly frequency. The GDP variable values are random, thus we can consider the GDP being a random variable. All in all we can admit that the GDP represents a stochastic process, and that the actual observed values between 1990 and 2014 represent particular accomplishments of the process.

3.1.1. Testing the GDP's steadiness

The graphic representation of China's GDP, presented in Table 1, indicates that the GDP presents a heaping tendency, with a lower inclination in the first part of the analyzed period of time, and an increasing inclination in the second part of the time period. After interpreting this graphic representation, one can affirm that the variable presents a determinist trend, thus it is not stationary or steady. In order to confirm the prediction in a graphic way, we appealed to a numeric analysis. We used the ADF and PP tests to test the steadiness of the GDP.

Table 1. Testing China's GDP steadiness, 1990 – 2014, using ADF and PP tests

	Constant pattern	Constant and trend pattern	Pattern without constant and trend
ADF	1,051242 (0,9957)	-0,956197 (0,9292)	0,931527 (0,9005)
Akaike	54.02948	**53.89190**	54.03411
Schwarz	54.17758	54.19034	**54.13285**
PP	9,641661 (1,0000)	1,712351 (1,0000)	16,53894 (1,0000)
Akaike	54.52832	**54.31915**	54.62711
Schwarz	54.62649	**54.46641**	54.67620

Source: Results obtained with the help of the Eviews program

Notes: 1). ADF - Augmented-Dickey Fuller, PP- Philips-Perron

2) The accepted values probability of the null hypothesis are presented between brackets

The bolded values represent the minimum values of the Akaike and Schwarz criteria. Within the ADF test, the Akaike criterion is minimum for the constant and trend pattern, which means that, both the constant and the parameter associated with the trend are of significant value. Thus, the GDP variable shows a determinist trend. The results obtained by using the ADF test were confirmed by the PP test, for which we obtained both criteria with minimum values for the trend and constant pattern.

The probabilities associated with stationary tests are higher than the presumed risk, thus the results of both tests, Augmented-Dickey Fuller and Philips-Perron, confirm the GDP's lack of steadiness due to the presence of the determinist trend.

3.1.2. Series steadiness

In order to exclude China's GDP determinist trend we took into consideration both the linear and the parabolic trends. We reckon that the parabolic trend was more suitable for our analysis. After eliminating the determinist trend, we took on a variable modulation by using the Box-Jenkins method. This modulation clings on the fact that a variable can be modulated based on its previous values.

3.1.3. Identifying the ARMA pattern

In order to identify the ARMA pattern, followed by stationary residues of the GDP variable, we used the values of the total and partial correlation functions, presented in Table 2 of the correlogram.

Table 2. Residue correlogram after eliminating the determinist trend

Sample: 1990 2014

Included observations: 25

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. |****** |	. |****** |	1	0.796	0.796	17.806	0.000
. |**** |	***| . |	2	0.505	-0.350	25.279	0.000
. |* . |	. *| . |	3	0.211	-0.163	26.647	0.000
. *| . |	.**| . |	4	-0.070	-0.213	26.804	0.000
.**| . |	. *| . |	5	-0.313	-0.190	30.108	0.000
****| . |	. *| . |	6	-0.487	-0.156	38.545	0.000
****| . |	. *| . |	7	-0.589	-0.175	51.542	0.000
****| . |	. *| . |	8	-0.598	-0.108	65.751	0.000
****| . |	. | . |	9	-0.507	-0.040	76.608	0.000
***| . |	. | . |	10	-0.348	-0.048	82.049	0.000
. *| . |	. | . |	11	-0.151	-0.024	83.150	0.000
. | . |	. | . |	12	0.040	-0.053	83.235	0.000

Source: Results obtained using the Eviews program.

In order to identify the *p* and *q* orders of the ARMA process, we analyzed the values of total autocorrelation and partial autocorrelation functions in Table 2. The values seem significantly different from 0 if they are left outside the interval (-1.96*1/√n; 1.96*1/√n).

Because there are 25 registered values for China's GDP variable, the interval becomes (-0,392;0,392). Taking this into consideration, one can observe that the first two total autocorrelation functions are gathered withni the interval, determining the order of the MA process to be 2, while the first value of the partial autocorrelation function, within this interval, equals 1, determining the order of the AR process to equal 1.

The estimated final pattern for the GDP variable is presented below, in Table 3.

Table 3. Assessing China's GDP evolution pattern

Dependent Variable: PIB_CHINA
Method: Least Squares
Sample (adjusted): 1991 2014
Included observations: 24 after adjustments
Convergence achieved after 11 iterations
MA Backcast: 1989 1990

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.07E+12	6.16E+11	3.358625	0.0035
@TREND	-2.20E+11	9.32E+10	-2.360858	0.0297
@TREND^2	3.67E+10	3.11E+09	11.80460	0.0000
AR(1)	0.572534	0.191275	2.993250	0.0078
MA(1)	1.310383	0.207859	6.304205	0.0000
MA(2)	0.604054	0.208674	2.894725	0.0097

R-squared	0.999727	Mean dependent var	6.81E+12
Adjusted R-squared	0.999651	S.D. dependent var	5.20E+12
S.E. of regression	9.70E+10	Akaike info criterion	53.64710

Sum squared resid	1.70E+23	Schwarz criterion	53.94161
Log likelihood	-637.7652	Hannan-Quinn criter.	53.72523
F-statistic	13189.00	Durbin-Watson stat	2.028138
Prob(F-statistic)	0.000000		

Source: Results obtained using the Eviews program.

The equation for the assessed regression pattern is:

$$PIB_t = 2,07 \cdot 10^{12} - 2,2 \cdot 10^{11} t + 3,67 \cdot 10^{10} t^2 + 0,572 \cdot PIB_{t-1} + 1,31 e_{t-1} + 0,604 e_{t-2}$$

According to the aforementioned equation, one can tell that the Gross Domestic Product presents a parabolic trend, while its annual values are influenced by the values obtained in the previous year and by the ones obtained two years ago, as well as by the unforeseen events or presumptuous shocks appeared in the previous year (mentioned in the equation through the residual variable estimated with a delay).
The obtained pattern explains, with a 99,972% probability, the variation of the GDP variable.

3.1.4. Testing the specific hypothesis for the regression pattern

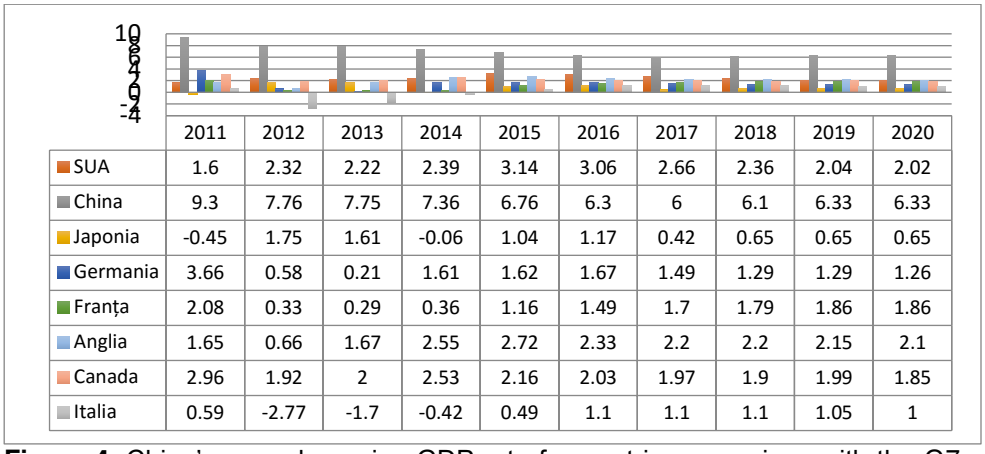
The hypothesis specific for the regression pattern (error normality, the zero average error, lack of error correlation and homoscedastiticity of errors) are respected and presented in Annex 1.

3.2. China's Gross Domestic Product Forecast

Forecasting the Gross Domestic Product for the biggest economical powers became the main preoccupation of some of the most important international organizations (World Bank, International Monetary Fund, United Nations, OECD, etc.)

The forecasted periods of time vary from one international institution to another, ranging between 2007 and 2017 (World Bank), 2011 and 2020 (IMF), 2009 – 2016 (United Nations), 2008 – 2016 (European Commission) and 2007 – 2016 (OECD). Long term forecasting covers the time period between 2008 and 2060 and is attributed to OECD.

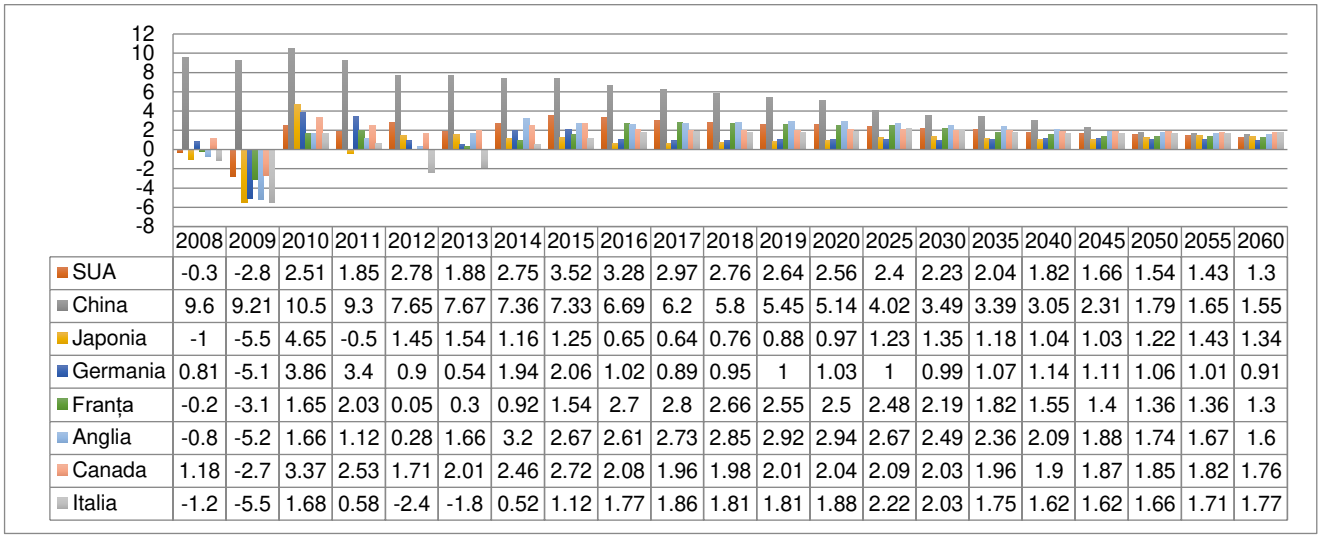
The selected countries for a comparative analysis are China and the G7 countries. Because the prognosticated figures of all the aforementioned international organizations are close, in order to graphically represent the annual growing rate of the GDP, the criterion taken into consideration was the covered timetable. Thus, the International Monetary Fund also takes into consideration the year 2020.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SUA	1.6	2.32	2.22	2.39	3.14	3.06	2.66	2.36	2.04	2.02
China	9.3	7.76	7.75	7.36	6.76	6.3	6	6.1	6.33	6.33
Japonia	-0.45	1.75	1.61	-0.06	1.04	1.17	0.42	0.65	0.65	0.65
Germania	3.66	0.58	0.21	1.61	1.62	1.67	1.49	1.29	1.29	1.26
Franța	2.08	0.33	0.29	0.36	1.16	1.49	1.7	1.79	1.86	1.86
Anglia	1.65	0.66	1.67	2.55	2.72	2.33	2.2	2.2	2.15	2.1
Canada	2.96	1.92	2	2.53	2.16	2.03	1.97	1.9	1.99	1.85
Italia	0.59	-2.77	-1.7	-0.42	0.49	1.1	1.1	1.1	1.05	1

Figure 4. China's annual growing GDP rate forecast in comparison with the G7 countries (IMF).
Source: Authors' representation, based on IMF data (Annex 2).

According to IMF, the annual growing rate of China's GDP will continue to drop until 6.33% in 2020. However, the country will remain the leading country worldwide. The second position will be occupied by the United States, but its values are up to three times smaller (2.02% in 2020).
The long term forecast offered by OECD is graphically represented in the following figure:



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030	2035	2040	2045	2050	2055	2060
SUA	-0.3	-2.8	2.51	1.85	2.78	1.88	2.75	3.52	3.28	2.97	2.76	2.64	2.56	2.4	2.23	2.04	1.82	1.66	1.54	1.43	1.3
China	9.6	9.21	10.5	9.3	7.65	7.67	7.36	7.33	6.69	6.2	5.8	5.45	5.14	4.02	3.49	3.39	3.05	2.31	1.79	1.65	1.55
Japonia	-1	-5.5	4.65	-0.5	1.45	1.54	1.16	1.25	0.65	0.64	0.76	0.88	0.97	1.23	1.35	1.18	1.04	1.03	1.22	1.43	1.34
Germania	0.81	-5.1	3.86	3.4	0.9	0.54	1.94	2.06	1.02	0.89	0.95	1	1.03	1	0.99	1.07	1.14	1.11	1.06	1.01	0.91
Franța	-0.2	-3.1	1.65	2.03	0.05	0.3	0.92	1.54	2.7	2.8	2.66	2.55	2.5	2.48	2.19	1.82	1.55	1.4	1.36	1.36	1.3
Anglia	-0.8	-5.2	1.66	1.12	0.28	1.66	3.2	2.67	2.61	2.73	2.85	2.92	2.94	2.67	2.49	2.36	2.09	1.88	1.74	1.67	1.6
Canada	1.18	-2.7	3.37	2.53	1.71	2.01	2.46	2.72	2.08	1.96	1.98	2.01	2.04	2.09	2.03	1.96	1.9	1.87	1.85	1.82	1.76
Italia	-1.2	-5.5	1.68	0.58	-2.4	-1.8	0.52	1.12	1.77	1.86	1.81	1.81	1.88	2.22	2.03	1.75	1.62	1.62	1.66	1.71	1.77

Figure 5. Comparative forecast of the GDP's growing rate between China and the G7 countries on long term (year 2060)
Source: Authors' representation, based on OECD published data (Annex 2).

The OECD forecast refers to a very long period of time, respectively the following five decades. The data used to come up with this forecast illustrates the fact that 2014 marks the beginning of a downfall for China's GDP growing rate, trend which will continue throughout the forecasted timetable.

Tabelul 4. China's GDP registered values and theoretical values (forecasted)

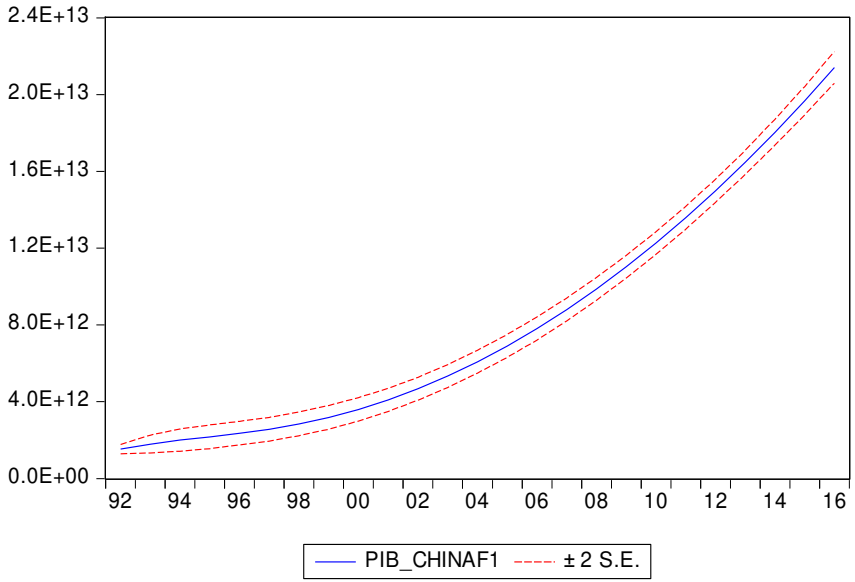
	GDP_CHINA	GDP_CHINAF
1990	1.112456E+12	-
1991	1.256018E+12	1.24140E+12
1992	1.468051E+12	1.37594E+12
1993	1.712460E+12	1.51045E+12
1994	1.977626E+12	1.64532E+12
1995	2.240825E+12	1.81179E+12
1996	2.508188E+12	2.02773E+12
1997	2.786506E+12	2.30339E+12
1998	3.037959E+12	2.64464E+12
1999	3.319428E+12	3.05481E+12
2000	3.681134E+12	3.53585E+12
2001	4.077459E+12	4.08885E+12
2002	4.516421E+12	4.71444E+12
2003	5.068050E+12	5.41297E+12
2004	5.732086E+12	6.18466E+12
2005	6.588191E+12	7.02963E+12
2006	7.652204E+12	7.94794E+12
2007	8.970991E+12	8.93963E+12
2008	1.002721E+13	1.00047E+13
2009	1.103626E+13	1.11432E+13
2010	1.235873E+13	1.23552E+13
2011	1.381026E+13	1.36405E+13
2012	1.514773E+13	1.49993E+13
2013	1.655471E+13	1.64315E+13
2014	1.803093E+13	1.79372E+13
2015	-	**1.95162E+13**
2016	-	**2.11688E+13**

Source: results obtained using the Eviews program

Note: GDP_CHINA represents the registered values for the GDP, while GDP_CHINAF represents the forecasted values based on the previously estimated pattern.

Since the process followed by China contains of a year gap, we could not find the values for the 1989 in order to determine, based on the pattern built, the values for the year 1990.

Thus, if China's GDP would evolve in similar conditions as the previous ones, it is estimated that, by the end of 2016, it will reach a total of $1.95162*10^{13}$ million Yuan, while the values estimated for 2017 would reach a staggering $2.11688*10^{13}$ million Yuan.



Forecast: PIB_CHINAF1	
Actual: PIB_CHINA	
Forecast sample: 1990 2016	
Adjusted sample: 1992 2016	
Included observations: 23	
Root Mean Squared Error	1.67E+11
Mean Absolute Error	1.39E+11
Mean Abs. Percent Error	3.022832
Theil Inequality Coefficient	0.009645
Bias Proportion	0.007789
Variance Proportion	0.034675
Covariance Proportion	0.957536

Figure 6. Punctual forecast and through an estimated trust interval of China's GDP
Source: Results obtained using the Eviews program

The sixth figure presents the registered and forecasted values of China's IPI. Since the identified pattern explains in a high proportion the evolution of the variable, one can notice that the registered values, as well as the forecasted ones are highly close one to another on the graph (Figure 7).

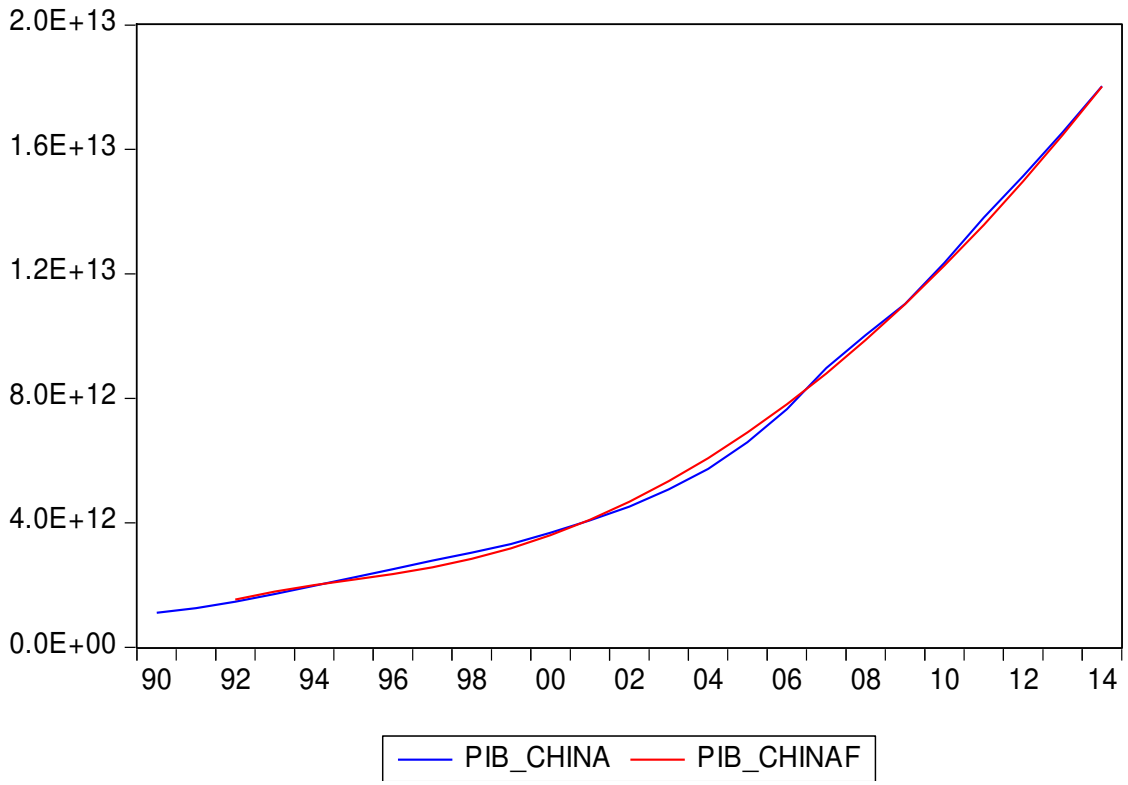


Figure 7. Graphic representation of registered and theoretical (forecasted) values of China's GDP
Source: results obtained using the Eviews program
Note: *PIB_CHINA* equals GDP_CHINA, while *PIB_CHINAF* equals GDP_CHINAF

4. Conclusions

The quantitative analysis of China's economical growth perspectives show the results of the country's GDP modulation, as well as the results of a forecast statistical analysis through which it was followed the highlight of the possible evolutions of this indicator's economical growth.

The resulted regression pattern suggests that China's GDP presents a parabolic trend, while its annual values are highly influenced by the values registered in the previous year, as well as the ones registered two years before and the possible unexpected events that could occur in the following year. Forecasting the GDP values for 2016 and 2017 were possible based on the estimated pattern. The finding values highlight a continuous economic growth, even though on a smaller scale than the one registered in the previous decade. Since the identified regression pattern explains the evolution of the GDP, the forecasted values closely follow the registered ones.

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CHALLENGES IN TRANSATLANTIC RELATIONS

Sándor Nagy
Assistant lecturer
University of Debrecen
Faculty of Economics

Since World War II the most important ally of the western European countries is the United States of America. However, it is also the country which poses a challenge to the European Union, even though Brussels uses it as a prototype of decision making. In the beginning it was important to form a group of countries which can play an important role to stop the expansion of communism on the western part of the continent. After giving the Marshall-aid, Washington formed the North-Atlantic Treaty Organization in order to create a military cover and protect the American investments. The USA also supported the European integration process but never let the member countries form their own EU army even if there was and there still is a need for one. Only 6 of the 28 EU member states is not the member of the NATO. Besides the non-existing army, there are important success stories like the common currency, which became too important at global level and started to endanger the position of the US dollar as a global currency. This is the reason why a propaganda campaign was going on against the euro and the Eurozone in the English speaking media where British and American journalists were talking about the crisis of Greece, instilling that the EU is weak as well. Furthermore, they were also reporting that Ireland, Italy, Portugal and Spain are facing severe problems. Using such soft power instruments, people all around the world started to believe that the European currency is not stable and it is rather unreasonable to keep it. In all these actions Great Britain played a substantial role, because they are the closest ally of the USA in the EU. They appear, however, to be going too far with their referend and Washington is trying to convince London to stay in. The reason is evident, their economies, their companies are connected to each other to a great extent and without the British membership there would be less American influence on the decisions of Brussels. And last but not least some words must be said about the Transatlantic Trade and Investment Partnership which is under negotiation.

Keywords: Transatlantic relations, European Union, euro, NATO, USA, Transatlantic Trade and Investment Partnership

JEL Classification: F.50

United States of America as a strategic partner

After the end of World War II, in March 1947, the United States of America decided through the Truman doctrine about the global strategic presence saying that the duty of the USA is to stop the expansion of communism all around the world. The civil war was going on in Greece when the British Government announced Washington that ", as of 31 March, it would no longer provide military and economic assistance to the Greek Government in its civil war against the Greek Communist Party. Truman asked Congress to support the Greek Government against the Communists. He also asked Congress to provide assistance for Turkey, since that nation, too, had previously been dependent on British aid."[6] He said "it must be the policy of the United States to support free people who are

[6] https://history.state.gov/milestones/1945-1952/truman-doctrine Download: 07.04.2016

resisting attempted subjugation by armed minorities or by outside pressures."[7]
At the time, the U.S. Government believed that the Soviet Union supported the Greek Communist war effort and worried that if the Communists prevailed in the Greek civil war, the Soviets would ultimately influence Greek policy.
The Truman Doctrine became the basic principle of the US foreign policy of the cold war era, and led, in 1949, to the formation of North Atlantic Treaty Organization, which is the most important military alliance of our age.
Three months later after Truman's speech the Marshall plan was declared by Secretary of State George Marshall at Harvard University. "In June 1947, Marshall made a visit to Europe to see what was needed. He left thinking Europe was so poor that the whole of Europe was about to turn Communist. Marshall and Truman asked Congress for $17 billion to fund the European Recovery Programme nicknamed **the Marshall Plan** - to get the economy of Europe going again. Congress at first hesitated, but agreed in March 1948 when Czechoslovakia turned Communist. "[8]
Sixteen countries joined the program and got the assistance they required, state by state, with administrative and technical assistance provided through the Economic Cooperation Administration (ECA) of the United States. They received nearly $13 billion in aid, which was basically shipments of food, staples, fuel and machinery from the United States and later lead to American investment in industrial capacity of Europe. Funding finished in 1951. Marshall Plan countries were supported in their economic recovery. From 1948 through 1952 European economies grew at an unexpected rate. Trade relations led to the formation of the North Atlantic Treaty Organization. "Economic prosperity led by coal and steel industries helped to shape what we know now as the European Union. "[9]

After Bretton Woods's conference (1944) US dollar started to become a global reserve currency. It not only aided European countries which started to pay with it in their trade transactions but other states as well in other continents. Forty-four countries were present at the conference and agreed to keep their currencies fixed to dollar, and dollar was fixed to gold. The British Pound lost its importance as the British Empire started to collapse after the war. In the Eastern Block the Council for Mutual Economic Assistance was formed but the soviet ruble never became important between the communist countries. They have been using the transferable ruble which was an artificial currency, an accounting unit and means of payment in joint international accounts of countries that are members of the COMECON. No other countries accepted it.

Nixon ended the convertibility of US dollar to gold in August 1971 because the US governments spent too much on military foreign aid and "European and Japanese exports become more competitive with US exports."[10] His decision shocked the Western European governments and they were already planning the common currency for the common market. The Werner-plan was destroyed by the Nixon shock and the first oil crisis. But the

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.[7] http://avalon.law.yale.edu/20th_century/trudoc.asp Download: 07.04.2016

[8] http://www.bbc.co.uk/schools/gcsebitesize/history/mwh/ir2/trumandoctrineandmarshallplanrev1.shtml Download 7 April 2016

[9] http://marshallfoundation.org/marshall/the-marshall-plan/history-marshall-plan/ Download 7April 2016

[10] http://www.federalreservehistory.org/Events/DetailView/33 Download: 7 April 2016

integration was going further: decision about the European Monetary System was taken in December 1977. The EMS started in March 1979 and contained the European Exchange Rate Mechanism (ERM), the European Currency Unit (ECU) and the European Monetary Cooperation Fund (EMCF). The ECU was a limited common currency, not an independent currency but a unit of account, a basket of the currencies of the European Community member states. This was followed by the creation of the Economic and Monetary Union "and was later enshrined in The Treaty on European Union (the Maastricht Treaty). "[11] The euro was introduced in the EU by 1 of January 2002.

Euro versus US dollar

As the official website of the European Union says:
"Within the euro area, the single currency, the euro, is the means by which governments, companies and individuals make and receive payments for goods and services. It is also used to store and create wealth for the future as savings and investments. However, the size, stability and strength of the euro-area economy – the world's second largest after the United States – make the euro increasingly attractive beyond its borders, too. "[12] Basically the EU member countries and citizens started to save and invest mostly in euro. So the position of the US dollar has become less important in the old continent after 2002.
"Public and private sectors in third countries acquire and use the euro for many purposes including for trade or as currency reserves. For this reason, today, the euro is the second most important international currency after the US dollar.[13] The widespread use of the euro in the international financial and monetary system demonstrates its global presence:
The euro is widely used, alongside with the US dollar, as an important reserve currency to hold for monetary emergencies. In 2015, more than one-fifth of the global foreign exchange holdings were being held in euros. "[14] In these lines it is also visible that the US dollar lost from its positions and more and more countries and people prefer the European currency. This also affects their trade and monetary policies. Russia, for example, reserved more euro than dollars last year as Bloomberg quote Bank of Russia.[15]

"The euro is also the second most actively traded currency in foreign exchange markets. It is a counterpart in around 33% of all daily transactions, globally." It shows that there is high trust in the European currency and a high need for it.

"The euro is widely used to issue government and corporate debt worldwide. In 2015, the share of euro denominated debt in the global markets was around 40%, on par with the role of the US dollar in the international debt market." This is also a clear message from the several governments that their confidence is strong about the Eurozone and its economy.

"The euro is also gaining momentum as currency used for invoicing and paying in international trade, not only between the euro area and third countries but also between third countries. It is used as trade invoicing currency for more than 50% of all euro area

[11] http://ec.europa.eu/economy_finance/euro/emu/index_en.htm
[12] http://ec.europa.eu/economy_finance/euro/emu/index_en.htm
[13] https://www.ecb.europa.eu/pub/pdf/other/euro-international-role-201507.en.pdf
[14] http://ec.europa.eu/economy_finance/euro/emu/index_en.htm
[15] http://www.bloomberg.com/news/articles/2015-05-12/euro-passes-dollar-in-russian-reserves-for-first-time-since-2008

imports, and for more than 65% of all euro area exports. "As the presence of the euro in the international trade is growing, the global role of the EU is getting higher and higher. Brussels and Frankfurt can influence the economies of the third world countries.

"Several countries manage their currencies by linking them to the euro, which acts as an anchor or reference currency." In this way governments start to depend on the decisions of the European Central Bank. They are interested to work together with the EU:

"The status of the euro as a global currency, combined with the size and economic weight of the euro area, is leading international economic organizations, such as the IMF and the G7, increasingly to view the euro-area economy as one entity. This gives the European Union a stronger voice in the world." The position of the EU member states in such organizations is more and more important and they can gain more power inside the international institutions.

"To benefit from this stronger position, and to contribute effectively to international financial stability, the euro area is speaking with one voice more and more in important economic fora. This is done through close coordination between the euro-area Member States, as well as the European Central Bank and the European Commission during international economic meetings. "

"A number of third countries and regions are even more closely linked to the euro. The stable monetary system behind the euro makes it an attractive 'anchor' currency for them, particularly for those that have special institutional arrangements with the EU, such as preferential trade agreements. By linking their currency to the euro they bring more certainty and stability to their national economies. "

"The euro is also widely used in third countries and regions neighboring the euro area, for example in South-eastern Europe, while some other countries – Andorra, Monaco, San Marino and the Vatican City – use the euro as their official currency by virtue of specific monetary agreements with the EU, and may issue their own euro coins within certain quantitative limits. "[16]

And not just the US dollar lost its position as a reserve currency but the British pound as well. So it is quite understandable why the propaganda against the euro and Eurozone was so active in the last few years. There were many reports in the Anglo-Saxon media about the problems of Greece, Italy, Portugal, Ireland and Spain. But the common currency did not become less popular, did not lose the trust. It became stronger than before and the US dollar with the British pound lost not just from their value but also from their popularity among third world countries and citizens.

La Manche is wider than the Atlantic Ocean

After so many discussions with Greece about its debt, the EU had to deal more with the refugee's crises and terrorist attacks. In Britain after the referendum about Scotland, the Conservative leaders are also facing the popularity of Nigel Farage and his Independence Party. This is the reason why Prime Minister David Cameron started its campaign about the British membership reform in the EU. They are competing for the votes and criticizing the EU and its rules. Cameron would like to reduce the social expenses and has discussions with European leaders. President of the European Council, Donald Tusk has got even open letter from him[17] and some of their negotiations is also done in front of the

[16] http://ec.europa.eu/economy_finance/euro/world/index_en.htm

[17] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/475679/Donald_Tusk_letter.pdf

media. [18]

Since London is still an important international finance center, the interest of the bankers of the City has to be respected by the Prime Minister of Britain. As latest researches say the Brexit would be a loss not only for the British banks, companies and state but also to the Americans. US president Barack Obama visited Britain in April 2016 and asked Cameron and other leaders to stay inside. The British economy is very much connected to the American economy and it is a key issue for the American politicians and companies to have a strong ally inside the EU because through London they can influence more the decisions of Brussels. The La Manche is wider than the Atlantic Ocean as some people say, but the US wants to keep the EU close to them. The Brexit could weaken the NATO as US Lieutenant General Ben Hodges head of the US Army in Europe said.[19]

NATO membership of EU countries

As we can see not only soft power techniques are used to keep the EU weak but the United States does everything to keep the European countries under military control. Already in the fifties there were plans about a European army but it remained a plan. Nowadays only 6 out of 28 EU members is not NATO member, but they joined some of the military projects of the USA like Iraq or Afghanistan.

The aim of the USA was to protect the members against the Soviet Union or from other enemies forming the NATO. But it is also an important organ to control the allied countries and influence even their home policy. Of course the British politicians are not happy when high rank US officers are criticizing their plans but they have to think about these worries. The US military presence is based on protecting the American investments in Europe, so it is very much connected to the economic questions.

NATO Secretary General Jens Stoltenberg said “a strong European Union with a strong Britain is good for NATO” and “a strong EU will also make sure that NATO has a strong partner… when we are facing the same security threats… For NATO it is important to have a strong Europe – and a strong Britain in a strong Europe contributes to stability. It underlines the importance of us working together, staying together.".[20]

European Commission leader Jean-Claude Juncker mentioned several times during the refugee crisis in 2015 that the EU has to have an army to protect its territory but nothing was done about it yet.

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[18] http://www.consilium.europa.eu/en/press/press-releases/2016/02/02-letter-tusk-proposal-new-settlement-uk/

[19] http://www.bbc.com/news/uk-politics-eu-referendum-35808955 15 March 2016. Download: 15 April 2016

[20] http://www.bbc.com/news/uk-politics-35461278 1 February 2016. Download: 15 April 2016

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Negotiations are going on since 2013 about the free trade agreement with the USA. Leaders in Washington and Brussels are hoping that it will bring more property for both parties, but there are too many interest groups and it is difficult to make good compromises. The European Commission published documents on 21 March 2016 about the ongoing talks of Round 12.[21]

The question is that in the long run what kind of results will come through this free trade cooperation and how the EU will deal with the other above mentioned challenges.

[21] http://trade.ec.europa.eu/doclib/press/index.cfm?id=1477 21 March 2016 Download: 15 April 2016

SUB-SECTION: EU SUSTAINABLE ECONOMIC DEVELOPMENT AND COMPETITIVENESS

THE INFLUENCE OF THE ACCESSIBILITY GRADE UPON THE TECHNICAL-ECONOMICAL ESTIMATES FOR THE WOOD EXPLOITATION

Timofte Adrian Ioan, Timofte Claudia Simona Cleopatra

Department of Silviculture and Forestry Engineering, Faculty of Environmental Protection, University of Oradea, Oradea, Romania
adi_timofte@yahoo.com
Faculty of Law and Jurisprudence, University of Oradea, Oradea, Romania
clau_timofte@yahoo.com

Abstract: *The paper presents the importance of decreasing the collection distances with the occasion of the maintaining or extraction works of wood and the way the accessibility grade directly affects the expenses related to labour, fuel and working time. As a case study, eight auctioned felling areas have been chosen during the period 01.2016 - 02.2016 by Bihor Forest Administration, in which some tending operations will be performed. For them, there were prepared the exploitation estimates, thus, resulting the direct, indirect and total costs. Based on the time norms and hourly rates valid for the year 2016 taken from Bihor Forest Administration, the rates per cubic meter were determined for labour, hauling operations with tractors and specific consumption for hauling operation with forest tractor, in lei/cubic meter, on grades of accessibility and according to the average tree volume. A simulation was also performed for situations where stands would range from five to one in grades of accessibility, in other words, if secondary forest roads would be realized, the felling areas could become more accessible. Thus, the labour costs, fuel necessary for the hauling operation have been determined for the five situations given by the different grades of accessibility; in this situation the parameters change altogether with the felling areas becoming accessible. To compare the obtained values, the results were reported to the labour costs of wood collection, total labour costs for the whole process of exploitation and to the total operating costs. Tables and graphs capture the benefits of reducing the collection distance so that the felling area to become easily accessible. The average tree volume is less than the greater cost of extracting timber. Thus, in the absence of forest roads that minimize the internal distances within stands, including hygiene and tending works become very expensive and "unprofitable" for economic operators.*

Keywords: *exploitation estimates, grade of accesibility, expenses, norms, wood collection, tariffs, thinning operations*

JEL classification: Q23, Y10, K3,K32

1. Generally Introduction.

In the field of forest exploitation, the economic agents are interested mainly in the immediate profit that they can obtain by extracting and rendering of timber. Of course, it is necessary to have in view both the immediate economic efficiency of

each executed work and the global profitability achieved from the whole assembly of works applied to forest until the moment of its exploitation (Florescu & Nicolescu 1998).
In the countries with forest economy that have a high level of organization, the exploitations that ineficient from an economic point of view but necessary from a silvo-technical point of view are supported by subsidies (Oprea şi Sbera, 2004).
In Romania, timber is rendered by law by the organizer as „standing wood" or „rough converted wood". The grade of accessibility influences also the starting price during the actions for standing wood altogether with the market level of the reference prices on species, assortments and according to the exploitation technology, in accordance with GD 924/2015 – Regulation for the rendering of wood in the public forest stock.
The grades of accessibility are given by the average collecting distance of the timber, respectively by the distance from the barycenter of the felling area to be exploited till a permanent transport route. If the felling area is at an average distance of more than 1500m from the primary platform, then the accessibility will be given by the grade 5, marked with G5. For a distance of 1001-1500 m, the grade is G4, for 501-1000m is G3, for 251-500m is G2 and for the felling areas found very close to the permanent transport route, respectively under 250m, the grade of accessibility is G1.
Making accessible the forest stock can be done by making new roads (according to art. 5 paragraph 1 of Law 56/2010) but it still remains a problem in Romania as long as 35% of the forests are considered difficult to be accessible, being found at a distance of more than 2 km from a permanent transport route, thus being included in the grade 5 of accessibility. The lack of forest roads is obvious. The thickness index is higher than the European average (6.69m/ha in comparison to 30-40m/ha). Generaly, many companies in the developed world started delocalizing or outsourcing production processes to them. The production based on intensive use of labor, some of it will be externalized or outsourced to countries where skilled labor is cheaper, thereby accumulating benefits from lower production costs (Negrea, 2014).
Among the production processes of wood exploitation, the most difficult one is its collection, because in this case, it is consumed 70% of the human energy, 100% of the animal energy, about 80% of the necessary fuel and there are recorded the highest expenditures – about 65...75% of the total production expenses necessary for the valuation of the timber from a felling area. (Ciubotaru, 1997).
Generally, the existent roads/routes must be improved and converted into auto forest roads to reduce the construction expenses and to make accessible the stands to be exploited. As a consequence of these investments, the collecting distances decrease, the value of the standing timber increases (value of the felling areas) becoming more accessible and very importantly, the expenses with timber exploitation decrease. To emphasize this fact, the way in which the expenses with labour and fuels are further presented when hauling with tractors when collecting the timber.

2. Material and Methods.

As a case study, eight felling areas have been selected that were auctioned during the period January-February 2016 by Bihor Forest Administration within Beius and Sudrigiu Forest Districts, with different volumes of the average tree, found on a high and very high slopes. At present, these felling areas are found in grade 5 of accessibility. Some thinning operations will be undertaken.
Based on the time norms and hourly rates, unit values corresponding to labour for the hauling operation with forestry tractor and the Diesel oil need while hauling with forestry tractor on grades of accessibility according to the volume of the average tree, according to Table 1, and their total is shown on groups of species in Figures 1 and 2.

Tabel 1: Labour and specific diesel oil consumption for the hauling operation with forestry tractor on grades of accessibility and according to the volume of the average tree.

Group of species	the volume of the average tree, cm/tree	The grade of accessibility of the felling areas				
		G1	G2	G3	G4	G5
Labour consumption for the hauling operation with forestry tractor, in lei/cm						
coniferous	<0.140	1.00	1.27	1.67	2.18	2.64
	0.141-0.700	0.82	1.09	1.46	1.97	2.47
	>0.700	0.65	0.92	1.27	1.80	2.30
decidous	<0.140	1.39	1.79	2.39	3.26	3.98
	0.141-0.700	1.14	1.54	2.14	3.01	3.77
	>0.700	0.95	1.32	1.94	2.80	3.52
Specific diesel oil consumption for the hauling operation with forestry tractor, in lei/cm						
R	-	0.70	0.86	2.14	3.23	4.33
F	-	1.07	1.32	3.27	4.95	6.63

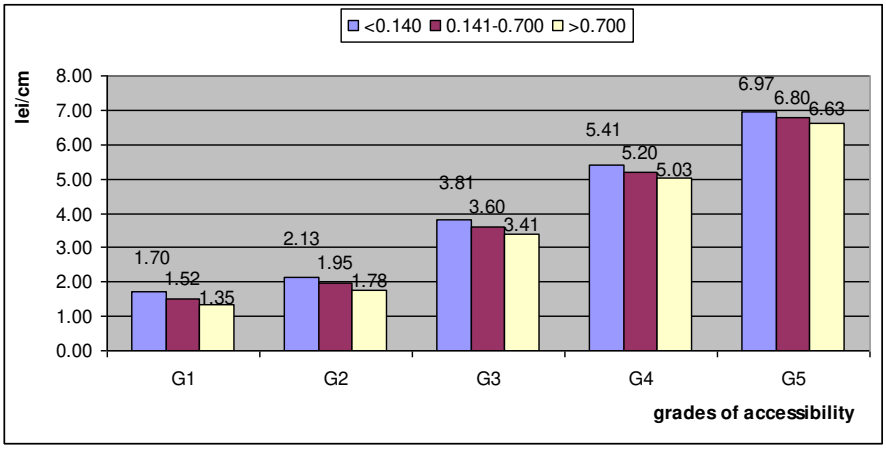


Fig.1: Representation of the unit tariffs regarding the expenses with forestry tractor when collecting (labour +diesel oil) on grades of accessibility and according to the volume of the average tree, in lei/cubic meter, for coniferous and soft wood (R+DM)

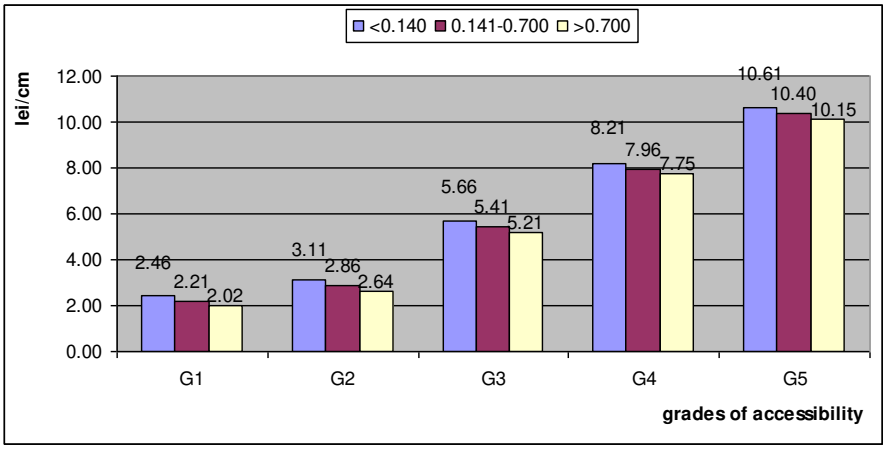


Figure 2: Representation of the unit tariffs regarding the expenses with forestry tractor when collecting (labour +diesel oil) on grades of accessibility and according to the volume of the average tree, in lei/cubic meter, for decidous and hard wood (F+DT)

With the help of a programme realized in Microsoft Excel, the exploitation estimates were made on operations, based on the hourly rates available for 2016 taken from Bihor Forest Administration and with the help of the time norms used in the forest exploitation determined by Professor Ciubotaru (1996). Thus, for each felling area, direct, indirect and total costs have been calculated (see table 2) for the situations in which the felling areas could be in the five grades of accessibility, by the reduction of the average collecting distances.

Tabel 2: Expenses necessary for the exploitation of the felling areas on grades of accessibility

The grade of accessibility	Expenses necessary for the exploitation of the felling areas, in lei/cm							
	Beiuş Forest District, the felling area…					Sudrigiu Forest District, the felling area…		
	P517	P526	P530	P531	P538	P203	P204	P227
G1	55.82	39.39	61.15	77.57	89.81	66.78	118.03	79.85
G2	57.15	40.67	62.47	79.04	91.02	67.96	119.25	81.06
G3	59.05	42.59	64.37	81.14	92.74	69.71	120.99	82.78
G4	61.65	45.14	66.95	83.99	95.06	72.04	123.35	85.11
G5	64.07	47.48	69.37	86.66	97.27	74.20	125.57	87.31

The values are high because the stands are young and tending works are carried on. Thus, at present for felling area 204 Sudrigiu Forest District, the proposed

thinning activities cost very much (125.57 lei/cubic meter) and a reduction of the accessibility grade would mean a decrease with 6% of the expenses. The percent is pretty low because the stand is 36 years old now, but later the gain will be significant. For instance, for the felling area 526 the decrease is about 17%.
This simulation allowed the determination of ratios occupied by the activities that are influenced by the reduction of the accessibility grade from G5 to G4, G3, G2, G1. It is about the labour for the hauling with tractors operation, the need of diesel oil for the operation of hauling. To be more suggestive, the results are presented into lei/cubic meter or in %, the obtained values being compared to the total volume, labour when collecting the timber and total of labour, total of fuel and total of expenses. The obtained results were included in the table below:

Tabel 3: Situation of the 8 felling areas under study regarding the volume of the average tree, total volume, slope and labour, needed fuel, % of the total expenses on grades of accessibility

Characteristics of felling areas and calculated indices		Forest District, felling area…							
		Beiuş					Sudrigiu		
		P517	P526	P530	P531	P538	P203	P204	P227
The volume of the average tree, cm/tree	R+DM	0.57	-	1.11	0.90	0.47	0.25	0.16	0.26
	F+DT	0.28	1.29	0.30	0.42	0.18	1.00	0.23	0.20
	total	0.28	1.29	0.31	0.43	0.23	0.52	0.21	0.22
The total volume, cm		427	800	312	224	164	231	105	192
The slope, g		25.00	32.00	32.00	25.00	26.00	32.00	40.00	32.00
ratio of the hauling operation out of the collecting labour on grades of accessibility, %	G1	20.77	20.79	20.65	23.80	22.80	20.74	21.51	22.28
	G2	26.17	26.68	26.06	29.72	28.43	26.39	26.97	27.85
	G3	33.02	34.82	32.90	37.04	35.35	33.95	33.76	34.76
	G4	40.93	43.55	40.81	45.28	43.21	42.21	41.55	42.63
	G5	46.41	49.17	46.30	50.86	48.77	47.80	47.07	48.18
ratio of the hauling operation out of the total of labour on grades of accessibility, %	G1	4.79	5.94	5.02	5.79	4.54	4.96	4.50	4.71
	G2	6.37	8.05	6.68	7.68	6.01	6.67	5.97	6.24
	G3	8.64	11.39	9.06	10.38	8.09	9.30	8.05	8.41
	G4	11.74	15.65	12.29	14.01	10.91	12.71	10.89	11.35
	G5	14.25	18.87	14.91	16.92	13.29	15.44	13.26	13.81
ratio of the expenses necessary with diesel oil when hauling with forestry tractor out of the total of fuels, on grades of accessibility, %	G1	20.76	27.15	20.80	20.52	22.88	23.88	20.69	20.27
	G2	30.66	38.53	30.71	30.35	33.37	34.61	30.57	30.02
	G3	40.90	49.52	40.96	40.54	43.94	45.31	40.79	40.18
	G4	50.21	58.96	50.39	49.96	53.43	54.82	50.22	49.58
	G5	57.03	65.41	57.21	56.79	60.17	61.49	57.04	56.41
ratio of the expenses needed for the hauling with forestry tractor out of the total of expenses per felling area on grades of accessibility, %	G1	4.29	5.47	3.91	3.33	2.44	3.06	1.87	2.71
	G2	6.36	8.21	5.81	4.98	3.65	4.62	2.80	4.05
	G3	9.16	11.96	8.39	7.21	5.30	6.79	4.09	5.87
	G4	12.63	16.43	11.62	10.03	7.41	9.51	5.76	8.19
	G5	15.67	20.17	14.47	12.54	9.34	11.93	7.29	10.30

In Fig. 3 for each felling area the variation amplitude was determined between the maximum value (obtained from G5) and the minimum value (obtained from G1) for the 4 indicators (determined as ratios in%): labour costs when hauling/ labour costs when wood collecting, labour when hauling/total labour, expenditure on diesel/total fuel, costs when hauling/total expenses per felling area.

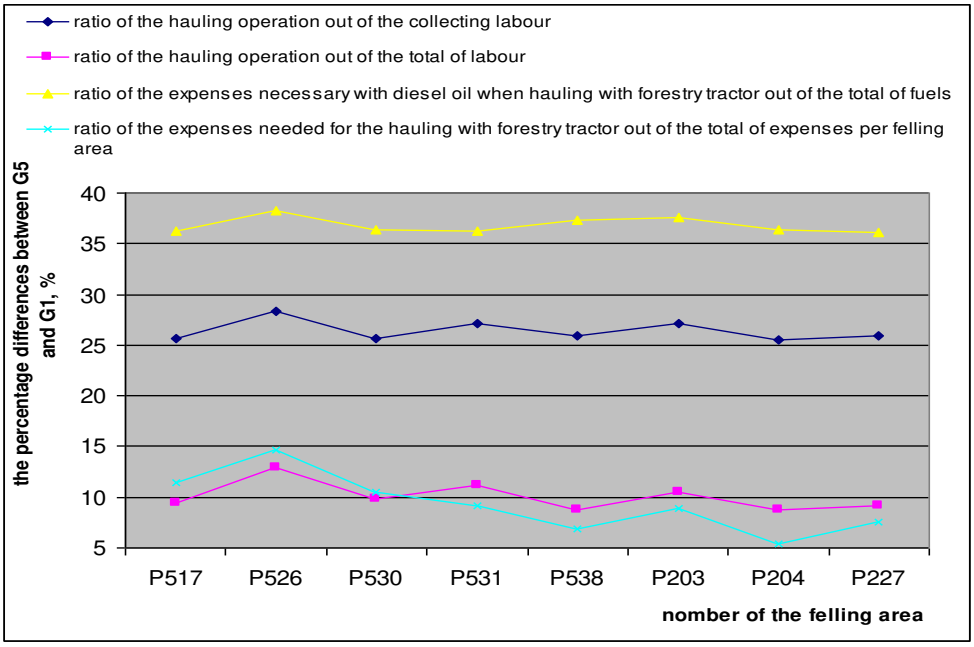


Figure 3: Representation of the percentage differences between G5 and G1 for the 8 analyzed felling area for the labour ratios when hauling, fuel and total expenses

Analyzing the 8 lots, the minimum and maximum values on grades of accessibility for the calculated indicators were illustrated in Figures 4-6.

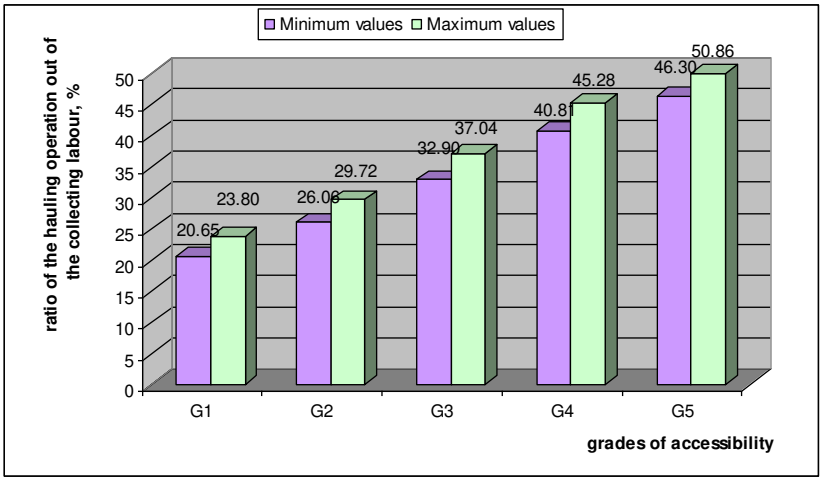


Figure 4: The ratio of labour when hauling from the labour when collecting, minimum and maximum values for all the 8 lots on grades of accessibility

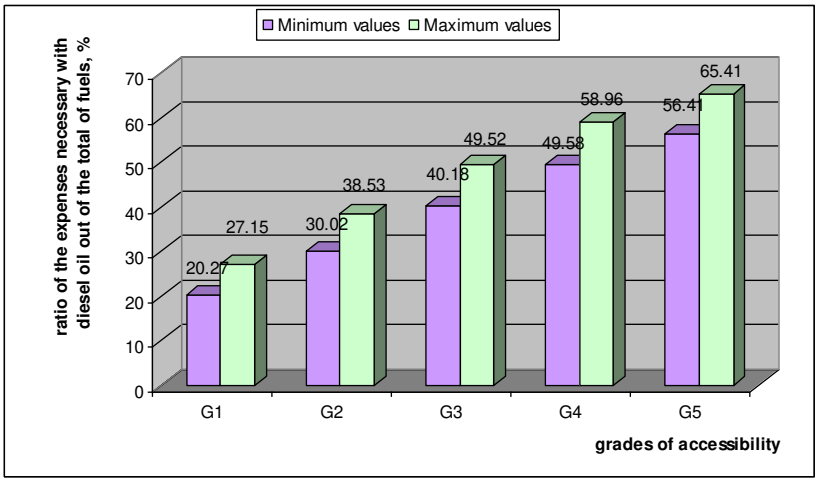


Figure 5: The ratio of the hauling operation out of the total of labour, minimum and maximum values for all the 8 lots on grades of accessibility

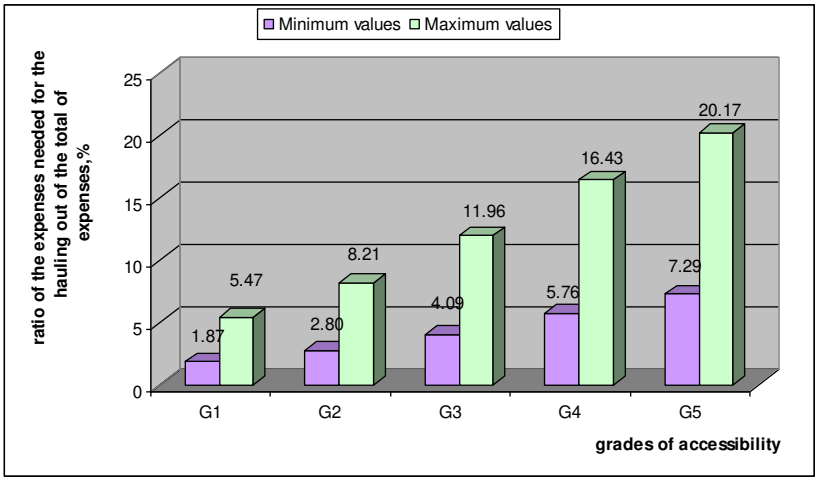


Figure 6: The ratio of the expenses needed for the hauling with forest tractor out of the total of expenses per felling area, minimum and maximum values for all the 8 lots on grades of accessibility

3. Conclusions and Proposals.

Table 2 show the total operating expenses in the 5 situations when the felling areas would be classified in the five grades of accessibility. To be compared, the results were compared to the total volumes, resulting unit values in lei/cm. The gain that would be obtained according to the estimates would be 7.42 to 9.09 lei per each cubic meter exploited.

According to Table 3, the labour for the hauling operation with tractors has maximum value for the felling area P531, representing 50.86 % of the labour when collecting, and the minimum value is recorded for the felling area P530 and representing only 20.65 % of the labour when wood collecting. If a full accessibility (gtom G5 to G1)could be accomplished, the labour costs when collecting would be reduced by 25.65 % (for the felling area P204, P517 and P530) and with 28.37 % for P526 (see fig.3. Looking at Figure 3 it is noted that the biggest savings would be achievable for the fuel. Labour and the amount of fuel needed, relative to the total labour and the total expenditure for each felling area are reduced to approx. 5-15%, based on the volume average shaft; For high volumes(1.29 cm / tree P530) there are more significant reductions.

In conclusion, the analyzed felling areas are currently inaccessible, with average volumes of 0.21 to 1.29 cm /tree. A reduction in the accessibility grade could further cut the exploitation spending. Thus, the labour costs when collecting would be reduced by approx. 25 to 28%, total labour costs would be reduced with approx. 9-13%, the amount of diesel required for hauling with tractors would lower by approx. 36-38%, and the total spending would decrease by approx. 5-15%. To these expenses, there can be added those for maintenance, depreciation and other expenses (with personal indirectly productive) and indirect activities caused by a full functioning of machinery when collection, given by the long collection

distances leading to the increase of operation hours. A lot of time spent for the collection operation due to the long distances to be covered, reduces the number of routes that the tractor driver makes during one day, increase the number of machines so that the trader to fall in the operation period approved by the exploitation authorization (according to MO 1540/2011).
In the analyzed felling areas some tending-thinning works will be made this year. In general, it is recommended that the roads for hauling, if not sufficient, to be made since the time of thinning so that the felling area to be optimally covered. The failure in not making them in due time leads to the increase in spending both in the case of tending works and future cuttings, according to the proposed treatments. If at the level of felling area/plot/subplot the network of collection routes are very important, at the level of production unit/forestry district the proposed forest roads are very important to be achieved when planned and specified in the Forest Management Plans in Chapter 9 to achieve an optimal accessibility.

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THE EU, APEC AND ASEAN; A COMPARISON IN THE FRAMEWORK OF ECONOMIC INTEGRATION

İsmet ATEŞ, Orhan ŞANLI
Adnan Menderes University Nazilli Faculity of Economics İsabeyli, Aydın-TURKEY
iates9@gmail.com
orhan.sanli@adu.edu.tr

Abstract*: Fast developing technology, increased production and the search for market has paved the way for globalization after the industrial revolution. Transnational borders has almost disappeared today's World which faced with two great wars and a lot more threat during the 20th century. Economic integrations gained speed after the two Great World Wars. Countries started to come together because of advancing technology, transportation facilities, security concerns and increased competition during this period. Thus, political, military and cultural integration movements established and also economic integration movements gained speed. Economic, political, military integrations like EU, APEC, ASEAN, NAFTA, WTO and NATO have showed impact in every region of the World. There are a lot of regional and global integration movements in the World. Globalization leads to act the World as if it had a single center increasingly. This case is important in terms of economic integration of the national economies. The main objective of economic integration is an effort to eliminate all barriers to trade. In this work, the structure of the economic integration process and its effect on the World economy will be examined. APEC, ASEAN and EU can be considered as one of the best samples of the economic integration in the World. General structures, macroeconomic performances and their effects on integration process of these three economic integrations will be discussed. As a result, APEC stands out with its developing large trade volume, ASEAN is noted with its great speed of economic development and, European Union differs with its large gross domestic product per capita. APEC, EU and ASEAN organizations show that both developed and developing countries can not remain outside of integration. Each of the three integration movement has been making great contributions to the World to integrate. World is almost becoming a single country thanks to the economic integration.*

Keywords: Economic integration, APEC, ASEAN, EU, Foreign Trade

JEL classification: F02

1. Introduction

Countries are making economic cooperation with other countries to increase their foreign trade, to compete with others for about last six decades. This kind of cooperation generally called economic integrations. Increasing security concerns and past experiences made countries to cooperate especially after Second World War. Integration such as European Union has emerged in these kinds of conditions.

Nowadays, there are a lot of regional and global integration movements in the World. Among of them possibly the most successful is the European Union. EU

economic integration movement is increasingly turning into a political union in recent days. As a result of political and economic unification in the World, some regional and global integration was established such as EU, NATO, ASEAN and APEC since the mid- 20th century.

Foreign trade has become an important position for those countries which don't want to lag behind in the globalized World. Countries need integration to export their products in foreign markets and to import some needed goods to their countries. The countries or groups of countries which established economic unity among themselves are trying to remove all trade barriers, to liberalize the foreign trade. (Hepaktan ve Çınar, 2011:68).

The aim of this study is to examine the overall structure of the concept of economic integration which is quite common nowadays. Therefore first, it is focused on the concept of integration, and then the three economic integrations, EU, ASIA and APEC as having a great place in the World economy are analyzed. These three integrations' foreign trade data and the share in the World economy are compared. Thus, the success of the economic integration process and its impact on the World economy will become more apparent.

2. The Concept of Economic Integration

Fast developing technology, increased production and the search for market has paved the way for globalization after the industrial revolution. Transnational borders has almost disappeared today's World which faced with two great wars and a lot more threat during the 20th century. New trade routes, competitive strategies and security concerns have caused the World to move toward integration. The globalization process is a quite broad concept. The concept of integration in general is expressed a different structure as gradually coming together and transformation as result of rapidly developing technologies, social, political, economic and even cultural developments (Şeren Güler, 2011:48). As a result of the globalization process the European Union which is the most successful example of the integration is founded.

Globalization leads to act the World as if it had a single center increasingly. This case is important in terms of economic integration of the national economies. The main objective of economic integration is an effort to eliminate all barriers to trade. Factor mobility is provided in advanced stages of integration. Ultimately, national economic policies are harmonized with integration by empowering integration (Aydoğuş, 2005:2). Regional economic integration results in eliminating the constraints of the national economy in trade. The free trade comes forward within the union by increasing prosperity and the level of income of the member states. The rules of intra-regional free trade and a common external trade are the most important rules of the economic integration process (Yanar, 2011:3).

Regional economic integration is being implemented in different ways. The order of the integration process is as follows: free trade area, customs union, common market, economic and monetary union and, full economic integration (Ertürk, 1991). In political union stage which is the most advanced step of the process of integration, countries start to move together in economic, military and political aspects. On the basis of the political integration process, it is expected the union to have regional and global power status without being any restriction and to act as nation states.

Relations with neighboring countries come to the fore because economic integration is based on cooperation and distributions. Geographical advantage thanks to regional integration improves the integration of power. The possibility success of the integration further increases in regions such as involvement of powerful countries, marketing is easy, the raw material can be obtained easily and far from political and terrorist threat (İsayev, 2013:194).

3. The European Union

The EU is a unique economic and political partnership between 28 European countries that together cover much of the continent. The EU was created in the aftermath of the Second World War. The first steps were to foster economic cooperation: the idea being that countries that trade with one another become economically interdependent and so more likely to avoid conflict. The result was the European Economic Community (EEC), created in 1958, and initially increasing economic cooperation between six countries: Belgium, Germany, France, Italy, Luxembourg and the Netherlands. Since then, a huge single market has been created and continues to develop towards its full potential. (http://europa.eu/about-eu/basic-information/about/index_en.htm)

What began as a purely economic union has evolved into an organization spanning policy areas, from development aid to environment. A name change from the EEC to the European Union (EU) in 1993 reflected this. The EU is based on the rule of law: everything that it does is founded on treaties, voluntarily and democratically agreed by all member countries. These binding agreements set out the EU's goals in its many areas of activity.

One of the EU's main goals is to promote human rights both internally and around the World. Human dignity, freedom, democracy, equality, the rule of law and respect for human rights: these are the core values of the EU. Since the Lisbon Treaty's entry in force in 2009, the EU's Charter of Fundamental Rights brings all these rights together in a single document. The EU's institutions are legally bound to uphold them, as are EU governments whenever they apply EU law (http://europa.eu/about-eu/basic-information/about/index_en.htm).

The capital city of The EU is Brussels in Belgium. There are several organs in The EU. These are as follows, European Parliament, European Council, European Commission, Court of Justice, The European Court of Auditors, The Economic and Social Committee, The Committee of Regions, The European Investment Bank, The European Central Bank, The Community Agencies (İBB- AB İlişkileri Müdürlüğü, https://ab.ibb.gov.tr/avrupa-birligi/abnin-temel-organlari/). The EU founded by six countries reached 28 members with the participation of Croatia at the end .

The European Union can be considered as an economic community that represents best the economic integration process. More than 500 million inhabitants and to address the close to 50% of the World economy shows the strength of the Union. Some countries from the EU such as Germany, France and England are located at the top of the countries with the World's ten largest economies.

Of the 500 largest companies Worldwide, nearly 200 companies are the EU member states (Şeren Güler, 2011:52). The European Union is the best performing integration movement in the World in terms of economic indicators. The countries that one of the members of EU such as Germany, Britain, France as the World's

largest gross domestic product and foreign trade volume are further increasing the power of the unity. The European Economic Community was founded in 1958 and, it has rapidly expanded with new members, and then has set an example for other countries in terms of economic success. In other parts of the World integration movement has gained speed in the face of economic success of the European Union. The success rates in integration are higher in developed countries. But in 1960 a few unsuccessful integrations experienced in World. As the 1990s, developing countries have established successful integrations. ASEAN, APEC, MERCOSUR are some successful regional economic activities (Çeştepe, Mıstaçoğlu, 2010:93-94).

Table 1: EU Macro-Economic Indicators

Years	2000	2001	2002	2003	2004	2005	2006	2000	2008	2009	2010	2011	2012	2013	2014
Population (Million)	487,9	489,2	490,5	492,3	494,3	496,3	498,2	500,0	501,9	503,3	504.5	505,5	505,1	506,5	508,3
Land Area (sq. km)	4241912	4241382	4240192	4240352	4240442	4240152	4239492	4239440	4238886	4239793	4241134	4240993	4238103	4238061	4238061
GNI Growth(%)	3,9	2,07	1,2	1,5	2,8	2,1	3,3	2,7	-0,078	-4,175	2,38	1,7	-0,6	0,05	1,2
Trade(%of GDP	68,	67	65	64	66	69	74	74	76	67	74	79	81	80	81
Inflation (consumer price %)	3,1	3,15	2,30	2,09	2,25	2,48	2,60	2,63	4,205	0,95	1,66	3,30	2,71	1,38	0,22
GDP at market prices trillion$)	8,8	8,9	9,7	11,8	13,7	14,3	15,2	17,6	19,0	17,0	16,9	18,3	17,2	17,9	18,5
GNI per capita, Atlas method (current US$)	19.5	18.9	18.6	21.04	25.4	29.2	31.3	33.4	35.9	35.4	35.4	35.6	35.2	35.6	35.7

Source: Table has been created by us with World Bank data.

Table 1 shows the European Union's macro-economic performance from 2000-2014 years. When it is examined the table, population of the EU was around 487 million in 2000, reached 508 million in 2014. National income per capita in 2000 was around 19.000 dollars increased to 35.000 dollars in 2014. Still it located in the very low rate of inflation. The consumer price inflation rate remained 0.22% for 2014. Looking at the foreign trade ratio of the GDP the European Union's it is about 81%. This rate was increased to 68 % in 2000 to 81 % in 2014. As can be seen from the table, the persistence of the some countries with the highest per capita income in the World are in the EU leads to an increase in the average macro economic indicator's value of unity.

4. ASEAN

The Association of Southeast Asian Nations is a political and economic organization of ten Southeast Asian countries. It was formed on 8 August 1967 by Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Since then, membership has expanded to include Brunei, Cambodia, Laos, Myanmar (Burma), and Vietnam. Its aims include accelerating economic growth, social progress, and sociocultural evolution among its members, alongside protection of regional stability as well as providing a mechanism for member countries to resolve differences peacefully (en.wikipedia.org).

The secretariat of the Organization is located in Jagart, Indonesia. ASEAN has become quite successful integration movement with nearly 40 years of its history. Although it faced with many challenges in the year it was founded ASEAN has

managed to become an important actor in the World economy and the community in accordance with the principle of, “ASEAN Way”. MAHPILONDO and ASA organizations could not succeed because of various problems before ASEAN founded. ASEAN have managed to keep members together with a strong sense of discipline, plans and projects. They also survive up to date by achieving to minimize the problems (Emin Demirbaş ve Aydın, 2014:79). As set out in the ASEAN Declaration, the aims and purposes of ASEAN are (http://www.asean. org/asean/ about-asean/overview/):

To accelerate the economic growth, social progress and cultural development in the region through joint endeavors in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community of Southeast Asian Nations;

- To promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries of the region and adherence to the principles of the United Nations Charter;
- To promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields;
- To provide assistance to each other in the form of training and research facilities in the educational, professional, technical and administrative spheres;
- To collaborate more effectively for the greater utilization of their agriculture and industries, the expansion of their trade, including the study of the problems of international commodity trade, the improvement of their transportation and communications facilities and the raising of the living standards of their peoples;
- To promote Southeast Asian studies; and
- To maintain close and beneficial cooperation with existing international and regional organizations with similar aims and purposes, and explore all avenues for even closer cooperation among themselves.

ASEAN which can not take an active role until 1975 began to take an active role by signing South East Asia Treaty of Friendship and Cooperation and re targeting regional security and the economic and social development goals in 1976. ASEAN is based on the basis of economic cooperation. Its main purposes are to set up large-scale industry and regional agricultural systems, to remove barriers and tariffs on trade, to open up international markets and to ensure cooperation in many economic areas (Erdem Hapaktan ve Çınar, 2011:70). Asian Free Trade Area Agreement (AFTA) which signed between ASEAN countries in 1992 was an important step in field of integration. The purposes of signing AFTA Agreement were reducing customs, quotas and tariffs gradually, encouraging foreign investment and boosting intra-regional trade. ASEAN has adopted quite different and successful model in economic cooperation. The basis of this economic cooperation model is to supply raw material resources they have into region and to make remain the monopoly power they have in the region. They increased trade in other products by preferential trade agreement. Thus, they could both preserve themselves from international competition and increase foreign trade (Emin Demirbaş ve Aydın, 2014:91).

ASEAN is an integration that gives great importance to economic relations out of region. China, South Korea, Japan, India, New Zealand, Australia, called ASEAN + 6 those are partners in close economic cooperation between ASEAN countries. In particular, the presence of close economic ties with China, makes ASEAN great contribution in terms of trade and capital flows (https://www.wto.org/english/tratop_e/region_e/con_sep07_e/kawai_wignaraja_e.pdf). ASEAN's 10 members have approximately of 626 million populations and approximately 2.4 trillion dollars gross domestic product. This feature has made ASEAN one of the largest economies in the World. It is the 3rd largest economy in the Asian region and the 7th largest in the World. ASEAN is the fastest growing economy in Asian region after China (https://www.usasean.org/system/files/downloads/asean_matters_for_america.pdf.

Table 2: ASEAN Macroeconomic Indicators

	2011	2012	2013	2014
Total land area km2	4.435.674	4.435.617	4.435.618	4.435.618
Total population thousand	598.926	606.856	614.741	622.250
Gross domestic product at current prices US$ million	2.210.915	2.343.196	2.409.216	2.573.589
GDP growth percent	4,9	6,0	5,3	4,7
Gross domestic product per capita at current prices US$	3.691	3.861	3.919	4.136
International merchandise trade US$ million	2.388.444	2.476.427	2.511.517	2.528.917
Export US$ million	1.242.199	1.254.581	1.271.128	1.292.634
Import US$ million	1.146.245	1.221.847	1.240.388	1.236.284
Foreign direct investments inflow	95.838	115.453	117.687	136.181
Visitor arrivals	81.229,0	89.225	101.055	105.083

Source: ASEAN http://www.asean.org/?static_post=macroeconomic-indicators

Table 2 shows the macro-economic performance of ASEAN. It has a population of 622 millions in 2014. The region's GDP growth rate was 4.9% in 2011 was around 4.7% in 2014. GDP per capita is located in the level of developing countries. This rate was $ 4,136 in 2014. When considered the Integration's total foreign trade performance it's around 2.5 trillion dollars. ASEAN increases the power of integration by not giving foreign trade deficit.

ASEAN is working on four basic disciplines to develop and strengthen its economy in international market. These are; production based single market, highly competitive based economic region, equitable economic growth based region, an integration that integrated into the global economy. The basis of ASEAN's success is these 4 rules that have great importance in raising the region. The production based single market system is made by the free movement of goods, services, capital, investment, and skilled labor (ASEAN ECONOMİC COMMUNITY BLUEPRINT 2008: http://www.asean.org/wp-content/uploads/archive/5187-10.pdf).

5. APEC

The Asia-Pacific Economic Cooperation (APEC) is a regional economic forum established in 1989 to leverage the growing interdependence of the Asia-Pacific. APEC's 21 members aim to create greater prosperity for the people of the region by promoting balanced, inclusive, sustainable, innovative and secure growth and

by accelerating regional economic integration (http://www.apec.org/). APEC ensures that goods, services, investment and people move easily across borders. Members facilitate this trade through faster customs procedures at borders; more favorable business climates behind the border; and aligning regulations and standards across the region. For example, APEC leads to synchronize regulatory systems which are key step to integrating the Asia-Pacific economy. A product can be more easily exported with just one set of common standards across all economies. APEC's 21 member economies are Australia; Brunei Darussalam; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; The Philippines; The Russian Federation; Singapore; Chinese Taipei; Thailand; United States of America; Viet Nam. (http://www.apec.org/).

APEC has grown to become a dynamic engine of economic growth and one of the most important regional forums in the Asia-Pacific. Its 21 member economies are home to around 2.8 billion people and represent approximately 57 per cent of World GDP and 49 per cent of World trade in 2014(http://www.apec.org/).

APEC is hosting countries with large economies such as, The US, China, and Japan .Before describing any further what APEC is, it would be useful to make clear what it is not.

APEC is not:

a formal trade agreement like the North American Free Trade Association (NAFTA);

a European-style "common market,"

a rules-based organization like the World Trade Organization (WTO);

a policy think tank group like the Organization for Economic Cooperation and Development (OECD) (http://www.ncapec.org/docs/what_is_apec.pdf).

APEC's way of working is based on no rules way of working, volunteering, open and transparent information, consultation and exchange of ideas. APEC had an understanding of consistently and increasing economic growth and improving the welfare when it was established. In 1994, this approach transforms into Bokor Goal understanding meant free and open trade and investment policies in Asia-Pacific region. Asia-Pacific Cooperation Organization integration structure is sat on three main pillars. These pillars are, trade and investment liberalization, ease of trade, economic and technical cooperation (APEC Primer, http://apec2015.ph/about-apec/primer)

Table 3: APEC Macroeconomic Indicators

Years	2010	2011	2012	2013	2014
Total Populations(in thousands)	2751655	2770277	2789395	2808668	2828112
GDP, Current USD (in millions)	36006901	39885586	42079945	43066839	43841331
GDP per capita, Current USD	13085,55	14397,69	15085,69	15333,55	15567,89
GDP Growth Rate (annual %)	4,586615	2,853565	3,260596	3,040897	2,417068
Labor Force Participation Rate, Total (% of total population ages 15+)	67,85118	67,9205	68,01757	68,09973	68,13394
Exports of Merchandise Goods and Commercial Services (in current USD millions)	8722801	10150931	10489995	10762352	10997494
Imports of Merchandise Goods and Commercial Services (in current USD millions)	8806477	10436179	10890167	11127426	11310845

Source: Table created by us with data of Stats APEC, http://statistics.apec.org/index.php/key_ indicator/kid_result_flash/66

The Table 3 which is created APEC statistics by us shows APEC's macro-economic performance in 2010-2014. Asia-Pacific Cooperation Organization approximately has 2.8 billion populations in 2014. This rate corresponds to more than 40% of the World population. Gross domestic product was 36 trillion dollars in 2010 rose to $ 43 trillion in 2014. APEC's GDP is equivalent to 58% of the World economy. National income per capita of the Community is located in the developed country status. The GDP per capita was around $ 13,000 in 2014 has increased up to 15,000 dollars in 2010. When the foreign trade value is mentioned it is approximately reached $11 trillion exports and $ 11.3 trillion import in 2014. Total foreign trade figures have already caught 22 trillion dollars in 2014. Labor force participation rate is about 68% of the total workforce in 2014.
APEC countries have award that the business cycle of the APEC countries played a key role in the region's success and in achieving the goals for a long time. Therefore it was decided to establish an organization that regulates the life business in the APEC region. As a result, the APEC Business Advisory Council (ABAC) was established. ABAC members are directly elected by the member countries of APEC. ABAC makes a large contribution to APEC to penetrate better integration, to make more successful and regular business activity (http://www.ncapec.org/docs/what_is_apec.pdf).

6. Comparison

All three integration movements of the forehead covered in this article have different bureaucratic structures, different levels of integration and operation rules. Nevertheless, all of them are integration. These integration movements make the World more integrated by creating new trade opportunities and facilitating international trade. Table 4 summarizes the general macroeconomic indicators for all integration analyzed in the study. APEC stands out with its developing large trade volume, ASEAN is noted with its great speed of economic development and, European Union differs with its large gross domestic product per capita.

Table 4: Comparative Macroeconomic Indicators 2014

	APEC	EU	ASEAN
Total Populations (in milions)	2.820	508,3	622,2
GDP, Current USD (in billions)	43.841	18.500	2.573
GDP per capita, Current USD	15.567	35.700	4.136
GDP Growth Rate (annual %)	2,41	1,3	4,7
Labor Force Participation Rate, Total (% of total population ages 15+)	68	47	42
Exports of Merchandise Goods and Commercial Services (in current USD trillions)	11,9	1,73 (2013 data)	1,3
Imports of Merchandise Goods and Commercial Services (in current USD millions)	11,3	1,68 (2013 data)	1,2

Source: Created by us with above table's data.

7. Conclusion

Economic integration provides a positive contribution to the economy of the country including the integration. Two Great Wars of the 20th century have made the countries closer to each other. Regional, economic, political and military integration

movement were begun to establish by Second World War. Increased security concerns, the corrections concern the deteriorating economies, competitiveness and trade targets triggered the integration and globalization. World countries award that the closed economic system couldn't bring success to them after the Second World War. International capital and trade are indispensable two targets for development for these countries no longer. Therefore, alliances and integrations have become imperative to withstand competition in the developing World.

Today, three economic integrations with big impact in the World have made great contribution to the economic integration process. The European Union founded in early 1950, has proven its integration success as its economic system, market understanding and management approach. With its 28 members acting as a single market economy The EU has become quite successful both within the region, in foreign trade and in the international arena. The average income per capita in the EU is around 35 thousand dollars in 2014. This figure is well above the World average. For many countries, the desire to join and-or the target of increasing trade with EU shows the success of the EU's economic integration.

The Asia-Pacific Economic Cooperation known as APEC is hosting the largest economies of the World. Major economies such as US, Japan, China and Russia raise the power of the integration of APEC. APEC contains more than 40% of the World population with its 21 members and of 2.8 billion populations. It is understood that the globalization and integration are indispensable musts because the number of international organizations. APEC economies address more than 50% of the World both in foreign trade and economy.

The Association of Southeast Asian Nations, known as ASEAN has contributed to the process of integration in the World with its 10 members. ASEAN provides a major contribution to success of integration with rapidly evolving disciplined management approach. In particular, ASEAN with ASEAN+6 understanding has close trade relations with countries such as large economies like China, South Korea, and Japan. Although the ASEAN's economy smaller than The EU and APEC, it is growing rapidly in free trade and economic growth. .

As a result, globalization has spread to almost all regions of the World. There is available various regional economic cooperation in Africa, Asia, Europe, and in Americas. Economic integration has become gradually mandatory especially in developing countries which desire to catch their growth and development objectives. APEC, EU and ASEAN organizations show both developed and developing countries can not remain outside of integration. Each of the three integration movement has been making great contributions to the World to integrate. World is almost becoming a single country thanks to the integration.

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INFLUENCES ON THE QUANTUM OF DAMAGES AWARDED AT ICSID

Mihai Berinde, Dana Petrica, Liana Mester
Economic Science Faculty, University of Oradea, Oradea, Romania
mihai.berinde@yahoo.com
danameste@ryahoo.com
lmester@uoradea.ro

Abstract: *The present paper is part of a larger study that aims to identify some of the factors that have a great impact on the quantum of the damages awarded in ICSID cases. The driver of this study is the high level of the damages awarded in this sort of disputes between foreign investors and the host state. In 2012 the ICSID tribunal awarded more than 1.77 billion USD for a breach of Fair and Equitable Treatment standard and indirect expropriation by Ecuador. Another reason for choosing this subject is the increasing number of the cases judged at this Centre. The analytical method used for analysing the determination relation between the identified factors and the quantum of the damages is the linear regression analysis. For the data collection were used as many cases' awards as could been found published on the official site, from which were selected the cases were damages were awarded, in number of 30. For all the analysis made the statistical signification was followed and additional statistics trimming methods used, were necessary. The first factor that had been chosen was the value of damages requested, the calculations showing the impact assumed for it. The reasons beside this selection are pretty obvious: it is the most obvious factor on which the arbitrator can rely, it has the same nature of value, and it's based on an expert's report of damages' valuation. There is plenty room for further analysis, this only representing the starting point, but is very important step in configuring the data base on which the following analysis will be set. For each case studied there are other characteristics, beside the value of damages requested, that were extracted and presented in order to determinate there impact or the lack of impact. For these factors is needed a preparation operation of pondering because of their nature, non-numerical, so that these will be the subject of a further analysis. The importance of this paper is also given by the definitions of the elements used in the factors' impact analysis.*

Keywords: damages awarded, valuation, damages requested, ICSID, arbitration

JEL classification: F510, F370, K220

1. Introduction

The foreign investments represent an important part of the economy for many developing countries. The governments of these countries are direct interested in attracting foreign investments in order to growth their Gross Domestic Product – GDP. There are some factors that directly influence the attraction of foreign investments, and one of these factors is the protection offered for these investments. Many Bilateral Investment Treaties (BIT's) include a protection clause and also the reference that the disputes that might arose between the foreign investor and the host state can be solved by arbitration.

In 14 October 1966 had entered in force the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (the ICSID Convention or the Convention), establishing the ICSID. At that date the Convention was ratified by 20 states, but until 2006 there were 143 countries that had signed it, becoming Contracting States. Between these countries was also Romania. The Convention was formulated by the Executive Directors of the International Bank for Reconstruction and Development.
The increasing number of the states ratifying the Convention is determinate, exactly by the wish of the governments to attract foreign investments. In the last years, the factor influencing these investments had changed substantially: in the early years the foreign investors were looking for cheap work force and were not necessary looking at aspects like protection, bureaucracy or technical development. As time passed, the governments became more interested in the factors second mentioned. In this way appearing the increase desire of countries to become Contracting States of the ICSID Convention.
There are special rules for the organisation and functioning of ICSID, setting the way of submitting an arbitration request, electing the Arbitrators, establishing the proceedings, and all the aspects that can be implied.
As there were more and more countries implied, in time the number of cases judged at ICSID has also increased.
There are many studies on this subject, the high level of the amounts requested, and sometimes awarded, as damages attracting the attention of many scholars and specialists. The analysis of the determination link between some factors and the level of damages awarded came in our attention and became the subject of this paper.

2. Material and method

In order to analyse the factors impact on the damages amount, is needed to extract these information from the award rendered by ICSID, more exactly from the cases where damages were awarded.
The present paper is based on the study of 30 cases that are presented in the following paragraph, together with their characteristics such as: the dispute parties: the claimant and the respondent, the date of the award, the subject of the dispute, the applicable Bilateral Investment Treaty, the damage valuation made by the claimant's experts and the method used for valuation, the findings of the tribunal in matter of: the standards' breach and the amount of damages awarded.
These information were extract from the awards rendered by the ICSID Tribunal an fond published on an official internet site.
After collecting the data needed, the analysis was made by using the linear regression for determinate the relation between the value of damages measured by the experts and the method used for measurement and the total damage amount awarded. In order to be able to measure the impact of the method used it was necessary to transform it in a numerical item, and this was made by pondering the methods in function of the percent of the damages awarded in each case that used that specific method.

2.1. Database for analysis

No.	Case Title	Date of award	Subject	Breach	BIT	Damages calculation's method	Damages Sum	
							Request	Receive
1.	AMCO v Indonesia	31 May 1990	hotel license revocation	violation of international law	SUA - Indonesia	DCF Hybrid 2 periods before and after award	15,000,000 USD	2,696,330 USD
2.	Enron v Argentina	22 May 2007	fiscal valuation imposed by the Argentinean authorities and a gas tax	violation of BIT, FET and umbrella clause	SUA - Argentina	DFC	129,000,000 USD	106,200,000 USD
3.	Metalclad_v_ Mexico	30 Aug. 2000	municipality did not grant a construction permit landfills	violation of the fair and equitable treatment, indirect expropriation	NAFTA	actual investment in the project	45,474,528 USD	8,819,467 USD
4.	Wena Hotels _v_ Egypt	8 Dec. 2000	hotel license revocation	violation of the fair and equitable treatment, indirect expropriation	UK-Egypt	actual investment in the project	16,685,000 USD	8,061,897 USD
5.	Siemens_v_ Argentina	6 Feb. 2007	Contract renegotiation and termination of providing IT services to government	expropriation and violation of fair and equitable treatment and full protection and security	Germany - Argentina	Fair market value - book value	444,000,000 USD	217,838,439 USD
6.	LG&E_v_ Argentina	25 July 2007	pesification into account price and cancellation price adjustment	violation of the fair and equitable treatment and the BIT umbrella clause, discrimination treatment	SUA - Argentina	dividends that could be received if there wasn't any breach	not specified	57,400,000 USD

7.	Feldman_v_Mexico	16 Dec. 2002	refusal to rebate excise for cigarettes exported from Mexico	violation of NAFTA, international law and Mexican Law, discrimination	NAFTA	lost profits rejected	30,381,938 USD	9,464,627 Mexican pesos
8.	Pope&Talbote _v_ Canada	31 May 2002	imposing additional charges for export of timber	violation of FET	NAFTA	expenditure incurred	not specified	407,646 USD
9.	Lemire_v_ Ukraine	28 Mar. 2011	not receiving radio frequency for each requested	discrimination	SUA - Ukraine	DFC	38,000,000 USD	8,720,000 USD
10.	Myers_v_ Canada	21 Oct. 2002	chemical waste export ban, for promoting domestic operators	violation of FET	NAFTA	income estimated without history	70-80,000,000 $ CAD	6,050,000 $ CAD
11.	Sistem_v_Kyrgyz	9 Sept 2009	Kyrgyz forcibly take hotel owned by System	expropriation	TURCIA - Kyrgyz	DFC in 1999	0	8,500,000 USD
12.	Thunderbird_v_ Mexico	26 Jan. 2006	applicant claim that gaming machines would actually be ability machines	claims rejected	NAFTA	-	not less than 100,000,000 USD	0
13.	Poushok_v_Mongolia	28 April 2011	impose fees for foreign employees and limit price for gold	claims rejected	RUSSIA - Mongolia	-	0	-
14.	AMD_v_ Mexico	-	tax charge of Mexico for corn sweeteners	violation of FET and performance requirements	NAFTA	lost profit	not less than 100,000,000 USD	33,510,091 USD

15.	National Grid _v_ Argentina	3 Nov. 2008	pesification into account price and cancellation price adjustment	violation FET and full protection and security	SUA - Argentina	comparative DCF with market approach	112,400,000 USD	3,458,813 USD
16.	Link_v_ Moldova	18 Ap 2002	are not granted tax exemption for consumers who buy from the free zone	Moldova did not violate any provision	SUA - Moldova	-	53,592,439 USD	0
17.	Chevron_v_ Ecuador	31 Aug. 2011	Ecuador violated contractual agreements with the plaintiff	violation of BIT, denial of justice	SUA - Ecuador	damages calculated in internal processes, unspecified methods	1,484,000,000 USD	96,355,369 USD
18.	Fuchs_v_ Georgia	3 Mar. 2010	Georgia gave a decree that annulled all rights previously granted to the applicant	expropriation	Greece - Georgia	market approach/income approach	36,517,031 USD	30,024,736 USD
19.	Railroad_v_ Guatemala	29 June 2012	Guatemala has made a press statement that it would be withdrawn defendant rights	violation of FET	CAFTA	DCF rejected - too speculative, amount invested accept	63,778,212 USD	3,379,450 USD
20.	OEPC_v_ Ecuador	5 Oct. 2012	termination of the contract between the claimant and the state	violation of FET and indirect expropriation	SUA - Ecuador	DFC	2,359,500,000 USD	1,769,625,000 USD

21.	Swisslion_v_ Macedonia	6 July 2012	abuse against investor denial auction result	Violation of FET	Swiss - Macedonia	proposed DCF or Amount Invested rejected, lump sum awarded	19,000,000 euro	350,000 euro
22.	Unglabe_v_ Costa Rica	16 May 2012	Costa Rica wanted to make a national park on land claimants	expropriation	Germania - Costa Rica	market approach - land in the sale price	5,190,000 USD	3,100,000 USD
23.	Rumeli Telekom_v_ Kazakhstan	29 July 2008	Rumeli were forced to sell shares of KAR-TEL for 3000 USD	indirect expropriation + violation of FET	Turkey - Kazakhstan	lump sum starting from DCF- rejected for lack of history	458,000,000 USD	125,000,000 USD
24.	Cargill_v_ Mexico	18 Sep 2009	tax charge of Mexico for corn sweeteners	violation of FET	NAFTA	cash flow	123,810,000 USD	77,329,240 USD
25.	CSOB_v_ Republic of Slovakia	29 Dec. 2004	Slovakia did not respect his engagements from CSOB privatization	violation of FET	Czech - Slovakia	lump sum	40 billion SKK from which: 10,647,236,411.30SKK - principal amount	24,797,381,842 SKK from which: 8,686,280,324 SKK - principal amount
26.	Europe Cement Investment_ Turkey	13 Aug. 2009	concession revocation handed down generation electricity distribution and marketing	-	Poland - Turkey	-	-	-

27.	Waguih Elie George Siag and Clorinda Vecchi_v_ Egypt	1 June 2009	land expropriation	illegal expropriation, breach of FET, security and protection, non-impairment	Italia - Egypt	market approach	195,800,000 USD	74,550,794,75 USD
28.	Quasar_v_ Russia	12 July 2012	imposing high taxes illegitimate	unlawful expropriation	Spain - Russia	market approach	2,600,000 USD	2,000,000 USD
29.	Rosinvest_v_ Russia	12 Sept. 2010	imposing high taxes illegitimate	unlawful expropriation	Denmark - Russia	market approach	232,700,000 USD	3,500,000 USD
30.	El Paso _v_ Argentina	31 Oct. 2011	pesification into account price and cancellation price adjustment	creeping violation of FET	SUA - Argentina	DFC	228,200,000 USD	43,030,000 USD

Table 1. Cases' characteristics
Source: made by author from awards rendered by arbitration tribunals

3. Results and discussion

As previous mentioned, the information extracted for each case were analysed in linear regression in order to determinate their influence. The value of damages requested, having the same numerical nature were used in the form presented. As regarded the method used by the experts to value the damages, these were first prepared to convert them into numerical values in order to be used in regression analysis. Their conversion was made starting with the percent of the damages awarded compared with the damages valuated by the experts and then pondered depending on the number of cases in which the tribunal decided to relay or to reject the method used.

The first analyse ruled was the one reflecting the direct link between the amount requested and the amount received. On the results we must first look at the Significance F, it is important to be as closer to zero as possible and in any circumstances to be less than 0.05, in order to have statistical significance. In our case the value is very close to zero, and this makes it significant.

The second value we must look on is the R Square value which is the value measuring the impact of the analyzed factor on the dependent item analyzed. In our example the R Square is 0.99866, a very high dependency being shown.

In order to obtain the formula for the influence we must look at the coefficients for intercept and for the Damages Requested. Even if the value for intercept looks very high, this is acceptable taking in consideration the large discrepancy between the damages awarded, on one hand amounts like 300,000 USD and on the other hand amounts like 175,000,000,000 USD. Anyway, the coefficient for the damages requested still show that more than 62% will be determinate by the value of the damages presented in the claimants' report.

The results for the first analyse are presented below:

Regression Statistics		*Significance F*		
Multiple R	0.999333317	0.0001		
R Square	0.998667079		*Coefficients*	*Standard Error*
Adjusted R Square	0.998593028	Intercept	-64,141,540	47,981,569
Standard Error	207,339,457	Damages Requested	0.62132804	0.005350281

The second analyse was studying the impact of the method used by the experts in valuing the damages, after making the conversion before described. The results show a Significance F higher than 0.05 and this means that there is no statistical significance for the impact of the factor that was analyzed.

Regression Statistics		*Significance F*	
Multiple R	0.320118462	0.157159464	
R Square	0.10247583		*Coefficients*
Adjusted R Square	0.055237716	Intercept	(1,010,483,433.51)
Standard Error	5,244,820,092.55	coef method	1,821,476,355.74

4. Conclusion

From the two analyses made the first conclusion is that the most important factor on determination of the amount that will be awarded as damage in an ICSID arbitration case is the value of the damages requested by the claimant. Of course that there are other factors that have significant influence, but these will be the subject of a further study. And, yes, there are also factors that do not exercise significant influence, such the method used in valuation, but they have to be take in the model in order to see their impact.

In order to maximize the value of damages that can be received in an international arbitration, the claimants should ensure that they use the method that evaluates all their losses, and that the valuation report sustained by facts and proves. The higher the report's value, the higher the prospective damages that can be awarded.

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MEASURING REGIONAL COMPETITIVENESS. THE CASE OF ROMANIA

Raluca Irina Clipa, Mihaela Ifrim
Department of Economics and International Relations, Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iasi, Romania
riclipa@gmail.com
mihaifrim@yahoo.com

Abstract:
The crisis has led to significant regional disparities, or at least to stopping the phenomenon of convergence observed before its outbreak. The poor performances of the five of the Romanian development regions put into question again the proper way to refer to this subject. This paper aims to critically analyse the measuring of regional competitiveness as it is revealed in literature and in the empirical studies. In order to achieve this goal, the paper brings forward some questions: What is regional competitiveness and how can someone measure the phenomenon? Is GDP per capita telling the whole story about regional competitiveness? What are the main factors explaining the differences in competitiveness for the Romanian regions? The methodology used is both qualitative and quantitative. It is based on critical analysis of the concept of "regional competitiveness" and of its estimation methods. Also, we will conduct a comparative analysis for estimation of regional competitiveness in Romania, using two different methods: regional competitiveness index developed by European Commission in 2011 and improved in 2013 (RCI 2013) and GDP per capita in 2013. The data are collected from Eurostat. We underline the fact that there is no complete measure of regional competitiveness which covers all the factors involved in describing regional competitiveness. Also, the paper aims to conclude that GDP per capita is not a sufficient tool to draw proper conclusion about regional competitiveness. Some qualitative and circumstantial factors are more appropriate to explain the differences in competitiveness results. The main conclusion is that a competitiveness index embraces more factors than purely economic aspects and it can be considered as a measure of regional competitiveness which goes beyond GDP. Through its value added, the paper may contribute to better understanding of the methods of measuring regional competitiveness and to avoid that the errors from theory could translate into practice.

Keywords: competitiveness; regions; regional competitiveness; regional competitiveness index; GDP.

JEL classification: R11; O18.

1. Introduction

The crisis has put a halt to the convergence process and in many cases has increased interregional disparities in income and employment. Before the crisis, there were still signs of the poor regions catching up to the richer ones. Since the crisis, that process seems to have stalled. Some studies (OECD, 2014) revealed

that disparities in regional GDP per capita have increased in half of the OECD countries. In the other countries, where the gap had decreased, this was typically due to worsening conditions in the leading regions rather than to improvements in the lagging regions. Inequality continues to be observed in other factors that determine well-being, such as health, air quality or safety.
Given these facts, the paper brings forward some questions: What are the factors that determine the competitiveness of a region and how can someone measure regional competitiveness? What is, first of all, regional competitiveness? Is GDP per capita telling the whole story about regional competitiveness? What are the main factors explaining the differences in competitiveness for the Romanian regions?
To address these questions, the paper will look at literature and empirical studies. The methodology is both qualitative and quantitative. It is based on critical analysis of the concept of "regional competitiveness" and of its estimation methods. Also, we will conduct a comparative analysis for estimation of regional competitiveness in Romania, using two different methods: regional competitiveness index developed by European Commission in 2011 and improved in 2013 (RCI 2013) and GDP per capita in 2013.
Romania has eight development regions, five of them being listed among the poorest 21 in the European Union in 2014. These results prove low levels of competitiveness and raise questions about the main causes of their poor performances.
The rest of this paper is organized as follows: In the next section we will underline that regional competitiveness in a vague concept and ambiguous too, which poses problems for researchers and policy makers in measuring process. The second part of the paper focuses on the critical analysis of the estimation methods of competitiveness at regional level, as they were developed in literature or empirical studies. The third section presents the comparative analysis for estimation of regional competitiveness in Romania, using different methods. A section of conclusions comes to point out the main findings and to draw up new directions of investigation the paper provides for future research. The main idea is that quantitative indicators as GDP do not tell the whole story about regional competitiveness, some qualitative and circumstantial factors being more appropriate to explain the differences in competitiveness results.

2. Defining regional competitiveness

The regional competitiveness refers to the common features characterizing all companies in one regions, including institutions, infrastructure, education, workforce skills, technology, innovation, in other words, to anything that can help a company operate in a business environment favourable for its development or, on the contrary, in a hostile one.
The interest of measuring regional competitiveness is due to the advantages that it may cause: provides evaluation of current local economic environment, identifies weaknesses of the local economy, encourages a longer term perspective on economic development process, lead to new marketing and promotional programs for the region.
Measuring regional competitiveness is not easy. On the contrary, it is a task even more difficult since the very concept of regional competitiveness suffers from not enough or misunderstanding. For example, D. Borozan (2008: 61) states that

regional competitiveness is seen in literature either as an aggregation of microeconomic competitiveness, or as a derivative of macroeconomic competitiveness. Anyway, the both perspectives do not provide a comprehensive picture of regional competitiveness. If regional policy is based on the findings of these perspectives, it may experience a failure seeking to improve regional competitiveness and thus contribute to sustainable regional growth and prosperity. This is due to the fact that each region has some unique specificities not being derived either from micro or macro-economy.
Other authors (Budd and Hirmis, 2004) mentioned that the essential problem is that territorially based actors and agencies seek to position and maintain the utility of their regions and sub-regions by reference to a set of measures and indicators that are conceptually suspect and often empirically weak.
There are interests in defining regional competitiveness for more than two decades. There are many definitions of regional competitiveness, but all converge on the same concept, whose content is not very accurate set*: competitiveness.* According to Eurostat (2014), competitiveness is the ability of an economic industry, enterprise, region or supranational assembly to generate, in a sustainable manner and in conditions of competition, a relatively high level of income and factors occupancy. At the same time, competitiveness can be a mean of sustained growth in the living standards of a nation and of maintaining the level of unemployment as low as possible.
At the beginning of the pursuits in this direction, the concept *regional competitiveness* was defined as the ability of an economy to attract and maintain firms with stable or rising market shares in an activity while maintaining or increasing standards of living for those who participate in it (Storper, 1997). Moreover, competitive regions and cities are places where both companies and people want to locate and invest in (Kitson, Martin and Tyler, 2004).
We can start the analysis of this concept from the studies of M. Porter (1998), which described the impact on the competitiveness of regional industrial clusters in three ways: increasing the productivity of companies in the region, facilitating innovation and creating new companies. Later, based on the theories of Porter, a group of researchers (Delgado et al., 2010b) developed a systematic empirical approach to identify the *role of regional clusters* - groups of industries closely related and complementary, operating in a particular region - in *regional economic performance.* The study findings were that: industries participating in powerful cluster record higher rates of employment, wages, locations and patents; new regional industries arise where there is a strong cluster; the presence of strong clusters in a region increases the opportunities in other industries and clusters. Another paper (Delgado et al., 2010a) studied *the role of regional clusters on regional entrepreneurship* and has concluded that the presence of economic complementary activities creates externalities that increase incentives and reduce barriers to the opening of new businesses and contributes to the survival of newly created companies. Labour force qualification, infrastructure and the efficiency of public institutions are common features that affect the competitiveness of all existing businesses in a particular region.
According to OECD (2014), a competitive region is one that can attract and maintain successful firms and maintain or increase standards of living for the region's inhabitants. Skilled labour and investment gravitate away from "uncompetitive" regions towards more competitive ones. The extension of the

competitiveness concept to the regional level is not too old and it's having a big influence on the direction of regional development policy. Lately, there's a revival of interest in a new form of regional policy. In the past, regional policy attempted to make regions more competitive by attracting in internationally competitive companies, but with limited success. The new approach is now mainly focused on making domestic firms more competitive. This led to an emphasis on regional assets as the source of company competitiveness, not only infrastructure but also other factors, called "soft" factors.
The emphasis on firm's performance as a way to increase regional competitiveness is the core of a recent study (Bekes and Ottaviano, 2015). The authors argue that as firms compete measuring regional competitiveness should be also based on comparing firm performance across regions. This can be accomplished by analysing their ability to access and penetrate world markets.

2. Measuring regional competitiveness

For measuring regional competitiveness there may be used either ex post indicators, such as regional GDP, GDP/capita, the annual rate of GDP growth, labour productivity, employment rate, the share of the region in the foreign market, the structure of foreign trade, or ex ante indicators, which actually refers to the sources of competitive advantages of the region than to the performance itself.
Because GDP has a central role in many studies trying to measure competitiveness, it is important to point out here some of its limits. GPD per capita can measure only material wealth, failing to provide an insight into the living standards of individuals, into the quality of their time spent outside work. GDP does not measure the household activities, the education of children in families or volunteering. It is a purely quantitative indicator, including also activities that are not in a direct and lasting relationship with individual well-being (eg, intensive exploitation of natural resources, the generation of negative externalities (pollution) or costs associated with activities related to crime, natural disasters, and accidents). Moreover, an increase in GDP per capita in nominal terms can hide a decline in personal income. It is also worth mentioning that informal activities, having significant shares in the poorest countries are not included in GDP, even if they have an important impact on that region welfare. GDP per capita provides only partial information related to competitiveness. Maintaining a constant output reported to fewer employees or to a less numerous active population or to a less numerous total population enables (from mathematical point of view) an increase in GDP per capita, meaning higher regional competitiveness (Danon, 2014). (We refer here to decomposed GDP per capita formula conducted by Ronald Martin in 2003 - GDP/Population = GDP/Total Employed * Total Employed/Active Population * Active Population/ Population).
Recently, some European researchers (Annoni and Dijkstra, 2013) developed the regional competitiveness index (RCI) that extends the traditional analysis of competitiveness as a purely economic measure to incorporate social elements too. The definition of competitiveness moves beyond the perspective of businesses to integrate the perspectives of residents or consumers. The RCI builds on the current debate that prosperity should not be measured only by GDP but also by a sum of criteria such as health or human capital developments (Stiglitz et al., 2009). The definition of regional competitiveness underpinning the RCI, which integrates the perspective of both firms and residents, is the following: '*the ability to offer an*

attractive and sustainable environment for firms and residents to live and work' (Dijkstra et al., 2011: 4).

The RCI is designed to improve the understanding of territorial competitiveness at the regional level for the reason that different regions have different strengths and weaknesses. Understanding differences in regional competitiveness may help provide an insight into social and economic conditions and offers policymakers a way to better decide policy initiatives in specific regions.

The RCI is a weighted composite measure of multiple dimensions. Each dimension, that cannot be directly observed, is indirectly quantified by a set of indicators, statistically assessed and aggregated. These different eleven dimensions are aggregated into three sub-indices of competiveness and an overall composite index, as it is shown in the Box 1.

Box 1. Regional competitiveness index (RCI) – typology of sub-indices and dimensions

Regional competitiveness index (RCI)
I. Basic sub-index
i) Institutions ii) Macroeconomic stability iii) Infrastructure iv) Health v) Basic education
II. Efficiency sub-index
vi) Higher education vii) Labour market efficiency viii) Market size
II. Innovation sub-index
ix) Technological readiness x) Business sophistication xi) Innovation

Source: Annoni and Dijkstra, 2013

The RCI therefore quantifies in a single index what may otherwise be difficult to measure: the level of competitiveness of an individual region. RCI offers the first comprehensive picture of the situation for all NUTS 2 regions in the EU-28.

3. Regional competitiveness in Romania. A comparative analysis

In Romania, in 2013, no region had an RCI above the EU-28 average. Furthermore, the gaps in competitiveness between Romanian capital region and the second most competitive region is quite wide, as it is shown in Table 1. Basic competitiveness, the level of efficiency competitiveness and the innovation score was below the EU-28 average in each and every region of Romania. The level of innovative capability influences the ways in which technology is diffused within a region. The indicators within the innovation dimension include, among others, patent applications, knowledge workers, scientific publications, human resources in science and technology and (the strength of) high-tech clusters (Annoni and Dijkstra, 2013). The capital region Bucharest – Ilfov had quite high scores, but were surrounded by regions with much poorer results.

Table 1: Regional disparities in the competitiveness index, by NUTS 2 regions, 2013, Romania

	RCI 2013	Basic competitiveness sub-index	Efficiency sub-index	Innovation sub-index
Min EU-28	0	0	-1.33	0
Mid EU-28	-0.31	-1.36	0.00	-0.16
Max EU-28	-1.17	-0.24	0.11	-1.58
National average	-1.23	-1.51	-0.99	-1.47
Capital region	-0.31	-1.36	0.11	-0.16
Other NUTS regions: North-West Centre North-East South-East South-Muntenia South-West Oltenia West	 -1.23 -1.36 -1.32 -1.48 -1.34 -1.36 -1.25	 -1.48 -1.48 -1.55 -1.60 -1.50 -1.48 -1.60	 -0.97 -1.21 -1.03 -1.33 -1.11 -1.20 -0.99	 -1.49 -1.60 -1.74 -1.70 -1.71 -1.62 -1.38

Source: Eurostat

According to RCI 2013, EU-28 regions are at different stages of economic development: each EU region was assigned to one of five stages of economic development (defined on the basis of GDP per capita, expressed in relation to the EU average; stages 1–5 reflect rising levels of GDP per capita).

Table 2: GDP per capita compared with the regional competitiveness index (RCI), by NUTS 2 regions and by stage of competitiveness, 2011 and 2013, Romania

		GDP per capita, 2011 (EU-28 = 100)					
	RCI, 2013 (EU-28 = 0)	**Stage 5**	**Stage 4**	**Stage 3**	**Stage 2**	**Stage 1**	**Stage of competitiveness**
North-West	-1.23					42	1
Centre	-1.36					45	1
North-East	-1.32					29	1
South-East	-1.48					39	1
South-Muntenia	-1.34					40	1
Bucharest-Ilfov	-0.31		122				4
South-West Oltenia	-1.36					37	1
West	-1.25				54		2

Source: Eurostat

Table 2 compares the calculated RCI values obtained for each NUTS 2 region with GDP per capita (covering the 2011 reference year). The authors (Annoni and Dijkstra, 2013) concluded that there is a close relationship between the two measures and confirms that competitiveness, even when defined using a much wider range of indicators (as in the RCI), tends to be closely related to the size of GDP per capita.
However, the comparative analysis of Romanian NUTS 2 regions rankings by RCI 2013 and by GDP per capita, shown in Table 3, reveals in some cases a small gap between the two rankings, leading to some insights that should not be ignored.

Table 3: Comparative analysis of NUTS 2 regions rankings by RCI 2013 and by GDP per capita, Romania

Region	Ranking according to RCI 2013	Ranking according to GDP/capita, 2013
North-West	2	5
Centre	6/7	3
North-East	4	8
South-East	8	4
South-Muntenia	5	6
Bucharest-Ilfov	1	1
South-West Oltenia	6/7	7
West	3	2

Source: Authors determinations using Eurostat data

Examining the Tabel 3, we conclude that: Bucharest-Ilfov keeps the first positions in both rankings; South-West Oltenia, South-Muntenia and West do not change the position significantly; the major change of position in a ranking relative to the other is observed for North-West, Centre, North-East and South-East regions.
It is interesting to point out the factors that should explain such a reversal of ranks.
North-West region ranks the second position on RCI, but only the fifth on GDP per capita. The region has a good score on efficiency sub-index (Table 1), that means higher education, training and lifelong learning, labour market efficiency and market size, but low levels of labour productivity. The large share of people employed in agriculture and the defining feature of most agricultural activities as being outside the market, so immeasurable in GDP can explain the difference between this region productivity and the size of GDP per capita.
North-East region is situated on the last position according to the GDP/capita, but on the fourth according to the RCI. This can be explained by the good score on efficiency sub-index, meaning that a good quality of the higher education and the lower labour costs are very attractive for IT outsourcing activities.
In the South-East region, most of the growth is based on commerce (benefiting from port area), tourist services and construction. In 2013, construction contributed to the GDP growth of the region with more than twice the average of the EU-28. But this region records poor results on RCI, achieving the lowest score on basic sub-index (meaning institutions, health and basic educations) and also on efficiency (higher Education, labour market efficiency).

The Centre region has a relative good position at national level according to the GDP per capita, but has poor results on competitiveness sub-indexes. The central and western regions of Romania are those who have received the biggest public investment in infrastructure, becoming more attractive to private investors. North-East region owes partly its poor performance in terms of GDP to poor government allocations for road infrastructure development, being quite inaccessible and isolated on the map of commercial poles.
It is worth mentioning here that Romania has one of the largest shadow economies in Europe, estimated at more than 28% from GDP (Schneider, 2015). This means that the real individual incomes are larger than the official GDP sums up. In the same time, a large part of the poorest rural population in Romania works abroad, often sending informally money to their families left at home.
Summing up, the differences between GDP per capita and RCI rankings for Romanian development regions could be explained based on GDP measure limits and on arbitrary allocations of public funds. Even if the second factor is a very important one, we would limit our insights here on the first. It is about the fact that Romania still have a large part of its population working in agriculture, in fact in subsistence farming for the household own use, which means many activities outside the market and, of course, outside the GDP. At the same time, Romania is on the European podium for its shadow activity, which means important incomes that are not declared and included in GDP.

Conclusions

The paper has revealed the fact that the concept of "regional competitiveness" is as vague and misunderstood as the "competitiveness" term is. Also, regional competitiveness could not be reduced to GDP per capita, given its limits to measure the incomes from activities outside the market and the incomes from underground activities. The differences on competitiveness should be more properly discussed based on qualitative and circumstantial factors. Competitiveness goes more and deeper beyond GDP. The critical analysis of different ways of measuring regional competitiveness has underlined there is no complete measure of regional competitiveness which covers all the factors involved in describing regional competitiveness.
The study of competitiveness should be oriented rather on analyzing firms' performances because they are the major economic actors and the main generators of economic wealth. The competition between companies generates competitive advantages and discussing competitiveness on a regional-territorial basis risks to move attention from the mechanisms of entrepreneurial discovery and from the intimate mechanisms of the market to redistributionist policies that will march more to what is seen, slighting what is not seen. This final insight can inspire future empirical research in this field.

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ASPECTS OF DECISIONAL TRANSPARENCY WITHIN THE PREFECT'S INSTITUTION IN ROMANIA AS A CHALLENGE IN A EUROPEAN UNION GOVERNENCE

Claudia Simona Timofte
Law and Administrative Sciences Department, Law Faculty, University of Oradea, Oradea, Romania
clau_timofte@yahoo.com

Abstract. The analysis of the concept of "international transparency" will show that there is a major interest in making public the information related to public administration or public sector. These informations are part of a public international agenda just to make the decision known in the most possible transparent manner to demonstrate "good governance" in the administration. Specialty literature perceives transparency as a way of increasing efficiency.
Special thanks to the Ministry for Public Consultation and Civic Dialogue witch studied all Prefect's Institutions from Romania in compliance with Law no. 544/2001, on free access to public information and the law 52/2003 on decisional transparency. This paper tries to underline the notion of transparency of decision prefect institution in Romania. Given the experience as director of cabinet of Bihor County Prefecture and based on the nationwide survey conducted by the Ministry for Public Consultation and Civic Dialogue I tried to do a study on displaying reports on Law 544/2001 and Law No. 52 / 2003 the prefect Institution from Romania. For a long time, the public sphere has been a central theme for the studies which referred to the organizational building of a state of law. The decision transparency involves the means by which the public administration provides citizens with all the necessary elements of its work, in other words it is put at their disposal. Internationally, public institutions use the principle of transparency, namely social media technology in order to make effective, transparent decisions and come closer to citizens.

Keywords: decision, public administration, transparency, prefect institution**,** Ministry for Public Consultation and Civic Dialogue

JEL classification: K0, K3, M0, M1,Z

1. Generally Introduction. Presentation of the decision transparency and good governance notions.

Those who speak about democracy and efficiency in public administration note that the issue of transparency is actually taken into discussion. What is very interesting to note is that transparency can be viewed from multiple perspectives; if we look from the perspective of democracy, transparency highlights democracy, and if we look at it from an economic perspective, transparency attracts the increase of both performance and gains. Considering the two perspectives, we could say that transparency in public administration would effectively highlight its acts.
A careful analysis of the concept of "international transparency" will show that there

is a major interest in making public the information related to public administration or public sector. All these information are part of a public international agenda just to make the decision known in the most possible transparent manner to demonstrate a "good governance" in the administration.
In this analysis we should also bring into discussion the evolution of the rule of law, independent and sovereign state, which evolved organizationally because of its ability to collect and analyze information, especially in times of social conflicts, making public the agenda and discussing it with all the people involved. (Cf. Schulz - Forberg and Strath 2010; Habermas 1989; Arendt 1958; Tocqueville 1991; Emirbayer and Sheller 1999).
For a long time, the public sphere has been a central theme for the studies which referred to the organizational building of a state of law. Since the nineteenth century, because of a system of information and international communication, some countries have had to adopt legislation providing access to public information. Thus, some states have adopted a new model of governance with emphasis on transparency. As stated by Tero Erkilla, there are European countries that have a very old practice, through which the documents issued by the public administration are made public. In his book he presents Sweden as an example which in 1766 implemented a system to disseminate state affairs. Other example is Finland which in 1951 created a legal status to the principle of publicity of administrative acts. (Tero Erkilla, p 105)
Specialty literature perceives transparency as a way of increasing efficiency (Best 2005, p. 141; Wintrobe 2007). Other authors see transparency as an element belonging to the performance management, perhaps even an element of the new policy management (See Blomgren and Sahlin 2007; Blomgren 2007). On the other hand, there are political and economic theories that show that the principle of transparency, respectively low corruption are guarantees of an efficient administration.
We could say that decision transparency involves the means by which the public administration provides citizens with all the necessary elements of its work, in other words it is put at their disposal. On the other hand, citizens have the right to actively participate in the administrative decision making especially at a financial level, namely the management of resources coming from local taxes.
At a European level in 2000, Prodi Commission aimed at promoting new forms of "European governance", that is mechanisms of democratic organization and management of the Union to increase the legitimacy of the institutions to make Europe accessible to all. The result was the publication of the White Paper on European governance, a document which, unlike the Green Card, which gives guidance and guidelines to be observed in well-defined areas, was meant to stimulate a debate proposed by the European Commission to all the actors involved intended to release changes, political orientations for the democratization of the Union. (Zăpârţan, 2001)
The main ideas put forward in the White Paper refer to the principles of good governance in the EU and main recommendations that can be made.
According to the White Paper, the European governance "designates rules, processes and behavior that affect the exercise of powers at European level, particularly in terms of openness, participation, accountability, effectiveness and coherence". Each of these five principles is a prerequisite for the functioning of good governance within the EU in the future. Herein the

concept is used to talk about a Union goal to be achieved for it to be reformed, because the notion of governance designates a particular type of organization to be improved. This refers to the manner in which the European Union uses the powers conferred to it by the citizens, the way things could and should be made to open up policy-making processes towards increased participation and empowerment. The best use of powers is to get near the Union to the citizens and by increasing the effectiveness of its policies. The five principles of good governance set out in the White Paper are: *Openness, Participation, Accountability*, *Effectiveness* and *Coherence*. (Montagner, 2007)

2. A brief summary of legislation on decisional transparency and free access to public information in Romania

The legislative framework on decisional transparency in public administration is given by Law No. 544/2001 on free access to public information and Law No. 52/2003 on decisional transparency in public administration, with further amendments and modifications.

According to Law No. 544/2001, the public institutions are required to report certain information of public interest, submit an annual activity report to the institution as well as the communication deadlines and the persons responsible to inform the citizen. The law also establishes penalties for non-compliance and going further even to the situation in which the injured person to put to trial the public institution.

Law No. 52/2003 on decisional transparency brings an added value to law 544/2001, empowering the public institutions and stimulating the citizens to participate in administrative decision making. Law also creates conditions for organizing public debates and stresses that institutions can organize these debates.

The breaking of these judicial norms which regulate the process of the access to public information involves, usually, the responsibility form of administrative-contraventional and civil form. (Ardeleanu-Popa, Cîrmaciu, 2010)

3.Case study - Analysis of compliance with the provisions of Law 544/2001 and Law 52/2003 on the level of prefectures in Romania in 2015

Internationally, public institutions use the principle of transparency, namely social media technology in order to make effective, transparent decisions and come closer to citizens. Not coincidentally there are used these technologies being based on three functions: increased transparency, inter and intra organizational collaboration and public participation in decision-making.

In Romania, the Ministry for Public Consultation and Civic Dialogue conducted a monitoring of all Prefect's Institutions from Romania in compliance with Law no. 544/2001, on free access to public information and the law 52/2003 on decisional transparency. This monitoring had in view the compliance by the representative of the government in the territory of the 18 indicators, such as: normative operational and organizational documents of the structure, organizational structure, departments duties, schedule, audience program, name and surname of leadership persons and civil servants responsible for disseminating the public information, contact data of the institution, financial resources, budget for 2015, balance sheet for 2014, own programs and strategies (2015), list of documents of

public interest, list of documents produced / managed by law, ways to contest the decisions of the public authority , periodic report 544 for 2014, periodic report Law 52/2003 for 2014, public procurement 2015, salaries to date (on staff categories). All 18 indicators should be on the websites of the Prefectures from Romania.
At the end of the monitoring carried out by the Ministry for Public Consultation and Civic Dialogue it was noted that out of the 41 Prefectures only two institutions met all 18 indicators and other two institutions met 16 indicators. Details on the number of met criteria by the Prefectures in Romania are shown in Fig 1.

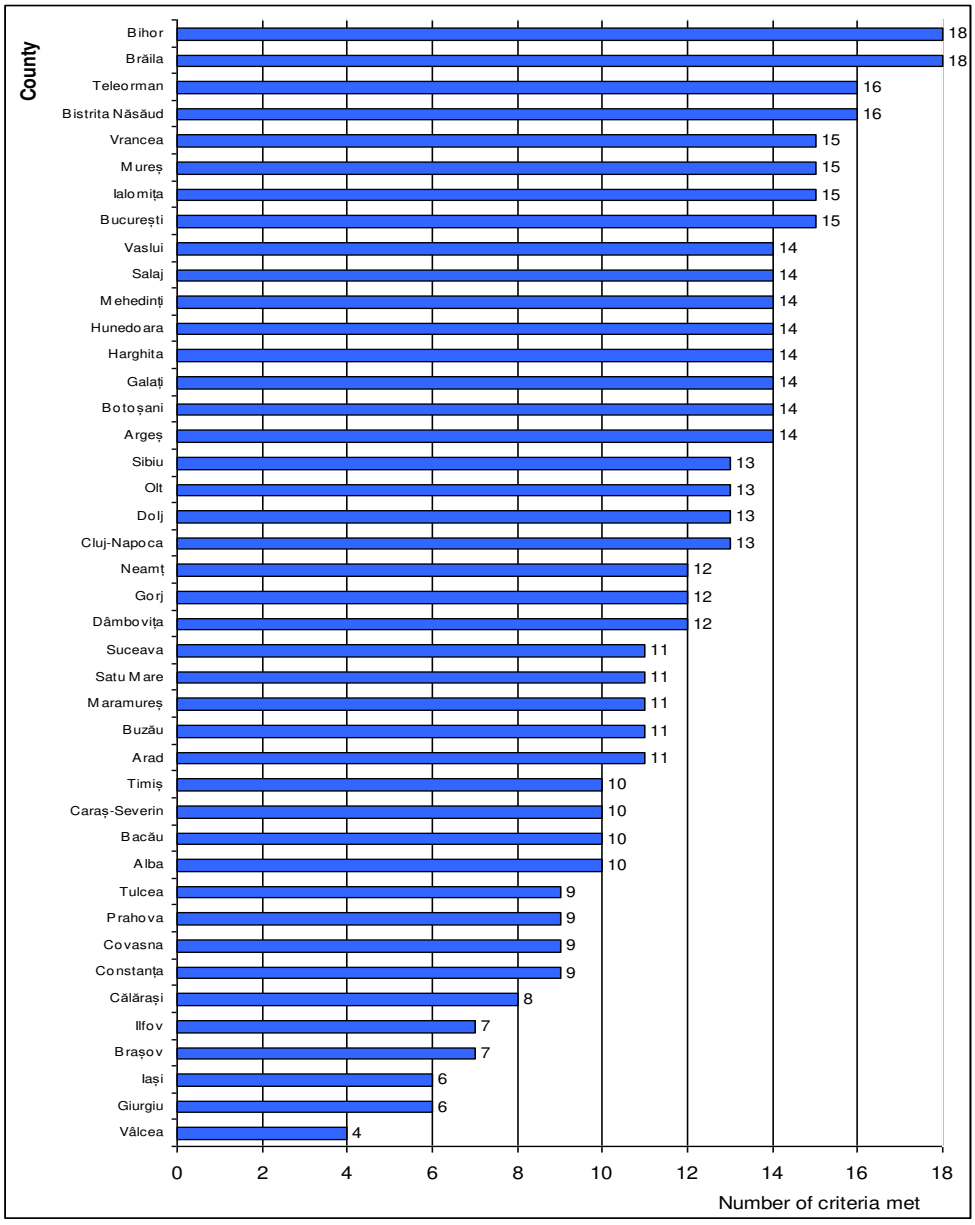


Fig.1 Representation of the number of criteria met by the Governors' institutions in

Romania

In the case study, out of the 18 indicators, we only refer to two indicators: the Law no. 544/2001 on free access to information of public interest and the provisions of Law 52/2003 on decisional transparency by prefectures in Romania in 2015.

Thus, at the end of 2015, the indicator Periodic Report on Law 544 for 2014 was met by only 29 prefectures out of 41. The situation is shown in percentages, in figure 2.

The indicator Periodic Report on Law No. 52 for 2014 was met by only 13 prefectures, and the situation in percents is presented in Figure 3.

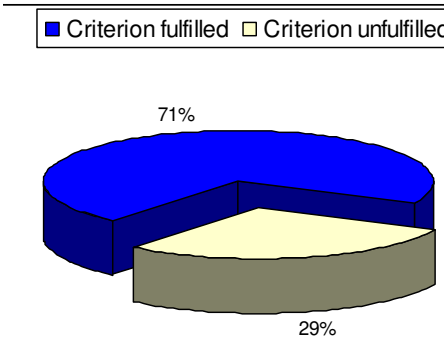


Fig.2 Statement of compliance with Law 544/2001 on the access to public information, at the level of Prefectures in Romania

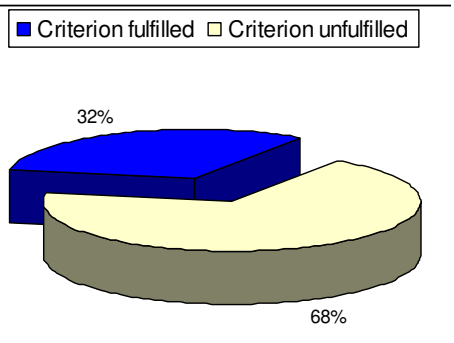


Fig.3 Statement of compliance with Law 52/2003 on the transparency of decisions at the level of Prefectures in Romania

Analyzing the situation of those two criteria in discussion, only five Prefectures out of 41 have fulfilled both criteria. The situation in percentages being shown in the figure below

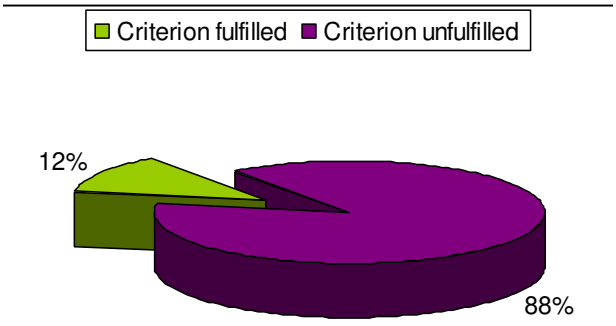


Fig.4 Statement of compliance with Law 544/2001 on access to public information and Law 52/2003 on decisional transparency at the level of Prefectures in Romania

From the list of observations, namely those indicators that were “NOT” respected in the interest of Law 544/2001, we underline that out of the 36 Prefectures, some were not posted on the website of the audience program. In this case, what would be way a citizen could find out the audience program? In other situations, the page

with "public information" wasn't updated since 2012. In other Prefectures, the decisions made at the meetings of the Prefect College, respectively of the Social Dialogue Commission, nor the governor orders which are normative administrative acts were not published. There were no public budgets, balance sheets or procurement plans.
The examples of good practice show that Bihor County Prefecture ranks among the first five prefectures in the country which have met all the eighteen indicators, making them public on the website: www.prefecturabihor.ro site. (See Figure 1)
It should be added that, Bihor Prefecture has a Facebook page. I can proudly point out that we were among the first Prefectures in the country in 2013 which had a Facebook page.

4. In conclusion.

We consider welcome the request made earlier this year by the Ministry for Public Consultation and Civic Dialogue. Not so much to prove that a certain Prefecture has failed to fulfill duties but to demonstrate that we live in an era of communications, therefore the citizen is related to the online environment, collects data and information from this environment. Thus, the representative of the government in the territory - Prefecture - must submit information to the citizen in a manner as quickly and transparently as possible. Decisions of public interest made by in the organizational framework of the Prefecture must be posted on the website of this institution or on its Facebook page. If at the beginning of this paper we presented countries like Sweden which made public their administrative documents in 1766, Romania passed a law on free access to public information only in 2001. But we are in 2016, when the world has evolved in terms of ensuring the transparency of decision-making;the public institution-citizen relationship must be a quick, transparent and efficient relationship. All these cannot be achieved only by means of online communication.
Given the fact that the Prefecture is the institution which represents the Government in the territory, we propose in a future amendment to the legislation of the public administration to consider means of strengthening the role of this institution by providing means of control and sanctioning of institutions that do not respect the principles of decisional transparency at a county level.

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Law no. 544 on 12 October 2001 (updated) on the free access to the information of public interest
Law n. 52/2003 on decisional transparency

THE PHENOMENON OF CORRUPTION AT THE LEVEL OF THE G20 VS. ROMANIA

Silviu Duțulescu[1], Ileana Nișulescu-Ashrafzadeh[2]
[1) 2)] Academy of Economic Studies, Bucharest, Romania
silviudemetrius@yahoo.com
nisulescu_ileana@yahoo.com

Abstract: C*orruption is a mass phenomenon which is present on all the globe's meridians, being relatively easy to identify but very tricky to accurately measure, which assumes a large number of particularities attaining to the complexity of it: culture, education, tolerance, awareness and value system. The phenomenon of corruption at the level of G20 has some particularities, which could be influenced by the governments of the states by increasing the standard of living and the level of education among their people. The fiscal strategy of a government plays an important role in this equation, such that many people are willing to commit acts of corruption, not necessarily due to greed or rent-seeking behaviour, but because they want to save their ongoing businesses and assure a better standard of living for themselves and their close ones. The database is composed of all the member countries of the G20, at which we have added, for comparability reasons, Romania and the European Union as a whole. We follow the phenomenon of corruption by means of economic variables (GDP per capita), fiscal variables (taxation level), educational level (average number of years spent in an educational institution), social variables (the population's trust in the act of justice) and political variables (political stability). These independent variables will be correlated by means of a reference system, meaning the Corruption Perception Index calculated by Transparency International. All the 5 independent variables reflect the reality of the year 2014. In this sense, we have run a series of regressions with the help of the Excel software, each independent variable being correlated to the variable Corruption Perception Index; the resulting series of correlation coefficients applied on the database values were arranged in a 3-part ranking: the first third – countries where the phenomenon of corruption is low, the second third – countries with a medium level of the corruption phenomenon, and the last third – countries with a high level of corruption. Even though the macroeconomic indicators of Romania are lower than those of many countries of the G20, nevertheless our country is situated in the middle of the ranking, with a score higher than the EU average, outstanding many G20 member countries.*

Keywords: corruption phenomenon; G20; Romania; taxation level; corruption map; country ranking

JEL classification: *C40, D12*

INTRODUCTION

The complexity of the corruption phenomenon, as well as the difficulty of quantifying it due to its many influence factors, has always been a disputed field in many scientific papers. Literature tries to identify and analyse the correlations between the size of the phenomenon of corruption and its determining factors,

many times pointing out that the actual methods of evaluation assume a limited explanatory power.

Literature remarks the significant link between corruption and the economic potential of a country, given the fact that the phenomenon of corruption attains great heights both at the level of the public institutions, and in the private sector (Heckelman and Powell, 2010). The final results show that high levels of corruptions are hindering the development of society, and in the long, will lead to the suffering of all the actors involved, including the population. Although the phenomenon of corruption creates misery for us all, few of us think about the causality between low pension funds and tax evasion; or at the link between fictive networks and insufficient funds for compensated medicine; the unemployed person rarely blames the lack of available jobs on the business owner who employs people without a work contract. Fiscal evasion has led to the increase of taxes and the decrease of the job offers, finally leading to corruption as a result of this process.

Matei (2008) argues that there is a very strong correlation between the dimension of the corruption phenomenon and the political instability. Thus, the stronger the “political battle”, the higher the probability that corruption will develop more rapidly in that state. Limiting ourselves to statistical data, it is very risky to elaborate a pertinent theory, because corruption is a complex phenomenon. For a higher degree of accurateness, it would be necessary the dissemination of this phenomenon by the type of corruption.

Marinescu and Jora (2013), show how the phenomenon of corruption can manifest on at least 2 dimensions. On the one hand, there is defensive corruption, meaning the attitude of the citizens towards the corruptible behaviour of the public functionary, and on the other hand there is the offensive corruption, meaning the attempt of some to “buy” higher public functionaries for a personal gain. Graeff and Svendsen (2012) state that the phenomenon of corruption leads to inefficient allocation of resources in a state, thus reducing labour productivity. Similar studies are dome by authors Li and Zahra (2012) who show the link between the dimension of the phenomenon of corruption in a country and the inefficiency of politicians to counteract it. Kaditi (2010) states that investors originating from countries with low levels of corruption, usually avoid making large investments in states with high levels of corruption. Zelekha and Sharabi (2012) underline the contagious effect of this phenomenon. Thus, when the commercial partners of a very corrupt state interact with economic partners from a less corrupt state, there is a tendency of levelling out, such that the less corrupt state will have to harshen the anticorruption measures to avoid the increase in the phenomenon of corruption.

The phenomenon of corruption is an ensemble of elements and mechanisms through which the services destined to the populations are intentionally diminished by a small group of people who intend to use the resources for personal gain (Jensen et al 2010). A demonstration of the destructive potential of the phenomenon of corruption, when it is out of the authorities’ control, could be the situation of Peru which, although owner of the largest gold mines in the world - Yanacocha, cannot market this resource for the benefit of the population; actually, more than half of the population lives in poverty while revolts and street fights are commonplace. In the view of the author Raicu (2010), the phenomenon of corruption targets the vulnerabilities of the public system and illegally exploits them to obtain advantages and personal gains. According to Uslaner (2008), countries with a totalitarian regime have a higher risk of spread of the phenomenon of

corruption than a democratic state. Thus, Moris (2009) did a set of detailed analysis regarding the capability of the political class, no matter whether the regime was totalitarian or democratic, to create and implement reforms that would discourage the development of the phenomenon of corruption at high levels.

No matter the perception we have on the phenomenon of corruption, one of the most efficient "weapons" against corruption is transparency and correct public informing regarding the way in which high functionaries of the state choose to protect the population's interest.

METHODOLOGY

The research motivation began from the assumption that the phenomenon of corruption is the primary responsible for reducing the resources necessary for a nation to develop through industry, investments, job creation, leading to low development levels and a lot of mistrust in the public institutions from the part of the population. In this context, one of the main objectives of the present research is the identification of the main causes that are conducive to the development of this phenomenon, as well as the influence that these causes have on the phenomenon of corruption. To reach these objectives we have chosen a qualitative research methodology. In this sense, we have analysed a significant number of scientific papers from the international but also Romanian literature. Another objective was to present in a practical manner the mechanism through which the phenomenon of corruption may be amplified, but also the effects that it creates. In this sense, we have undergone a quantitative research, using as instrument of research the case study. The diversity of the evaluation methods, as well as the undifferentiated character of the methods included in the process of evaluation, contributes to the increasing of uncertainties in this research, manifesting at the same time dilemmas regarding the relevance of the offered data. In this sense, we aim for a professional, trustworthy argument which has as final purpose presenting and interpreting results in an as objective as possible manner. In the present situation, we aim to underline the phenomenon of corruption through economic variables (GDP per capita), fiscal variables (taxation level), educational level (average number of years spent in an educational institution), social variables (the population's trust in the act of justice) and political variables (political stability).

All the 5 independent variables reflect the reality of the year 2014, and as a resource for all these variables we have chosen the reports of the World Bank (Doing Business), United Nations (Human Development Reports) and PWC (Paying Taxes). These independent variables will be compared to a reference system represented by the Corruption Perception Index calculated by Transparency International.

The database is composed of member countries of the G20, to which we add, for comparability reasons, Romania and the European Union as an entity. The European Union, even though it is not a country like other 19 of the G20, will be analysed on the whole. In order to establish the values for the analysed variables corresponding to the EU, we have considered an average of the values of the 28 member countries of EU. To establish the influence of each independent variable on the dimension of the phenomenon of corruption, we will first run multiple regressions with the help of the (Microsoft Office) Excel software, and depending on the values of R Square, we will establish the values of the coefficients of

correlation which will be applied to the database previously constructed. Following the results obtained for each country including the EU, we will construct a ranking divided in 3 parts in the following manner: the first third (the highest scoring countries) will be included in area A to define countries with very low level of corruption, the second third will be included in area B to define countries with a medium level of corruption and the last third will be included in area C to define countries with the highest level of corruption. After accomplishing this ranking, we will do a correlation between the variable of taxation level and the scores obtained by the countries, in order to establish particularities and correlation between the size of the phenomenon of corruption in one country and the level of fiscal taxation. By having available information about every country, provided by the 4 variables for which we will run a regression (GDP per capita, Education, Trust in justice, Political stability), we can establish in what degree the corruptible behaviour of people can be influenced by the fiscal strategy of a government. In this way, we can estimate whether the size of the phenomenon of corruption assumes precise, measurable causes (poverty, low education, etc.) or less measurable ones (greed, rent-seeking, etc.). This paper aims to literally sketch a map so that the information provided could be more easily understood and interpreted even by people without economic background. Based on this information, comments, comparisons, opinions, personal considerations or even predictions for next years are forwarded. This research assumes a convergence of several dimensions that the phenomenon of corruption touches upon (economic, educational, fiscal, social, political).

RESULTS AND DISCUSSIONS

Following the collection, structuring and processing of the information inherent to each variable analysed, we have obtained a database synthetized in table no. 1:

Table 1: Database

Countries	Corruption phen.	GDP per capita	Education	Trust in justice	Political stability	Taxation level
South Africa	44	12122	9,94	63,94	43,20	30,10
UK	78	39267	13,05	94,23	60,68	34,00
Saudi Arabia	49	52821	8,70	65,38	35,44	14,50
Argentina	34	22050	9,83	18,27	49,03	107,80
Australia	80	42261	12,96	96,15	87,38	47,00
Brazil	43	15175	7,66	55,29	45,15	68,30
Canada	81	42155	13,00	94,71	91,26	24,30
China	36	12547	7,54	42,79	29,61	63,70
South Korea	55	33890	11,89	80,77	53,88	27,90
France	69	38056	11,13	88,46	59,22	64,70
Germany	79	43919	13,07	93,27	79,13	49,40
India	38	5497	5,39	54,33	13,59	62,80
Indonesia	34	9788	7,59	41,83	31,07	32,20
Italy	43	33030	10,10	66,83	64,08	65,80
Japan	76	36927	11,52	89,42	84,47	49,70
Mexico	35	16056	8,47	37,98	20,87	53,70
Romania	43	18108	10,78	63,46	49,51	42,90
Russia	27	22352	11,95	26,44	18,45	50,70
USA	74	52947	12,94	89,90	66,99	46,30
Turkey	45	18677	7,56	59,62	12,14	40,20
EU	64,21	32209	11,40	82,88	73,58	41,90

Source: Authors' projection

After running the statistical regression functions for each independent variables, we have obtained 4 outputs centralised and presented in table 2. For differentiation purposes, the values of each variable was denoted with 1 – GDP per capita variable, 2 – Education variable, 3 – Trust in justice variable and 4 – Political stability variable.

Table 2: Correlation coefficients for independent variables

Regression Statistics	***1***	*Regression Statistics*	***2***
Multiple R	0,773833017	Multiple R	0,737412038
R Square	**0,598817538**	R Square	**0,543776514**
Adjusted R Square	0,577702672	Adjusted R Square	0,519764752
Standard Error	12,03269158	Standard Error	12,83159474
Observations	21	Observations	21
Regression Statistics	***3***	*Regression Statistics*	***4***
Multiple R	0,937572797	Multiple R	0,847101144
R Square	**0,879042749**	R Square	**0,717580349**
Adjusted R Square	0,872676578	Adjusted R Square	0,702716157
Standard Error	6,607052655	Standard Error	10,09576588
Observations	21	Observations	21

Source: Excel outputs

As it can be seen from table 2, the variable Trust in justice has the strongest correlation with the dimension of the phenomenon of corruption. A high correlation is also noticeable for the last variable, Political stability, while the

weakest correlation is attributed to the variable Education. A fist conclusion shows that the variable Trust in justice could have a major impact in shaping the phenomenon of corruption. Following the processing of the data from Table 1, we have obtained the following ranking, synthetized in Table 3:

Table 3: Country ranking according to the estimate of the level of corruption

Country	*Score*	*Area*	*Country*	*Score*	*Area*	*Country*	*Score*	*Area*
Canada	156,69	A	France	127,11	B	Turkey	65,62	C
Australia	155,16	A	South Korea	116,84	B	Indonesia	63,40	C
Germany	146,80	A	Italy	110,91	B	China	63,23	C
Japan	146,26	A	Romania	97,55	B	India	60,56	C
USA	135,24	A	South Africa	92,86	B	Argentina	57,05	C
UK	134,29	A	Saudi Arabia	88,74	B	Mexico	53,30	C
EU	132,53	A	Brazil	85,48	B	Russia	43,45	C

Source: Authors' projection

The first position in the ranking is occupied by Canada, while the last position, by Russia, making the amplitude of the sample equal to 113.24 points. As shown in the Transparency International 2014 Report, Russia is the most corrupt state of the G20, being outweighed by few countries such as Uganda, the Republic of Congo, Afghanistan or Somalia. A particular case in this research is represented by the EU, which, although not a state in itself, was taken into account as the 20th member state of G20. We are in fact speaking about 28 countries, which registered sufficiently high average values to qualify for area A. Excluding EU, we notice that in area A, we find countries with the highest economic potential and at the same time, with the highest geopolitical influence. The amplitude for this area is 24.16 points, meaning 41.96% lower than area B and 8.97% higher than area C.

In area B, we notice the largest score differences between the first and last country, France (127.11) and Brazil (85.48). Romania is situated exactly in the middle of both area B, and of the entire sample, with a score of 97.55 points, 3.95% lower than the average overall country score. In the ranking, Romania is placed between Italy and South Africa, at approximately the same score distance from both.

Although not a member of the G20, Romania registers values very close to the G20 group average for all the main variables, Trust in justice (63.46), Political stability (29.51). For the countries of area C, the amplitude of the score between Turkey (65.62) and Russia (42.45) is at the lowest level (22.17). In these countries, we estimate that the phenomenon of corruption is at the highest levels. As a particularity, these countries register the lowest values for the variable Trust in justice (below 60 points) and for the variable Political stability, with the exception of Argentina (49.03); as such, the highest values start from 31 points downwards while, by comparison, Canada registers a value three times higher for the same variable (91.26). Countries with the best results registered for the Trust in justice variable are Australia (96.15), Canada (94.71) and UK (94.23), while the lowest scores for the same variable are registered in Mexico (39.98), Russia (26.44) and Argentina (18.27)

The fiscal policy of a government can manifest a strong influence on the business environment and on the population's standard of living, in some situations either encouraging or hindering the development of corruption. Keeping this in

mind, we have researched a correlation between the scores regarding the phenomenon of corruption of the 21 countries analysed and the taxation (fiscal) level of each country at the level of the year 2014. This correlation is suggestively presented in figure 1.

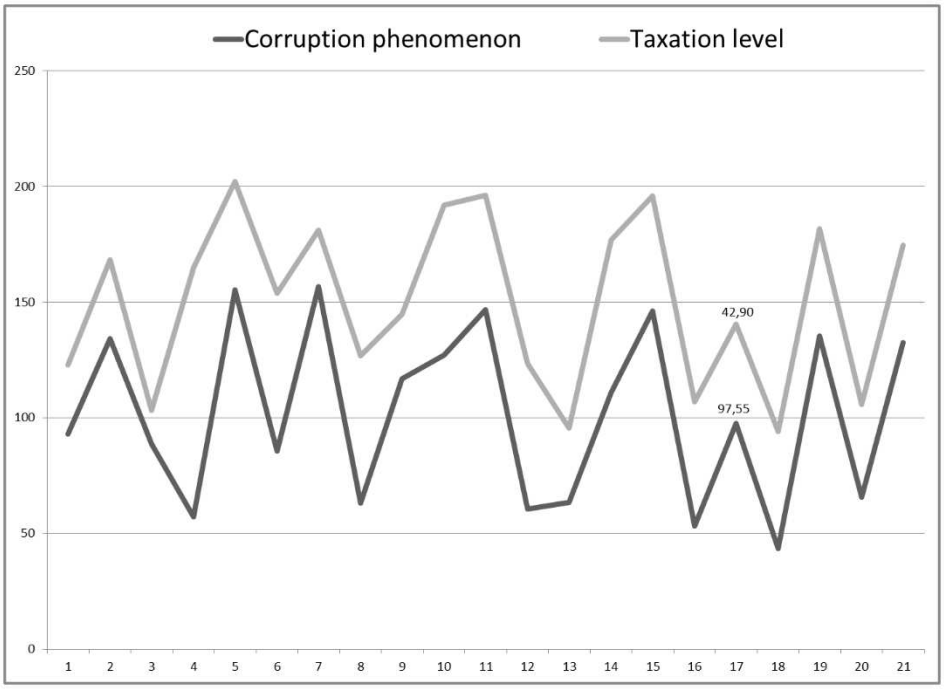


Figure 1: The correlation between corruption phenomenon and taxation level
Source: Authors' projection

As we can see in figure 1, the dimension of the phenomenon of corruption (the black line) correlates strongly with the taxation level (the grey line). Although we cannot speak about a perfect correlation of the two graphs, the trends are close enough, which suggests that at the G20 level, an important factor influencing the corruption phenomenon is represented by the fiscal policy. In Romania, the taxation level is 42.90% of the profit obtained by a company after paying all its taxes, a level below the G20 average of 48.47%. Although the taxation level in Romania is situated below the G20 average, placing it among the first 10 countries in the corruption level ranking, its position is negatively affected by the variable GDP per capita which is 18 108 $ per capita, meaning a lot lower than the average of the G20 group (28 564.47 $ per capita) or of the EU (32 209 $ per capita). We can conclude that in Romania, the size of the corruption phenomenon is due, in large part, to the lower living standards, which remains a catalyst for the maintaining and even development of the phenomenon of corruption.

After undergoing the analysis and observations, the data were synthetized and exposed in a suggestive, comprehensible manner as a map, presented in figure 2.



Figure 2: Map of corruption at the level of the G20 member countries
Source: Authors' projection

As we can see from figure 2, there is no correlation between the territorial size of a state and the size of the phenomenon of corruption, but rather a correlation between the economic potential of a country and the size of the phenomenon of corruption. In general, a larger country in terms of territorial size (Russia, China, Australia, Canada, and USA) benefits from the presence of important natural resources, which may potentially transform it into an economic power; from this point on, we can start discussing about the phenomenon of corruption. In the present study, the European Union was perceived as a state and analysed in its entirety, but in a future article, the analysis will focus on the 28 member states independently, in order to establish with a higher accuracy the size of the phenomenon of corruption in this territory.

CONCLUSIONS

The variable that has the strongest correlation to the size of the phenomenon of corruption is the variable Trust in justice, such that, with only one exception (France), all countries from area A have values of this variable larger than the countries from areas B and C.

The second most important variable according to its influence on the phenomenon of corruption is Political stability. Just as with the case of the first variable, with only one exception (UK 60.68), all countries from area A register higher values of this variable compared to countries from areas B and C.

Romania, which is situated in the middle of the ranking (11th position) registers values which are lower than the G20 average for the variables Trust in justice and Political stability.

Romania also registers lower than average values for the first variable (GDP per capita), meaning 63.43% of the average GDP per capita for G20.

Romania registers higher values than the sample average for the variables

Education and Taxation level.

According to this research, the highest level of corruption is registered in Russia.

In Russia, the Taxation level is higher than the average of the analysed countries, being situated at 50.70% of a company's profit, while the values of the variables Trust in justice and Political stability are among the lowest values of the entire sample of countries analysed.

As it is evident from the reports of Transparency International since 2010 until today, Russia is the most corrupt country of the G20, the situation being due, in part, to economic causes, GDP per capita being 22 352 $, lower with almost 6 000 $ than average GDP per capita of G20.

Russia registers very good values for the variable Education (11.95 years), a lot higher than the sample average.

The country with the weakest values for the educational component is India, with an average of 5.39 years, followed by countries such as China, Turkey, Indonesia and Brazil, countries which register values below 8 years. With the exception of Brazil (area B), all these countries are situated in area C, and in their cases, the large size of the phenomenon of corruption may be due on the lack of awareness of the population of the disastrous effects that this phenomenon might have.

Among the countries with the highest Education levels we mention Germany (13.07 years), UK (13.05 years), Canada (13 years), Australia (12.96 years) and USA (12.94 years). All these countries are situated in area A, and one of the explanations for this fact may be that the people in these countries are aware of the risk they expose themselves to, when they practice or tolerate corrupt behaviour.

A particular case to discuss is Argentina, a country situated in area C, which has a taxation level of 107.90%. In this country, an economic agent would find it impossible to legally do business in absence of subsidies or tax exemptions.

With the exception of Argentina, countries with high levels of taxations are Brazil (68.30%), Italy (65.80%) and China (63.70%).

The country with the lowest level of taxation is Saudi Arabia (14.50%) followed at a distance of almost 10 percent by Canada (24.30%)

Surprisingly, besides Turkey and Russia which are geographically situated on 2 continents, no other country located on the European continent is situated in area C, most of them being found in area A.

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RESEARCH AND DEVELOPMENT IN THE EUROPEAN UNION

Gheorghe Hurduzeu[1], Maria-Isadora Lazar[2]
[1],[2] Department of International Business and Economics, Faculty of International Business and Economics, Bucharest University of Economic Studies, Bucharest, Romania
gheorghe.hurduzeu@rei.ase.ro
lazar.isadora@yahoo.com

Abstract:
In the aftermath of the economic crisis, measures have been taken in order to set the paths towards a sustainable growth in the European Union. One of these measures was objectified through Europe 2020 Strategy that was meant to ensure a smart, sustainable and inclusive growth. The smart growth was expected to be achieved through improvements in research and development, innovation and education. In this paper we decided to address Europe's smart growth, taking into consideration one of its main pillars: research and development. We have taken into consideration data for the 28 European Union member states and applied a comparative analysis of the dynamics of research and development expenditures for the last ten years, analyzing data from Eurostat database. Our results highlighted the increasing interest in the research and development activities in the last years. For a better understanding of the dynamics, we analyzed also the structure of the R&D expenditure, by the following four institutional sectors: business enterprise, government, higher education, private non-profit with the total of sectors. In most of the European Union member states the main sector of performance in R&D expenditures is the business sector, followed by higher education sector. However, this is not the cases in all countries, some of them having a different structure in this respect. In some countries, as Latvia and Lithuania, the higher education sector is the main funder of R&D activities, while in other countries, as Romania, R&D activities are conducting with the support of both private and public funding, in almost equal contribution. However, despite the differences in structure, the general trend is of increasing R&D funding, highlighting the increasing interest for innovation and more knowledge intensive outcomes. Even if progress has been registered, in most European Union member states efforts should be made in order to support R&D activities, as to meet the Europe 2020 target, but primarily for boosting innovation.

Keywords: research and development, European Union, business enterprise, government expenditure, higher education

JEL classification: H52, I23, O30, Q01

1. Introduction

In the aftermath of the economic crisis, measures have been taken in order to set the paths towards a sustainable growth in the European Union (EU). One of these measures was objectified through Europe 2020 Strategy that was meant to ensure a smart, sustainable and inclusive growth. The smart growth was expected to be achieved through improvements in research and development, innovation and education. The sustainable growth should be met when tackling aspects regarding resource efficiency, while the inclusive growth should be achieved when problems regarding high unemployment and poverty rates will be reduced. In order to achieve this goal, targets had been set, as to be able to set the paths towards the sustainable, smart and inclusive growth which is the overall objective that should help the European Union recover and prosper.

2. Europe's Smart Growth

Europe's smart growth is meant to be achieved through improvements in research and development and education. As to be able to monitor and assess the progress registered in this respect, certain indicators are kept under observation and used for analysis, for the main purpose of emboldening progress in meeting the targets.
The indicator for R&D activities is Gross domestic expenditure on R&D (% of GDP), with the specific target of 3%GDP.
Enhancement in education is translated in reducing the percent of total early leavers from education and training (% of population aged 18–24) to below 10% and increasing the percent of total tertiary educational attainment (% of population aged 30–34) to above 40%.

Table 1: Smart growth indicators and specific target according to Europe 2020 Strategy

Topic	Indicator	Target
R&D	R&D Gross domestic expenditure on R&D (% of GDP)	3%
Education	Early leavers from education and training, total (% of population aged 18–24)	<10%
	Tertiary educational attainment, total (% of population aged 30–34)	>40%

Source: European Commission

In respect to progress registered regarding education, "there has been significant improvement regarding these dynamics, in 17 out the 28 European Union member states, this objective being in 2014 already achieved. Italy, Malta, Romania, Slovakia and Czech Republic should increase their efforts, as the share of people aged 30 to 34 year old to have completed tertiary or equivalent education was in 2014 of less than 30%. Except from Germany, in all the other European countries, women are more educated than men (taking into consideration tertiary educational attainment by sex, age group 30-34, year 2014). Important gaps in this respect can be seen in Bulgaria, Estonia, Slovenia and Latvia" (Hurduzeu, Lazar, 2015).
In this paper we decided to address Europe's smart growth, taking into consideration one of its main pillars: research and development. We have taken into consideration data for the 28 European Union member states and applied a comparative analysis of the dynamics and the structure of research and

development expenditures for the last ten years, analyzing data from Eurostat database.

„Research and experimental development comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications" (Eurostat, from Frascati Manual, 2002 edition). As per Europe 2020 Strategy, European Union member states should increase their R&D expenditures up to or above 3%GDP. This should ensure a smarter growth of the European space and therefore, will help solve other related problems, as high unemployment, through the rationale that more research and development will lead to better, more diverse, products, increased productivity, higher demand and more jobs. However, although the rationale is correct, estimating the exact impact on jobs is difficult to assess with high accuracy: „this assessment is completely 'neutral' to which particular technologies (with the accompanying benefits and risks) will eventually hit the market and which technologies are specifically associated with the increase of jobs. The positive impacts of research and innovation are generally couched in terms of fostering the prosperity and wealth of nations and the availability of finance for research and innovation in general is seen as a condition to achieve this prosperity" (Von Schomberg, 2013). In their study based on the construction and the analysis of the Europe 2020 index Pasimeni (2013) specified that "the internal analysis of the index shows that the Smart and the Inclusive growth dimensions of the strategy are strictly correlated and that the trade-offs between each of these two dimensions and the Sustainable one exist but are decreasing, suggesting that a change towards more sustainable models of development is occurring in Europe. The external analysis of the index shows that it can be a valid measure to assess the overall competitiveness of countries and that the most critical factors for this strategy to be successful are good governance and social capital".

Although the impact of the R&D target achievement on the labour market and other economic indicators is difficult to quantify, previous studies had shown that "efforts have been made by all European Union countries in meeting the Europe 2020 Strategy targets. In this respect, the strategy can be considered a success, by setting thresholds that were set as national objectives. However, the results are very diverse between the European countries, reaching the targets by 2020 by all member states being a very ambitious objective, even impossible for some countries regarding one aspect or another, considering the path they are in" (Hurduzeu, Lazar, 2015). Dynamics in the research and development sector had been previously studied by Ulnicane (2016) that had highlighted the fact that, after the crisis, "EU research and innovation policy has focused on two main issues. Firstly, it has aimed to facilitate structural reforms and to increase the level, quality and efficiency of public and private investments in research and innovation at the national level. Secondly, the EU has increased its own research and innovation funding".

On this topic, some authors justifiable plead for responsibility in research and innovation Owen, Macnaghten, and Stilgoe (2012), others draw attention to the fact that "the target of spending 3% of GDP in research and development must either be replaced, or at least complemented by output indicators representing the level of innovation taking place in a given portion of territory. In this respect, the indicators used in the innovation scoreboard of the European Commission appear

more meaningful and useful" Renda (2014).
As mentioned, this paper will address research and development, taking into consideration data for the 28 European Union member states and applying a comparative analysis of the dynamics and the structure of research and development expenditures for the last ten years, analyzing data from Eurostat database.

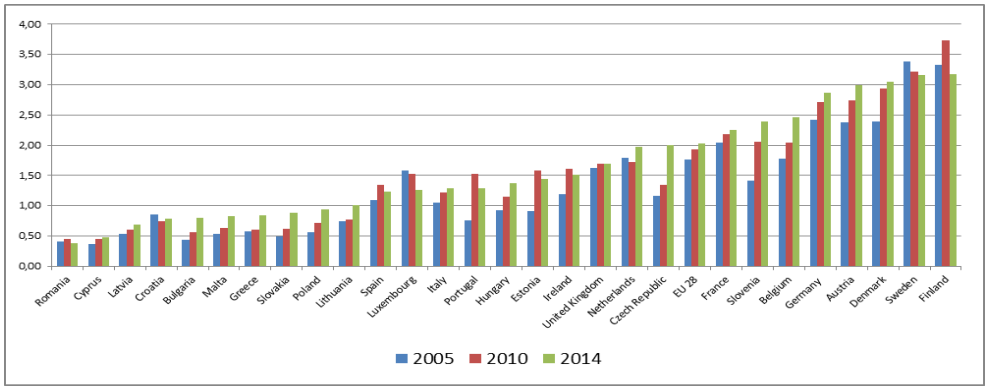


Figure 1: Total R&D expenditure (percentage of gross domestic product)
Source: Eurostat

Europe 2020 target for R&D expenditure is set at 3%GDP. It can be seen (Figure 1) that had been improvements in this respect in most of the European countries since 2005. Moreover, the average for the European Union in this respect has also improved from 1.76 %GDP in 2005 to 2.03%GDP in 2014. Exceptions had been registered by Romania in which R%D expenditure was of 0.41%GDP in 2005, 0.45%GDP in 2010 and only 0.38%GDP in 2014. This is not the only case, however. The situation is similar in Spain, Luxemburg, Portugal, Estonia and Ireland. In some of these countries, cutting expenditures can be explained by the difficult times of the last years and the need for fiscal consolidation. R&D expenditures had also fallen since 2010 in Sweden and in Finland, but their situation is somewhat different, considering that in 2014, the R&D expenditures in still above the 3%GDP threshold. Next to these two countries, Austria and Denmark are the other two European Union member states in which the target in met in 2014. France, Slovenia, Belgium and Germany are above the EU average, but still have to register progress in order to meet the Europe 2020 target in this respect. The total R&D expenditures as %GDP had been accounted from Eurostat as Intramural R&D expenditures that are „all expenditures for R&D performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds" (Frascati Manual, OECD 2002, from Eurostat).
For a better understanding of the dynamics, we analyzed also the structure of the R&D expenditure, by the following four institutional sectors: business enterprise, government, higher education, private non-profit with the total of sectors. In most European Union countries, the main sector of performance is the business sectors that accounts for the highest percentage of total R&D expenditure. There are, however, exceptions. In Lithuania the higher education sector accounted for most

of the R&D expenditure (0.54%GDP), compared to the government sector (0.18%GDP) and the business sector (0.30%GDP). The situation is similar in Greece, 0.31%GDP being the R&D expenditure of higher education, 0.28%GDP of the business sector and of only 0.23%GDP of the government. Also in Latvia and Cyprus, the higher education sector is the main sector of performance regarding R%D expenditure, followed by the business sector and the government. Only in Romania the main funding is assured by the government sector, of 0.16%GDP and by the business sector, of also 0.16%GDP.

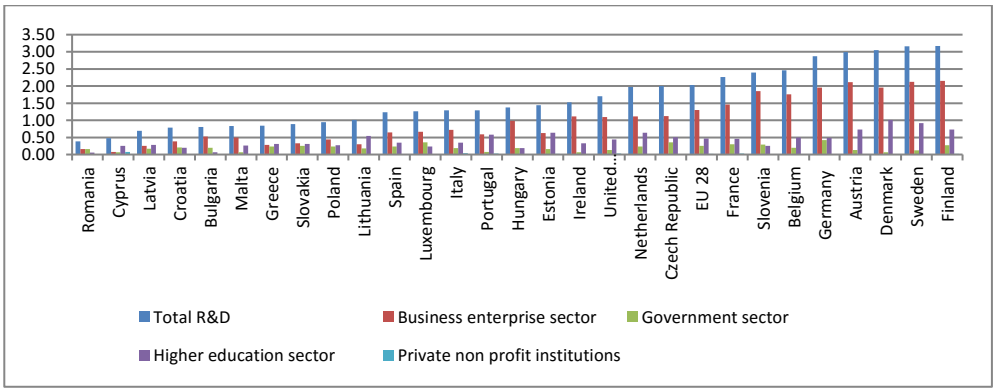


Figure 2: Total intramural R&D expenditure (GERD) by sectors of performance in 2014, percentage of gross domestic product
Source: Eurostat

The forth sector of performance, this being the private nonprofit institutions is present in some countries, but accounts of less than 0.05%GDP. Cyprus is highlighted in this respect, as in this country the private nonprofit institutions are very active in R&D activities, as R&D expenditure accounts for 0.08%GDP, equal to the participation of the business sector and more than of the government sector.
The dynamics of the government sector R&D expenditure highlight the decreasing interest of the government sector in providing research funding in many countries, as Denmark, Sweden, Ireland, Cyprus, Portugal, United Kingdom, Lithuania, Italy, Hungary, Bulgaria and France.
In other countries, as Romania, public funding has increased since 2005, showing the concentrated interest in enhancing innovation and setting the path towards a more sustainable growth.

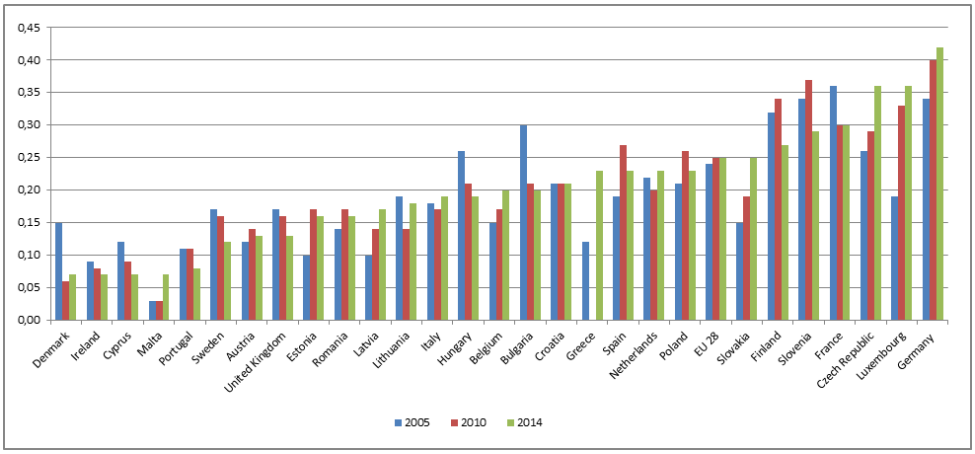


Figure 3: Government sector R&D expenditure (percentage of gross domestic product)
Source: Eurostat

However, in many countries, perhaps also due to unfavorable economic dynamics of the last years (Hurduzeu, Lazar, 2015), since 2010 government expenditure on R%D decreased. On the more fortunate side, in countries as Denmark and Sweden, the decrease in the public funding had been surpassed by the increase in private funding. The increase in private sector highlights the fact that the business sector is interested in investing in innovation, being therefore an indicator of the structural features of that economy.

5. In conclusion

In the aftermath of the economic crisis, measures have been taken in order to set the paths towards a sustainable growth in the European Union. One of these measures was objectified through Europe 2020 Strategy that was meant to ensure a smart, sustainable and inclusive growth. The smart growth was expected to be achieved through improvements in research and development, innovation and education. In this paper we decided to address Europe's smart growth, taking into consideration one of its main pillars: research and development. We have taken into consideration data for the 28 European Union member states and applied a comparative analysis of the dynamics and the structure of research and development expenditures for the last ten years, analyzing data from Eurostat database. Our results highlighted the increasing interest in the research and development activities in the last years. Moreover, the average for the European Union in this respect has also improved from 1.76 %GDP in 2005 to 2.03%GDP in 2014. Exceptions had been registered by Romania, Spain, Luxemburg, Portugal, Estonia and Ireland. In some of these countries, cutting expenditures can be explained by the difficult times of the last years and the need for fiscal consolidation. R&D expenditures had also fallen since 2010 in Sweden and in Finland, but their situation is somewhat different, considering that in 2014, the R&D

expenditures in still above the 3%GDP threshold. Next to these two countries, Austria and Denmark are the other two European Union member states in which the target was met in 2014.
For a better understanding of the topic, we analyzed also the structure of the R&D expenditure, by the following four institutional sectors: business enterprise, government, higher education, private non-profit with the total of sectors. In most of the European Union member states the main sector of performance in R&D expenditures is the business sector, followed by higher education sector. However, this is not the cases in all countries, some of them having a different structure in this respect. These are the cases of Lithuania, Latvia, Cyprus and Greece. In other countries, as Romania, R&D activities are conducting with the support of both private and public funding, in almost equal contribution.
However, despite the differences in structure, the general trend is of increasing R&D funding, highlighting the increasing interest for innovation and more knowledge intensive outcomes. Even if progress has been registered, in most European Union member states efforts should be made in order to support R&D activities, as to meet the Europe 2020 target, but primarily for boosting innovation.

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PROMOTING COMPETITION ON THE NATURAL GAS MARKET IN THE EUROPEAN UNION

Mihaela Ionescu Sas
Department of Economics, Doctoral Schoolof Social Sciences, University ofOradea,
Oradea, Romania
ss_mihaela@yahoo.com

Abstract: The objective of this paper is to analyze the development of natural gas infrastructure in the EU and discuss its prospects. The first part is shown the relationship between the regulatory framework of the European Union and development investments to increase competition in the gas sector. High consumption of natural gas in the Member States of the European Union has led to a dramatic increase in imports, and this trend is likely to continue in the future. In addition, resource security after prolonged disruptions of gas supply initiates a series of projects that should enhance security of supply by promoting market integration and allow natural gas flows reversed. In this context the European regulations to encourage investment coming into interstate natural gas transmission pipelines, an industry characterized by a special regulatory framework. The European Commission adopted in 2015 a list of 195 key energy infrastructure projects that will help achieve the objectives on energy and climate in Europe and form key elements of the EU Energy Union. The projects - known as project of common interest (PCIs) - will allow connection Energy Union through gradual integration of energy markets in Europe and the diversification of energy sources and transport routes. In Europe it is found that the gas market is generally well integrated physically in the west, but in Southeast Europe, there is severe congestion. Following the failure of infrastructure projects in the region, Nabucco and South Stream project is investigating BRUA for infrastructure integration in this region of Europe. In the second part of the article analyzes the integration of Romanian gas transmission system in the European market during the next decade. Economic theories of investment in gas infrastructure does not provide clear indications of the conditions in which levels of investment can be effectively achieved, but demonstrated the added value of using a new institutional economic prospects. The author tries to make an assessment of the impact of national gas infrastructure development on the Romanian economy.

Keywords: Energy infrastructure; investment; natural gas market; projects of common interest.

JEL classification: Q43

1. Introduction

European vision on energy is building an integrated single market, the competitive activities to be liberalized and competitive, the only remaining covered components networks. For the Single Market to work, it has abolished all restrictions possible

(physical and regulatory) to energy trading across borders. The market is more competitive and diversified, the greater energy security.
Growing dependence on imports of natural gas in the European Union requires additional infrastructure investment import and storage.

2. European gas market integration

2.1. Theoretical considerations

There is a rich economic literature on regulation and infrastructure specifically regulating infrastructure with natural monopoly characteristics (Laffont and Tirole, 1993). However, economic theory does not provide clear guidance on the conditions under which investment levels can be effective.
The theory of public interest (den Hertog, 2000) provide explanations to regulatory intervention in the concept of market failure, but makes to explain.
Klein (1996) defines a number of ways the competition can be applied to network industries and provide some conditions to be fulfilled for the successful adoption of certain options in a specific context.
Regarding the new institutional economics Williamson (1998), provides a better framework for analysis infrastructure regulation, since it is based on assumptions of behavior more realistic, and recognize the essential role of the institutional environment in the functioning of markets. In particular, the economic cost of the transaction, who eventually transaction analysis center seems to be the solution to help explain differences regulating various types of gas infrastructure expansion in different contexts. While the new institutional economics provides a better framework since May explanatory factors include, it must be operationalized regulatory cases of investment in gas infrastructure.
The observed differences in the implementation of regulations in different markets or network industries focuses on relevant external effects.

2.2. Regulations on natural gas infrastructure development in the European Union

In the early 1990s, the EU was characterized by the existence of several national markets of gas at all or poorly interconnected dominated by state giants who held a monopoly on all related activities: production, transport, import, storage, distribution. But high consumption of natural gas in the Member States of the European Union has led to a dramatic increase in imports. Thus Member States began to be increasingly dependent on gas supply contracts concluded several decades, the price was set by the oil price and the importer undertook to pay a certain minimum amount of gas.
In line with the European principle of free movement of goods, services, people and capital in the internal market, the European Commission adopted three directives approved in 1998, 2003 and 2009 which instituted deregulation of the gas market and separating activities such as production the gas distribution. The stated objective of this policy was the introduction of competition in a market that was closed it before. The concept Brussels, a large number of independent distributors, competing, should lead to attempts supply from new producers outside Europe, lower prices and expand the transmission network in Europe, to have access to the widest possible range of end users.
Article 87 of the EC Treaty (Article 107 TFEU) provides that "be incompatible with

the common market any aid granted by a Member State through State resources in any form whatsoever which distorts or threatens to distort competition by favoring certain undertakings or the production certain goods as long as it affects trade between Member States ". But Article provides a number of exceptions considered compatible with the internal market of the Union including aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of Member States.

Given the liberalization of the domestic gas market, on security of supply, any difficulty having the effect of reducing gas supply could cause serious disruption of economic activities so and supply of natural gas to households.

The European Commission adopted in November 2010 initiative called "Energy 2020 - A strategy for energy competitive, sustainable and secure energy", COM (2010) 639, which defines the energy priorities for a period of 10 years and propose measures that can be taken to address a number of challenges, including achieving a market with competitive prices and secure supplies, strengthening leadership in technology and effective negotiation with international partners.

Strategy "Energy 2020" requires investment in energy sector 1000 billion (540 million euros - energy production, 210 million - networks of electricity and gas) and the Energy Roadmap 2050, aims at the full integration of networks, energy and openness European market.

The large variety of energy sources and diversity of suppliers, transport routes and transport mechanisms may each play an important role in ensuring energy supply. Building reliable partnerships with suppliers, transit countries and consumer countries is seen as a way to reduce the risks associated with the EU's energy dependence; to this end, in September 2011 the European Commission adopted a Communication entitled "EU Energy Policy: Engaging with Partners beyond Our Borders" [COM (2011) 539].

The European Commission stated in its Communication COM (2010) 677/4, on energy infrastructure: "Every European region should implement infrastructure allowing physical access to at least two different sources."

Progress to date is still too slow and there are still many problems to be solved to provide the expected benefits of market integration in terms of security of supply and competition. These issues are addressed for better regional cooperation among stakeholders at national level, better coordination related to infrastructure development, better align regulation and authorization processes for transboundary infrastructure and facilitating access to finance.

Regulation (EU) Nr.994 / 2010 requires operators of transmission systems to ensure a permanent bi-directional capacity on all cross-border interconnections, unless that was granted an exemption from this obligation. Its objective is to ensure that the potential benefits of permanent bi-directional capacity are always taken into account when a new interconnection planned. However, bidirectional capability can be used for both gas supplies to neighboring Member States and other countries located along the corridor of gas supply. Thus, the benefits they can ensure a permanent bidirectional capabilities for security of supply should be considered from a broader perspective, in the spirit of solidarity and enhanced cooperation.

Although there have been efforts continue to implement harmonized standards under the third energy package, Regulation 994/2010 / EU concerning measures to safeguard security of gas supply supports the development of key infrastructure

projects.
Acting on their own Member States cannot achieve a sufficiently objective of this Regulation, namely to guarantee a secure gas supply within the Union. Given the scale or effects of the action, this can be better achieved at Union level.
Review of the Regulation Nr.994 / 2010 proposed in February 2016 aims to achieve an adequate level of preparedness in Europe in the event of gas supply disruptions and mitigate any effect that must occur at the lowest possible cost.
General objectives are to review the Regulation in accordance with EU Treaty objective to ensure security of energy supply in the EU (Article 194 (1) (b) TFEU).

2.3. Projects of Common Interest in natural gas

Energy 2020 strategy "requires investment in energy sector 1000 billion (euro 540 million - energy production, 210 million euros - electricity and gas networks). Energy Roadmap 2050 is envisaged full integration and market opening European energy networks, essential for maintaining balance between energy security, competitiveness, profitability, sustainable economy and consumer interests; completion of the internal energy market, eliminating energy islands in the European Union.
The European Commission adopted in November 2015 a list of 195 key energy infrastructure projects that will help achieve the objectives on energy and climate in Europe and form key elements of the EU Energy Union.
The projects - known as project of common interest (PCIs) - will allow connection Energy Union through gradual integration of energy markets in Europe, the diversification of energy sources and transport routes. PCIs will benefit from accelerated authorization procedures and regulatory conditions improved and may be eligible for financial support from the Connecting Europe Facility (CEF). A budget has been allocated € 5350000000 trans-European energy infrastructure within MCE 2014-2020, helping projects of common interest to be implemented more quickly and make them more attractive to investors. List of projects 2015 PCI updating the list adopted in October 2013. It comprises 108 electricity projects, 77 gas 7 3 projects for oil and smart grids. A good balance between projects in electricity and natural gas was achieved also by identifying clear priority projects in a regional context.
The MCE, in 2014 and 2015, the amount of € 797 million was allocated for financing of studies and construction work to help the implementation of PCIs. It is expected that about 62 projects to be completed by the end of 2017.
According to Order No 157 of 11.4.2015, Article 1 methodology for evaluating investments in projects of common interest in gas infrastructure, including risks related to them, apply to projects of common interest, as they are defined in Art. 2 pt. 4 of Regulation (EU) no. 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure repealing Decision No. 1364/2006/ EC and amending Regulations (EC) No. 713/2009, (EC) No. 714/2009 and (EC) No. 715/2009, for which a project initiator assumes higher risks in the development, construction, operation or maintenance project of the risks incurred typically a comparable infrastructure project.
European Commission's proposal to invest 217 million euros in a series of 15 key projects for trans-European energy infrastructure was accepted by Member States of the European Union.
Under this agreement, the largest amount (179.3 million euros) to be paid to the

National Gas Transmission Company Transgaz SA for execution works in Romania at national transmission system of natural gas in order to develop a pipeline that will linking Bulgaria and Austria via Romania and Hungary (Table 1).
Of the 15 projects selected for funding are nine natural gas (which will receive financial aid of 217 million).
Interconnector linking the natural gas networks of Bulgaria, Romania, Hungary and Austria is an important step for the development of the gas market in the European Union because it will allow gas from the Caspian region and other possible sources, including LNG, to reach Central Europe.

Table 1: List of actions selected for receiving financial assistance under the second CEF Energy 2015

PCI name	Action Name	Applicant(s)	Action location	Maximum EU financial assistance (in Eur)
North-South gas interconnections in Western Europe Priority Corridor (NSI West Gas)				
Development of the Islandmagee Underground Gas Storage (UGS) facility at Larne (Northern Ireland)	Front End Engineering & Design Study and Insitu Downhole Testing	Islandmagee Storage Limited/ Infra Strata plc	UK	4.024.000
PCI Reverse flow interconnectionon TEN Ppipeline in Germany	Reverse Flow on TENP - Works	Fluxys TENP DE Gmbh	DE	8.665.000
PCI Eastern Axis Spain-France-interconnection point between Iberian Peninsula and France at Le Perthus[currentlyknown as Midcat	Conceptual and FEED studies (French part of the MidCat project)	TRANSPORT ET INFRASTRUCTURES GAS FRANCE	FR	4.150.000
PCI Easter nAxis Spain-France interconnection point between Iberian	Engineering studies of	Enagas Transporte	ES	1.477.125

Peninsula and France at Le Perthus [currentlyknown as Midcat]	MidCat project	S.A.U.		
North-South gas interconnection in Central Eastern and South Eastern Europe Priority Corridor (NSI East Gas)				
Városföld-Ercsi–Győr pipeline+ enlargement of Városföld Compressor station + modification of central odorization	Preparing the Enviroment al Impact Assessment (EIA) and obtaining the enviromenta l permits for the Hungarian part of the Romanian-Hungary-Austria transmissio n corridor	FGSZ Natural Gas Transmission Private Company Limited by Shares	HU	1.377.000
PCI Interconnection Croatia–Slovenia (Bosiljevo – Karlovac – Lučko – Zabok – Rogatec (SI))	Interconnect ion Croatia – Slovenia (Bosiljevo – Karlovac – Lucko – Zabok – Rogatec	Pinacro d.o.o.	HR	4.825.000

	(SI) – Studies for Phase I			
Necessary rehabilitation, modernization and expansion of the Bulgarian transmission system	Preparatory activities in the frame of the P.C.I 6.8.2. Necessary rehabilitation, modernisation and expansion of the Bulgarian transmission system	Bulgartransgaz EAD	BG	850.000
Southern Gas Priority Corridor (SGC)				
Gas pipeline from the EU toTurkmenistan via Turkey, Georgia, Azerbaijan and the Caspian [currently knownasthe combination of the"Trans Anatolia Natural Gas Pipeline" (TANAP), the "Expansion of the South-Caucasus Pipeline"(SCPF)X)and the"Trans-Caspian Gas Pipeline" (TCP)]	Detailed Engineering for Stations, Pipeline Monitoring System and Security System	TANAP DOLGALGAZ ILETIM ANONIM SIRKETI	TR	2.219.000
	Developme nt on Romanian	Societatea Nationala de Transport Gaze	RO	179.320.4

Gas pipeline from Bulgaria to Austria via Romania and Hungary	territory of the National Gas Transmission System on the Bulgaria-Romania-Hungary-Austria execution works Stage 1	Naturale Transgaz S.A.		00

Source: European Commission

3. Development of transport infrastructure natural gas from Romania

3.1. National regulations

Law no. 346/2007 concerning measures to safeguard security of natural gas supply, transpose into national law the provisions of Directive 2004/67/EC of the European Union. The purpose of this bill is to ensure an adequate level of security in the supply of natural gas through measures transparent, non-discriminatory and compatible with the demands of a competitive market for gas.

Given the liberalization of the domestic gas market, on security of supply, any difficulty having the effect of reducing gas supply could cause serious disruption of economic activities so and gas supply consumers.

In accordance with Art. 15 of Law no. 346/2007 concerning measures to safeguard security of natural gas supply, S.N.T.G.N. TRANSGAZ S.A. Medias developed in order to create technical and technological conditions to ensure safety in natural gas supply, the document "Strategy Interconnection National Transmission System natural gas transport systems of natural gas from neighboring countries" .Strategy Interconnection gas networks allow the investment objectives established both increased cross-border capacities through the construction and development of interconnections, ensure the gas supply at national and European security in gas supply and creating new networks trans-European gas transportation natural.

The data presented by Transgaz, the national carrier gas administers the 13.138 kilometers of pipeline, while major gas distributors, E.ON Gas Distribution, which covers the north of Romania, and GDF SUEZ Energy Romania, covering south, operates a pipeline network of 20,000 km and 17 550 km. With this total, Romania ranks 11 in Europe in terms of length of gas pipelines. But the local market is lagging behind countries like Hungary, Czech Republic and Belgium, which have much smaller surface area compared to Romania.

The European Commission endorsed on 19 Januaray 2016 funding to the sum of 179 million euros (Table 1) of the works to be carried out by Transgaz to the national gas transportation Romanian development of a pipeline that will link between Bulgaria and Austria via Romania and Hungary (to interconnect Bulgaria - Romania - Hungary - Austria abbreviated BRUA - phase 1). Thus, Transgaz will have some of the necessary funding to execute, Romania, the works in question.

The project was born after the failure of Nabucco involves developing a natural gas transmission capacity between existing points of interconnection with natural gas transportation systems in Bulgaria (Giurgiu) and Hungary (Csanadpalota) by building a new pipeline. This would have a total length of 550 km, the corridor Giurgiu - Plateau - Corbu - Hurezani - Haţeg - Recaş - Horia. After commissioning, the project will provide natural gas transportation capacity of 1.5 mld.mc/year to Bulgaria and 4.4 mld.mc/an towards Hungary. Project implementation period is 2019 and the estimated value amounts to 560 million euros (Energy Report).

3.2. Effects on the Romanian economy

In 2012 it was discovered more natural gas deposits in the Romanian Black Sea. Through this pipeline would be transported to Austria and the EU and gas extracted in the area.

Table 2: GDP estimates for the period 2017- 2021

The year	2017	2018	2019	2020	2021
GDP (mld.Euro)	177,23	182,22	181,040	186,9	191,9
Annual growth rate (%)			4,52	4,67	4,79

Source: Results of the author based on data Transgaz

For Romania, through the project, in case natural gas transit capacity by Romanian transport system, economic growth is expected to be at 4.52% in 2019, up from 4.79% in 2021 (Table no. 2).
Transit of gas through pipelines from Romania supposedly occurs at a capacity of 5.9 mld.mc/an. The estimated value is about 40 mil. Euro.

4. In conclusions

To achieve smart growth and encouraging competition in the gas sector The European Union requires modern infrastructure with a high level of performance, contributing to the integration and interconnection Union and all its regions. TENs should facilitate cross-border interconnections, to promote greater economic, social and territorial cohesion and to contribute to a more competitive social market economy.
Growing dependence on imports of natural gas in the European Union requires additional investment in transport infrastructure and storage. In addition, resource security after prolonged disruptions of gas supply initiates a series of projects that should enhance security of supply by promoting market integration and allow natural gas flows reversed.
At European level project BRUA will contribute both to the integration of European energy markets, increasing the security of gas supply for Bulgaria, Romania, Hungary, Austria, diversifying sources of supply in the region by facilitating access to gas from the Caspian region, providing LNG via Greece and Bulgaria and creating conditions for future regional access to potential gas resources in the Black Sea. It ensures diversification of transport routes, creating an infrastructure that allows the elimination of energy isolation of some Member States.
Nationally benefits for Romania are diversifying transport routes, creating an infrastructure that allows the elimination of energy isolation, creating conditions for future regional access to potential gas resources in the Black Sea accompanied by economic growth.

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EMIGRATION TRENDS AND CHALLENGES IN THE FRAMEWORK OF EUROPEAN ECONOMIC INTEGRATION

Noja Grațiela Georgiana
Faculty of Economics and Business Administration, West University of Timisoara, Romania, PhD Lecturer
gratiela.noja@e-uvt.ro
Moroc Andrei
Faculty of Economics and Business Administration, West University of Timisoara, Romania, PhD Student
andreimoroc@yahoo.com

Abstract: *The research performed within the paper aims to highlight the importance of labour mobility within the European Union in the deepening context of the European integration process. The EU expansion strategy focuses on an intensified cooperation process with EU's Eastern neighbours which includes both EU candidates, like Macedonia, Montenegro and Serbia, as well as other countries that take part in the Eastern Partnership (EaP) developed by the EU in 2009. This partnership has the main purpose to ensure an institutional framework for debates on joint economic and political issues for all involved partners that may lead to grating them the EU membership statute in the future. Within this perspective, the European integration process and the EU expansion which involves the possibility to expand the free movement of workers from the Eastern countries towards Western Europe, brings out numerous talks on least sensitive and controversial aspects of labour mobility. Moreover, the current refugee crisis confronting Europe points out the necessity to implement accurate strategies and policies for labour market integration of immigrants and asylum seekers, thus transforming the potential negative effects into positive externalities on economic growth. Therefore, our study focuses on the effects generated by emigration on sending economies in terms of labour market outcomes and GDP increases, mainly through remittances. We took into account the latest EU enlargements in 2007 (Romania and Bulgaria) and 2013 (Croatia), thus assessing the emigration impact upon these labour exporting countries during the 2000-2014 period. The developed macroeconometric models take the form of SEM models used for the combined and mediated analysis of the shaping factors of emigration stocks and their economic consequences, which were processed through the MLE method. Moreover, we performed in-sample and out-of-sample predictions of the emigration stocks and remittances for the three countries considered within the panel up until 2020. The results show that wage differentials are extremely important for the migration decision, thus shaping the emigrant stock, along with the labour market outcomes and education, while remittances generate positive effects on sending economies, leading to an increase in total output.*

Keywords: Economic integration, Emigration, Education, Economic growth, Labour mobility, Remittances

JEL classification: F15, F22, F24

1. Introductive issues concerning the key challenges faced by the European Union in the present context of labour mobility and refugee crisis

The increased importance of labour mobility within the European Union in the deepening context of the European integration process brings out to light several important questions regarding the strategies and policies that need to be implemented in order to cope with high emigration/ immigration flows. Moreover, the EU expansion strategy focuses on an intensified cooperation process with EU's Eastern neighbours which includes both EU candidates, as well as other countries that take part in the Eastern Partnership (EaP) developed by the EU in 2009. Thus, there is a projection of the international migration patterns, intensity, structure and size, which proves to be extremely important when we consider the extremely complex effects of this process upon sending and receiving economies.

OEDC (2014) shows that the migration flows registered a shift in trend during latest years, most migrants from Eastern Europe choosing Germany or Austria as main destination country compared to Italy and Spain that are still among the main destination countries, but with a significant decrease compared to previous years, now being only the seventh or eighth position among the largest immigration countries in OECD (Noja et al., p. 98).

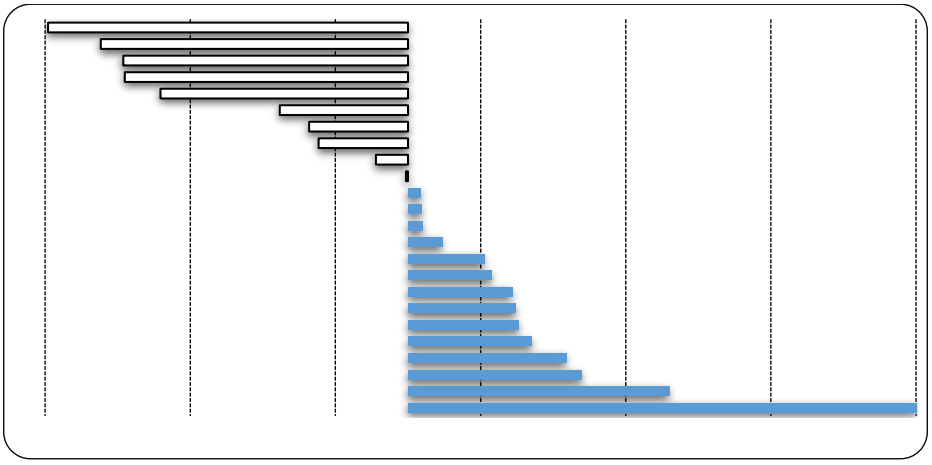


Figure 1: Change in permanent flows between 2007-2011 average and 2012
Source: OECD, International Migration Outlook (2014)

Moreover, the anxiety towards emigrants from Central and Eastern Europe in the context of the latest enlargements, mainly 2007 (Romania and Bulgaria) and 2013 (Croatia), but as well towards asylum seekers and refugees coming from Syria and other Arab countries, highlights the importance of international migration policies, along with accurate and efficient immigrants integration strategies defined by the main European destination countries (Germany, Austria, Sweden).

In the latest years, the main migration corridors through Eastern Mediterranean and Western Balkan have gained a significant relevance due to the large number of migrants crossing it by Turkey. At the same time, the Central Mediterranean

route that leads to Italy is also extremely used. Thus, according to the latest official estimates more than 300000 persons have reached Europe by sea since January 2016 until now, including about 210000 in Greece and 120000 in Italy (OECD, 2015).

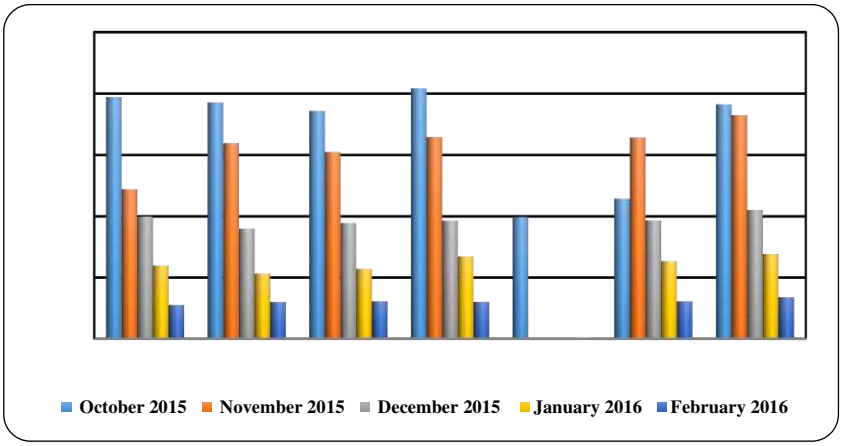


Figure 2: Estimated refugee arrivals per host country (flows through the Western Balkans Route), October 2015 – February 2016
Source: own calculation based on UNHCR data

Within the European Union, Italy, Greece and Hungary are in the front line of refugees, but the final destination countries are Germany (in absolute terms), Sweden or Austria, relative to their population (OECD, 2015).

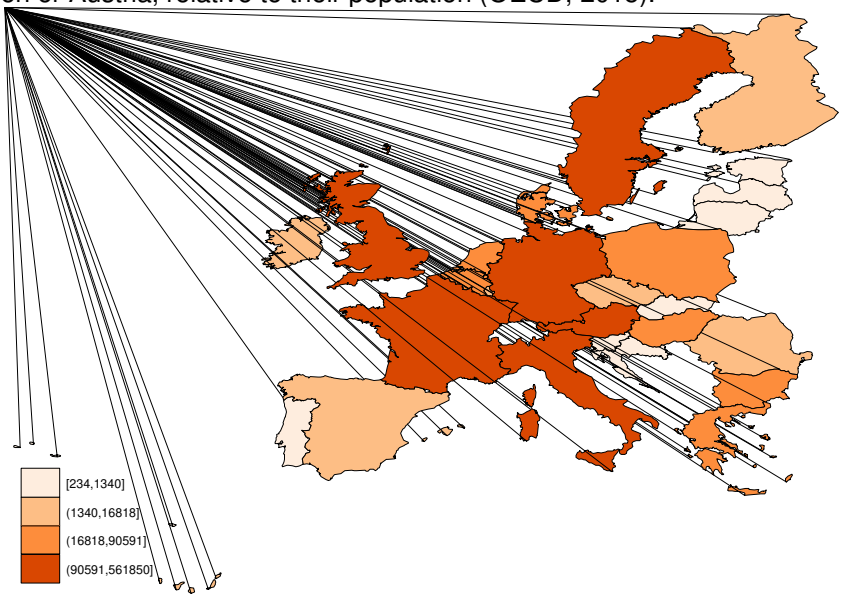


Figure 3: Total refugees and asylum seekers by country or territory of asylum within the EU, mid-2015
Source: own process based on UNHCR data through Stata 13

Thus, in 2014, about 630000 asylum requests have been registered within the EU Member States, and according to the latest OECD estimates, approximately 700000 more asylum requests have been filled in this year, while the total number could reach 1 million by the end of 2016. Within this context, between 350000 and 450000 persons could benefit from humanitarian protection in Europe, which involves the refugee status, an associated protective status or granting the temporary staying permit due to humanitarian reasons, with extremely important implications in terms of economic consequences for the main destination countries.

2. Literature review on labour emigration shaping factors and effects

Various economic theories on international labour migration focus on the neoclassic approach based on the analysis of wage differentials between sending and receiving economies as incentive for the migration decision. These theories reveal that emigration leads to competition between migrants which lead to wage decreases in countries or regions with capital abundance. At the same time, remittances can lead to economic growth, thus implying a decrease in inequalities and wage differences.

Recent studies on the determinants of labour migration (Clemens, 2011; Kim and Cohen, 2010; Hoti, 2009) reveal the importance of demographic, geographical and social variables in the analysis of emigration rates and the inclination to emigration. At the same time, language, culture and historical elements (Mayda, 2010; Clark et al., 2007), with the age structure of the population (Kim and Cohen, 2010), may have a significant impact on international migration. An aging population in the country of destination may indicate an increased demand for immigrant workers - in this respect are considered also the retirement ages, respectively the participation rates of older people on the labour market. Also, according to other studies (Neumayer, 2005), people living in urban areas have more information on international migration than in rural areas. Infant mortality rate and life expectancy at birth are also demographic indicators of the quality of life, often used in empirical analyzes of international migration - since the factors affecting the health of the population have a significant impact on the inclination for migration. Therefore, a country of origin, characterized by a high rate of child mortality, respectively a low life expectancy on birth, could send more migrants than any other country of origin with a higher life expectancy. Meanwhile, a destination country characterized by a high mortality attracts fewer immigrants relative to another destination country where this indicator has a low value.

The changes induced in the labour force structure generate direct effects on inequality, mainly through the alternations in the share of persons with high wages, respectively low incomes within the economy. The labour supply changes (for origin and host economies), induced by the active population movements, are reflected in the process of wage equalization between countries and markets. Theoretical neoclassical approaches concerning the equalization of wages between markets performing exchanges of employees can highlight a potential wage growth in migrant sending countries, respectively a wage decline in the host economies. Labour free movement between countries (regions) with high and low

wages generate a reduction of income inequalities over a certain period, and as a result, the propensity towards migration tends to decline. Nevertheless, cross-section analyses between countries do not clearly reveal whether the migrants move towards countries with high wages or, alternatively, whether developed countries, with a high level of wages, gave other characteristics and particularities that attract migrants.

Nevertheless, in the absence of a labour surplus, the loss of labour through emigration generates, ceteris paribus, a production decrease for the origin country and changes the functional income distribution in favour of wages. The wage increase effects can be intensified by a demand increase in the source economy. This result is expected only when the migrant sending country has a growing economy that creates new jobs. At the same time, there are several factors generating higher labour gaps, like changes in the education system, low labour mobility, respectively low levels of inter-job mobility (between different jobs) or even long run technological and demographic changes.

From the immigration perspective, Harris and Todaro (1970) have considered what impact is generated upon the economic equilibrium. Their results reflect that in the absence of complete wage flexibility, both the restrictive migration policies and limited wage increases can lead to welfare and thus an improvement in the economic conditions within destination countries. Nevertheless, the result of both policies is not a positive one overall the migrant sending and receiving economies. Piore (1979) pointed out through his research that there is a small impact of migration on natives within the main destination countries, due to the fact that the immigrants usually take jobs refused by the local workers. Zimmermann (2005) debated the positive and negative immigration effects, within the perspective of wages, working conditions or unemployment pressures, its concluding remarks revealing the fact that immigration has an important positive impact on host economies. More precisely, the immigration flows do not necessary lead to a reduction in natives wage levels or to an increase in unemployment, even though there are several adjusting phases.

3. Methodology and data

In order to assess the shaping factors of labour emigration and its effects upon the three New EU Member States considered within the panel (Romania, Bulgaria and Croatia), we developed a SEM model (Structural Equations Modelling), processed through the MLE (Maximum Likelihood) method of estimation.
The structural equations modelling is also called simultaneous equations modelling being and advanced technique of multivariate data analysis used for the design, test and estimation of causal relations between variables.

A multiple equations model is developed under a structural form, by formally transposing the economic theory for a certain analysed process into an equations system.
The general form of the simultaneous equations model has the following configuration:

$$\begin{cases} b_{11}y_{2t} + ...+ b_{1m}y_{mt} + c_{11}x_{1t} + ...+ c_{1n}x_{nt} = \varepsilon_{1t} \\ b_{21}y_{2t} + ...+ b_{2m}y_{mt} + c_{21}x_{1t} + ...+ c_{2n}x_{nt} = \varepsilon_{2t} \\ ..... \\ b_{m1}y_{1t} + ...+ b_{mm}y_{mt} + c_{m1}x_{nt} + ...+ c_{mn}x_{nt} = \varepsilon_{mt} \end{cases}$$

where: t is the number of observed time periods; b_{ij} are the parameters associated to the endogen variable y_{ij}; c_{ij} are the parameters of the exogenous variable x_{ij}; i=1, … , m; j=1, …, n.

The structural form of a simultaneous equations model is in fact the initial design of the model resulting after the specification stage and represents the structure of the described economic process in terms of components and connexions.

We selected a series of specific indicators as proxy for the variables of developed models, ranging from the economic activity, labour market outcomes and education to the emigration process, thus comprising:
i) international migration specific indicators: the stock of emigrants, remittances (mil. USD);
ii) economic activity and labour market indicators: total GDP (mil. Euro); unemployment rates (%); earnings (monthly and annual) by two-earner married couple with two children (Euro) and earnings dispersion among employees (Decile 9/ Decile 5); the educational attainment (both general and vocational) through secondary and tertiary education levels (the highest ISCED - International Standard Classification of Education level successfully completed), as well as the participation rate in education covering participation in formal and non-formal education and training.

The main data sources for the indicators used are the statistical database of the European Commission - Eurostat, the international migration database of OECD, World Bank – World Development Indicators and United Nations Database – UNHCR (United Nations High Commissioner for Refugees), UNU WIDER World Income Inequality Database.

4. Results and discussion

Based on the relevant economic literature we developed a model which links the emigration shaping factors and main determinants to the emigration impact on economic growth within the three considered sending countries, both through exporting a large part of the labour force and by remittances. Thus, for identifying the main modellers of emigrant stock we considered the labour market performances of origin countries in terms of unemployment and level of earnings, the educational level of the labour force (secondary and tertiary – for the brain drain) and the general living standard through the life expectancy at birth as a socio-demographic indicator. Regarding this former aspect, we connected the impact of remittances (as the money sent by the emigrants to their remaining families and households) both upon the economic output/ GDP levels and living standards, health and welfare of the population, respectively life expectancy.

Moreover, we accounted the short-term impact generated by the loss of a significant part of the population through emigration on the total GDP of sending economies.

The results obtained are synthesised and presented in Figure 4 and Table 1.

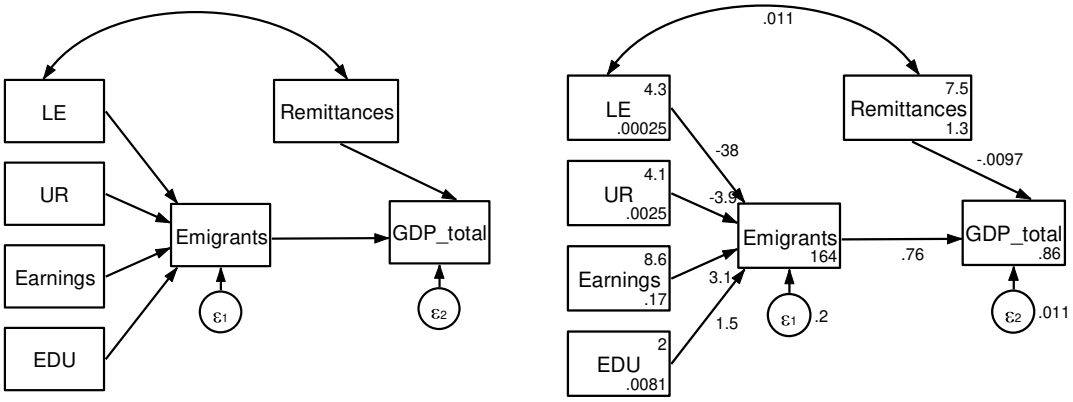


Figure 4: General form of the SEM model developed for the emigration analysis
Source: own process of panel data through Stata 13 econometric package

The accuracy of estimated coefficients is extremely high, being validated through the high level of statistical significance, mostly at 0.1%, as well as through the level of Fisher and Wald tests.

Table 1 Results of the SEM models developed for the assessment of emigration shaping factors and impacts on sending economies

	Model 1 b/se	p	t	Model 2 b/se	p	t	Model 3 b/se	p	t
log_emigr_stock									
log_life_exp	43.640**	0.008	2.655	49.102**	0.006	2.753	-38.371**	0.001	-3.283
	(16.44)			(17.84)			(11.69)		
log_unempl_rate	-1.417***	0.000	-4.922						
	(0.29)								
log_monthly_earn	-0.691*	0.034	-2.118	-0.884*	0.011	-2.530			
	(0.33)			(0.35)					
log_edu_tert	-2.725**	0.001	-3.243	-3.737***	0.000	-4.313			
	(0.84)			(0.87)					
log_empl_rate				6.389***	0.000	3.795	-3.931	0.219	-1.229
				(1.68)			(3.20)		
log_earnings_couple							3.116***	0.000	4.869
							(0.64)		
log_part_rate_edu							1.506	0.268	1.107
							(1.36)		
Constanta	-159.283*	0.017	-2.395	-207.797**	0.004	-2.905	164.283**	0.002	3.053
	(66.51)			(71.53)			(53.81)		
log_gdp_total									
log_emigr_stock	0.702***	0.000	18.200	0.702***	0.000	18.200	0.760***	0.000	29.307
	(0.04)			(0.04)			(0.03)		
log_remittances	0.014	0.643	0.463	0.014	0.643	0.463	-0.010	0.639	-0.470
	(0.03)			(0.03)			(0.02)		
Constanta	1.505***	0.001	3.427	1.505***	0.001	3.427	0.857**	0.005	2.787
	(0.44)			(0.44)			(0.31)		

Source: own process of panel data through Stata 13 econometric package

Our results comply with the economic literature highlighting that wage differentials between sending and receiving countries are one of the main factors for the migration decision, while the positive effects of remittances on economic growth are extremely significant. More precisely, the results show that a slight increase in monthly earnings tend to reduce the emigration stock (by 0.691% in Model 1 and 0.884% - Model 2). Still, when we considered the annual net earnings of a couple with two children, respectively a family, this type of increase could provide the necessary financial resource for moving and establishing into another country through emigration, thus being an incentive for this process.

In the case of the emigration effects on sending economies, there is evidence to attest that an increase in remittances lead to a slight increase in the total GDP, while an increase in the total emigrant stock also generated increases in GDP levels on then short-run, mainly through additional remittances, incentives for those remaining to participate in education and training and the labour market.

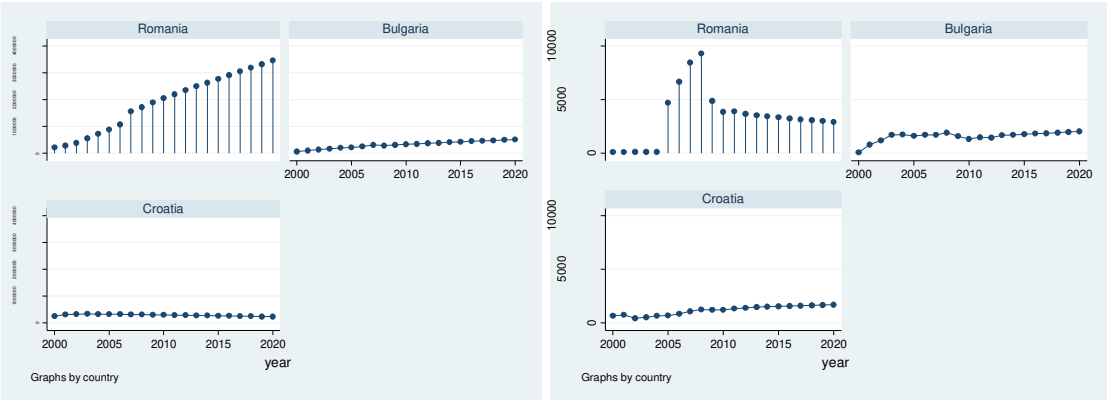


Figure 5: Within and out-of-sample forecasts for the emigrants stock (left) and remittances (right), 2000-2020
Source: own process of panel data through Stata 13 econometric package

We also performed some predictions regarding the future evolution of the emigrant stocks and remittances until 2020 based on the trends registered during 2000-2014, respectively in-sample and out-of-sample forecasts (figure 5), that reveal an increasing trend of emigration for Romania in the following period, meaning higher stocks of emigrants towards the main EU destination countries, however the remittances tend to decrease up to a constant level. On the other hand, in the case of Bulgaria and Croatia, the stock of emigrants has a constant evolution with a very slight increase until 2020, but the remittances levels tend to improve.

5. Concluding remarks

The study performed focused on the main evolutions and challenges faced by labour mobility (emigration) in the context of the European integration process and EU expansion, respectively the refugee crisis in Europe, and their economic consequences, mainly for the three New Member States in 2007 and 2013,

Romania, Bulgaria and Croatia (one of the main research limitations could imply the relatively small number of countries within the analysed panel).

To this respect, following the economic literature, our results reveal the importance of a focus on the main determinants and shaping factors of labour emigration, especially in the case of highly-skilled workers, as well as on the impact of emigration for sending economies, in order to adopt and implement accurate strategies and policies, at the European level and within the main EU origin and destination countries.

This would imply taking into consideration both labour and humanitarian migration (current challenges faced by the European Union in the context of the refugee crisis), as well as the emigration effects on sending economies and the immigration impact on natives and host countries, respectively their labour market integration and socio-economic inclusion. The most important measures highlight active and passive labour market policies along with flexicurity (flexibility and security) measures (Son and Carica, 2011), which focus on job creation for the unemployed, training for professional development and skills acquirement or wage incentives.

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THE MAINTENANCE CONTRACT BETWEEN THE PAST AND PRESENT, IN REGULATING THEW CIVIL CODE IN FORCE

Carmen Teodora Popa

Law Faculty, University of Oradea
bnppopacarmen@gmail.com

Abstract: Until the entry into force of the new Civil Code, was an unnamed maintenance contract, it didnot benefit from separate regulations nor the old civil code and by any other special law. It was, however often met in practice either by an agreement by themselves or through a clause inserted in a contract.
Given the legislative gaps which exist in relation maintenance contract and the need to regulate its Civil Code in force has solved this problem by regulating it in Title IX (Various special contracts), Chapter XVIII, in art. 2254-2263. The current regulation of the Civil Code addresses the complex and comprehensive maintenance contract, establishing distinguished criteria between this contract and other similar contracts and its legal regime. Although the doctrine is rich in the maintenance, the theme is far from being exhausted. The main objective of this paper is the treatment of theoretical and practical problems related to the maintenance of contract regulated in the New Civil Code.

JEL classification: K0, K3, M0,

Keywords: The maintenance contract, civil code, Maintenance debtor, beneficiary, resolution, regulations

1. LEGAL DEFINITION AND CHARACTERS

In the old regulations, although often encountered in practice, the maintenance contract was a contract that didn't have a name, a legal regulation on its own nor in The Civil code from 1864, nor in any special law, being the creation of the judicial practice and doctrine. Thus, although it was accepted that resembles to the annuity contract, the maintenance contract was governed by the General rules applicable to contracts.
For the first time in our law, the legislature gave the New Civil Code a legal figure for the maintenance contract, covering contract at issue in art.2254-2263 in Chapter XVIII " About the maintenance contract" of Title IX "Various special contracts" Book V "About obligations".
The maintenance contract is defined in **art. 2254** as the type of contract whereby one party undertakes maintenance for a specified duration. If the contract was not provided for the duration of the maintenance or only its life contingency character, then the maintenance is due on lifetime maintenance for the creditor in benefit of the other party or of a third party in regards to the necessary maintenance and care benefits.
Maintenance claim may be *lodged* both against payment, stipulating for another (the contractual Figure is represented by the *stipulation for other* who benefits, as well as the contract for the maintenance of its own rules in the new civil code, in article 1284-1288. According to doctrine, the stipulation to another can be defined as a contract or a clause in a contract whereby one party, called *the one that*

promises, is required in relation to the other side, called *stipulant*, to perform a benefit in favor of another person, whether or not in relation to the third contract, called third-party beneficiary. It is a tripartite operation carried out with or without the participation of the third party to the contract. Most of the time, the stipulation to another consists of a clause in the contract, including the birth of a proprietary right of a third party directly in, has the effect of adding to the cost ratio between stipulant and the one who promises, a second report, between the one who promises and the third beneficiary), or simply the Convention concluded between the maintained and reciprocal provider, whereby first sends a good or an amount of money and the second is required instead to perform maintenance, but it can be made up and *free of charge.*

In the latter case, the maintenance claim can be provided in a maintenance contract or a will, which must comply with all conditions of substance and form required by law for legal figure has chosen.

As regards to the *legal characters of the maintenance contract*, as evidenced by the regulation given to The New civil code, it is a *synallagmatic obligation*, since the task was born to both parties. Maintenance contract can be *unilaterally* when maintenance is free of charge, because it creates obligations only in a single task. Moreover, as it follows from article 2254 Civ. code, in a supletiv manner, the legislator intended that the rule in terms of maintenance contract to be unilaterally, defining the contract in question only from the perspective of the person's obligations that does maintenance.

Out of the character exhibited before, another character results for the maintenance contract, respectively *for a character*. Thus, as a rule, both sides have a proprietary interest, namely the the keeper who seeks to obtain the benefit of maintenance, and the maintainer wants to obtain capital. However, a maintenance contract is for consideration only by nature, not by his essence, whereas, as I predicted, it can be concluded as valid and free of charge.

The maintenance contract has a *randoml character,* as there are chances of gain or loss for each of the Contracting Parties, who depend on an uncertain future event and lifetime, respectively the person who is maintained, as well as her needs.

In relation to the randomness of the maintenance contract, the doctrine developed under The Old Civil code, rightly pointed out that it is the essence of the maintenance contract, being here more poignantly than the annuity, since the debtor's obligation depends not only on the duration of the maintenance creditor's life in limbo, but also "to the object of benefit, according to his daily needs or other factors that may influence the extent of the benefit (of the person health care, cost of living, etc.) ". When the item is missing, the contract is null. For example, the Court ruled that the termination of contract shortly after the death of the person who was cared for, can't reach a conclusion of the contract for invalidity of the Act or for unlawful or immoral cause, precisely because of the randomness of its character. In particular, the circumstance that at the date of conclusion of the contract the beneficiary's maintenance was ailing and hospitalized in hospital has no relevance, because a defendant could not have known the severity of the disease of the person who made the credit.

The maintenance contract is a ***solemn***, authentic form being required by law to complete as valid. Thus, according to art. 2255 Civil code, the contract of maintenance ends in authentic form, under penalty of absolute nullity. The

authentic form imposed by the legislator ad validitatem is meant to alert the parties of the contract on the importance that it has met the obligations under the contract of maintenance for their auditing, securing freedom and certainty of consent, exercise control of the company through the organs of the State, with respect to civil legal act concluded, whose importance exceeds the framework of interests of the parties.
The maintenance contract is *displaced*, whereas the benefits due from the one who is taking care and is running instead of acquiring such property or capital of any kind.
The maintenance contract is a *intuitu personae* contract, in consideration of the person who is caring. For this type of contract, the mutual knowledge is appropriate, mutual trust and affection between the contracting parties-especially since, as a rule they must live together are fundamental requirements whose fulfillment shall ensure the achievement of finality often pursued by either side through the conclusion of the contract. From the intuitu personae character of the contract in question results also the unnoticed and divested character for maintenance. In this regard, article 2258 Civ.code states that "the rights of the creditor of maintenance may not be ceded or subject to prosecution."
Contractually agreed to grant maintenance implies the debtor in judicial practice were reported and were considered legitimate cases in which maintenance was performed by an agent or temporarily for reasons of force majeure to execute another person on behalf of obliged. Thus, the Court held that the consistent ensure care of the beneficiary can be accomplished through service from others as it's chosen by the accompanying expense of the beneficiary, unable to support that the benefit of maintenance and has lost its intuitu personae character.

2. THE CONDITIONS OF VALIDITY OF THE MAINTENANCE CONTRACT

Conditions of validity of the contract of maintenance are, as in the case of any other contract, as follows from article 1179 Civ. code, the ability to contract, consent of the parties, a determined and legitimate object, lawful and moral and of solemn form, the latter condition being imposed by article 2 para. 1179 Civ. code with regard to article 2255 Civ.code. Given the onerous nature and translativ property maintenance contract according to article 1651 Civ.code, of the rules shall apply to the contract of sale in respect of the obligations of the alienator.
At the same time, it is important to note that in article 2370 Civ.code, the legislature has provided for the application of the rules provided for in article annuity seen in art. 2243-2247, art. 2249, art. 2251 para. 1 and art. 2252 Civ. Code and maintenance contract.
Thus, in respect of the formation of modes of the maintenance obligation, the possibility of the establishment of maintenance obligation during the life of several people, the possibility of the establishment of the obligation in favor of several persons, the situation of the establishment maintenance during the life of a third party who was deceased at the time of conclusion of the contract, or for the duration of a person's life, which was marred by a fatal disease, introduction of a privilege or a mortgage in order to ensure payment of maintenance requirement the contract rescinded if the forming and irrevocability of maintenance contract, they are borrowed from the annuity contract.
In relation to the fact that the maintenance contract for pecuniary interest, the creditor shall conclude a maintenance provision act with respect to the property,

and the maintenance debtor shall assume an obligation to do, namely to provide maintenance, both sides should have the *full capacity to exercise*. In accordance with article 38, paragraph 1 Civ. code, "the full exercise capacity begins at the time when the person becomes an adult", and according to paragraphs 1 and 2 of the same article "the person is considered an adult at the age of 18 years." Having regard to the provisions of articles 39 Civ. Code, I appreciate that the minor who is married, and the minor who acquires full capacity of exercise, can conclude a maintenance contract, both as debtor and as creditor.

In terms of maintenance contract with a free of charge title, taking into account the lack of creditor performance, I appreciate that he should not have full capacity to exercise validly to conclude a maintenance contract, with the condition that there is a cause of incapacity specific for the donation contract[22].

However, in respect of the maintenance debtor, I appreciate that he must always have full legal capacity because from his point of view the contract is for consideration.

As related to the *provided consent,* he must, on the one hand, meet the conditions of art.1204 Civil Code, that is to be serious, express freely and knowingly, and on the other hand, take the form of an authentic, under the penalty of nullity, as required by the provisions of the Civil Code art.2255 .

As regards the contract of maintenance, this is to ensure a certain maintenance for a limited time or for the entire life of the maintenance of the creditor by the debtor of such an obligation.

In literature, rightly it is shown that "to say about a particular legal act that covers legal operation means in reality, that you refer to the conduct of the parties[23].

In this sense, we can say that the object of the maintenance contract is to convey ownership of capital by the maintenance creditor, in exchange for the provision of maintenance by the maintenance debtor.

However, the same authors showed that the distinction between the object of juridical act and the obligation of importance regarding one of the requirements of validity, namely that the legal act should have a specific object, while the obligation is enough not only a specific object, but determinable at the time of conclusion.

At the same time, it was noted that the distinction between subject and object of the juridical act shows interest under the other requirements of validity in the sense that it would be possible for the legal operation as a whole to be illicit, although is the subject matter of each obligation, that is each benefit seen in isolation, might not have that character, as would be possible for the legal operation to be illicit, but some of the benefits or benefits to be infringing.

In addition to the *object of the contract* (a legal operation) and *object of the obligation* (benefits that bind the one who cares and the maintainer), it would be able to distinguish and benefit, that is the property covered by the benefit. Thus, with respect to the subject matter of the contract, if the contract is the beneficiary of care for consideration and, where it refers to an individual good, it must exist, be

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[22] In this regard, it is worth mentioning Article 36 of the Civil Code. the rights of children conceived and art.990 Civil Code provisions. Special matters concerning the incapacities liberalities.

[23] Gabriel Boroi, Carla Alexandra Anghelescu, Civil right course, General, 2nd Edition, Editura Hamangiu, București 2012, p.164;

lawful and must be possible to be in the civil circuit. If maintenance is done free of charge, the maintenance creditor does not assume any obligation. Furthermore, regardless of the title under which the contracts, it is forbidden to assume obligations regarding the provision of services[24].

Regarding to *the object of the earner benefit,* the same characters may be applicable and in addition, the condition of being a personal act of one who undertakes, the latter condition resulting from intuitu personae of the maintenance contract.

Regarding the condition of being a personal act of one who commits, I believe that this person does not require impose himself to the one he takes care of, generally, it he obliges to transmit a right and not committing a crime. However, the question is whether the benefit of the object of work for beneficiary could be an asset belonging to another person. Considering the provisions of the Civil Code art.1230., which provides that the rule is that the property can be alienated to a third party, but also the appearance that lends maintenance rules applicable to the contract of sale that the provisions of the Civil Code art.1683. regulate the conditions under which the sale of the property of another is valid, I believe that the person who is cared can transfer the property to a third party in exchange for the provision of maintenance by the borrower, provided the right of property by the debtor or by acquiring property, or by ratification of alienation by the owner, or by any other means, directly or indirectly procuring maintenance debtor ownership of the property.

With respect to the *maintenance contract cause*, this is the reason that urged each side to conclude the contract, that is immediate purpose. Thus, the aim pursued by the provider from mediated contract may be acquiring capital to give it a particular destination, while the goal of mediated by the maintained person is to obtain the benefits from the maintenance provider. The cause of the maintenance contract, as in any other contract, must be lawful and moral.

In judicial practice, was retained in a case that the immediate goal, as part of the legal act is represented at random contracts, as the maintenance one, the foreshadowing risk convention, as future and uncertain circumstances on which depends the chance of gain and, accordingly, the risk of loss for each party. Thus, for the debtor's maintenance there was no moment to risk losing as the serious health condition was known to the creditor maintenance and the imminent death, so the maintenance contract is null and void for lack of cause[25].

Regarding the test case, as required by the provisions of paragraph 1 art.1239 Civil Code, "the contract is valid even when the cause is not expressly provided for", while the provisions of paragraph 2 of the same article states that "the existence of a cause is presumed valid until proven otherwise. "therefore, invoking the absence or invalidity proceedings has the burden of proof under article 249 C.proc.civ., any evidence is admissible.

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[24] Titus Prescure, Curs de contracte civile, editura hamngiu, București, 2012, p.231;

[25] C.A.Brașov, dec.nr.839/R din 14 decembrie 2005 în Luminița Cristina Stoica, Contract of maintenance and annuity, Judicial Practice and regulation of the New Civil Code, Hamangiu Publishing House, Bucharest, 2011, p.15;

If the object of obligation of maintenance of beneficiary may consist in sending a capital of any kind, in exchange the benefit of the one who provides care can only consist in providing in nature for maintenance. The provision through which the creditor that commits for services to the debtor or third parties is considered unwritten.

Basically, through the maintenance contract all the categories of goods and rights can convey, all that can makethe object of the sale/purchase contract. Most of the times the benefit of the creditor maintenance feature is realized uno ictu.

There may be situations where the practice of maintenance contract has several lenders and/or borrowers for obligation to offer maintenance. In such cases, the obligation of maintenance is indivisible, actively and passively, resulting unequivocally from article 2256 para.2 Civ. Code.

Thus, if there are several creditors of the maintenance obligation, this shall be deemed to be executed only if all lenders have received proper maintenance. Failure to perform in relation to one of the lenders can attract the entire contract rescinded. In case of plurality of debtors, either of them may be required to execute performance maintenance, but also the provision of any of its maintenance is for all others a discharge of liability.

In the case of a single debtor for maintenance obligation if he dies and there will be more accepted heirs, they will be ordered to provide maintenance jointly and severally owing to their author.

For example, maintenance was established in favor of the spouses. At the death of one of the spouses, maintenance will run further in favor of the surviving spouse and the maintenance obligation will cease only when this one dies.

To the maintenance contract is applied certain provisions from the contract of annuity. Thus, it is hit by absolute nullity which constitutes a maintenance contract for the duration of the life of a third party who was dead on the day of conclusion of the contract. It is also struck by the invalidity of the contract maintenance creditor's demise followed that was affected by a disease to moment of the maintenance contract within a period of 30 days from that date. It is necessary that the death may have occurred due to illness that the one who was cared for and not from other causes. This cause of invalidity shall not apply to maintenance provided free of charge.

3. THE EFFECTS OF MAINTENANCE CONTRACT

3. 1. Obligations of the parties

Where the contract maintenance is free of charge, in general, the maintenance creditor has no obligations in relation to the debtor, with the exception of the obligation of the provider, if it has the form of the donation as traditionally referred to as "gratitude".

The maintenance contract set up for consideration is a synallagmatic obligation, incurred in the task of both sides, both the one who needs care and the one that provides care.

A. The obligations of the creditor of maintenance (the one who is cared for)

Where a maintenance contract is a consideration, i.e. whether the one for who care is provided made an obligation towards its provider to transmit a certain good in exchange for maintenance, he has the same obligations as the seller in the contract of sale and purchase. However, unlike the buying-selling contract, where the rule is that the performance of the seller's obligations shall be concurrent with the execution of obligations by the buyer, and the part that does not fulfil an

obligation is not entitled to claim other correlative obligation to execute without an agreement to the contrary, in the case of a maintenance contract for pecuniary interest the maintenance creditor fulfils its obligations, as a rule, previous to the execution debtor provider.
The one who is cared for is obliged to transfer ownership of the property, to teach good, to preserve the good, to guarantee the provider of care for eviction and hidden defects of the property.

B. The obligations of the debtor(provider of care)
The debtor is required to ensure the provision of maintenance, which is an obligation to do what needs to be done daily, until the death of the beneficiary that requires maintenance.
The maintainer is required to ensure the provision of maintenance obligation to do what needs to be done on a daily basis, for the period determined in the contract, if it is for a fixed period, or for the lifetime of the maintenance creditor, if the contract was not provided for the duration of the maintenance or only its viager character.
The place of *supply of maintenance* is determined by the parties or, in absence of a contractual term shall be deemed to be the kept at home, so payment is portable and does not cher, due to its specific nature.
If the *content of the obligation* has not been determined by the parties, then its determination will be made traditionally by a broad interpretation of the term maintenance. Consequently, maintenance should be ensured in full, according to objective criteria of *the level of living of the beneficiary*, at the time of contracting. In the absence of an express contractual term, it shows no relevance the fact that the person who is beneficiating has enough material means. This is because conventional maintenance obligation is not to be confused with the legal obligation to maintenance when need of care depends on the state of the rightful person to receive it.
In the case of a plurality of creditors, the contents of the claim of maintenance must be established for each lender individually, their physical needs or their spiritual ones can be very different. However, by way of novelty line (1) of article 2257 Civ.code introduces another criterium image that must be taken into account when determining the extent of the obligation of maintenance. The value of the borrower's lender capital alienated in exchange for provision of maintenance. Newly introduced landmark may be withheld only in respect of the establishment of costly maintenance and we appreciate that you have taken into account only that which comes to refine the process of determining the quality of maintenance benefits determined in accordance with the social status of the creditor of the obligation of maintenance. More specifically, we appreciate that it is natural that the previous social status to be maintained (no one concludes such a contract to see diminished his/her living standards, and, if that happens, the details should be laid down explicitly), but the quality and quantity of benefits may be influenced by the amount higher or lower capital received by the one who provides care.
Moreover, although the text of paragraph (1) points out that any reporting between the content and the purpose of the obligation to the creditor maintenance, maintenance must be carried out in an equitable manner, should not be lost sight of that this *contract* remains one *random* circumstance which imposes upon the provider of care to execute it, regardless of how onerous it turns out to be for him.

Therefore, the provider of care will not be able to justify any non-performance or decrease of the value of care by the fact that the value of maintenance that is provided has exceeded the value of the law. The provider of care will not be able to free up that responsibility, even if he would be obliged to repay everything he has received under the contract, giving up to the reimbursed equivalent value of benefits he provided. Only the consent of the person who is cared for can free the debtor of the obligation of maintenance.

With regard to *the exact content of the maintenance obligation*, the parties may determine it, by limited listing procedures for performance of the obligation. Until the entry into force of the new rules, if the parties have not determined in any way the content of the obligation of maintenance, the doctrine and case law had established that it was to be interpreted in a sense as comprehensive. In this respect, in the context of the concept of genre of maintenance, their tutors was supposed to provide the means to enrich both the Cilento and the spiritual needs of the creditor.

Paragraph (2) of article 2257 Civ.code brings the details of the process for accurate interpretation of the will of the parties, the naming of the main landmarks of the sample content requirements of the provider of care: food, clothing, footwear, cleaning, use of an appropriate housing, care and necessary expenses in case of sickness. We consider that this list made by the legislator is not exhaustive and comprehensive. For practical reasons of the doctrine we appreciate that it is advisable that the maintenance contract to be provided for elements of the obligation of maintenance in order not to create confusion primarily for contractual parties. Thus, the parties will know with certainty what obligations are resulting from the contract and in this way, they can be avoid any disputes.

In view of the reference to ensure the living needs, the maintainer will have and take the obligation of the place of the person in care, or finding a living space by way of lease or payment of rent and maintenance costs of accommodation occupied by the maintained etc. .

With reference to the content of the obligation of maintenance, in a particular case[26] it was considered by the Court that the conditions under which, through maintenance contract, debtor was required to ensure that all required maintenance creditors with a decent living and medical assitance, to bury them according to the custom of the place, the aid given by the debitor in the household or at work has no meaning of execution of obligations.

In the same time, it is important that the matter to have been omitted from the lawgiver, the spiritual needs of one who provides care, which, as already noticed in the doctrine, and will do for the future, subject to the obligation of maintenance, even more so as paragraph 2 of article 2257 Civ.code whatsoever the nature and not restrictive.

Considering that the provisions of paragraph (2) of article 2257 Civ. Code have a character device, the contracting parties are free to shape as they appreciate the content of maintenance obligation by extending or restricting it, this is a valid conclusion for para.(3) that establishes the obligation for the funeral of the person maintained in the case of viager maintenance or death occurred during the performance of the contract.

[26] C.A.Târgu Mureș, S.civ., Dec.nr.712/A din 15 septembrie 2004;

In terms of quality of maintenance, the doctrine held that the way of life of the creditor's maintenance contract at a later date, even if you don't know an improvement, must be at least even in the previous contract.
Burial will be made in compliance with religious rituals that the person who received care wanted or prescribed by the cult to which he belongs.
Regarding the personal character of the obligations assumed by the contract maintenance, in case it was noted that the maintenance was thought to both parties, and the person, about the maintenance obligation therefore is essentially personal, non-transferable, except if the parties have agreed that this agreement may be enforced by the trustee. A defendant in the case in question did not fulfill their obligations properly, them being gone for about eight months abroad, during which they mandated a third party to perform the maintenance creditor, although allegations were bound by convention to pursue personal, and it needs special attention, being deaf and blind, and moves as the 1st degree disability[27].
At the same time, the maintenance obligation is an obligation *to make, successive* and presents *a character for food, which is why,* in the event of default, the debitot is in arrears.
With reference to the nature of the obligation and the succession of daily maintenance, in practice it has been noted that the nature of the obligation of maintenance assumes its fulfillment in good faith, more so as the mode of enforcement is left to the discretion of the debtor, not fixed in the contract, by the way, thanks to the character of the daily execution of the contract, neither one could predict what it will need in the future for food, clothing, medicines, etc. the beneficiary or other care will require in the event of sickness or old age. By definition, the maintenance obligation is with successive execution, so the benefits will be made at intervals so as to correspond to the current needs of the beneficiary's rate (even in the presence of the debtor's domicile daily for ensuring these needs)[28].
From the provisions of art. 2261 para. Civ.code, shows that the maintenance requirement is *causa mortis transmissible but not entitled to maintenance.* However, it is only the unfullfilled obligation is transmissible at time of death of the person cared for.
Instead, considering the character of *intuitu personae* of maintenance, art. 2258 Civ. code prohibits the assignment of the claim, it may not operate neither total nor partial, in connection only with some of its components.
Whether maintenance is provided free of charge, the benefit due can be put under prosecution by the creditors of the person who received care, these can just revocate the contract or introduce *the oblique action*, pursuant to article 2259 Civ. code.
Thus, creditors of the person who was cared for, must be protected, when this diminishes the heritage through the disposal of a property/instead of receiving maintenance that cannot be subject to execution or prosecution. At the same time, lenders must be protected when assuming an obligation of maintenance free of charge or under conditions likely to create or increase a state of insolvency. Under

[27] C.A.Timișoara, s.civ., dec nr.2922 din 31 octombrie 2001, în Luminița Cristina Stoica, op.cit., p.72;
[28] C.A.Ploiești, s.civ. și pt.cauze cu minori și de fam., dec nr.676 din 7 octombrie 2008

these conditions, both categories of creditors may bring legal action to set aside, obtaining its specific effects.
In addition, the personal creditors of the one who receives care, may require the oblique action (art. 1560-1561 Civil Code) to maintenance execution by relieving the debtor's assets breadwinner for their daily living expenses necessary of course to the extent that a default occurs the breadwinner.
It is reported that the provisions of art. 2259 Civil Code. were derogatory to the rule of common law, which does not allow creditors to exercise the rights and actions that are closely connected to the person of the debtor.
In case of death of the person who receives care, his heirs can not demand further execution nor the amount of maintenance benefits due, but unexecuted during the life of the person who receives care, to run in their favor, because of the maintenance contract intuitu personae.
In this regard, in judicial practice, under the old regulations, it was noted that the conclusion of the maintenance is done in consideration of people who undertake obligations, which makes only them denounce the unexecution of the obligations that were assumed. Failure of maintenance of the person who was cared, can not be invoked by heirs in heritage which can not be transmitted, by way of succession, an extinguished debt. The heirs are only able to continue their action initiated by the author, this is just a transmition of the juridical way, not a claim.
However, in such cases, if the debtor of the obligation of maintenance has not fulfilled all obligations, the successors will be able to request and receive appropriate compensation in the form of compensatory damages.
Although the obligation of maintenance must be carried out in nature, in the course of the contract, may appear situations when the addict or the independent will of the parties, the nature of the obligation is no longer possible.
As stated in the legal literature[29], causes that can lead to this situation can be various: change of domicile of one of the parties, with the consequence of its reassignment to another commune, disputes between the Contracting Parties, the refusal of the creditor to receive maintenance, etc.
In this respect, para. (1) art. 2261 Civil Code mentions the death of person who received care as a transformation of maintenance money. As noted in the literature, the statement is welcome, primarily because ends the historical dilema of transmission *causa mortis* of that obligation and, secondly, because it saves them the heirs of the person who was cared for of the performance of an obligation entered into *intuitu personae* to which they may be lacking skills / conditions for continuing execution in nature.
In such situations, it may proceed with the replacement obligation, meaning that it will not provide maintenance in nature, but by regular payment of sums of money. As assumed or not by the court intervention, transforming the maintenance can be judicial or extrajudicial. Regarding the *judicial transformation of maintenance*, the court can be invested with a request for conversion into cash maintenance or obligation maintance by either the care provider or the one who received care. If the plaintiff is the person who received care, the court will accept the request if, on

[29] Flavius-Antoniu Baias, Eugen Chelaru, Rodica Constantinovici, Ioan Macovei, Noul Cod civil, Comentariu pe articole, Editura C.H.Beck, București, 2012, op.cit., p.1717;

the basis of contradictory evidence adduced in that execution in kind is no longer possible due to the attitude of the debtor guilt. If the court finds guilt of the applicant-creditor request will be rejected.
Thus, in the Court's practice it was considered that the refusal to receive proper maintenance without a good reason constitutes an abuse of the client, he may not get to the annulment of the contract, availing himself of own fault.
On the other hand, it was appreciated and that the refusal to receive maintenance should not be characterized to be fault of the person who receives acre, whether through his conduct, dealings with the creditor, the debtor was manifested, created a real sense of stress, uncertainty, fear for life and health. If the person who receives care is the one who referres the matter to the Court with an application for conversion of the maintenance obligation, then its admission is subject to proof by the plaintiff that, culpably, without grounds, refuses to accept the maintenance creditor.
However, considering that art. 2261 para. (1) Civ.code refers to "objective reasons", which widens the field of application admissibility replacement beyond finding fault of one party to any cause that attracts the impossibility of objective of enforcement in kind of maintenance, the Court will be sovereign in appreciation.
As a result of the acceptance of the request for conversion into money of the obligation of maintenance, the relations between the parties shall be governed by the rules applicable to the contract of annuity, and the borrower will be required to pay, in the form of periodic benefits, a sum of money, by way of production. In terms of the amount of the sum to be paid periodically, this is established, on the basis of samples, depending on the actual level of maintenance required by the lender.
Considering, on the one hand, that the maintenance needs of the debtor may not be the same throughout the execution of the contract, but also, on the other hand, there will be changes in the cost of living, the amount of money determined by the Court may be amended, upon request of the party concerned, in accordance with paragraph (2) of article 2261 Civ. Code
With regard to the *processing of out of court*, on the basis of the principle of autonomy of the will, the parties are free, through their agreement, to amend the maintenance requirement, replacing it with an obligation for periodic payment of a sum of money.

4. TERMINATION AND RESCISSION OF CONTRACT MAINTENANCE

As regards the cessation of maintenance, you need to distinguish the maintenance contract concluded for a fixed or indeterminate time or a viager character.
In the first case, in accordance with article 2263 para. 1 of the Civil code. maintenance contract concluded for fixed-term contracts shall cease upon expiry of this duration, except in the case where the maintenance creditor dies earlier when the contract is terminated at the latter date.
In the second case, if the term of the contract was not provided or has been provided for the maintenance of the viager character, then the contract will be terminated on the date of the death of person who received care, as resulting from article 2254 para. 2 Civil code.
In the event that maintenance was provided during the life of many people, under conditions of art. 2256 paragraph 1 Civil code related to the art. 2244 Civil Code, maintenance contract will cease, in the absence of contrary stipulation, from the

date on which the last of these people will die.
Termination of maintenance can occur as a result of the agreement and will of both parties (mutuus disensus), without obligation for the parties to show the cause for wanting that the maintenance would no longer have effect for the future.
In addition to these cases, art. 2263 Civ. code provides two cases of the maintenance contract, due either to the behaviour of one of the parties that make it impossible to execute contract under conditions conforming morality, or non execution of obligation without justification.
For these two reasons, the person concerned and which is not at fault, may require delivery of the judicial court resolution. The annulment of the contract can be declared only by the Court of Justice, unless the parties should be able to insert a contractual clause that draws unilateral cancelation maintenance where one of the two hypotheses would become exposed during the incident on execution of the contract. If however the parties inserted such a clause, then this will be considered as unwritten, the written notification of the debtor being devoid of any legal effect.
At the same time, assuming that the Court was vested with an action for the annulment of the contract based on the provisions of art. 2263 para.2 and 3 Civ.code, the defendant will not be able to prevent the admission of the action through an offer of maintenance done after entering the action.
The legal basis of resolution is the interdependence and reciprocity of obligations of the Contracting Parties by sinalagmatic contract. Despite the fact that this contract is of successive execution obligations from the execution perspective of the provider of care, the legislature has chosen to regulate its applicability in the case of resolution, and not the termination.
Concerning the abolition of the contract by rescinding or terminating because of the other party, which makes impossible the performance of the contract under conditions conforming morality, in juridical literature were justifiably remarked that the sending of the legislator to the criterium "morality", although surprising at first glance, it is entirely natural by reference to the subject-matter of the contract obligations, and the nature and specifics of the maintenance activity that involves personal connections and contacts very close between the contracting parties.
As regards the meaning of the term morality, juridical literature showed that "it is aimed at those behaviours, qualified social relations as positive morals of society to sanction conduct culpable of one party. The dynamic nature of this and various phrases appears as obvious, and, for the success of the action, the plaintiff is required to prove, by whatever means, that the defendant has a behavior that does not allow the execution of the obligation of maintenance under normal conditions, the society's moral standards compliant. Action in annulment of the contract will be promoted in this first hypothesis, either by the creditor or the debtor of maintenance."
Regarding the second reason for rescinding or terminating the contract of maintenance consisting of failure to perform or execute maintenance, is important to note that these need not be caused by the conduct of the person who receives care.
In this sense, in practice, the maintenance contract rescinded promoted by the maintained person was dismissed as unfounded when, on the basis of evidence, the Court established that the one who offer care have fulfilled the obligation properly until the date on which, under the influence of relatives, the person required care has refused maintenance. The departure of the complainant from

home, made the recurents unable to execute their obligations of the maintenance contract, more so with how these duties consisted, intrinsically, for food and nature of benefits, on succession that the person refused, without real justification.
Despite the fact that the regulation of art. 2263 Civ.code would arise that the maintenance contract rescinded could be pronounced only in respect of those two reasons referred to above, and in fact referred to the doctrine[9], does not share this opinion. The resolution will be rescinded by the Court and where, for example, the transmission of the property provider at a later date, is evicted from the whole good or part of it, in case of lack of not contracting the person to care for. If the Court finds that the conditions of substance and form to the admissibility of the action exist, shall order the disbanding of rescinding or *terminating the contract*.
However, there may be the rescission of the contract as maintenance obligations by inserting the unfulfillment of the termination clause governed by the Civil Code art.1553.

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LEGAL SEPARATION BETWEEN THE LEGAL COMMUNITY AND LIQUIDATION BETWEEN THE SPOUSES ACORDING TO THE CIVIL CODE

Carmen Teodora Popa

Law and Administrative Sciences Department, Law Faculty, University of Oradea, Oradea, Romania
bnppopacarmen@gmail.com

Abstract: Due to its cessation the community legal goods are validated by an official notary or by court order. If the regime ceases community goods by divorce, former spouses remain owners of the common property until establishing of the share for each. If the community regime is ceased by the death of a spouse, liquidation is made between surviving spouses and heirs of the deceased spouse. During community liquidation, each spouse takes its own assets and then separation of assets will take place. This paper examines the legal community liquidation and division between spouses and former spouses upon termination community through divorce and death in the light of the current civil code regulations and changes to the rules of the old family code.

Keywords: *Legal community, matrimonial regime, ex-spouses, divorce, community liquidation, division*

JEL classification: K0, K3, M0,

1. Matrimonial regime of legal community - notion and regulatory

Currently, the legal community matrimonial regime is regulated by the Civil Code which entered into force on 1st of October 2011 and was a response to long-standing expectations of the Romanian society in terms of property relations between spouses. Until 01.10.2011, the scheme was regulated by the Family Code, repealed with the entry into force of the new Civil Code.

The old regulation of family law community of property regime consecrated as a single, legally binding, and no matrimonial[30] conventions were admitted. The doctrine of the old regulation was a rigid, constraining, without any alternative[31].

The Civil Code in force introduces a whole new regulatory and innovative regulation, flexible and adaptable to the wishes of spouses, offering them the possibility to choose the matrimonial property regime, establishing the principle of the freedom of the choice of matrimonial regime. The matrimonial regime choice is the consequence of the new visions of the legislature over economic relations between spouses, harmonised with European norms.

Thus, according to art. 312 of the Civil Code, the spouses and future spouses have

[30] I.P. Filipescu, *Tratat de dreptul familiei*, Editura All, București, 1998, p.46; I. Albu, *Dreptul familiei*, Editura Didactică și Pedagogică, București, 1975, p.119.

[31] Al Bacaci, *Considerații în legătură cu regimul matrimonial actual*, în Dreptul nr.4/2001, p.92.

the option of opting for one of the following matrimonial regimens[32]:
- ☐ legal community;
- ☐ division of goods;
- ☐ conventional community.

Thus, a legal regime is established - a community property regime and two types of conventional regimes - the separation of property regime and the regime of conventional community.
The community property regime, with some modifications remains the legal regime, but is flexible and shall be applied only in cases in which the spouses or future spouses have not opted for another double matrimonial regime by matrimonial convention.
Finally, whenever the spouses do not conclude a matrimonial convention and do not choose another regime of matrimonial property relation, it shall be governed by the rules of Community law. In our current law, this is the **matrimonial property regime**.
The legal regime of community of property belonging to spouses is regulated in art. 339-359 of the Civil Code.

2. The goods of the spouses

As regards to the goods, the spouses have two categories: the common goods and the own personal goods[33]. As regards to the debts, the spouses just have two categories of debt: the common and the own debts.
Article 339 of the Civil Code recognises the Community rule of all assets acquired during the community laws, by either of the spouses, on the date of their acquisition.
With article. 343 there is no need to prove the quality of common goods, the legislator establishes a presumption for all assets acquired during the community[34].
By way of exception, in accordance with article 340 of the Civil Code, are not common but goods of each spouse:
a) assets acquired by inheritance or donation, except to when the one that disposed them has provided expressly that they will be common;
b) goods for personal use;
c) goods destined for one of the spouses to exercise the profession, if there are elements of a trade which is part of the community of property;
d) economic rights of intellectual property over personal creations and distictive recorded signs;
e) assets acquired as prize, reward or scientific or literary manuscripts, sketches and artistic projects, inventions and other such goods;
f) insurance and indemnity compensation for any moral or material injury brought to one of the spouses;
g) goods, money or any values that replace an asset, as well as the property acquired in exchange;
h) their own assets.

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[32] C. Popa, *Drept civil. Succesiuni*, Editura Universității din Oradea, 2012, p. 64.
[33] T. Bodoaşcă, *Unele opinii în legătură cu bunurile comune ale soților dobândite în timpul căsătoriei*, *în lumina noului Cod civil*, în Dreptul nr.10/2011, p. 84-95.
[34] Adrian Alexandru Banciu, *Raporturile patrimoniale dintre soți potrivit Noului Cod civil*, Editura Hamangiu, 2011, p. 100.

To qualify a common good, the effective contribution of each spouse to the acquisition is not a esential, since this contribution is presumed by the law, by the very fact of setting up the legal community.
Direct or indirect contribution of each spouse is relevant only as soon as the question of determining shares parts that is appropriate to each spouse, and to the division of the common property.
Unlike the old regulations[35], art. 339 Civil code no longer is considering the acquisition of the property during the marriage, but during "the legal regime of the community". This is explained by the fact that, although the legal community of goods has the vocation to apply throughout the duration of the marriage, it is possible that over time its existence may not always coincide with the duration of the marriage. Thus, it is possible that spuses amend the matrimonial property regime during marriage and opt for a conventional regime.
In relation to assets acquired by spouses during their separation in fact remains the solution dedicated to the doctrine and in jurisprudence, in the sense that these are common goods[36]. However, the separation of the spouses shows concern with regard to the contribution of each spouse to the acquisition of joint property. In this respect, should be borne in mind art. 385 of the civil Code, which provides that either spouse or both of them together, can ask for divorce Court to certify that the matrimonial property regime ceased from date of separation in fact.

3. Termination and liquidation of the legal community

The legal institution of the liquidation of the community was introduced with the adoption of the present Civil code and is not being regulated by law. It is important to note that the rules concerning the termination and liquidation of the legal community of the Civil code applies only if a divorce occurred after the date of entry into force of the Civil code or if a spouse's death occurred after that date.
Matrimonial property regime of the legal community shall cease through:
- death of one or both spouses
- invalidity or cancellation of marriage
- divorce
- invalidity of marriage or pronunciation of cancelation of marriage
- its change during marriage

Under art. 355 paragraph 1 of the New Civil Code, upon the termination of the community, it must be validated by court order or notarial authentic document. Until the completion of the liquidation, the assets of both subsists and in respect of the good and the obligations.
In case of termination of the marriage by the death of one of the spouses, the cessation of the legal community will take place at the time of death of the person. The legal community expiry date coincides with the time of death of the person, which is also the opening date of the inheritance. The termination operates according to the law, even if it has not yet operated the winding-up of the

[35] Under the old Code of the family, it was a common good if it was acquired by either spouse during the marriage and was not one of the categories of personal property provided that such art. 31 C.fam.
[36] Cristian Mareș, *Dreptul familiei*, ediția 2, Editura C.H. Beck, București, 2015, p. 10.

community. Liquidation of the community is a separate legal entity which does not affect the existence of the matrimonial property regime.
Thus, the surviving spouse, whether or not he/she accepted the inheritance of the deceased, will complete the Act of liquidation of the community with the spouse's heirs. The liquidation of the community has to have an authentic form. If the only heir of the deceased is the surviving spouse, the notice of liquidation will take the form of a unilateral act (Declaration) stating the share of contribution to the acquisition of joint property. Share for each spouse from the common goods shall be determined in the light of the contribution that each had during the marriage to the acquisition of joint property. The obligations of the deceased spouse are divided between heirs in proportion to their shares from inheritance.
The Act of liquidation of the legal community shall be communicated by the public notary of the Register of matrimonial regimes, for information purposes and to the other registers provided for by law, depending on the asset: the Land Registry for real estate and to the Electronic Archive of Pledges and the Commercial Register for movables[37].
In the case of the dissolution of marriage by divorce, cessation of the legal community regime is taking place at the time of the introduction of a divorce action, not at the time of final judgment of divorce or at the time of issue of the certificate of divorce by the public notary or the civil status officer. We consider it opportune this change in relation to the old regulation where the community of property ceased at the time of the dissolution of the marriage, that is, the date on which the divorce judgment was pronounced and remained irrevocable[38].
As a result of divorce, the former spouses remain co-owners of property in common until establishing share attributed of each through a document of liquidation. In the old regulation of the family law, divorce proceedings turned into coproperty and the spouses were to establish quotas of contribution relating to assets acquired during the marriage.
Under art. 357 Civil code, in the context of the community, each of the spouses takes on his or her own belongings, after which it will proceed to the division of common property and the common obligations[3910]. To this end, it first determines the share of each of the spouse, based on his/her contribution for both the acquisition of and common obligations.
Therefore, the criterion used in the context of the community of goods is the criterion of the contribution of each spouse to the acquisition of joint property. Until proven otherwise, it shall be presumed that the spouses had an equal contribution. The community will also include the debts of the common goods and the spouses are responsible with the common goods.
If the liquidation of legal community is by court order, the court is obliged to establish, based on the submissions of the parties and the evidence adduced in the case, the contribution of each spouse to the acquisition of common goods, because on the basis of that contribution will establish quotas that the parties will

[37] Uniunea Națională a Notarilor publici din România, *Codul civil al României. Îndreptar notarial*, Editura Monitorul Oficial, p.125.
[38] Alexandru Bacaci, Viorica-Claudia Dumitrache, Codruța Hăgeanu, *Dreptul familiei*, ediția 4, Editura All Beck, București, 2005, p.154
[39] A.A. Banciu, op.cit., p.117.

have to share the goods.
Jurisprudence and doctrine have identified a number of criteria that can be considered when setting quotas contribution to the acquisition of joint property of spouses:
- contribution rates are set based on all of their common goods, and not for goods seen as isolated;
- of the evidence in question may result in practice, different rates of contribution to the acquisition of joint property of spouses, the difference can go up to a 100% quota for a spouse and 0% for the other spouse;
- the contribution rate of the spouses is unique to all common goods, unable to be establish differentiated for certain categories of goods;
- for setting quotas can be considered a number of factors, such as income each spouse, the real work of each spouse in the household and raising children, separation facto of spouses and the single contribution of one of them, during separation, to the acquisition of common goods[40].
If the marriage is null or annulled, and it appears that both spouses acted in bad faith in marriage, marriage is considered absent, which inevitably attracts the lack of a matrimonial community.
In case of termination of the legal community as a result of the finding or declaration of invalidity of marriage in which at least one of the spouses was in good faith, the same rules will apply as at a dissolution of marriage through divorce. In this sense, art. 304 para. 2 Civil code provides that in the case of putative marriage between former spouses property relations are subject to the provisions relating to similarity through divorce. The date of termination of the community in this hypothesis is the date of the anulllment action.
In case of termination of the legal community through regime change, the date of termination of the community will be the date of the end of formalities required by law for publicizing the convention through which is altered the matrimonial regime. Thus, spouses have the option after at least one year after the conclusion of the marriage, to change the existing matrimonial property regime with another matrimonial regime notarized by notarial act.

4. The division between the former spouses
After the liquidation of the community, the public notary or court shall proceed to sharing common assets.
According to art. 670 Civil code, division of property between spouses can be made by mutual consent or Court decission.
The object of division is made by all existent common goods at the moment of division[41].
The division of common property is made in nature, in proportion to the share of each co-owner. If the property is indivisible is not shareable or in nature, the division will be in one of the following ways:
a) the entire assignment, in exchange for the benefit of one amount of money in favor of one owner or more owners, upon their request;

[40] G.C. Frențiu, în *Noul Cod civil. Comentarii, doctrină și jurisprudență*, vol. I, Editura Hamangiu, București, 2012;
[41] Lucia Irinescu, *Curs de dreptul familiei*, Editura Hamangiu, București, 2015, p. 101

b) sale of the property as established by co-owners or, in case of disagreement at public auction, under the law and price distribution by co-owners in proportion to the share of each;
b) sale of the property as established by co-owners or, in case of disagreement at public auction, under the law and price distribution by co-owners in proportion to the share of each;
The action of partition is imprescriptible and the competence lies with the Court (District Court) in whose district the property is located, if the goods contain shareable property or if the goods are shareable or are only movable assets.
The act of sharing voluntarily or the decisions concerning separation is constitutive of rights and each co-owner is the exclusive owner of the goods or amounts allocated only as of the date fixed in the division, but not earlier than the closing date of the act if partition is voluntarily or where applicable, the date of the final judgment.
If the goods are buildings, the act of voluntary sharing is made in an authentic form and is registered with a constitutove effect in the Registry of Land.

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FINANCIAL EFFICIENCY OF DAY CARE VERSUS HOSPITALIZATION

Uivaroșan Diana[1], Endres Laura[1], Fodor Katalyn[2]
[1]Preclinical Disciplines Departament, University of Oradea, Faculty of Medicine and Pharmacy, Oradea, Romania
[2]Pharmacy Department, University of Oradea, Faculty of Medicine and Pharmacy, Oradea, Romania
diana.uivarosan@gmail.com
laura_endres@yahoo.com
katifodor@yahoo.com

Corresponding author: Uivaroșan Diana – e-mail: *diana.uivarosan@gmail.com*

Abstract: *Day hospitalization/day care is a service of which can benefit all patients that require thorough investigations to make the diagnosis of a disease, for monitoring chronic diseases, preoperative exploration, microsurgical interventions, postoperative inspections, that cannot be performed in ambulatory.*
Services required for the diagnosis, treatment or monitoring the patient which are carried out in a day care regime may have plurispecialized and/ or multidisciplinary character, may be invasive, may be followed by side effects or risk of emergency while performing them or correlated with the health condition of the patient, requiring medical supervision that cannot be carried out in ambulatory.
Day hospitalization is a modern concept within which, through advanced medical technologies, a series of medical procedures can take place during a single day.
Day hospitalization services have the advantage of providing patients the opportunity to perform in a reduced time (within 12 hours) all necessary investigations, no longer requiring continuous hospitalization.
Hospital medical assistance under continuous hospitalization regime includes acute type care and chronic type care , and factors which must be taken into account cumulatively when taking the decision of hospitalization under a continuous hospitalization regime are: the severity of signs and symptoms presented by the patient, medical predictability of a negative evolution, unwanted of the patient, the need and availability of the analysis / diagnostic investigations, depletion of diagnostic and therapeutic resource in other areas of healthcare.
A comparative study was conducted day hospitalization - continuous hospitalization, the three most common diagnoses of the hospitalized patients in day hospitalization: poorly controlled diabetes type 1 and 2 , essential hypertension. The study was conducted within the period 01.01.2015-31.12.2015 in clinical sections of Cardiology and Diabetes of the Clinical Emergency County Hospital Oradea. The aim of the study is to highlight the financial efficiency of day hospitalization compared to continuous hospitalization.

Keywords: hospitalization; costs; diabetes; arterial hypertension; internment; diagnostic.

JEL classification: I10; I11; I13; I18; G23

Introduction

Currently, hospital services are granted in regime of continuous hospitalization, the form of hospitalization through which the patient receives curative medical assistance and for recovery for the time necessary to fully solve the case, but also in regime of one day hospitalization, the type of hospitalization through which the medical assistance is provided for a maximum duration of 24 hours (Miriam E. Tucker,2014).

Day hospitalization is a form of internment, for a short period of time during which investigations for diagnosis can be made, monitorization of chronic or acute conditions which cannot be treated in ambulatory, postoperative observation in case laparoscopic interventions, investigations and preoperative analysis, controls or any postoperative treatments that cannot be performed in ambulatory medical assistance conditions (Marlene Busko,2015; Larry Bersford,2015).

There are situations, such as chronic cases, when for curing the disease, for the prevention of its complications, for the recovery or amelioration of the sufferings, it is needed caring and medical assistance within the department with beds, in regime of continuous hospitalization(Karen Appold,2016).

Material and methods

The study was performed in order to realize the financial efficiency of day hospitalization, compared to the costs of continuous hospitalization.

In order to demonstrate the financial efficiency in the case of day hospitalization we have studied the three most common diagnoses of the patients hospitalized in the Cardiology and Diabetes sections within the Emergency County Hospital Oradea.

Results

It is highlighted a larger number of day hospitalizations, for all the three diagnoses studied, compared to the number of continuous hospitalizations.

Table 1: Number of cases

Diagnostic	Hospitalization	Day care	The share continuous hospitalization (%)
Type 1 diabetes mellitus with poor control	40	345	10.39
Type 2 diabetes mellitus with poor control	58	288	16.76
Essential hypertension	60	605	9.02

We notice the small share of continuous hospitalizations in relation with day hospitalization (10.39% in type 1 DM, 16.76% in Type 2 DM respectively 9.02% in essential hypertension).

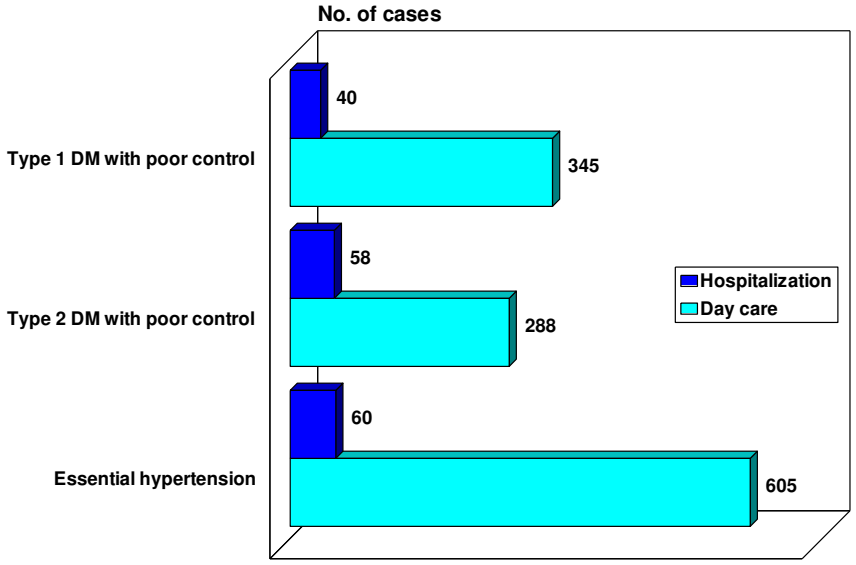


Fig. no.1. The number of cases in hospitalization and day care

Table 2. Average length of stay

Diagnostic	DMS continuous hospitalization
Type 1 diabetes mellitus with poor control	3.27 days
Type 2 diabetes mellitus with poor control	3.52 days
Essential hypertension	2.61 days

The average hospitalization period was between 2.61 days in the case of hypertension and 3.52 days in the case of type 2 DM with poor control.

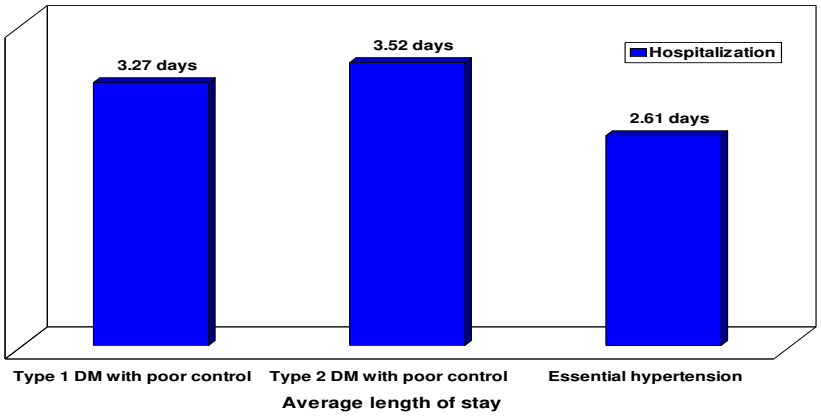


Fig.no.2. Average length of stay

Table 3. Average cost

Average cost (lei)	Hospitalization	Day care
Type 1 DM with poor control		
Medicines and medical supplies	175.50	16.50
Medical tests	125.78	85.22
Other investigations and proceedings	145.75	32.46
Costs hotel	565.00	0
Total	**1012.03**	**134.18**
Type 2 DM with poor control		
Medicines and medical supplies	74.74	3.77
Medical tests	135.28	86.07
Other investigations and proceedings	134.75	30.25
Costs hotel	624.00	0
Total	**968.77**	**120.09**
Essential hypertension		
Medicines and medical supplies	29.14	2.52
Medical tests	173.19	110.62
Other investigations and proceedings	99.00	68.87
Costs hotel	565.00	0
Total	**866.33**	**182.01**

Compared to continuous hospitalization, the total cost of day hospitalization is 8.1 times lower in the case of type 2 DM, 7.5 times lower in the case of type 1 DM and 4.5 times lower in hypertension. This difference is mainly due to the hotel costs, medicines and sanitary materials.

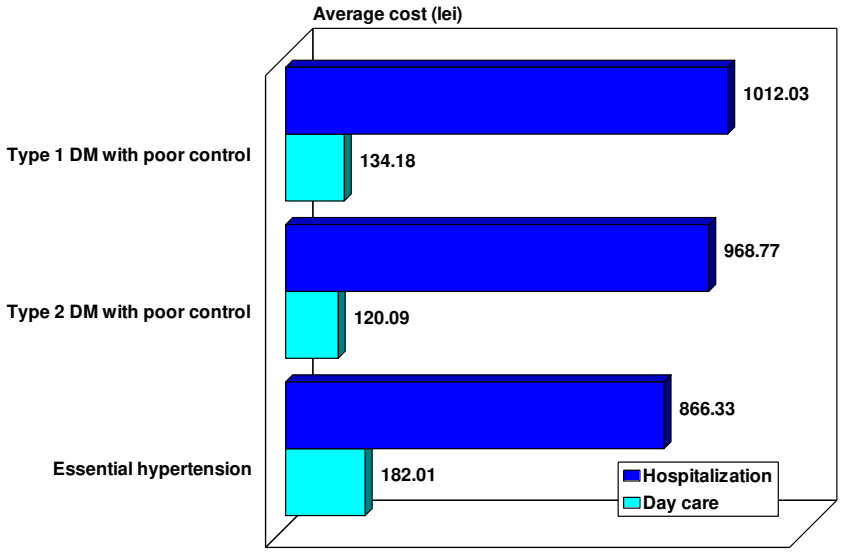


Fig.no.3. The average cost in hospitalization and day care

Table 4. The difference between the discounted and cost

Diagnostic	Continuous hospitalization			Day hospitalization		
	Discounted by CAS	Costs	Difference	Discounted by CAS	Costs	Difference
Type 1 DM with poor control	917.44	1012.03	-94.59	273.00	134.18	138.82
Type 2 DM with poor control	917.44	968.77	-51.33	307.00	120.09	186.91
Essential hypertension	564.48	866.33	-301.85	202.00	182.01	19.99

On the 3 types of diagnoses, in the case of continuous hospitalization costs are not covered, while day hospitalization, regardless of diagnosis the difference between the amount discounted by CAS (Health Insurance House) and costs is positive.
If we evaluate the 158 cases performed in continuous hospitalization, results a financial loss of 42464.72 lei.

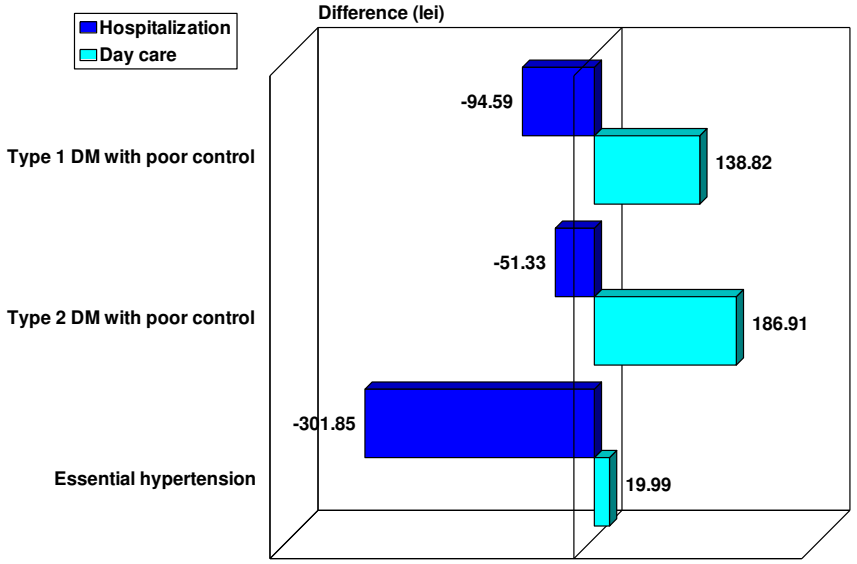


Fig.no.4. The difference between the discounted and cost

Conclusion

Through the introduction of day hospitalization in the contract with CAS, the number of internments in continuous hospitalization regime for the 3 diagnoses analyzed, decrease. At the same time, restricting by contract the number of cases of day hospitalization has as effect the internment of some cases in continuous hospitalization, cases that would require day hospitalization. Any case of day hospitalization day that is hospitalized in continuous hospitalization has negative financial effect.

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SOME CONSIDERATIONS ON HUMAN CAPITAL SUSTAINABLE DEVELOPMENT IN ROMANIA

Valentina Vasile[1], Ana-Maria Ciuhu[2]
[1]Institute of National Economy, Romanian Academy, Bucharest, Romania
[2]Institute of National Economy, Romanian Academy, Bucharest, Romania; National Institute of Statistics, Bucharest, Romania
valentinavasile2009@gmail.com
dobre.anamaria@hotmail.com

Abstract: *Human capital and sustainable development are related concepts. This paper aims to present a research on human capital sustainability in Romania. The human factor and its influence on development in general and more particularly on sustainable development can be analysed from many points of view. We are referring to the aspects of employment, education and social inclusion. The component of population is being analysed, in the context of new approaches concerning the human capital. Some current challenges for human capital sustainability are presented, related to demographic impact on the labour market. Using data from official statistics, we will expose an overview based on the social component of the sustainable development.*

Keywords: Human capital; Sustainable development; Labour market; Employment; Education

JEL classification: J21, J24, Q01

1. Introduction

Especially in the last decades, the interest for human capital and sustainable development has increased at European level. Several studies are reviewing successfully the human capital. Special focus is given on the digital inclusion and skills of the human capital. These will shape the sustainability of the human capital in the near future. The European Commission has even created the indicator named “digital skills indicator”, which takes into consideration the information skills, communication skills, problem solving skills and content creation skills. (European Commission, 2015a) Another approach of the European Union is based on the human capital dimension of the Digital Economy and Society Index. (European Commission, 2015b). The same report shows that unfortunately, Romania has the weakest performance at this indicator.

The paper aims to emphasize the definition of the human capital nowadays and the current challenges of the human capital. The sustainability of the human capital is underlined with the support of relevant statistical indicators.

The research provides an approach of valuing the human capital potential, as a solution for keeping the human capital sustainability in the future.

2. Sustainability of the human capital

2.1. Human capital nowadays

The concept of human capital was extended today at the societal level and even globally, and it is recognized as a factor of economic growth (Krueger and Lindahl, 2000). The focus is on the role of education, labour market dynamics and income inequality. A reference work in this regard is "Capital in the Twenty-First Century" of the economist Thomas Piketty (2014). The author argues that the efficient use of capital in developed countries is consistently higher than the rate of economic growth, and this will generate an increase in wealth inequality in the future.

Two types of human capital could be distinguished. The first type refers to its use as labour in connection with the production of economic value added, where labour is the generating element along with other factors of production such as financial capital, tangible assets and working time. The other type of human capital is viewed as objective investment in education and training. Scheffrin (2003) considers human capital as "the stock of skills and knowledge embodied in the ability to perform the work so as to produce economic value." Therefore, human capital includes both perspectives.

Currently, the most complex and used definition of the human capital was developed by the Organisation for Economic Co-operation and Development (OECD, 2001:18): human capital is "knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being". In other words, human capital incorporates productive labour, skills and knowledge.

2.2. Current challenges of the human capital

Currently, human capital is the most important resource of the economy, with special importance due to its complexity, size and dynamics from the perspective of its frequent changes, but also from the perspective of interdependence of demographic phenomena and the social and economic processes. In the context of Europe 2020 Strategy and the Romanian Operational Programme "Human Capital", the focus is on social inclusion and efficiency of individual, group and society. Unlocking the potential of labour, creating conditions for increasing labour market participation and assuring access to quality jobs are priority objectives of economic competitiveness, sustainability and inclusion. At the same time, the costs and benefits of efficient allocation of human capital in terms of impact and positive and negative effects are important as well.

Current challenges and concerns are related also to the work development in the future. Due to technological innovations and the emergence of new business models and industries, it will tend towards a development matrix of industrial relations, diversity, virtual organizations, responsibility and ethics. The work will be guided by new technologies and social networking data, and traditional activities and professions will disappear (PwC, 2014).

Population characteristic is also a component that leads to changes of the human capital. Hence, aspects such as the socio-professional status, education and mobility of the population must be considered in the context of sustainable development. This emphasizes two issues concerning human capital. First, in underdeveloped countries, the population is growing and the level of education is

poor. These individuals must be supported with resources, while they do not produce enough for the economy. On the other hand, population distribution in urban and rural areas is important, as classical economic growth was supported by the exodus of population from urban to rural.

Migration was included in the new Agenda 2030 of United Nations - Sustainable Development Goals (SDG), in 4 of the 17 goals of sustainable development, thus correcting their absence from the set of Millennium Development Goals, adopted in 2000. The Agenda 2030 is stating the following: "We recognize the positive contribution of migrants inclusive growth and sustainable development. We also recognize that international migration is a multidimensional reality with relevance to developing countries of origin, transit and destination. We cooperate globally to ensure safe migration, in full compliance with human rights and humane treatment of migrants, regardless of their status. This cooperation is intended to improve the resilience of local communities to refugees, particularly in developing countries. We emphasize the right of migrants to return to their country of origin and specify that States must ensure that returned migrants are reintegrated." (United Nations, 2015) Therefore, the United Nations assumes these goals to ensure a better monitoring of migration and considers the phenomenon of migration of refugees.

At European level, a European approach places the migration as a determinant of sustainable development (European Commission, 2013). The total number of migrants in the world have risen from 150 million in 2000 to over 200 million in 2010 (International Organization for Migration, 2010). Over half of them live in low- and middle-income countries and many developing countries are both countries of origin and countries of destination for migrants. This regional mobility generates opportunities, contributing for example to reducing poverty, but simultaneously makes effective governance necessary to resolve issues like brain drain and exploitation of migrants.

In Romania, the new approach of human capital is based on Human Capital Operational Programme, conducted in the period 2014-2020. It envisages valuing human capital, a resource for sustainable development in the future. The program will contribute to the objectives assumed by Romania in the context of the Europe 2020 Strategy, which are related to human capital:

- Increase to 40% the proportion of people under 30 who graduated from tertiary education. To achieve this goal, reforms are needed in education and economy designed to support education expenditures.
- Decrease to 11.3% the early school leavers. There was a decrease in the dropout rate from 22.9% in 2000 to 18.3% in 2008, but it rose in 2010 to 19.3%, as a result of the economic crisis. In 2014 the rate of early school leavers was 18.1% (Figure 1).

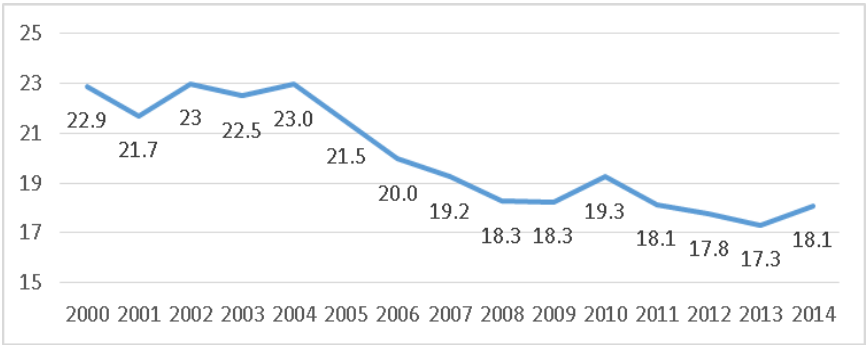


Figure 1: Early school leavers in Romania, 2000-2014
Source: National Institute of Statistics, Romania

- Increase social inclusion - this objective seeks to reduce the population at risk of poverty or social exclusion to 580 thousand persons. In Romania, the highest at-risk-of-poverty rates are registered among young people aged 0-17, which constraints their evolution on the education and labour market.

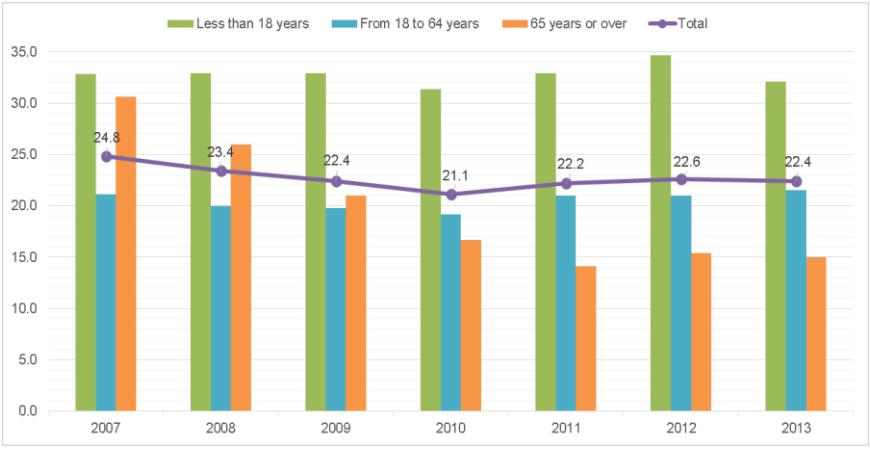


Figure 2: At-risk-of-poverty rate by age groups, 2000-2014
Source: At-risk-of-poverty rate by poverty threshold, age and sex (source: SILC) [ilc_li02]

- Increase the employment rate for people aged 20-64 years to 70%, which claims for reforms in terms of stimulating employment and ongoing training of the workforce. The employment rate for people aged 20-64 had the highest value in 2008, just before the crisis. The lowest value of the period was in 2011.

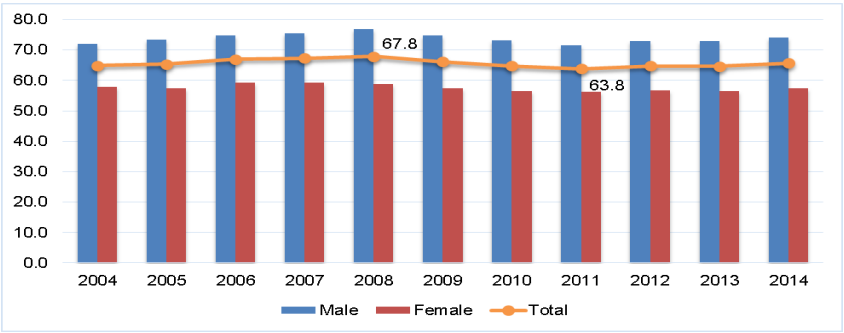


Figure 3: Employment rate for people aged 20-64 in Romania, 2000-2014
Source: National Institute of Statistics, Romania

3. Labour market and the demographic impact

Analysis of the impact of demographic trends in terms of employment shows a significant amount of restriction items, among which deserve attention, in particular, the declining birth rates and the deterioration of the age structure of the population, high levels of infant and maternal mortality, changing demographic behaviour of young couples opting for fewer children, massive drop in the birth rate for mothers with a higher level of education and medium living conditions, migration, especially external and internal but in less developed areas, from rural to urban areas. The latter produces imbalances in territorial depopulation and even when it is not matched by natality.

Ageing is a demographic process specific to Romania's population. The accelerated phenomenon of population ageing owes to negative natural increase rate – in the two decades the number of deaths exceeding increasingly the number of live births - and, in parallel, due to the increase of life expectancy. Birth rate declining has reduced the young population (0-14 years). Also, the extension of life expectancy has resulted in increasing the number and proportion of elderly population (65 years and over).

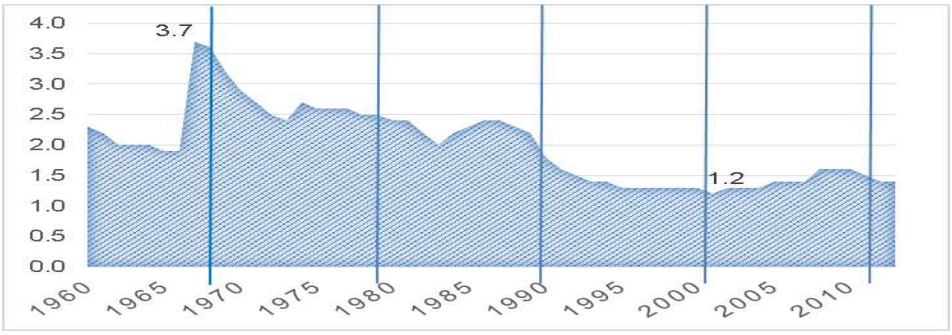


Figure 4: Total fertility rate in Romania, 1960-2013
Source: National Institute of Statistics, Romania

In Romania, total fertility rate, defined as the number of children born by a woman during her fertile life, has been decreased dramatically every decade. In 1967, the fertility rate was the highest in all the period (3.7 children) and in 2001 was

registered the lowest rate, of just 1.2 children.
In the last two decades, Romania's population was reduced by about 1.7 million, which represents a waste of human capital of over 7% plus temporary migration for work - estimated at about 2 million people.
The official data (National Institute of Statistics) show for Romania that in 2050, young people will be significantly reduced: 4.9% for the age group 0-14 years and 2.5% for 15-24 years. Considerable risks may arise from such evolution. In the demographic trends, they are linked to ensuring human capital for labour market, as the school population is reduced drastically as a result of long-term effects of the phenomena mentioned above. Even if, through appropriate policies there will be a recovery in the birth rate, population decrease in the last two decades will influence aging and will decrease the potential for work to the horizon of 2050. It is anticipated a minimization of the labour market, if this deficit will not be compensated by immigration. The current context of immigration has a negative mark at European level, which will be observed in Romania in the near future. In addition, the current demographic crisis could maintain the behaviour of young people to postpone the founding family, respectively will reduce fertility rates. On the other hand, Romania will risk to confront the phenomena of migration to areas that have failed earlier to counter the effects of the crisis through the creation of new jobs.
Reducing demographic impact on the employment potential can be countered by measures and policies to stimulate population growth by: pro-natality policies or social programs targeted to family and child; effective public health policies for children; maintaining a positive external migration rate by returning people who have migrated.

4. Valuing human capital potential

The solution for keeping the human capital sustainable is definitely the valuing of its potential.
In a society two categories of human capital can be found: the potential human capital and the real human capital. They are delimited by two large sections of the population: resident population and migrants.
The resident population considers the external migration balance (according to usual residence criterion), while the permanent population covers the whole Romanian population, according to permanent residence in Romania criterion, irrespective of the usual residence (National Institute of Statistics, 2015).
Another classification of the population, made by labour market participation criterion, is important to note. The economically active population comprises all persons aged 15 years and over, providing available labour force for the production of goods and services; it includes employed population and unemployed.
Human capital includes all potential working age population (15-64 years), which are both economically active and inactive population. Economically active population takes value by transforming into real human capital through employment. Employment could be analysed on two levels:

- Quantitative, in terms of number of employees, employed persons;
- Qualitative, in terms of social productivity, value added.

Therefore, the gap between potential and real human capital is given by unused potential human capital (by employment) and includes the following categories:

unemployed, NEETS, pupils and students, housewives and pensioners. The real human capital is the one which takes part actively in the labour market and includes the employed persons: employees, employers, self-employed, unpaid family workers, farmers, remunerated apprentices and trainees, members of armed forces (Figure 5).



Figure 5: Categories of human capital
Source: authors' view

5. Conclusions

The concept of human capital has been changed over time, and nowadays we face its global view regarding its role on economic growth. The population component plays an important role as it has impact on the labour market.

Indicators such as rate of early school leavers, at-risk-of-poverty rate for young people, employment rate and total fertility rate show that the human capital is not sufficiently sustainable in Romania.

The frequent discrepancies between the education market and the labour market are materialized in the loss of human capital, loss of investment in education, loss of added value as a result of improper work or relinquishment to work after graduation. Young workforce that leave Romania is a loss that deepens the gap between potential and real GDP and the gap between states.

The sustainability of human capital could be achieved by applying the methodologies for monitoring the insertion of graduates of different forms of education (vocational, secondary and higher).

Last but not at least, as a way to ensure the sustainability of human capital, it can be conducted an analysis of the skills that employers in Romania consider important to their company's success and adapting the education and training offer to those requirements and periodic updating the occupational standards and training and educational curriculum, closely related to dynamic changes on the labour market.

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THE STRATEGIC APPROACH OF SUSTAINABLE DEVELOPMENT IN ROMANIA

Cristian – Liviu Vele, Diana Cezara Toader, Grațiela Boca , Cezar Toader
Faculty of Science, UTCN
Department of Economic Sciences, Faculty of Sciences,
Technical University of Cluj Napoca, North University Center in Baia Mare Romania
Romanian Academy of Economics Bucharest, Bucharest 010374, Romania
cristian.liviu.vele@gmail.com
bocagratiela@yahoo.com
Cezar.Toader@cubm.utcluj.ro

Abstract:
The paper presents the important aspects of local and territorial development, such as strategic planning, sustainable development strategies, and integrated development plans. The comparative analysis allows the reference to real situations at the managerial level in the Romanian and European public administration. Thus, an ideal optimal model can be built for similar structures where sustainable development programs. The case studies presented in the paper may represent models of good practice for any city hall in Romania as regards the increase of institutional and administrative capacity at the level of local authorities and civil societies, the management of polycentric territorial-administrative development. An important role in sustainable development in Romania, will go to continuous education, for the acquisition of new communication skills, risk management, business management, for a more effective activity which is adapted to continuous changes in market conditions and for ensuring competitiveness in all fields. The Urban System presented in this paper has all the characteristics of a model structure of polycentric development that has elaborated/formulated a development overview on long and medium- term with all the strategic, tactical and operational elements that support the development within a well-defined territory. The promotion of polycentric and balanced territorial development as an essential element for the territorial cohesion realization represents one of the priorities of Europe Strategy 2020.

Keywords: *sustainable development, city, strategies, urban, system, polycentric.*

JEL classification: R11, R23, Q56

1. Introduction

The sustainable development through its economic, social and environmental dimensions has become a key factor that generated major changes with respect to the management techniques in the public administration.
The positive evolution of the administrative decentralization will lead to the decentralization of the development process, this implying a high degree of specialization and diagnosis within the structures of the local public administration.

The development and strategy departments should become integrated and integrating elements of the management in the institutions of the local and regional public administration.
The strategic approach of sustainable development in the local communities leads to the accreditation of a social perception regarding the importance of public participation in all the approaches related to local development. Making the sustainable development an efficient process implies the alignment of the Romanian institutional system to the new European standards.
The Urban Development Integrated Plan of the city in Romanian, is aimed at the public intervention on a well-defined area needing regeneration because of social, economic, territorial, functional and environmental discrepancies, as compared to other urban areas of the municipality.
The success of the implementation of the European project on sustainable development in the cities of Romania, during 2015-2020 will depend to a great extent on the qualification of human resources and on the know-how, on the infrastructure improvements. Introduction of innovation in the production sector, the administrative processes, in everyday life, the promotion of local products and on the market development for a new generation of products and services.
The main strategic objectives of sustainable development in Romania during the implementation of the European projects are:

- the development of modern education and training systems in order to provide youth with the proper skills required by the labor market;
- the promotion of an attractive higher education system linked with the economic environment;
- measures to reduce unemployment rate and to support the employment of young graduates;
- stimulation of innovation and creativity, including entrepreneurship spirit, at all levels of education and professional training, supporting young entrepreneurs in starting and developing a business.

The Development Strategy of the cities contains the vision and the strategic development objectives, the package of policies, programs and projects, as well as the implementation mechanisms in a continual process over a defined period(drafting, implementation, post-implementation analysis, reviewing).
The metropolitan development strategy sustains the polarizing role of the city in the concepts of regional public management, being defined as an instrument of long-term public management, in order to sustain the regional polycentric development, a current aspect of public management policies.
Outlining these aspects concerning the modern instruments of public management can conceptually and practically support the Romanian public administration in the process of administrative reform. The manner of the integration and the results of the assimilation can be shown as examples of good practice, established at the level of global doctrines and at the level of applicability in the Romanian society.
The field of sustainable development is rather new in Romania. Resources management, local economic development with protection for the future young generations are quite a challenge for the communities with poor resources in the context of globalization and increased world competition for resources but also in the context of challenges concerning globalization, climate changes , social and economic crisis.
The strategic approach of local communities' sustainable development has to

create a social perception that institutions are serving the citizens and not the other way around. In order to be compatible with the European model, public management becomes an important model in the community's evolution in the context of decentralization.

In the new European context, stimulating the development of a managerial conception, characteristic for a modern public administration, is absolutely necessary.

Each public manager has to select, based on his or her own experience and perception, those elements able to define their own managerial "model". This paper does not claim to have an academic approach to the managerial phenomenon in public services nevertheless it represents a starting point in understanding this field of work going through adaptation processes, based on best practice experiences and examples accomplished in the Romanian public administration.

The study of public management in the circumstances generated by the current situation of the Romanian local administration presumes an investigation conducted on all the elements connected to documented foreseeing, the public authorities' ability to prepare plans, programs and projects, the competence to decide on drafting and implementing adequate strategies for ensuring a sustainable development of the local communities.

Specialized studies and research in the field have a rather recent history in Romania. The premise at the base of this paper is the objective need to conduct a theoretic-applicative research on the new approaches, simultaneously with the proposal of choices for perfecting the public management instruments.

Consideration has to be given to the fact that sustainable development, as a fundamental element in the evolution of communities, has to be analyzed with all that it involves at the institutional, legal and community level of resources management.

In addition, there are a series of current global challenges needing a fast adaptation through mechanisms enabling, in the context of long term measures, the application of public management capable to diminish or to adapt to these challenges.

Amongst the most important current challenges, needing the development of instruments sustainable at local, regional but also with global effects, the following are listed:

Globalization, expressed especially through population mobility, pressure on the life quality level, extended economy, interdependence of social, economic and environmental systems;

Climate changes, as an effect of the pressures on the environment's natural regeneration ability;

Society, as a means of organizing existence, designs the entire field of human action: social system, behavioral organism, individual personality, physical and organic environment, cultural system.

Made up from a regulation system of orders, statuses, rights and obligations belonging to members, human community, in order to survive and develop, has to maintain the integrity of a cultural orientation, understood and respected by its members, as a base for social identity.

Evolution in time of local community structures as well as the social and interdependence relations between individuals and groups, the increased complexity of phenomena and the development of communication instruments

have led to the appearance and development of the management concept.
A number of issues defining the urban system in Romania management emerged from the diagnosis analysis carried out. This set of problems will lead us, as a next step, to formulate strategic objectives and policies, programs and development projects, respectively:

- the effect of economic restructuring;
- the existence of regional disparities;
- the existence of environmental issues;
- the damaged built heritage ;
- the complexity of public management.

Considering the elements that are part of the vision of development, the strategic objectives for which the Urban System has been created are: improving the quality of life and removing the existing disparities between localities, creating a pole of economic concentration and support for attracting investment and for further development of jobs in this area.

2. The implementation of a Strategy for Local Sustainable Development

The sustainable development for the cities of the Romania, which contains the elements of both a development strategy and of a transformation strategy, is characteristic of a pro-active community development. One crucial element which led to its elaboration is represented by the existence of a well-developed community, with a positive potential of human resources, within the context of a radical change in the fields of activity in the local economic sector.
The necessary equilibrium for implementing such a strategy is sustained through the achievement of an efficient communication with the local community in order to directly involve it in the process of decision making and the promoting of measures necessary for implementation, as well as through the over-development of the tactical level, able to sustain the reaching of medium and long-term goals within strong social and economic transformations.
The way of integrating the local strategic objectives at a county and regional level has been realized through the promoting of an ascendant strategic construction (“bottom to top”), the elements of the local strategy being the basis for the construction of strategies at county and regional levels.
Implementing the strategy represents the practical stage of planning and monitoring the process of putting into practice the decisions expressed in development programs and projects. This must ensure the reaching of the strategic goals that have been stipulated, through the implementation of projects at the community level.
The Sustainable development strategy represents a strong political pledge on the vision about the future of the community and at the same time a platform for the coordination of integrated actions from the urban agenda assumed by the collectivity. The strategy answers the challenges with which communities are faced on a global scale: financial crisis, competitiveness and globalization, a decrease in population and the demographic aging, migrations, climatic changes and the management of energy resources, to which are added, at an internal level, the process of de-centralization in the education and health systems.
Through the experiences encountered by the cities of the Romania during this implementing period, the perspective of a supra-urban level depending on the

global agglomeration that had created it was identified, the necessity of development being in this respect approached from a territorial point of view. The modification in the ratio of resources between the dense urban zone and the adjacent rural zones is analyzed according to the common values and objectives they sustain.
This poly-functional territory has been analyzed both from the perspective of defining the administrative limits and from the point of view of the social, economic and environmental development potential. The defining of a metropolitan-type strategy, as well as of some afferent measure plans needs an institutional and financial construction in order to efficiently complete the territorial dimension.
Romania's development is based on a powerful system of major development poles connected to the complemented system of support specialized poles by a good partnership relation between the different levels in view to ensure the socio-economic and territorial cohesion, the sustainable development.
In this context it is necessary to consolidate a coherent network of development centers which is to act as development engines, and also as an equilibrium structure at the regional level in Romania.
The Urban System for the cities of Romania is a functional example of territorial structure which has drawn a development strategy where there have been underlined the key-aspects of management, the strategic objectives, the policies and the development measures.
The instruments used have mainly been those promoted by the local public administration, these having the role of offering consistency to the private and public policies at the level of local or regional communities. The decisive role of public management in the near future is to build the "frame" for the social and economic development of a well-defined space.
This space must tackle with both the values of local identity (cultural, economic, social or natural environment), and the major challenges linked to globalization-related phenomena, the ever-changing world economy and the degrading of the environment.
The instruments of public management facilitate the access of the community, in its whole, to public resources and the development vision of a community, the public administration playing the major role of managing these resources for a rise in life-quality levels within the community it represents.
Connection to the European network (URBACT) dealing with the strategic management for land use, which is considered to be the most important tool for the approach and provision of competitiveness, attractiveness and sustainability of European cities/regions.
This implies an approach at the strategic level (planning instruments, observation instruments), as well as at tactic and operational level (action plans, study cases) and it can generate a series of practical models and methods for similar communities interested in local development.
Drawing up new grounds that would settle the objectives and criteria based on which new partnerships will be built between regional or local governments and all the economic, social stakeholders, with structures that represent the civil society, with non-governmental organizations or other bodies interested in the sustainable development of communities.
Development of local networks and partnerships for the use of the participative mechanism correlated with an efficient information and communication system,

which will further allow the concentration of resources and the optimal exploitation of the local potential.
Elaboration of three types of main tools meant to orient and promote a realistic and responsible vision upon the local development perspectives: a local development strategy that sets the medium and long- term objectives; an action plan that outlines the priorities and steps to be taken on medium and long - term for reaching the objectives set in the strategy, that will include cost assessment, identification of financial resources and how to apply for them; a portfolio of projects considered by the entire community as priorities for the sustainable development of the city or region.
Setting up a clear calendar for the preparation, elaboration and correlation of the strategic documents, of the mechanisms and related tools, necessary to apply for European funds foreseen for 2014- 2020, in order to be able to reach the objectives set by the European Strategy 2020 and by the national programs (National Reference Program, National Development Plan, Operational Programs).
For the implementation of measures related to the integrated polycentric development network, instruments specific to the territorial spatial planning (investment programs, territorial plans, monitoring of territorial development), non-spatial (budget, finances, administrative capacity) and strategic planning (strategies of regional development, coordination mechanisms, politics substantivize, strategic planning) are used.
The promotion of polycentric and balanced territorial development as an essential element for the territorial cohesion realization represents one of the priorities of Europe Strategy 2020. In this context, the formation and consolidation of the development poles as basic elements for the creation of polycentric networks must be supported by integrated politics at local and regional level.

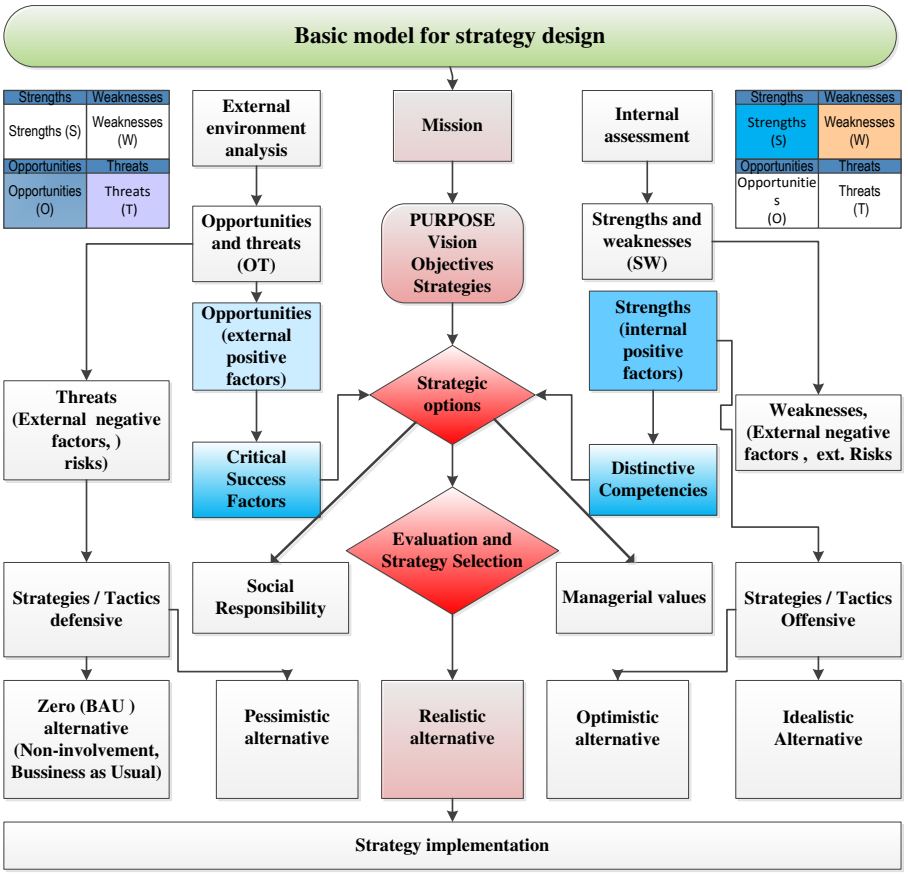


Figure 1. Model for strategy elaboration
Source: Anghel, 2013

The base model used for the formulation of the strategy was used in all phases of the measurements, starting from a simplified model with approaches on two directions represented by the SWOT analysis part (analytical approach), respectively the visionary measurements (overview, mission, strategic targets). The two approaches have finally generated five types of strategic alternatives (zero alternative, pessimistic alternative, optimistic alternative, realistic and visionary alternative)
The model emphasizes the two great types of approaches (defensive and offensive) important especially in tactical phases that aim at medium- term targets.
Another advantage of the model is the emphasis and picture of the distinctive competitiveness and competent elements as critical factors of success, respectively the social responsibility and managerial values as important elements within the complete

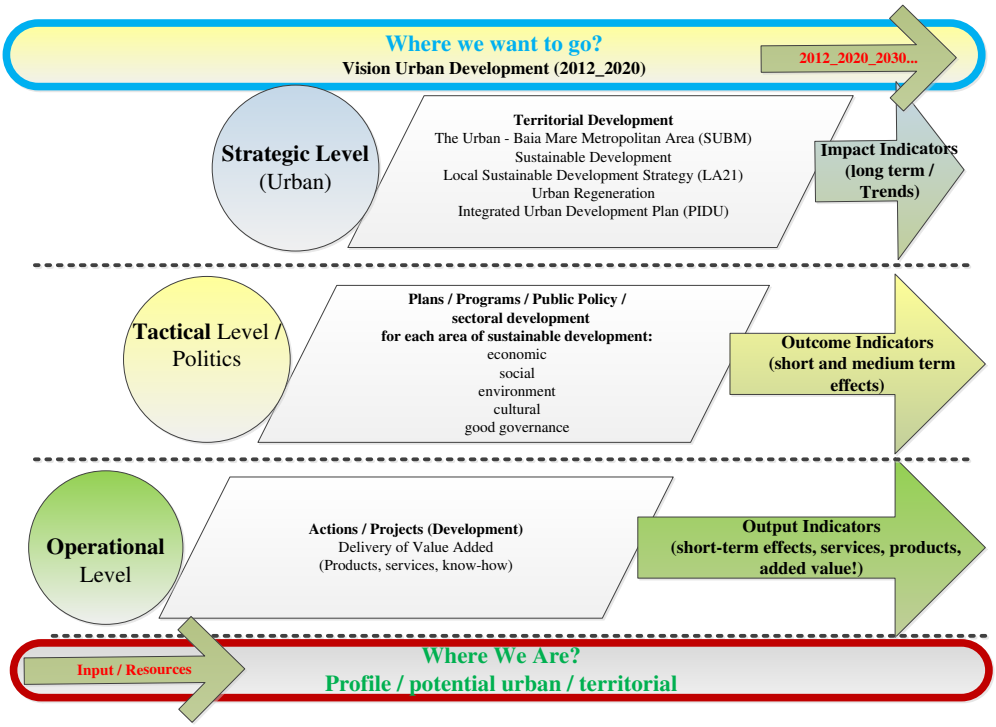


Figure 2. Concept of Local – Territorial Integrated Development
Source: Anghel, 2013

A series of public management instruments are interconnected in order to realize a unitary construction that covers the entire problematical aspects of a community at a county capital city level.

The Scheme of the Local-Territorial Development Concept synthetically presents:

(a) The content of the stages of local-territorial development planning:

- Definition of urban – territorial profile based on the quantitative indicators (statistics) and the qualitative indicators of the local resource types (natural, physical, human, social and financial);
- Evaluation of the development potential (based on the strategic analyses SWOT/PEST of the local – territorial profile);
- Establishment of strategic planning elements;
- Definition of the development overview, an ideal image of a desirable future, shared within the community;
- Establishment of development targets and measures (strategies and programs)

From the territorial perspective of the administrative unit (subunits – neighborhoods, or supra-units– territorial cooperation areas; micro regional, counties, regional);

- From the sectorial field perspective of the local development integrated within the concept of durable development (economic, social, environment, culture, governing)

(b) The process of local-territorial planning, definitive for the local capacity

evaluation of public management. It is defined through the involvement degree (civic participation) of all concerned parties in all planning stages (by information, consulting, and participation), ensuring the participative character of the elaboration, public assumption and application of local-territorial development politics.

(c) The levels and types of indicators of the monitoring and evaluation system of the implementation progress of development elements:

- Impact indicators (long- term effects on big groups of beneficiaries, the entire community), definitive for the degree of achievement of strategic objectives;
- Result indicators (short- term effects on some specific target groups) that define the degree of the achievement of the programs, applied plans, respectively of the specific objectives and planned measures;
- Exit indicators/“output” (services and products realized as a result of projects’ application, services provided within the Local - Territorial Action Plan)

The disadvantages of such an approach is the concentration of public interventions in a well-defined urban area to the detriment of other urban areas that require interventions in an extended conceptual analysis; a representation of the application or urban regeneration at the level of the entire community is represented as follows:

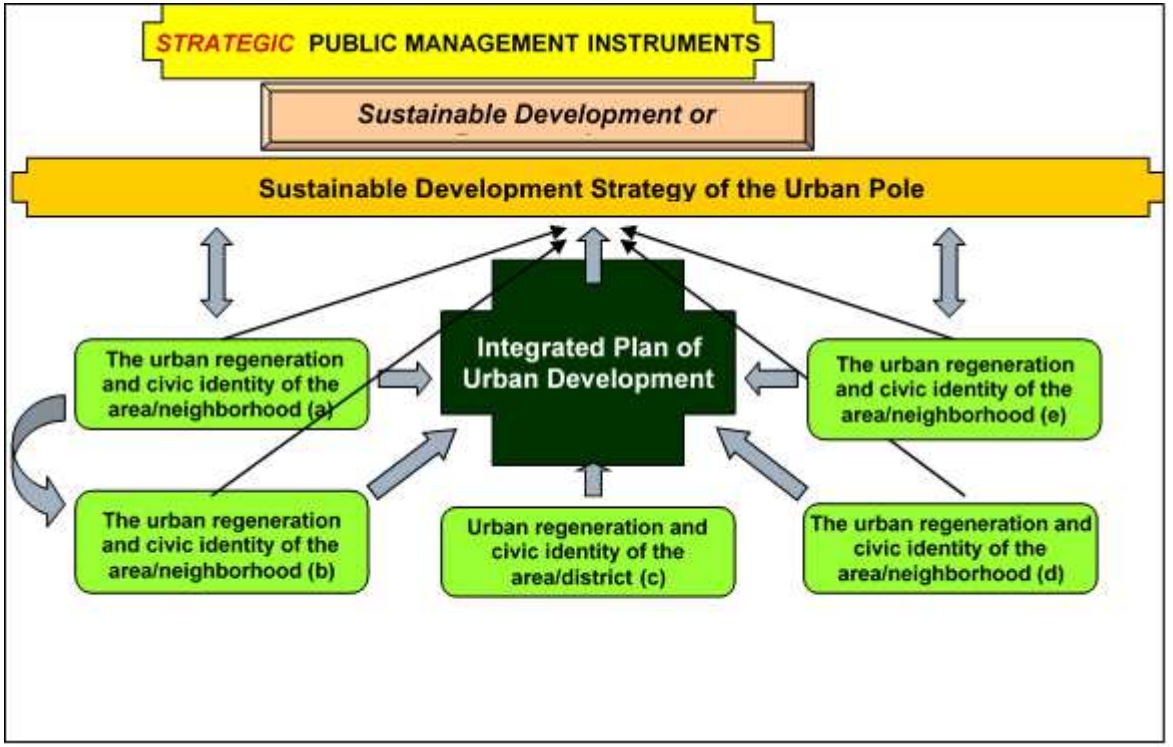


Figure 3. The analysis of the sub-urban development in relation to the entire local
Source: Anghel, 2013

In this context, the functional approach of a Masterplan of urban regeneration for this area offers a series of competitive advantages on a long and medium- term, the most important being the following:

- The integrated approach of some functional urban areas, in relation to the neighborhood creates the premises of a balanced, long-term sustainable development;
- The identification and the allotment of a social, cultural and administrative identity to an urban zone lead in perspective to social stability and an increase in the predictable competitiveness of any zone;
- The decentralization of administrative, economic and social functions at an urban level is the tendency of the third millennium, at all levels this optimal endeavor being correlated with the increase in the cooperation capacities and the social dialogue in a globalization world;
- The credibility of some long-term strategic projections not only renders more efficient the resources allotted for their completion, but also creates a favorable environment for an increase in the level of life quality due to the elimination of some development risks;
- The capacity to integrate distinct measures and actions having the same direct beneficiaries leads to the sustainability of long-term planning of certain objectives, the results and impact on a short- and medium term being synergic and comprehensive for these beneficiaries;

The instruments used were mainly those promoted by the public administration, these having the role to offer consistency to private and public policies. The decisive role of public management in the near future is to build the “frame” for the social and economic development of a well-defined space.

This space must address not only the local identity values (cultural, economic, social of natural and built frame), but also the major challenges linked to the phenomena of globalization or the degradation of the environment.

The sustainable development of cities which contains the elements of both a development strategy and of a transformation strategy, is characteristic of a pro-active community development. One crucial element which led to its elaboration is represented by the existence of a well-developed community, with a positive potential of human resources, within the context of a radical change in the fields of activity in the local economic sector.

The necessary equilibrium for implementing such a strategy is sustained through the achievement of an efficient communication with the local community in order to directly involve it in the process of decision making and the promoting of measures necessary for implementation, as well as through the over-development of the tactical level, able to sustain the reaching of medium and long-term goals within strong social and economic transformations.

The way of integrating the local strategic objectives at a county and regional level has been realized through the promoting of an ascendant strategic construction (“bottom to top”), the elements of the local strategy being the basis for the construction of strategies at county and regional levels.

One of the most important development options is the strengthening of the metropolitan zone through the pole-centered integration of development, starting from the attraction vectors of the city seen as a center of gravity and with the

following options:

- coherent development strategy
- functional specialization through innovation
- supporting sustainable economic development
- elimination of disparities

The territorial development knows a new approach within which de social, economic and territorial dimensions are treated in an integrated manner in the context of the sustainable development. The decisions regarding measures for development are made under multiple pressures, and the phenomena that manifest themselves locally have an ever-growing territorial dynamics.
Romania's development is based on a powerful system of major development poles connected to the complemented system of support specialized poles by a good partnership relation between the different levels in view to ensure the socio-economic and territorial cohesion, the sustainable development.
In this context it is necessary to consolidate a coherent network of development centers which is to act as development engines, and also as an equilibrium structure at the regional level in Romania.

2. Conclusion

The Sustainable development strategy represents a strong political pledge on the vision about the future of the community and at the same time a platform for the coordination of integrated actions from the urban agenda assumed by the collectivity. The strategy answers the challenges with which communities are faced on a global scale: financial crisis, competitiveness and globalization, a decrease in population and the demographic aging, migrations, climatic changes and the management of energy resources, to which are added, at an internal level, the process of de-centralization in the education and health systems.
Through the experiences encountered by the cities of Romania during this implementing period, the perspective of a supra-urban level depending on the global agglomeration that had created it was identified, the necessity of development being in this respect approached from a territorial point of view. The modification in the ratio of resources between the dense urban zone and the adjacent rural zones is analyzed according to the common values and objectives they sustain.
To this purpose the concept of poly-centric regional development has been analyzed and developed, the great urban centers having a polarizing role for the adjacent influence zone. The Metropolitan Development Strategies represent the third instrument of strategic public management dealt with within this paper.
This poly-functional territory has been analyzed both from the perspective of defining the administrative limits and from the point of view of the social, economic and environmental development potential. The defining of a metropolitan-type strategy, as well as of some afferent measure plans needs an institutional and financial construction in order to efficiently complete the territorial dimension.
The approach of the Sustainable Development Strategy of Baia Mare city has as its foundation the global and European experience in the domain of strategic territorial planning, within the context of promoting the sustainable development of cities.
In the process of drawing the sustainable development strategy of the cities of

Romania there has been used for the first time in Romania the poster-plan type of cartography, which presents the main strategic choices until 2020.
The development of the management capacity of local public administration institutions requires the use of some modern management instruments that shall lead to an increase of the administrative capacity at local level.
The case studies presented in the paper may represent models of good practice for any city hall in Romania as regards the increase of institutional and administrative capacity at the level of local authorities and civil societies.
For the implementation of politicize related to the integrated polycentric development network, instruments specific to the territorial spatial planning (investment programs, territorial plans, monitoring of territorial development), non-spatial (budget, finances, administrative capacity) and strategic planning (strategies of regional development, coordination mechanisms, politics substantivize, strategic planning) are used.
The promotion of polycentric and balanced territorial development as an essential element for the territorial cohesion realization represents one of the priorities of Europe Strategy 2020. In this context, the formation and consolidation of the development poles as basic elements for the creation of polycentric networks must be supported by integrated politics at local and regional level.
Sustainable development in during 2015-2020, will be the responsibility of the entire human community, from public institutions to the citizens. The existence of a performing county public administration will be crucial for the sustainable development.
The longer term impact on the level of the projects implemented on the development of the sustainable development of Romania will involve activities which generate socio-economic benefits, but with the sustainable conservation of resources to the benefit of future generations.
The successful implementation of the European will depend on the community's ability to form effective working teams which will successfully implement European projects, monitor and evaluate properly the results, which will generate an increase in the quality of life.

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SOME CHARACTERISTICS OF ROMANIA'S EXTERNAL TRADE IN THE PERIOD 1990-2014

Gheorghe Zaman, Florentina - Viorica Gheorghe, Artur - Emilian Simion

Institute of National Economy, Romanian Academy, Bucharest, Romania
Romanian Academy, National Institute of Statistics, Bucharest, Romania
Romanian Academy, National Institute of Statistics, Bucharest, Romania

gheorghezaman@ien.ro
florighe_2006@yahoo.com
artursimion@yahoo.com

Abstract: *This paper investigate the evolution of the Romania's exports and imports in the period 1990-2014, having in mind the relationship between external trade and sustainability of the national economy. The issue of the economic growth is addressed, considering different steps taken by Romania since the year 1990, corroborated with those of the global financial crisis which broke out in 2008. The global financial crisis, which started at the end of the year 2008, had a negative impact on exports and imports of Romania. One of the reason of this negative impact is related to the fact that Romania's economy is heavily dependent on the other EU Member States economic evolution, which is vulnerability. This strong dependence is illustrated by the high scale of the crisis impact on Romania's GDP and on the external trade flows. The relationship between these macro-indicators is very important and it is dependent on the export resilience to the external shocks. Exports and imports increased over the whole period analyzed, so that today we can say that openness of Romanian economy is relatively high, which implies not only opportunities for external trade, but also concerns for increasing resilience of the national economy to the possible external shocks and vulnerabilities. Export resilience of Romania as well as of its county's was analysed in this study. The main conclusion of the paper reveals that the evolution of external trade at global level failed to counteract the negative effects of the economic crisis in Romania and did not contribute to its sustainability and convergence. The GDP decline in 2009 and 2010 has been recovered only partially by 2014 even if exports and imports exceeded the maximum level before the crisis. As regard the territorial level, the export resilience is not favourable for those counties who focused theirs exports on primary products, products based on natural resources and low-technology products. This kind of exports lead to the decrease of the gains from external exchange and implicitly to a low potential of endogenous growth at the county level, mainly due to deteriorating terms of trade.*

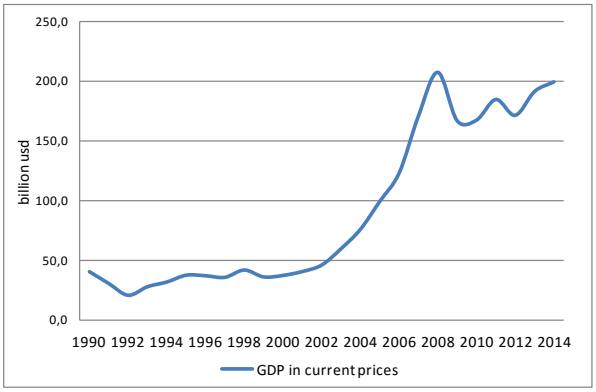
Keywords: *export, import, trade balance, resilience, regional distribution of external trade, concentration and diversification indices*

JEL classification: *D40; F10; F15*

1. Exports, imports and economic growth

A quarter century after the change of the political regime, in 2014 Romania was about to resume the economic growth reached in 2008, with the recovery of a large proportion of the decline in the years 2009-2010.

Figure 1 Evolution of Romania's GDP in the period 1990-2014



Data source: UNCTAD (http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=96, January 2016)

In Romania, the evolution of economy was different throughout the four periods of post-revolutionary history on the way to obtain the status of a Member State of the European Union (1990-1994 - the pre-association period; 1995-1999 - the association period; 2000-2006 - pre-accession period; after 2007 – the post-accession period).
The first two periods were marked by severe economic decline recorded between the years 1990-1993 and 1997-1999. Only since 2001, the GDP began to grow beyond the level of 1990.
In these two periods, the share of Romania's GDP in the EU's GDP was about 0.4%, increasing slightly to 0.6% in the pre-accession period. In the period 2007-2014 the share of Romania's GDP in the EU's GDP was around 1%, as average.

Table 1 GDP, export and import of goods and services of Romania and EU, 1990-2014

		EU pre-asociation period	EU asociation period	EU pre-accesion period	EU post-accesion period
		1990-1995	1996-2000	2001-2006	2007-2014
billion USD, current prices					
Romania (RO)	GDP	189.6	188.6	446.2	1464.8
	Export of goods and services	39.4	51.7	149.9	500.4
	Import of goods and services	49.3	63.9	191.7	593.5
European Union (EU)	GDP	49452.0	46681.9	73729.3	142695.5
	Export of goods and services	12735.0	14401.4	25587.0	57228.6
	Import of goods and services	12491.7	13838.0	24894.9	55160.4
share of RO GDP in EU GDP (%)		0.4	0.4	0.6	1.0
Romania (RO)	share of export of goods and services in GDP (%)	20.8	27.4	33.6	34.2
	share of import of goods and services in GDP (%)	26.0	33.9	43.0	40.5
European Union (EU)	share of export of goods and services in GDP (%)	25.8	30.9	34.7	40.1
	share of import of goods and services in GDP (%)	25.3	29.6	33.8	38.7

Data source: own calculations based on UNCTAD data (http://unctad.org/en/Pages/Statistics.aspx)

The goods and services exports and imports shares in GDP has been increasing over the first three periods analysed - from 20.8% in the pre-association period to 33.6% in the pre-accession period for exports and respectively from 26% to 43% for imports.

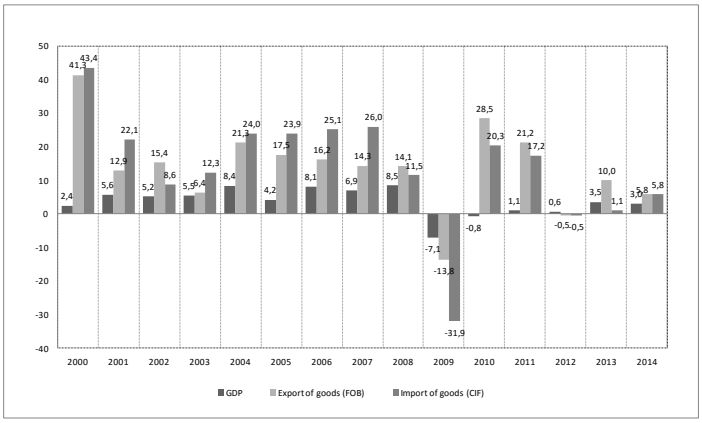
In the post-accession period, the exports share in GDP has continued to grow - to about 34.2% on average in the period 2007-2014 while the share of imports in GDP has declined during this period, with an average of 2.5 pp (from 43% to 40.5%).

The share of export in Romania's GDP is lower than the share of export in EU's GDP (34.2% versus 40.1%, in the post-accession period). On the contrary, the share of imports in the Romania's GDP is higher than in the case of EU (40.5% versus 38.7%, in the post-accession period), as can be seen from Table 1 above.

Generally, the exports of goods and services sustained the development of Romanian economy, being a positive correlation between their trends and the GDP evolution. But although they were an important driver for GDP, exports did not have enough strength to haul the economy, especially in periods in which it was dipped

into recession.

Figure 2 - Evolution of the annual growth rate in the case of the GDP and external trade of goods (%)



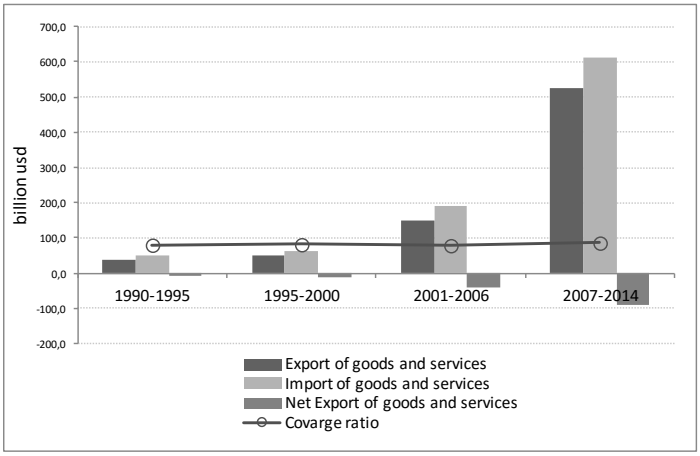
Data source: own calculation based on data of Romanian National Institute of Statistics (www.insse.ro) and National Bank of Romania (www.bnro.ro)

The potential of Romanian exports is limited considering their dependence by the economic evolution of other EU Member States, main trading partners of Romania and, also, their low contribution in GDP in comparison with contribution of domestic consumption.

2. Net export and export/import coverage ratio

Limited impact of exports in GDP is linked to the fact that not only exports in absolute terms are considered in quantifying the contribution to GDP, but the net exports. So, the imports dynamics is also very important.
Usually, higher exports involve also imports increase, which limit the net contribution of external trade to economic growth. This is due to the fact that, unfortunately, the Romanian exports do not include enough value added yet, although the trend is positive from this point of view.

Figure 3 Net export and export/import covarage ratio in Romania, 1990-2014



Data source: own calculation based on data of Romanian National Institute of Statistics (www.insse.ro), National Bank of Romania (www.bnro.ro) and UNCTAD (http://unctad.org/en/Pages/Statistics.aspx)

Exports and imports have increase over the four periods analysed. If in 1990, at the beginning of pre-association period, exports of goods and services were approximately 6.4 billion USD by the end of 2014 they increased by about 12.8 times, exceeding 82 billion USD.

Imports of goods and services have increased by about 8.4 times in 2014 compared to 1990. Although the growth of exports is higher than of imports, the volume of imports is greater than exports in 2014 compared to 1990, the net balance having an ascending trend along the periods analysed.

As a result, the coverage of imports by exports was not favorable to the economy. Although the average coverage of imports by exports exceeded 85% in the post-accession period (2007-2014), indicating a slight improvement in the trade balance compared to previous periods (which was under 80%), the level still indicate that in the case of Romania, the export activity does not compensate for imports. Thus, the export potential of the economy is quite limited and even with an increase in GDP, the trade deficit will not be reduced, Romania remaining largely dependent on imports.

Improving relative coverage especially after EU accession (2007) is seen as a positive factor, some economists taken into account this indicator in the trade efficiency calculation (Albu et al, 2013)

Exports are highly dependent on imports, especially in relation to EU's Member States, as will be seen further on. This seems to be a consequence of the current structure of the Romanian economy, which, as already said before, although is able to record an increase in real terms, not significantly reduce the trade deficit.

Romania's economy is heavily dependent on the Eurozone, which is vulnerability. However, in recent years, it has been observed further increase of the

geographical diversification degree by increasing the exports to non-EU countries. As seen from the data presented in the Table 2, the average share of exports to the EU increased from 48.5% in 1990-1995 to 73.7% in the accession period 2001-2006, followed by a diminishing of the share to 71.4% during 2007-2014 (after Romania's accession to EU). Unlike exports, the share of imports from the EU increased continuously from 46.5% in 1990-1995 to 73.1% in the post-accession period.
So, the high degree of Romania's dependence by the European Union (over 70%) should be considered when it comes to diversifying national exports.

Table 2 Share of Intra-EU and Extra-EU exports/imports in total exports/imports of Romania, 1990 - 2014

share in total export/import (%)		Export		Import	
		Intra-EU28	Extra EU28	Intra-EU28	Extra EU28
EU pre-association period	1990-1995	48.5	51.5	46.5	53.5
EU association period	1996-2000	67.9	32.1	65.8	34.2
EU pre-accession period	2001-2006	73.7	26.3	66.4	33.6
EU post-accession period	2007-2014	71.4	28.6	73.1	26.9

Data source: own calculation based on data of Romanian National Institute of Statistics (www.insse.ro)

Trade balance shows the interface of the national economy of a country with the external environment. In fact, a country exports in order to obtain currency needed for import, which is essential for its economic and social development.
As shown in Table 3, throughout the whole period of transition to a market economy, Romania had a negative trade balance, with an increasing trend in the medium and long term, which highlights the ongoing weakness of the chronicity of the trade deficit.

Table 3 Trade balance sold for Intra-EU and Extra-EU, 1990 – 2014 (Romania)

		Trade balance sold (FOB-CIF)		Average trade balance sold (FOB-CIF)	
		billion USD			
		Intra-EU28	Extra EU28	Intra-EU28	Extra EU28
EU pre-association period	1990-1995	-4.4	-5.7	-0.7	-1.0
EU association period	1996-2000	-7.5	-7.7	-1.5	-1.5
EU pre-accession period	2001-2006	-26.8	-46.0	-4.5	-7.7
EU post-accession period	2007-2014	-104.9	-83.8	-13.1	-10.5

Data source: own calculation based on data of Romanian National Institute of Statistics (www.insse.ro)

Thus, the negative average trade balance of Romania increased approximately 3-times in the post accession period against the pre-accession period. This deterioration is explained by the reduced competitiveness of Romanian exports to the EU market and the impact of financial crisis which diminished the export demand Romania's partner Member States.

3. Openness of Romania against EU and some partner Member States

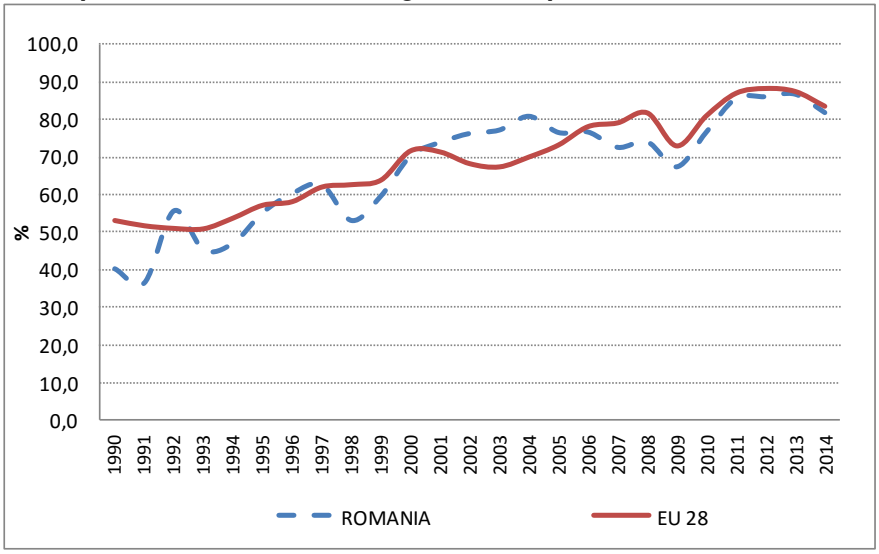
One of the advantages of the EU accession is given by increasing the openness to the world economy, with beneficial effects on foreign direct investment flows, bilateral flows of labor force, labor productivity etc.

If the openness of the economy is high, the country is more integrated into the international community and, therefore, more dependent on external markets. In some industrialized countries, that have a large domestic market, able to absorb much of the production, the openness of the economy is not very high. On the other hand, the openness of the developed countries, with small territorial size, is very high due to a lack of domestic markets in relation to production capacity.

Openness of the Romanian economy - with a steady ascending trend in recent years - has increased significantly, from 40.2% in 1990 to 81.6% in 2014, due to the decrease of tariff protectionism and the intensification of the process of the integration in the world economy.

Considering the annual evolution of this indicator in the period 1990-2014, the maximum level was reached in 2013 (86.5%). In 2014 the degree of openness of the Romanian economy shrank by about 5 percentage points compared to 2013. The same downward trend was recorded at EU level, in 2014 the degree of openness being 83.3%, 4 percentage points below the level recorded in 2013 (87.3%).

Figure 4 Openness of Romania as against European Union, 1990 - 2014



Data source: own calculation based on data of Romanian National Institute of Statistics (www.insse.ro) and UNCTAD (http://unctad.org/en/Pages/Statistics.aspx)

Evolution of the average degree of the economy openness during the 4 historical periods after 1989 show a steady increase, more accentuated in the first three periods, i.e. between 1990 and 2006.
The openness of Romania during the current accession period is over 32 pp higher than the pre-association period (from 46.5% to 78.7%), while the increase as against to the pre-accession period is only 2 pp (from 76.7% to 78.7%).

Table 4 Openness of Romania as against some partner EU Member States, 1990 - 2014

%	EU pre-association period	EU association period	EU pre-accession period	EU post-accession period
	1990-1995	**1996-2000**	**2001-2006**	**2007-2014**
Bulgaria	101.9	111.1	118.8	130.3
Czech Republic	96.6	108.4	126.2	139.7
France	43.1	49.6	52.7	58.2
Germany	48.4	56.4	73.0	90.5
Greece	32.9	40.6	49.6	53.4
Hungary	67.8	119.2	137.6	169.1
Italy	40.5	48.5	51.3	56.3
Poland	44.8	54.9	70.3	88.3
ROMANIA	46.5	61.0	76.7	78.7
EU 28	52.8	63.5	71.2	82.4

Data source: own calculation based on data of Romanian National Institute of Statistics (www.insse.ro) and UNCTAD (http://unctad.org/en/Pages/Statistics.aspx)

As against other EU Member States and main trading partners, the openness of Romania in the current post-accession period (2007-2014) is significantly lower (especially compared with Hungary, Bulgaria, Czech Republic, Germany, and Poland). On the other hand, Romania has, on average, a higher openness compared with France and Italy, the top trading partners in the period 2007-2014.

4. Export's technological structure and performance

Export performance varies significantly from country to country, with different evolutions in dynamics. Technological structure of exports represents an indicator of their quality.

Export success is more and more linked to the ability to attract foreign direct investments. Given the increasing globalization (with occurrence of integrated production systems that link together several countries) and the role of multinational companies in trade and innovation, it is important for countries to provide not just more foreign investment, but also a better quality of thereof.

Most theories of trade assume that technological activity hasn't a role in a country's comparative advantage and that the main determinants are relative endowments of production factors. Developing countries are believed to be followers of technologies, importing and users of innovations from developed countries.

The relatively weak competitiveness of Romanian external trade is determined by the low level of diversification of exports during the pre-accession period and the low volume of high-tech exports and imports. Goods incorporating low and medium technologies have the biggest share in Romanian exports.

There are many ways to break down exported and imported goods by the types of

technologies used for their producing. In what follows, a 1994 OECD classification - based on technological activity within each product category was used.

Table 5 Share of exports by tehnologies, in total Romania's exports of goods

Share of exports of goods by technologies (%)		EU association period	EU pre-accession period	EU post-accession period	Coverage of clasification by tehnologies
		1996-2000	2001-2006	2007-2014	
PP	Primary products	7.8	5.7	8.0	Fresh fruit, meat, rice, cocoa, tea, coffee, wood, coal, crude petroleum, gas
RB	Resource based manufactures	18.7	18.6	18.0	Prepared meats/fruits, beverages, wood products, vegetable oils, ore concentrates, petroleum/rubber products, cement, cut gems, glass
LT	Low technology manufactures	49.1	44.4	23.5	Textile fabrics, clothing, headgear, footwear, leather manufactures, travel goods, pottery, simple metal parts/structures, furniture, jewellery, toys, plastic products
MT	Medium technology manufactures	19.8	24.9	38.3	Passenger vehicles and parts, commercial vehicles, motorcycles and parts, synthetic fibres, chemicals and paints, fertilisers, plastics, iron, pipes/tubes, engines, motors, industrial machinery, pumps, switchgear, ships, watches
HT	High technology manufactures	4.0	5.9	9.9	Office/data processing/telecommunications equip, TVs, transistors, turbines, power generating equipment, pharmaceuticals, aerospace, optical/measuring instruments, cameras

Note: this classification does not cover electricity, cinema film, printed matter, "special" transactions, gold, art, coins, and pets

Data source: own calculations based on UNCTAD (http://unctad.org/en/Pages/Statistics.aspx). Lall's classification available at OECD was used for data aggregation on the types of technologies.

If we look at periods of pre-association, accession and accession to European Union, we find that the share of primary products is declining, from 23.6% in the period 1996-2000 to 18.9% during the period 2007-2014. A similar trend is observed for products based on natural resources and low technology products. Even in the case of medium-tech products, which have the largest share in exports, a descending trend during the period 2007-2014 could be observed as compared to the period 2001-2006.

High share of high-tech products in the exports of a country is the best indication that country has an increased level of competitiveness. As regards Romania's exports of high-tech products, there is an ascending trend from year to year if we consider groups for years 1996-2000, 2001-2006 and 2007-2014.

However, if we consider the annual change in the exports share of high-tech products in Romania, their trend is slightly decreasing since 2011, being explained rather by the impact of temporary factors, but also by reducing expenditures on research, development and innovation (RDI) in recent years. In absolute terms, exports of high-tech products increased by 4.2 pp in 2014 as against to 2013.

As regards imports, the largest share belongs to the medium technology products (46.1%), being followed by low technology products (25.6%), primary products and natural resource-based (each about 19%). The share of high-tech products is increasing at 20.3% on average in the post-accession period as against to 16.5%

in the pre-association period. At the annual level, however, the share of imports of high-tech products is declining (about 17% in 2014, the lowest level in the last 10 years) as well as their dynamics as 99.3% in 2014 against to 2013.

Table 6 Share of imports by tehnologies, in total Romania's imports of goods

Share of imports of goods by technologies (%)		EU association period	EU pre-accession period	EU post-accession period	Coverage of clasification by tehnologies
		1996-2000	2001-2006	2007-2014	
PP	Primary products	23.6	21.3	18.9	Fresh fruit, meat, rice, cocoa, tea, coffee, wood, coal, crude petroleum, gas
RB	Resource based manufactures	19.5	19.0	18.7	Prepared meats/fruits, beverages, wood products, vegetable oils, ore concentrates, petroleum/rubber products, cement, cut gems, glass
LT	Low technology manufactures	29.2	33.2	25.6	Textile fabrics, clothing, headgear, footwear, leather manufactures, travel goods, pottery, simple metal parts/structures, furniture, jewellery, toys, plastic products
MT	Medium technology manufactures	42.6	48.6	46.1	Passenger vehicles and parts, commercial vehicles, motorcycles and parts, synthetic fibres, chemicals and paints, fertilisers, plastics, iron, pipes/tubes, engines, motors, industrial machinery, pumps, switchgear, ships, watches
HT	High technology manufactures	16.5	18.4	20.3	Office/data processing/telecommunications equip, TVs, transistors, turbines, power generating equipment, pharmaceuticals, aerospace, optical/measuring instruments, cameras

Note: this classification does not cover electricity, cinema film, printed matter, "special" transactions, gold, art, coins, and pets

Data source: own calculations based on UNCTAD (http://unctad.org/en/Pages/Statistics.aspx). Lall's classification available at OECD was used for data aggregation on the types of technologies.

In the developed EU Member States and implicitly at Community level, the share of high-tech exports is higher than in Romania. In 2014, the largest shares are registered by Ireland, France, the Netherlands and the UK. Basically, the gap between Romania and the developed countries is due to the lack of interest from the Romanian private sector side to finance RDI expenditures whereas up to 90% of the high-tech sector is controlled by the foreign companies (branches and subsidiaries of multinational corporations) who supplied the necessary RDI results, in Romania research centers of such companies being non-existent or very rare.

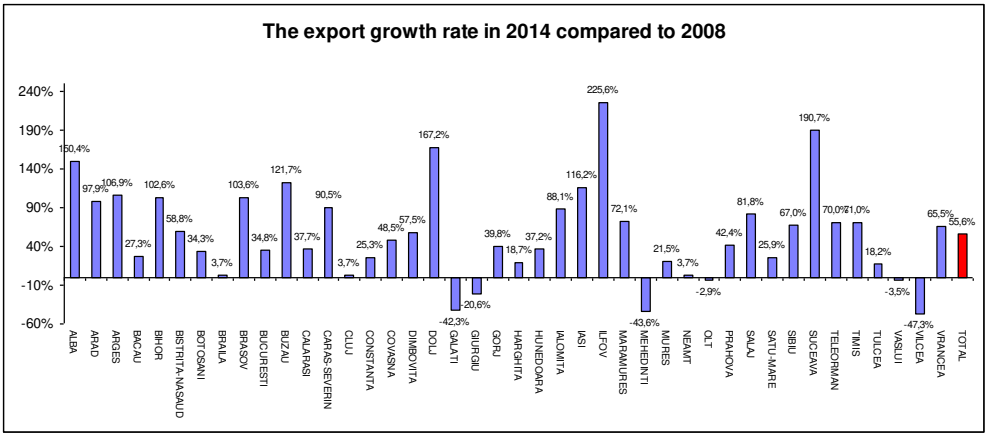
5. The evolution of external trade at county level

5.1 The export growth rate in the period 2009-2014 compared to 2008

The export growth rate in the period 2009-2014 compared to 2008, at the county level, had different values from one county to another. Thus, the counties of Arges, Buzau, Calarasi, Gorj, Ilfov, Suceava and Tulcea have shown a strong resilience on export, export growth continued in the period after the crisis. An atypical county

is Cluj, which after the crisis recorded high growth rate on exports (+ 121.7% in 2011 compared to 2008), in 2012 registering a high decrease of export (- 16.7% compared to 2008), mainly because of cessation activity of a major producer and exporter of mobile phones. Another atypical county is Giurgiu, which after the crisis recorded positive rates of exports (+33.2% in 2011 compared to 2008), in 2013 registering a high decrease on exports (inconstant resilience).

Figure 5 - The export growth rate in 2014 compared to 2008



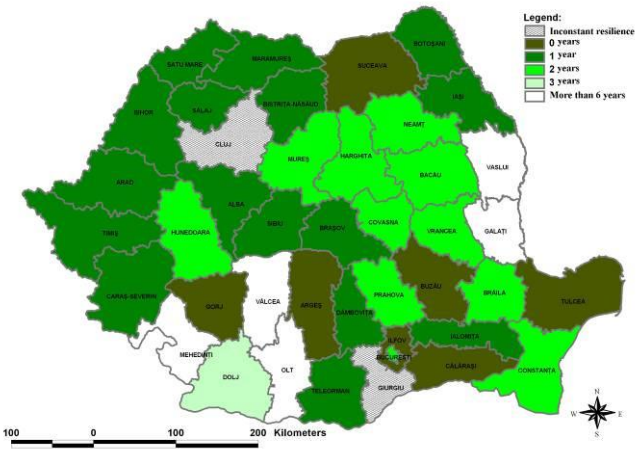
Counties such as Alba, Arad, Bihor, Bistrita-Nasaud, Botosani, Brasov, Caras-Severin, Dambovita, Ialomita, Iasi, Maramures, Salaj, Satu-Mare, Sibiu, Teleorman and Timis had a relatively good resilience export; thus in 2010 the export exceeded the 2008 level for these counties. Instead, for the counties Bacau, Braila, Bucharest, Constanta, Covasna, Harghita, Hunedoara, Mures, Neamt, Prahova and Vrancea the export exceeded the 2008 level only in 2011. The Dolj county returned to pre-crisis export value only in 2012, with the launch exports of a large car manufacturer.

Table 7 – Export resilience (Recovery time in years)

Recovery time	0 years	One year	Two years	Three years	More than six years	Inconstant resilience
No. of counties	7	16	11	1	5	2
Weights in 2008	12.3	34.0	37.8	1.3	10.7	3.2
Weights in 2014	17.3	39.7	32.0	2.2	5.0	2.1
Counties	Argeş, Buzău, Călăraşi, Gorj, Ilfov, Suceava and Tulcea	Alba, Arad, Bihor, Bistriţa-Năsăud, Botoşani, Braşov, Caraş-Severin, Dâmboviţa, Ialomiţa, Iaşi, Maramureş, Sălaj, Satu-Mare, Sibiu, Teleorman and Timiş	Bacău, Brăila, Bucureşti, Constanţa, Covasna, Harghita, Hunedoara, Mureş, Neamţ, Prahova and Vrancea	Dolj	Galaţi, Mehedinţi, Olt, Vaslui and Vâlcea	Cluj and Giurgiu

There are still 5 counties which did not return to the values of pre-crisis exports: Galati (2014 compared to 2008 -42.3%), Mehedinti (2014 compared to 2008 -43.6%), Olt (2014 compared to 2008 -2.9%), Vaslui (-3.5% in 2014 compared to 2008) and Valcea (-47.3% in 2014 compared to 2008).

Figure 6 – The export resilience at the county level



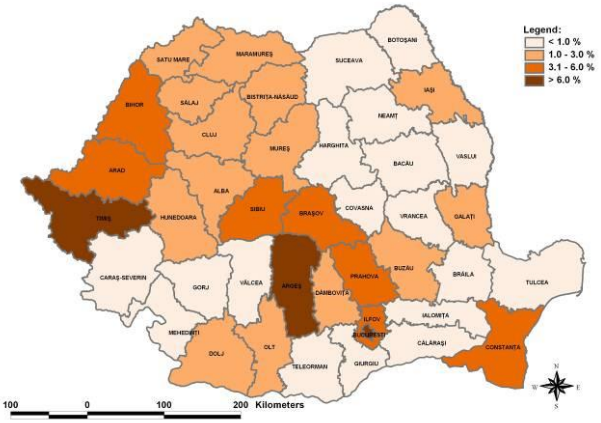
The share of export for top 10 counties in total exports increased in 2014 compared to 2008 from 64.6% in 2008 to 66.2% in 2014. The highest increases in weights (in percentage points pp) had recorded the following counties: Arges +2.4 pp (climbed from position 3 to position 2 in the top) and Ilfov +2.1 pp (climbed from position 14 to position 8 in the top). The biggest rise in the top recorded county Suceava, which has climbed 11 places from position 37 to position 26 in the top. The biggest drop in top was recorded for county Valcea, which lost 14 places, from position 17 in 2008 to position 31 in 2014 (-1.2 pp). The largest decreases of the weights (in percentage points pp) were recorded by the following counties: Galati -2.6 pp (form position 6 in 2008 to position 17 in 2014) and Bucharest that, though it kept its leading position on export, registered a large decrease of the weight in total export (-2.5 pp).

Table 8 - Top 10 counties on export in 2008 and 2014

2008			2014		
No.	**County**	**Weight**	**No.**	**County**	**Weight**
1	Bucureşti	18.9	**1**	Bucureşti	16.4
2	Timiş	8.4	**2**	Argeş	9.7
3	Argeş	7.3	**3**	Timiş	9.2
4	Constanţa	6.2	**4**	Arad	5.5
5	Arad	4.3	**5**	Constanţa	5.0
6	Galaţi	4.1	**6**	Braşov	4.7
7	Prahova	4.1	**7**	Sibiu	4.1
8	Sibiu	3.9	**8**	Ilfov	4.1
9	Olt	3.8	**9**	Prahova	3.7
10	Braşov	3.6	**10**	Bihor	3.7

Counties like Galati and Olt came out of top 10 in 2014 compared to 2008, giving way to the top 10, in 2014, to Ilfov and Bihor counties.

Figure 7 – The export weights of the counties in 2014



The share of top 10 exporting companies at county level in 2014 exceeded, in most cases, 50% of total exports at the county level, which indicates a strong dependency of exports at the county level by a few big exporting companies.

Table 9 – The weight of top 10 exporting companies at county level in 2014

	The weight of top 10 exporting companies at county level between:						
	30 – 40 %	**40 – 50 %**	**50 – 60 %**	**60 – 70 %**	**70 – 80 %**	**80 – 90 %**	**> 90 %**
No. of counties	1	2	8	3	12	12	4
Counties	Cluj	Harghita Bucureşti	Satu-Mare Timiş Braşov Sibiu Arad Mureş Bihor Băcău	Maramureş Vrancea Ilfov	Vâlcea Suceava Botoşani Brăila Alba Covasna Prahova Iaşi Bistriţa-Năsăud Hunedoara Neamţ Buzău	Dolj Argeş Ialomiţa Constanţa Tulcea Caraş-Severin Călăraşi Sălaj Giurgiu Dâmboviţa Gorj Vaslui	Olt Mehedinţi Teleorman Galaţi

The main export partners

While in 2008 the main export destination was Italy for 21 counties, in 2014 only 15 counties still had Italy on a first position on export. Instead, Germany exceeded Italy in 2014 compared to 2008 and has become the main destination for 16 counties on exports in 2014, compared to only 12 counties in 2008. This shows an increase of exports dependence, on county level, of demand in the German market. Other partner countries on a first position on county export in 2014 are: Bulgaria (2 counties), United Kingdom (one county), South Korea (one county), Norway (2 counties), Poland (one county), Russia (one county), Turkey (2 counties) and US (one county).

Table 10 – The weights of a top 10 partner countries on export in 2014, at the county level

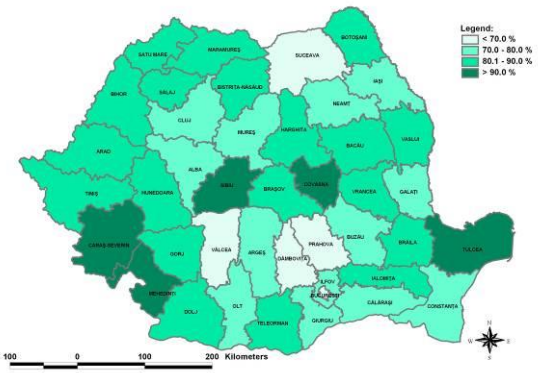
	The weights of a top 10 partner countries on export in 2014, at the county level, between:			
	60 – 70 %	**70 – 80 %**	**80 – 90 %**	**> 90 %**
Number of counties	5	13	19	5
Counties	Dâmboviţa, Prahova, Suceava, Vâlcea, Bucureşti	Alba, Argeş, Buzău, Cluj, Constanţa, Galaţi, Iaşi, Ilfov, Mureş, Neamţ, Olt, Călăraşi, Giurgiu	Arad, Bacău, Bihor, Bistriţa-Năsăud, Botoşani, Braşov, Brăila, Dolj, Gorj, Harghita, Hunedoara, Ialomiţa, Maramureş, Satu-Mare, Sălaj, Teleorman, Timiş, Vaslui, Vrancea	Caraş-Severin, Covasna, Mehedinţi, Sibiu, Tulcea

In 2014 Italy was in the top 10 export destination for 41 counties, Germany for 39 counties and UK for 32 counties.

Table 11 – Partner countries in top 10 export destination of counties

Number of counties	**Over 20 counties**	**Between 10 and 20 counties**	**Under 10 counties**
Partner countries in top 10	IT, DE, FR, GB, HU şi TR	BG, NL, ES, PL, AT, BE şi CZ	US, CN, SE, SK, UA, MD, EG, GR, RU, JO, XS, AE, CH, IL, LY, NO, SM, BR, JP, LB, MX, CA, DZ, EC, FI, GE, IN, KR, KZ, MA, MK, PT, SA, SI, SY, UG şi ZA

Figure 8 – Weights of top 10 partner countries on counties exports in 2014



5.2 Exports per capita

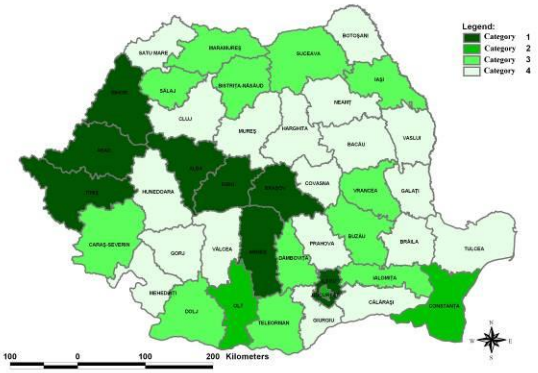
Depending on the export per capita in 2014 and export dynamics in 2014 compared to 2008, counties are divided into 4 categories:

- **Category 1**: counties with export per capita higher than the national average and export dynamics in 2014 compared to 2008 higher than the national growth rate
- **Category 2**: counties with export per capita higher than the national average and export dynamics in 2014 compared to 2008 less than the

national growth rate

- **Category 3**: counties with export per capita less than the national average and export dynamics in 2014 compared to 2008 higher than the national growth rate
- **Category 4**: counties with export per capita less than the national average and export dynamics in 2014 compared to 2008 less than the national growth rate

Figure 9 – Counties by categories, previous defined

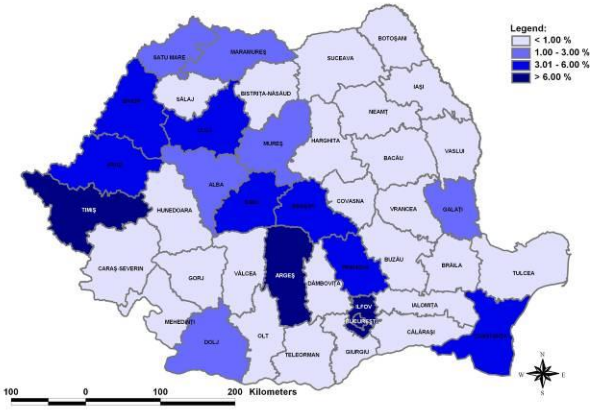


Based on these criteria resulted in the following:
- in the first category there are 8 counties, with a total export share increasing from 33.7% in 2008 to 43.5% in 2014; dynamics of export per capita in 2014 compared to 2008 are: Alba +177.9%, Arad +111.5%, Arges +120.8%, Bihor +109.8%, Brasov +120.5%, Ilfov +132.2%, Sibiu + 76.6% and Timis + 66.1%.
- in the second category there are 3 counties, with a total export share dropping from 28.9% in 2008 to 23.8% in 2014; dynamics of export per capita in 2014 compared to 2008 are Bucharest +40.5%, Constanta +31.8% and Olt +8.5%.
- in the third category there are 12 counties, with a share of total exports slightly up from 10.0% in 2008 to 12.7% in 2014; dynamics of export per capita in 2014 compared to 2008 are: Bistrita-Năsăud +77.3%, Buzau + 144.5%, Caras-Severin +115.0%, Dambovita +63.2%, Dolj +191.8%, Ialomita +102.3%, Iasi +126.7%, Maramures +86.7%, Salaj +100.2%, Suceava +225.6%, Teleorman +90.0% and Vrancea +93.5%.
- In the fourth category there are 19 counties, with a share of total exports drastically decreasing from 26.6% in 2008 to 18.4% in 2014; however dynamics of export per capita in 2014 compared to 2008 are increasing in counties such as Bacau +51.0%, Botosani +51.3%, Braila +20.9%, Calarasi +43.5%, Cluj +2.7%, Covasna +58.9%, Gorj +58.7%, Harghita +24.5%, Hunedoara +58.1%, Mures +29.0%, Neamt +27.3%, Prahova +55.1%, Satu-Mare +35.1%, Tulcea +41.8% and Vaslui +12.9%. The rest of the counties recorded large decreases in 2014 compared to 2008: Valcea (-40.9%), Galati (-33.0%), Giurgiu (-19.4%) and Mehedinti (-35.4%).

5.3 Import and trade balance

Although exports had a high resilience to the crisis, it had a limited impact on GDP because, in the quantification of contribution to GDP, the net exports are taking into account (difference between exports and imports), but also because they involve usually an increase in imports (reflected in the import content of exports), which limit the contribution of international trade to economic growth.
The share of the top 10 counties in total Romanian imports slightly decrease in 2014 compared to 2008 from 75.7% in 2008 to 74.7% in 2014. The biggest drop of the share (in percentage points pp) was recorded in Bucharest (-9.8 pp). However it kept the leading position among the top counties on import with over 28% of total imports of Romania in 2014. Significant increases of share, in 2014 compared to 2008, recorded the following counties:
- Arges +2.6 pp (dynamic 2014/2008 +73.3%) climbed three positions in the top, from position 7 to position 4;
- Arad +1.6 pp (dynamic 2014/2008 +68.3%) climbed three positions in the top, from position 10 to position 7;
- Timis +1.6 pp (dynamic 2014/2008 +31.9%) climbed one position in the top, from position 4 to position 3;
- Brasov +1.2 pp (dynamic 2014/2008 +44.1%) climbed one position in the top, from position 9 to position 8.

Figure 10 - Shares of counties on Romanian import in 2014



Besides Bucharest, significant decreases in the shares of the total import in 2014 compared to 2008 recorded the following counties:
- Galati with -1.4 pp (dynamic 2014/2008 was -47.3%) fell six positions in the top, from position 8 to position 14;
- Cluj with -0.6 pp (dynamic 2014/2008 was -12.8%) fell four positions in the top, from position 6 to position 10.

Table 12 - Top 10 counties in total imports of Romania in 2008 and 2014

2008			2014		
No.	**County**	**Weight**	**No.**	**County**	**Weight**
1	Bucureşti	37.9	**1**	Bucureşti	28.1
2	Ilfov	6.4	**2**	Ilfov	7.2
3	Constanţa	5.6	**3**	Timiş	7.1
4	Timiş	5.5	**4**	Argeş	6.3
5	Prahova	4.4	**5**	Constanţa	5.9
6	Cluj	3.9	**6**	Prahova	5.2
7	Argeş	3.7	**7**	Arad	4.2
8	Galaţi	2.9	**8**	Braşov	4.0
9	Braşov	2.9	**9**	Bihor	3.4
10	Arad	2.5	**10**	Cluj	3.3

In the 2008-2014 period there was a huge drop in the external trade deficit of Romania (dynamic 2014 / 2008 was -74.2%), from -23.5 billion Euro in 2008 to -6.1 billion Euro in 2014.

At county level, the largest contribution to reducing the Romanian external trade deficit had Bucharest (42.8% of reduction), with a decrease in the external trade deficit from -15.3 billion Euro in 2008 to -7.8 billion 2014 (dynamic 2014/2008 was -48.8%). Another important decrease in the external trade deficit had county Ilfov, from -3.0 billion in 2008 to -2.1 billion in 2014 (dynamic 2014/2008 was -30.2%).

Some counties had positive external trade balance in 2008 and this increased in 2014, as follows: Arges county from +0.35 billion Euro in 2008 to +1,43 billion Euro in 2014 (dynamic 2014/2008 was +313.5%) and Alba county from 0.12 billion Euro in 2008 to +0.53 Euro in 2014 (dynamic 2014/2008 was +336.3%).

From classification of counties based on the trade balance in 2014 resulted 29 net exporting counties (with a positive external trade balance of +6.48 billion Euro in 2014 compared to only +0.22 billion in 2008) and 13 net importing counties (with a trade deficit of -13.19 billion Euro in 2014 compared to -23.50 billion Euro in 2008).

Table 13 - Classification of counties based on external trade balance in 2014

No.	**Net exporter (export>import)**	**External trade balance**	**No.**	**Net importer (import>export)**	**External trade balance**
1	Argeş	1430.1	**1**	Satu-Mare	-20.3
2	Timiş	681.4	**2**	Suceava	-25.3
3	Olt	638.4	**3**	Harghita	-33.0
4	Alba	534.1	**4**	Bihor	-39.2
5	Arad	409.0	**5**	Bacău	-47.1
6	Sibiu	348.7	**6**	Giurgiu	-68.0
7	Maramureş	317.1	**7**	Galaţi	-75.6
8	Sălaj	239.1	**8**	Mureş	-128.3
9	Dolj	189.9	**9**	Constanţa	-814.4
10	Buzău	163.2	**10**	Cluj	-901.3
11	Hunedoara	144.9	**11**	Prahova	-1096.5
12	Bistriţa-Năsăud	133.0	**12**	Ilfov	-2105.3
13	Braşov	124.1	**13**	Bucureşti	-7830.9
14	Călăraşi	119.3			
15	Brăila	118.4			
16	Dâmboviţa	113.8			

No.	Net exporter (export>import)	External trade balance	No.	Net importer (import>export)	External trade balance
17	Iaşi	110.4			
18	Neamţ	97.6			
19	Teleorman	93.8			
20	Vâlcea	88.5			
21	Tulcea	73.7			
22	Caraş-Severin	72.1			
23	Ialomiţa	64.2			
24	Covasna	50.4			
25	Botoşani	46.5			
26	Vaslui	31.0			
27	Vrancea	24.0			
28	Mehedinţi	21.3			
29	Gorj	2.3			

6. Conclusions şi final remarks

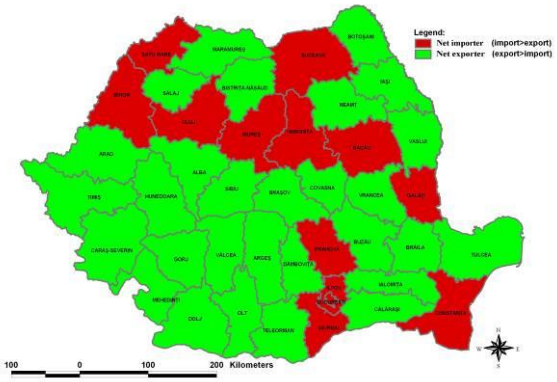
Analysis of Romania's external trade during the period 1990-2014 leads to the following conclusions:

- Exports and imports increased over the four periods analysed, so that we can say that openness of Romanian economy is relatively high, which implies not only opportunities for external trade, but also concerns for increasing resilience of the national economy to the possible external shocks and vulnerabilities;
- If in 1990, at the beginning of pre-association period, exports of goods and services amounted approximately 6.4 billion USD, by the end of 2014 they increased by 12.8 times, exceeding 82 billion USD.
- Imports of goods and services have increased by about 8.4 times in 2014 compared to 1990.
- Although the growth of exports is higher than of imports, the volume of imports is greater than exports in 2014 compared to 1990, the net balance having an ascending trend along the periods analysed.
- The average negative trade balance of Romania increased by around 12-times in the current post accession period as against the period 1990-1995. As against the period 2001-2006, the average negative trade balance increased by around 3-times, due to the negative impact of the international financial crisis and the difficulties inherent in adapting to the strictness and competition on the Single Market of EU.
- Romania fails to compensate imports by exports, a situation reflected in trade deficit. The level of imports - exports coverage rate indicates the maintaining of a higher level of imports for a given volume of exports, a situation caused by the high dependence of the economy imports.
- Persistent trade deficit can affect economic growth and stability. It involves enhancing the efficiency of policies for promoting foreign investments and increasing the credibility of the entire set of the economic policies.
- Structure of Romanian exports is dominated by products with low and medium technological level that have relatively low added value incorporated. Investments in productive assets, infrastructure and know-how are a

prerequisite and foundation for economic growth and sustainable development in all countries. They will results in growing hich-tech exports, with more vakue-added incorporated.

- Romania's economy is heavily dependent on the Eurozone, which is vulnerability, but in recent years it has been observed further increase the degree of geographical diversification, exports to non-EU countries is increasing.
- although Romania's total exports has shown a quit good resilience, there are still counties who have not exceeded exports from 2008 nor in 2014. The share of the top 10 exporting companies and top 10 countries of destination for counties export over 50% in 2014, for almost all counties, reveals a strong dependence of counties exports by a few big exporting companies (in majority with foreign capital) and several destination countries (mostly from European Union). However, the increase in external demand for products of a county, according to the basic Keynesian theory, contributes to its economic growth.
- the positive external trade balance at the county level may have a positive impact on the economic development of the county if the exports refer to high technology products. If this positive trade balance is based on exports of raw materials and semi-products, under conditions of low imports, it will have a negative impact on sustainable economic growth of the county in question (immisering exports). The most counties that have kept the positive external trade balance in the 2008 – 2014 period are in this situation.

Figure 11 – External trade balance at county level in 2014



- The counties with negative external trade balance must act to reduce the external trade deficit in the medium and long term. However, a negative trade balance deficit may have a positive impact on sustainable economic development if it is based on the high-tech products imports, local assimilated through technology transfer.

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REGIONAL PATTERNS OF ROMANIAN FOREIGN TRADE IN THE AFTERMATH OF THE ECONOMIC CRISIS

Gheorghe Zaman, Zizi Goschin

Professor dr., Corresponding Member of the Romanian Academy, Director of the Institute of National Economy, Bucharest, Romania.
Professor dr., Bucharest University of economic Studies; Senior Scientific Researcher, Institute of National Economy, Bucharest, Romania.
gheorghezaman@ien.ro
zizi.goschin@csie.ase.ro

Abstract: *The regional degree of competitiveness, specialization and performance are closely linked to regional demand for imports, as well as to regional supply for exports. Given the importance of export and import as influence factors for regional economic development, this paper aims to outline a comprehensive picture of Romanian foreign trade at county level. We analyze the level and dynamics of relevant indicators of regional foreign trade in Romania, aiming to highlight the main spatial patterns, as well as to identify recent trends, with a focus on the impact of the global economic crisis. The recent economic crisis has shown the vulnerabilities entailed by the external opening of the national economy, although the Romanian counties have been more successful in mitigating the negative impact of the economic crisis on the foreign trade than in the case of GDP. The empirical analysis revealed strong differences in counties' exports over the period 2008 to 2014, with a few developed counties, already situated well above the average national export per inhabitant, continuing to strengthen their combined shares in overall exports. These resilient counties emerged stronger from the recent economic crisis, proving the ability to adapt to the changing post-crisis international environment.*

Key words: export, import, economic crisis, economic resilience, county, Romania.

JEL classification: R10; R12; R58

1.Introduction

Export is an essential factor for regional economic development, both in the framework of Solow's classical model of economic growth and in the context of endogenous growth model (Frankel et al, 1997; Baldwin and Forslid, 2000).

The recent global financial crisis had a negative impact on Romania's foreign trade, which suffered of lower demand for imports in relation to all our trade partners, the regional scale of this impact depending on the magnitude, sustainability and importance of trade links between the economy of each region or county and the European economy. As our exports are mainly "poorly specialized or dominated by products at a relatively low level of processing" (Zaman and Vasile, 2012, p.22), the foreign trade, both nationally and regionally, is not competitive enough on the EU market.

The recent economic crisis has shown the vulnerabilities entailed by the external opening of the national economy, and the need to have the protection of an

appropriate level of national economic resilience, sufficient to provide resistance to strong external shocks. The crisis manifested an uneven spatial distribution in Romania, its regional effects depending on the specific economic and social structures, the degree of regional specialization and other local factors, such as previous unsolved regional problems (Goschin and Constantin, 2010; Ailenei et al, 2012).

Romanian counties have been more successful in mitigating the negative impact of the economic crisis on the foreign trade than in the case of GDP. According to 2014 official statistical data many counties failed to recover entirely the crisis-driven GDP decline (Zaman and Goschin, 2015; Zaman and Georgescu, 2015), while only a few were below the pre-crisis levels of exports.

Studies such as Reinhart and Rogoff (2009) advanced the idea that the timespan for recovering the GDP loss entailed by the crisis is at least four years, while other research (e.g. Papell and Prodan, 2011) suggested that emerging countries might achieve this goal more rapidly, even if they experienced higher economic decline. Duration of the recovery depends on the severity of downfall, the regional development level, the degree of economic resilience to shocks, and other region-specific factors. Among these factors, the more diversified is the regional economy and the more various are its exports, the higher is the capacity to resist to and recover after crises. Resilience tend to be stronger for "export-orientated economies, with the presence of international companies and an innovative and higher skilled workforce" (ESPON, 2014, p.12).

The regional degree of competitiveness, specialization and performance are closely linked to regional demand for imports, as well as to regional supply for exports. In the context of sustainable development, both import and export exert major impact on regional growth, but might also be a source of higher economic and social inequalities.

Several studies in Romania also addressed the regional aspects of economic recovery from the crisis, focusing mainly on GDP, as well as on labour market. We approach a different line of research, aiming to asses the recent trends in regional exports and imports, in the aftermath of the global economic crisis that affected international trade in particular.

The Romanian regions and counties share similar characteristics, arising from a common economic vision and strategic goals, but also distinct features generated by their specific endowment with economic factors that supports their own endogenous development. Drawing on such common and specific determinants of regions' development, we address various aspects of export and import evolution in Romania in the context of widespread turmoil caused by the recent international economic and financial crisis, using various statistical tools.

2. Regional variation of exports and imports

Romania's exports showed good resilience at country level: compared to 2008, the overall exports increased by 10.8% at the peak of the crisis (in 2010) and by 55.6% in 2014. However, the picture of export dynamics is very diverse at the county level, resilience to crisis varying sharply from one county to another. In counties such as Arges, Buzau, Calarasi, Gorj, Ilfov, Suceava and Tulcea exports have not been hindered at all, as export growth continued steadily during the crisis.

In 2010, the second year of the crisis in Romania, most counties have already returned to export growth (Alba, Arad, Bihor, Bistrita-Nasaud, Botosani, Brasov,

Caras-Severin, Dimbovita, Ialomita, Iasi, Maramures, Salaj, Satu-Mare, Sibiu, Teleorman and Timis), while others achieved their pre-crisis export levels in 2011 (Bacau, Braila, Bucuresti, Constanta, Covasna, Harghita, Hunedoara, Mures, Neamt, Prahova and Vrancea) and Dolj county recovered in 2012, based on exports launch of a major car manufacturer.

Some counties had atypical and even surprising evolution of exports. For instance, Cluj county recorded very large increases in exports in the aftermath of the crisis (+ 121.7% in 2011 compared to 2008) followed by a sharp decline (- 16.7% in 2012 compared to 2008), driven mainly by closing down of a large producer and exporter of mobile phones. Likewise, Giurgiu county achieved high increases in exports in the post-crisis period (+ 33.2% in 2011 compared to 2008), but in 2013 recorded a sharp drop in export suggesting extreme resilience volatility.

Finally, three counties have yet to recover about 40% of the 2008 level of exports (Galati, Mehedinti, Valcea), while Olt and Vaslui are just a few percent away from their pre-crisis export levels.

In order to capture better this territorial variability, we employed the relative standard deviation (or coefficient of variation) to gauge the spatial dispersion of foreign trade components in Romania (Table 1). This indicator is computed as the standard deviation relative to the mean and is usually expressed as percentage.

Table 1: Inter-county coefficient of variation for export and import (%)

	EXPORT	**IMPORT**
2001	180.15	249.90
2002	151.76	228.94
2003	144.52	229.11
2004	148.93	234.98
2005	137.28	233.71
2006	137.73	238.58
2007	123.70	233.00
2008	135.87	244.65
2009	137.34	219.43
2010	127.59	198.98
2011	131.37	199.30
2012	135.14	203.36
2013	134.91	197.98
2014	132.38	189.14

Source: calculated by the authors using data issued by the National Institute of Statistics

The results illustrated in Table 1 clearly indicate that inter-county variability of export is high, and even higher in the case of import. Romanian counties seem to differ considerably in their import needs, as well as in their export potential. Nevertheless, there is a long-term downward trend in the regional coefficient of variation, both for export and import, and this trend continued throughout and after the peak of the crisis. The average coefficient of variation for export decreased

from 144.99% over 2001-2008 to 133.12 over 2009-2014, while for the import the figures were 236.61 and 201.37, respectively.

3. County rankings for exports and imports

The share of the top 10 counties in Romania's total exports increased from 64.6% in 2008 to 66.2% in 2014. The most significant increases were achieved by Arges county (+2.4 percentage points- pp) and Ilfov county (+2.1 pp). Suceava County succeeded the largest ascent in this hierarchy by climbing from position 37 to 26. The biggest drop was undergone by Valcea County, which has lost 14 places (from position 17 to 31). The largest percentage drops in export shares were recorded for Galati County (-2.6 pp) and Bucharest municipality, which, while maintaining its leading position, lost -2.5 pp. The share of the top 10 exporting companies at the county level in 2014 exceeds, in most cases, 50% of total exports, which reveals a strong dependence of exports on a few big exporting companies.

The share of the top 10 counties in Romania's total exports declined slightly from 75.7% in 2008 to 74.7% in 2014. The most significant decrease in the share of total country exports was suffered by Bucharest municipality: -9.8 percentage points (pp). However Bucharest maintained its position as import leader with over 28% of total Romanian imports in 2014. Most significant increases in their weights in total import in 2014 compared to 2008 were recorded by Arges County with 2.6 pp (+ 73.3% growth), Arad County with +1.6 pp (+ 68.3% growth) and Timis County with +1.6 pp (+ 31.9% growth).

Table 2. The top 10 county shares in total Romanian exports (%)

2008			2014		
Rank	**County**	**Share in exports**	**Rank**	**County**	**Share in exports**
1	Bucharest	18.9	**1**	Bucharest	16.4
2	Timis	8.4	**2**	Arges	9.7
3	Arges	7.3	**3**	Timis	9.2
4	Constanta	6.2	**4**	Arad	5.5
5	Arad	4.3	**5**	Constanta	5.0
6	Galati	4.1	**6**	Brasov	4.7
7	Prahova	4.1	**7**	Sibiu	4.1
8	Sibiu	3.9	**8**	Ilfov	4.1
9	Olt	3.8	**9**	Prahova	3.7
10	Brasov	3.6	**10**	Bihor	3.7

2008			2014		
Rank	**County**	**Share in imports**	**Rank**	**County**	**Share in imports**
1	Bucharest	37,9	**1**	Bucharest	28,1
2	Ilfov	6,4	**2**	Ilfov	7,2

3	Constanta	5,6	**3**	Timis	7,1
4	Timis	5,5	**4**	Arges	6,3
5	Prahova	4,4	**5**	Constanta	5,9
6	Cluj	3,9	**6**	Prahova	5,2
7	Arges	3,7	**7**	Arad	4,2
8	Galati	2,9	**8**	Brasov	4,0
9	Brasov	2,9	**9**	Bihor	3,4
10	Arad	2,5	**10**	Cluj	3,3

Source: calculated by the authors using data issued by the National Institute of Statistics

Biggest declines in total import shares were recorded by Galati County with -1.4 pp (-47.3% in 2014 compared to 2008) and Cluj County (0.6 pp).

4. Spatial concentration of exports and imports

In view of a deeper understanding of foreign trade variability and concentration among counties, we are further going to compute some traditional indicators of concentration.

Herfindahl-Hirschman Index (Hirschman, 1964) is an absolute measure of concentration defined as the sum of squared regional shares:

$$H_j = \sum_{i=1}^{n} (g_{ij}^C)^2 , \qquad (1)$$

$$g_{ij}^C = \frac{X_{ij}}{\sum_{i=1}^{n} X_{ij}} = \frac{X_{ij}}{X_j} \qquad (2)$$

where: ***i*** – region; ***j*** – year; X_{ij} –magnitude of export or import in year *j* and region *i*; n – number of regions.

Herfindahl index might reache a maximum of 1 reflecting concentration of variable X in a single region.

The Gini coefficient - GC (Gini, 1939) is a statistical indicator measuring the degree of concentration according to the following formula:

$$GC_j = \frac{\sum_{i=1}^{n} (2i - n - 1) \cdot X_{ij}}{n \sum_{i=1}^{n} X_{ij}} \qquad (3)$$

where X_{ij} represents the export or import value in year *j* and region *i* and n is the number of regions.
Gini coefficient ranges between 0 and 1, increasing with the degree of inequality.
The Concentration Coefficient CC is an adjusted version of Gini coefficient GC (depending on the number of regions n) and is calculated as:

$$CC_j = \frac{n}{n-1} GC_j , \quad (4)$$

The results of these computations, presented in Table 3, illustrate a significantly bigger degree of concentration for imports than for exports. Both components of foreign trade display high spatial concentration, the dominant position of Bucharest municipality playing a decisive role in this outcame.

Table 3. Export and import concentration among counties

Export	**2008**	**2014**
Herfindahl Index	0.067762	0.065533
Gini Coefficient	0.551906	0.570169
Concentration Coefficient	0.565367	0.584076
Import	**2008**	**2014**
Herfindahl Index	0.166313	0.108987
Gini Coefficient	0.682069	0.653057
Concentration Coefficient	0.698705	0.668986

Source: calculated by the authors using data issued by the National Institute of Statistics

The concentration level of imports tends to decline significantly, from 0.1663 in 2014 to 0.1089 in 2008 for Herfindahl Index and and a less important drop in Gini Coefficient, suggesting a more balanced territorial distribution. The evolution of exports went on a quite opposite trend, thus reducing the initial difference in the concentration patterns of export and import. Still, the increase of Gini and concentration coefficients for export over 2008-2014 is relatively small and the differences in concentration patterns of exports and imports by county remains significant.

5. Spatial variations in export per capita

Given the sizeable differences in counties' population and endowment with production factors, comparisons based on absolute values of export and import indicators have limited significance. As analyses using per capita indicators are more meaningful for regional studies, we further calculated the values of export per inhabitant at county level.
Figure 1 reveals strong differences in counties' exports per capita in 2008 and 2014. A few developed counties (Alba, Arad, Arges, Bihor, Brasov, Ilfov, Sibiu and Timis), already situated well above the average national export per inhabitant, continued to strengthen their combined shares in overall exports (from 33.7% in 2008 to 43.5% in 2014). These resilient counties emerged stronger from the recent economic crisis, proving the ability to adapt to the changing post-crisis international

environment. Among them, Alba county was the most dynamic, achieving an impressive +177.9% increase in export per inhabitant, followed by Ilfov county (+132.2%).

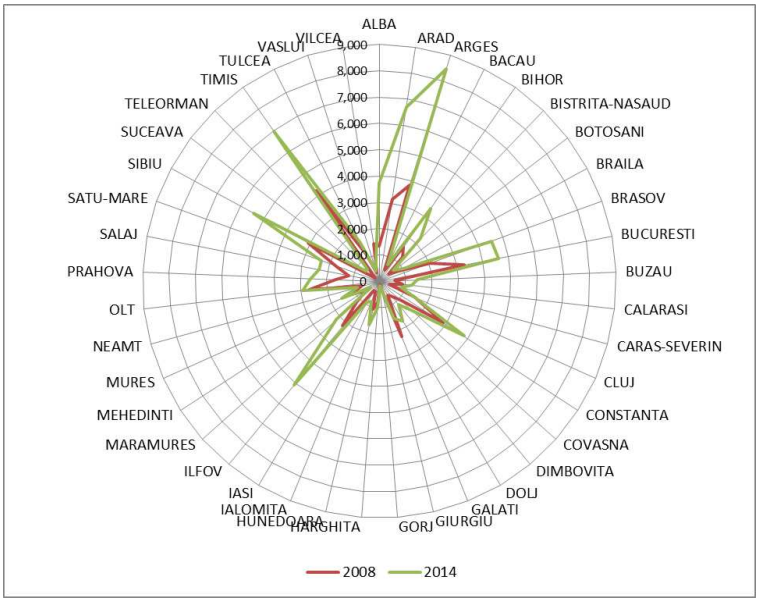


Figure 1. Export per capita (Euro per inhabitant) by county, 2008 against 2014
Source: processed by the authors using data issued by the National Institute of Statistics

6. Foreign trade balance

Although export had a high resilience to crisis, it had a limited impact on GDP because measurement of its contribution to GDP is taking into account net exports (the difference between exports and imports). Moreover, as a rule, an increase in exports generates an increase in imports, which limits the contribution of foreign trade to growth.

The huge trade deficit of Romania strongly dropped, from Euro -23.5 billion in 2008 to Euro -6.1 billion in 2014 (-74.2%). As Figure 2 clearly shows, the largest contribution to the trade deficit decline belongs to Bucharest Municipality (42.8% in total deficit reduction) based on a decline in the trade deficit from Euro -15.3 billion in 2008 to Euro -7.8 billion in 2014 (-48.8%). Another significant decrease in the trade deficit is due to Ilfov County: from Euro -3.0 billion in 2008 to Euro -2,1 billion in 2014 (-30.2%).

Some counties have experienced big increases in their trade excedent, as follows: Arges from Euro 0.35 billion in 2008 to Euro 1.43 billion in 2014 (+313.5%) and Alba from +Euro 0.12 billion in 2008 to Euro 0.53 billion in 2014 (336.3% 2008).

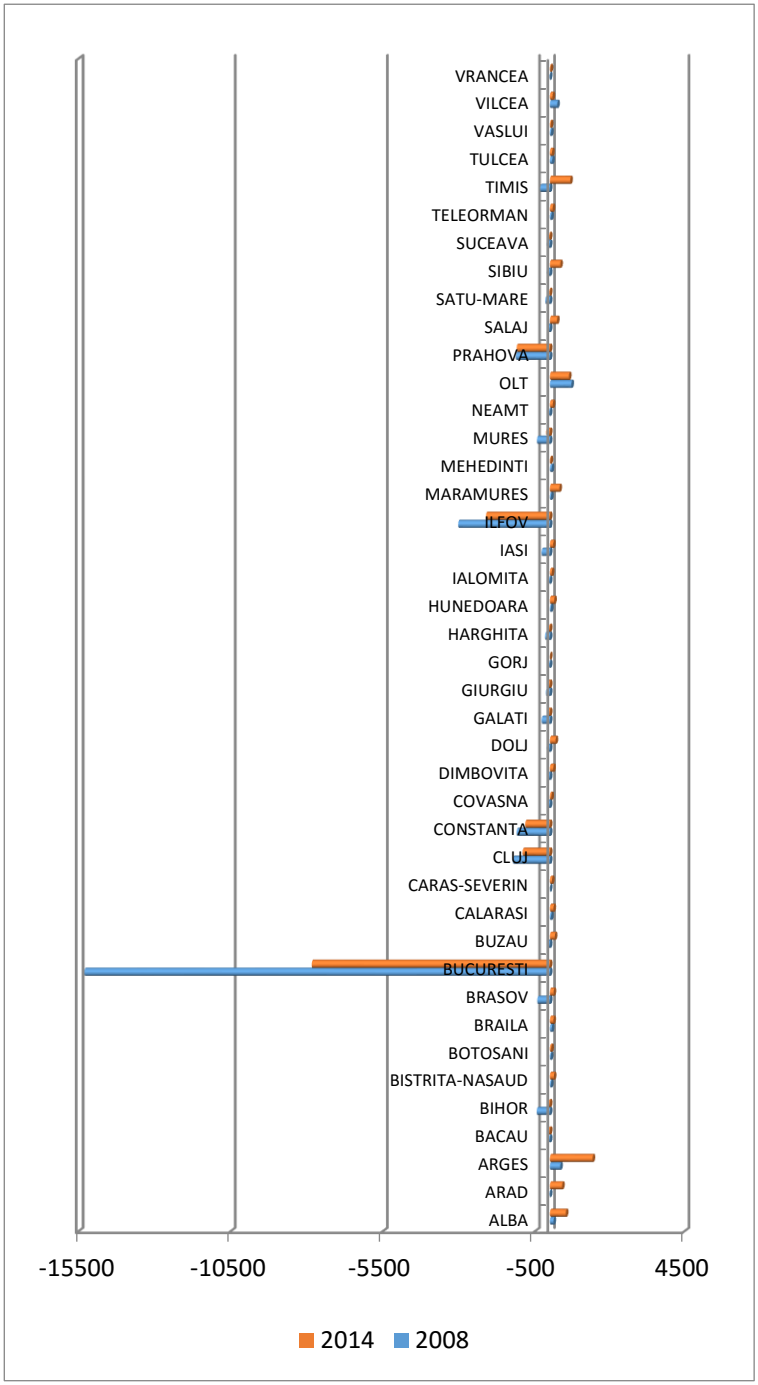


Figure 2. Foreign trade balance (exports – imports) in thousand Euro, by county, in 2008 and 2014

Source: processed by the authors using data issued by the National Institute of Statistics

7. Final remarks

Drawing on the endogenous potential for sustainable regional development, the implementation of new regional growth strategies, able to combine effectively internal and external factors of economic growth, such as external economic openness, reindustrialization, smart and well defined specialization, can boost not only the economic performance of all Romanian counties but can also strengthen the resilience to internal and external shocks and the capacity to recover quickly and entirely after crises.

Technically, to recover means to return to pre - crisis levels, but since this process takes place in a different economic context, that provides new opportunities for growth, special attention should be devoted to investments and to exports as instruments for designing renewed and more efficient regional economies, able to harvest properly the potential benefits brought about by an open economy in the European Union environment.

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SUB-SECTION: THE IMPACT OF FOREIGN LANGUAGES ON THE BUSINESS ENVIRONMENT

BUSINESS ENGLISH WITH FIRST YEAR STUDENTS IN ECONOMICS

Ioana Claudia Horea
Department of International Business, Faculty of Economics, University of Oradea, Oradea, Romania
ihorea@uoradea.ro

Abstract: *When teaching languages for specific purposes (LSP), such as Business English, the background knowledge of the students, the level of understanding economic terminology, business notions and concept, play a rather crucial part. Though important and of utmost relevance, this aspect is often neglected and language instructors are faced with the situation of having to check and explain such elements instead of counting on the students knowledge in their field of specialization. As desirable as it may be to able to rely on your students' expertise in the specific domain they are qualifying for and consequently be in the position to even elicit explanations from them when the case, the teachers of LSP more often than not will find themselves in the circumstance of dealing with lexical and conceptual material that seems totally novel for their as yet inexperienced learners. Teachers may not be able to benefit from any 'specialised' help in the matter from their students and hence they shall prepare their material such way that they can themselves, if needed, provide at least minimal information on the specialised concepts and specific terminology found in the material they use in teaching the language. The current article discusses this issue of having to adapt to the level of specialised knowledge of the learners when teaching a language for a specific domain to students newly entering the field. It brings a series of opinions on the matter, as found in the literature, and also presents several concrete examples of unexpected vocabulary problems encountered in teaching Business English to first year students in Economics. Thus, the study puts forward the idea of the need for a better harmonisation of curricula in this respect, so that the study of specialised language shall come after the students are at least elementarily 'initiated' in the major areas of the domain, so that they can have an idea of what some basic notions they meet in authentic texts may represent and mean.*

Keywords: teaching LSP, Business English, economic terminology, vocabulary issues

JEL classification: Y80; Z00; M53; A29

1. Preliminaries

As discussed by most part of the literature of speciality, the classic method of vocabulary introduction in teaching a foreign language promotes a contextual approach (Richards &Rodgers, 1996; Walters, 2006).

1.1. Benefits and challenges of authentic texts

People learn better and faster the things that they need and they have a preoccupation towards. „Motivation to learn and effectiveness of learning depend

on the learner's needs and interests. With ESP learners a common approach is to select and work on authentic texts from their field of specialization. The clear relevance of the English course to the students' needs should improve motivation and thus make learning better and faster." (Hutchinson & Waters, p.8)
With students in economics, teaching Business English vocabulary is indeed best to be approached contextually, i.e. to bring authentic texts as study material for the introduction of lexical elements: "Vocabulary can be best learnt in context that is why authentic materials can be a choice" (Sim, p.5).
But this comes with a flaw. Students in their first academic year, and more particularly in the first semester, might not be familiar with the specific economic notions and concepts, not even in their native languages, as these aspects are very likely not to have been covered yet in the classes of the specialised disciplines of study.

1.2. A question of teachers' role

The major question here is: what is the right approach in such condition? Are teachers of languages to explain specific terminology and to what extent? Must they and can they do so?
It can be argued that teachers of ESP should not try to 'know everything' and substitute other instructors, as they cannot be hold responsible to fill the lacks in specialised background knowledge: „the goal of English for Specific Purposes is not primarily the teaching of a subject in English as a foreign language, but rather that the aim is to teach English with a specific content which is normally mixed with general topics" (Maleki)
On the other hands, what happens if teachers of LSP cannot properly explain or choose not to interfere? Can the term be simply left aside, until further and appropriate study within speciality discipline classes? Theoretically, yes. Practically though, clarification, at least of a certain degree, is required in order to ensure overall context apprehension that can render a basic fluency of thought needed for the cognitive processes of language acquisition.

2. ESP class profile and corresponding approach

2.1. 'Expectation and return'

Relying on what students already know, on how much they can at the moment grasp from the field of their chosen future career, is crucial in maintaining class interest and consequently in their acquisition of the language terminology at stake. "The students' abilities in their subject-matter fields, in turn, improve their ability to acquire English. Subject-matter knowledge gives them the context they need to understand the English of the classroom. In the ESP class, students are shown how the subject-matter content is expressed in English. The teacher can make the most of the students' knowledge of the subject matter, thus helping them learn English faster." (Fiorito)
Ideally, it should be strictly language, communication skills and linguistic abilities that the LSP teacher should concentrate on because the specialised notions are supposed to be known: „In the case of ESP classes, the teacher is no longer a "primary knower". The students themselves are frequently the primary knowers of the content of material. The teacher's main role is to create real, authentic

communication in the classroom based on the students` knowledge. (Morena, p.46)
Still, though it would be ideal that students only have some general English problems, concerning elements of communication and grammar structure, and could try to cover these lacks by inferring meanings from context, they, as noticed, most often rely heavily on translation (Benhaoued, p.3). But even this or, more appropriately, it is exactly this approach that becomes totally useless in the circumstance when the term in discussion, a given economic concept, is altogether new to the learner.
So, „in certain situations, such as pre-study or pre-work courses in which learners have not yet begun their academic or professional work and have poor subject knowledge, methods of teaching ESP courses will be similar to those of general English. On ESP practice, ESP is a materials-led field, and that most materials are prepared by individual teachers for particular situations. This is, of course, no simple job." (Dudley-Evans, pp.131-136)

2.2. Level of language specialization

Bearing in mind the actual requirements and characteristics of nowadays labour market, the focus on students' language proficiency is what should be the main preoccupation of a language teacher. „Modern workplace communication expects well-rounded professionals who not only have an excellent command of their subject area, but who can also communicate well both with colleagues and the general public. The focus needs to be on communication, and consider both accuracy and fluency (with fluency being possibly more important than accuracy 'at all costs'). (Day & Krzanowski, p.13)
Indeed, teachers of ESP are supposed to carefully select and prepare their material at the same time with a view to the level of specialisation of their students: "the teacher's task also includes adapting material when published materials are unsuitable or writing his\her own materials. But, one of the main controversies in the field of ESP is how specific those materials should be." (Morena, p.46). So, material preparation for ESP classes can be a rather painstaking endeavour as, definitely, authentic texts do not allow for levels of terminology understanding in accordance with diverse school curricula.

3. Research methodology

3.1. Aim of research

This practical study aims at finding to what extent English terminology most relevant in several basic economic fields, as met in the authentic texts, can be effectively taught having the conceptual background previously formed and the notional knowledge implemented from practice or during classes of speciality disciplines.

3.2. Research hypothesis

The hypothesis of the current study is:
With first year students in economics, an important part (more than half) of the basic economic terms, notions and concepts that appear in Business English texts, are not understood or known properly.

This situation may be due to a misbalance in curricula, with the study of several introductory disciplines of speciality beginning later.
If the hypothesis is confirmed then the challenges faced by the specialised language instructor, in preparing the didactic material, choosing and adapting texts, finding and providing elementary explanation of specific concepts, become obvious and awareness of this aspect is more than welcomed for selecting bets approach and most suitable way of tackling the lesson.

3.3. Method of research

The method of research was that of observation and analysis of data observed with four series of first year students taught along two academic years. Along teaching Business English classes using authentic texts, lacks of knowledge of economic concepts were noted, marked and further centralised and analysed as to the percentage these unknown notions represent in a total of words considered essential or of utmost relevance to the specific domain. A notion was considered unknown if the majority of the students in the group did not understand its meaning or use.

3.4. Results measurement

The share of the known lexical elements and concepts in the total of essential terms selected was calculated and a comparison was drawn between the results in the diverse fields. The percentages obtained are analysed to find whether the research hypothesis is confirmed or not.

4. Analysis of specific vocabulary knowledge

4.1. Approach undertaken

The most relevant vocabulary, lexical elements, notions and concepts met in Business English texts during the classes taught to first year students in economics along the last two academic years were extracted and grouped according to the economic fields they are representative of. Category tables were drawn up presenting this vocabulary lined alphabetically and classified according to proximity of meaning and concepts in each line where the case.
A term was considered unknown and marked with red in the following exemplification tables if the majority of the students in the group did not understand its meaning or use. The table lines marked with yellow represent concepts or notions only partially, vaguely or not thoroughly understood by the majority.

4.2. Data obtained and corresponding remarks

Analysing the situation we can note that there are not too serious issues for the most straightforward circumstances, as those related to getting a career, a job in a company (seen in Table 1), travelling and holiday making (illustrated in Table 2) or passively assimilated lexis due to extensive hearing/ seeing in the media, for instance, as the case of marketing domain (shown in Table 3). For these circumstances, on average, the share of essential vocabulary knowledge in the total selected is around 66%, which is a quite fair result for first year students.

Table 1: Vocabulary connected to working in a company

1. dismiss, lay off, resign, retire
2. dole, indemnity, incentives
3. engage, employ, -er, -ee, (un)employment
4. (sick) leave, days off
5. full-/part- time job
6. getting idle
7. headquarters, office, plant, factory
8. job title
9. moonlighting
10. peers, fellow workers
11. redundancy
12. strike
13. union
14. wage, earnings
15. work shifts/ long hours/ overtime

Source: own concept and design

Table 2: Vocabulary of Tourism

1. abroad
2. accommodation
3. all-inclusive
4. bed and breakfast
5. boarding card
6. booking
7. car hire/ rent
8. check in/ out
9. coach tour
10. foreign currency
11. full board
12. guest house, inn
13. half board
14. hotel, motel, hostel
15. luggage trolley
16. reception
17. resort
18. tour operator
19. travel agent/~cy
20. voucher, traveller's cheque
21. single, double, twin-bedded room
22. self-catering /independent flat
23. paying deposit/ down-payment vs. paying balance
24. sight-seeing, entertainment, leisure activity

25. time-sharing

Source: own concept and design

Table 3: Marketing related vocabulary

1. ad(~vert) (~ise) (~ment), commercial spot
2. brand, logo, slogan
3. challenger
4. competitive edge
5. consumer
6. demand and supply
7. distribution
8. flyer, brochure, leaflet
9. follower
10. free market competition
11. free samples
12. market leader
13. market share/ dominance
14. marketer, market research
15. marketing mix
16. monopoly, oligopoly
17. niche, ~r
18. product line
19. promote, promotion
20. sales, discount

Source: own concept and design

Problems start to develop as the degree of specialisation increases, i.e. as the domains considered are in themselves of a more specific nature.
For the fields of world economy, macroeconomics, international commerce and global business (exemplified in Table 4), we can see that a fifth of the terms are vaguely understood and more than 40% of them are totally new concepts. In all, only a share of 36% (9 out of the total of 25 selected) of the words met in the authentic texts on the domains are clear to the learners.

Table 4: Terminology related to Economy, Business and Trade

1. (foreign) investment
2. (visible/invisible) import/ export
3. aggregate supply/demand
4. autarchy
5. bailout (package)
6. balance of trade vs. balance of payment
7. breach of contract/ agreement
8. capital outflow

9. carriage, shipment
10. carrier, freight agent
11. consignment, merchandise, freight
12. customs, duty free
13. dumping
14. economic output
15. economy of scale
16. emerging market
17. foreign trade
18. free market/ trade vs protectionism
19. GDP, GNP
20. IMF, GATT
21. INCOTERMS
22. margin
23. negotiations, terms and conditions
24. quota and tariffs
25. retail vs. wholesale

Source: own concept and design

In what the field of business organisation and management is concerned, it is remarked that again only 40% of terminology seem totally familiar to the students while a quarter of the terms are remotely known and 35% are brand new concepts (as presented in Table 5).

Table 5: Terms in management and business organization

1. brainstorming
2. chair person
3. chief executive officer (CEO)
4. corporation, company, firm, business
5. General Assembly
6. joint stock
7. joint venture, alliance
8. limited liability
9. meeting agenda
10. memorandum of association
11. merger vs. acquisition
12. minute of the meeting
13. organization chart
14. public company
15. share, ~holder
16. SME
17. social parts vs. shares
18. sole proprietor, freelancer
19. staff, board, human resources

20. takeover

Source: own concept and design

When it comes to money, fiscal issues, finance, banks and banking, financial market and stock exchange, crisis and boom (exemplified in Table 6) or to the sophisticated specialization of accountancy (Table 7) things get even more blurred. Though terminology of banks and banking is heard around and sounds familiar to some extent, meanings prove however rather obscure. Money terminology is grasped, fiscal matters are quite easily deduced from contexts while financial market lexical problems prove of a more complex nature and require more consideration. In all, a third part of the concepts in these fields is understood clearly, a third just vaguely and the other third is rather unknown.
For the accounting field, even the terms that are 'known' seem to be blurry when it comes to their meaning, so some vocabulary might have been assimilated during classes of disciplines such as basics of accounting but many concepts seem to have eluded proper apprehension as to their usage and applicability. Thus, if 35% of the terminology is known there still may be a reserve as to whether its meaning is indeed properly grasped.

Table 6: Basic terminology of Finance and Banks

1. (checking/ saving) account
2. ATM, cash desk
3. bank deposit, deposit box
4. bank overdraft
5. bank run, bankruptcy
6. bill of exchange
7. bonds vs. stocks
8. boom
9. borrow vs. lend, loan
10. broker, ~age
11. bull and bear (market)
12. central/ investment bank
13. cheque, payment instruments
14. coin, banknote, change, cash
15. collateral, mortgage, insurance, real estate
16. credit vs debit, interest (rate)
17. currency, monetary aggregates
18. depression, crisis, recession
19. derivatives, options
20. earn/ earnings, save/ savings
21. economic cycle
22. exchange (rate)
23. fee, taxation, fine, state budget
24. financial bubble
25. front/ back office

26. levy
27. pawn
28. promissory note
29. stock (market/ exchange), index, listing
30. subsidy, grant

Source: own concept and design

Table 7: Accounting vocabulary

1. (in-/tangible) assets
2. (working) capital
3. accountant, accountancy
4. balance sheet
5. book keeping
6. cash flow
7. claim, account receivable
8. debenture
9. depreciation
10. dividend
11. equity / equity interest
12. expenses, expenditure
13. good will
14. income, revenue
15. inventory
16. liabilities
17. profit and loss account
18. turnover
19. value added
20. write off

Source: own concept and design

5. Final considerations on research results

Considering the whole set of results we can note that on average the research hypothesis is fulfilled. In the total of 115 Business English notions, lexical elements and sets of concepts, 34 items are obscurely familiar and 47 items are totally new. These two categories sum up to a share of 70% of unclear terminology, which mean that only 30% of the terms are clear and properly known and understood by the students, as seen in the pie chart in figure 1.

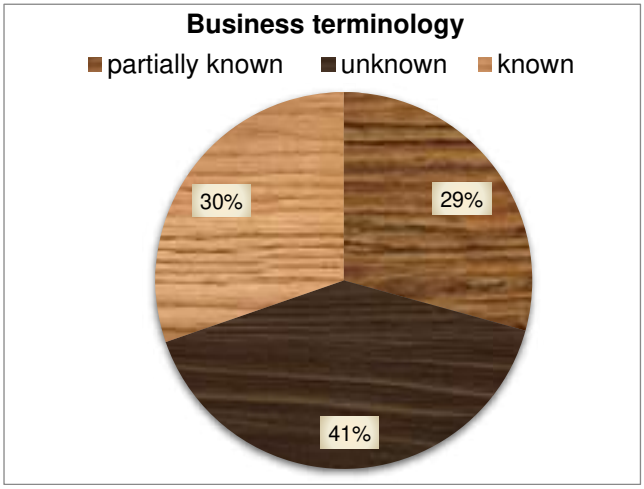


Figure 1. Knowledge of business concepts with first year economic students
Source: own concept and design

6. Conclusion

A minimal but proper introduction to all fields of economics – management, marketing, accounting, tourism, finance and banking, business and trade – seems to constitute a prerequisite to learning English for Specific Purposes (ESP), namely English for Economics in this particular case. To ensure effective acquisition of Business English terminology, the basic knowledge in the field and the conceptual background specific to its areas need to have previously been well implemented so that students can make good use of them when attempting to acquire English language for the specific purpose.

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STYLISTIC FEATURES OF BUSINESS WRITING

Anamaria-Mirabela Pop, Monica-Ariana Sim
Department of International Business, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
Department of International Business, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
mipop@uoradea.ro
msim@uoradea.ro

Abstract: *Style is a crucial element of business communication, since the writer has to manage to obtain a balance between being pleasant and being polite. People use business writing to ask for a job, to inquire about different opportunities, to ask for price quotations, to get into business with partners etc. It is to the writer's advantage to learn how to write in a business style because it is an important part of most people's everyday life. Nowadays, due to the development of international business partnerships, business people in Romanian and not only are faced with the necessity of writing and translating official business papers from English into Romanian because English is considered the language of world business relationships. In comparison with literary texts, the texts of official documents are highly standardized. This refers to both the structure of the whole text and the arrangement of special paragraphs. The language of business documents is characterized by specific terms and expressions and also by certain grammatical and syntactical patterns. The literature in the field has showed vastly subjective approaches, yet these approaches are not all the time in accordance with existing rules of formal English. Also, there are no accepted criteria for changes that should be taken into consideration. Therefore, the main problems of people who write business documents are: how should they write it to sound correctly? How formal should they be in the content of documents, if even English-speaking people have difficulties drawing a line between formal and informal English? The aim of this paper is to investigate the stylistic peculiarities of official business documents. It starts with introductory notions regarding style and stylistic and it continues with the relation between language and its function in social settings. The second part of the paper provides a stylistic analysis of the most common features seen in business documents.*

Keywords: style, stylistics, stylistic analysis, business discourse, business documents

JEL classification: Y8; Y9.

1. Style, stylistics and Business English

Business English as a language of international communication and exchange has become an important element of the business activities. With the economic development, especially after Romania's accession to the European Union,

Romania's cross-border business activities have become increasingly frequent. International business transactions are carried out at an unprecedented rate in the rapid development of the economic and commercial fields. At the same time, more and more enterprises begin to target the Romanian market, to expand their international market for economic benefits. Therefore, Business English is more and more important for people and subsequently written English used in business documents. As Bruce, Hirst and Keene (1995) put it, "today's world of business lives on written documents" (p. 1). Written communication relies on heavily stylised and standard expressions and, in order to carry out a stylistic analysis of business documents it is important to define style, stylistics and stylistic analysis.

Styles has been defined by different scholars differently at different times. According to *Longman Dictionary of Applied Linguistics* (2002), style is the manner of expression in writing or speaking which changes all the time according to different situational elements, e.g. the participants, time, place or subject of the communicative event, from very formal to very informal. According to modern stylistics, style can be defined as the habits of language use of a person or a group of people in a particular situation. Different situations require different ranges of a language that, in return, show different linguistic characteristics and therefore style may be seen as the various characteristics of language use in various contexts.

Stylistics is the branch of linguistics which studies the principles and the effect of choice and usage of different language elements in expressing thought and emotion in certain communication situations. Subsequently, it deals with:

- the aesthetic function of language;
- expressive means in language
- synonymous ways of expressing one and the same idea (a change in meaning taking place with the change of wording);
- emotional colouring in language;
- a system of special devices called stylistic devices;
- the division of the literary language into separate systems called style;
- the interrelation between language and thought;
- the individual manner of an author in using language. (Apud www.durov.com/study/moi_shpory_stilist-1034.doc)

Stylistics was defined by Widdowson (1979) as "the study of literary discourse from a linguistic orientation and I shall take the view that what distinguishes stylistics from literary criticism on the one hand and linguistics on the other is that it is essentially a means of linking the two".(p.67)

According to Chris Baldick in *Oxford Concise Dictionary of Literary Terms* (1996), stylistics is defined as "a branch of modern linguistics devoted to the detailed analysis of literary style, or of the linguistic choices made by speakers and writers in non-literary contexts." F.de Saussure introduced one of the fundamental concepts in linguistics, that of the contrast of "language and speech" (*langue - parole*). Saussure considers that language is a system of elementary and complex signs: phonemes, morphemes, words, word combinations, utterances and combinations of utterances. Saussurean contribution was to dissect the total phenomenon of language (*langage*) into: a) actual speech production (parole), including the role of the individual will, and b) the socially shared system of signs (langue) that makes production and comprehension possible. (Koerner; Asher, 1995:234)

Stylistic analysis in linguistics refers to the identification of patterns of usage in

speech and writing and in literary studies is usually made for the purpose of commenting on quality and meaning in a text. Its aim is to "bring to light patterns in style which influence readers' perceptions and relate to the disciplinary concerns of literary and linguistic interpretation." (http://www.digitalhumanities.org/companion/

1.1. The Relation between Language and its Functions in Social Settings

The key to a successful written communication is the balance between knowing general rules and being aware of certain features of different writing situations. Writing involves three elements, present in any act of communication: the writer, the reader, and the subject. The emphasis may fall on each of these, depending on the type of message sent. When the emphasis is placed on the reader, the message is persuasive, specific to newspaper articles or advertising, being probably the most common form of business writing. Persuasion involves directing or making a reader do something or not. Business examples include job applications, proposals, sales messages, etc. The fact that the emphasis is placed on the reader means that the writer is not in charge. In the case of advertisements, for example, the reader decides whether to or not to carry out an action, make a decision, etc.

Writing in organizations is complicated by the fact that an organization is changing all the time. Sometimes change is anticipated, other times it is unexpected. But in any event, accepting change is essential and the correspondence should continue, adapted to the conditions of changes.

The official-business style refers to a certain style of documents used in international and national trade such as: international agreements, legal documents, instructions, official correspondence, business papers, etc. Different types of business documents have different forms of representation and disposition of the material which facilitates and simplifies their use. For example, addresses on envelopes are written in a certain order, according to the rules specific to each country, yet in a well-established order to make it easy for both the sender and the post office employees.

One way to examine written communication is from a structural perspective. Words are a series of symbols that communicate meaning; they combine in specific patterns. Nouns, verbs, adjectives, adverbs, prepositions, and articles are the structures used to compose written documents. Another way to examine written communication is from the perspective of the objectives established, where specific documents have in view certain objectives and have rules and formats that are anticipated and expected. Not complying with these rules, customs, or formats can have a negative impact on the way these documents are received. According to McLean (2012), "colloquial, casual, and formal writing are three common styles that carry their own particular sets of expectations." ("Business Communication for Success" http://2012books.lardbucket.org/pdfs/communication-for-business-success.pdf)

The style that the writer uses depends on the audience and whether the communication is going to be read only by those in the writer's company (internal communications) or by those outside the organization, such as sales people, customers or clients (external communications). Generally, external communications are more formal, just as corporate letterhead and business cards which are more formal than the e-mail and text messages that are used for everyday writing within the organization.

We consider that in business writing two crucial elements, stylistically speaking, are the purpose of the document and the audience as it is important to establish a connection between language and the social settings. One branch of linguistics dealing with this subject is SFL (Systemic Functional Linguistics). According to Nordquist (2012), systemic functional linguistics is the study of the relationship between language and its functions in social settings. It studies the peculiarities of various functional styles, including official business. (http://grammar.about)

Trask and Stockwell (2007) define systemic linguistics as "an avowedly functionalist approach to language, and it is arguably the functionalist approach which has been most highly developed. In contrast to most other approaches, SL explicitly attempts to combine purely structural information with overtly social factors in a single integrated description. Like other functionalist frameworks, SL is deeply concerned with the *purposes* of language use. Systemicists constantly ask the following questions: What is this writer (or speaker) trying to do? What linguistic devices are available to help them do it, and on what basis do they make their choices?" (Trask &Stockwell, 2007:293)

In *An Introduction to Systemic Functional Linguistics* (2005), Eggins states that "[w]hile individual scholars naturally have different research emphases or application contexts, common to all systemic linguists is an interest in *language as social semiotic* (Halliday 1978) - how people use language with each other in accomplishing everyday social life. This interest leads systemic linguists to advance four main theoretical claims about language:

- that language use is functional;
- that its function is to make meanings;
- that these meanings are influenced by the social and cultural context in which they are exchanged;
- that the process of using language is a *semiotic* process, a process of making meaning by choosing.

These four points, that language use is functional, semantic, contextual and semiotic, can be summarized by describing the systemic approach as a *functional-semantic* approach to language." (Eggins, 2005:3)

In business communication, linguistic forms are the constituents of a semiotic system which the communicators select to create their reality while having in mind the establishment of an interpersonal relationship with respect to power and solidarity.

2. The Style of Business Documents

The main feature of business writing common to all forms (letters, emails, documents) is the style. Regardless of the documents written, the aim should be conciseness, clearness and an efficient way of transmitting information. There are many types of business communication styles that influence how companies, corporations, governments, and institutions communicate with each other and share information. Nowadays, businesses carry out their activities both online and offline, sharing information via letters or via email. One of the most important elements in business writing, according to the majority of scholars, is formality since each document has to be treated as a legal document, and should be considered the image of a company or organization's communication system. For this reason, many types of business writing are considered official documents, thus

more and more companies care about how they write and how others perceive them through the documents written. Formality in business writing brings a level of seriousness to the advertisements, for example, and makes the documents seem official. Business documents as correspondence (letters), enquiries, offers, complaints and contracts are of legal importance. It has been noted that the official business language differs from other kinds of the English language, the style of official documents being the most conservative one. All emotions and subjective modality are forbidden in this style. It maintains the structural forms and the use of syntactical constructions. Addressing documents and official letters, signing them, expressing the reasons and considerations leading to the subject of the document are regulated lexically and syntactically. Like other styles of language, the objective of this style is communication and, therefore, has its own system of interrelated language and stylistic means. Business style has its own unusual terms, phrases and expressions, which differ from the terms of correspondence, phrases and expressions of other types of this style. Unusual features common to all stylistic varieties of official documents are the following: the use of abbreviations, conventional symbols and clipped words; the use of formal words; absence of emotion; general syntactical mode of combining several ideas into one sentence.

2.1.1. The use of abbreviations, conventional symbols and clipped words

Initials and abbreviations are one of the most common methods in business correspondence writing. Usually these abbreviations are technical terminology or abbreviations of a company or an organization. For example, L/C (=letter of credit), B/L (=Bill of Lading), FOB (=Free on board), CIF (=Cost, insurance and freight), CFR (=Cost and freight), and IBM (=International Business Machines), P&G (=Procter & Gamble), HP (=Hewlett-Packard).

The advantage of the notice provided by the symbols is that it enables others to respect and not infringe intellectual property, deters them from attempting to use the name or mark for their own business, and prevents confusion in the marketplace about the identity of a product or service. For example, the most common symbols are ™ (trademark, for products), ℠ (service mark, for services) and ® (registered trademark). They notify the world and the competitors that a particular company claims trademark rights in the mark or name using these symbols. Clipped words mean to abbreviate and intercept a part of the word, mainly the suffix, prefix of the word. For example, biz (=business), Corp (=corporation), Ad (=Advertisement), PC (=piece), NO (=Number), etc. People in business use the abbreviations to avoid lengthy explanation and simplify the process of transaction, and improve work efficiency, in accordance with the requirements of saving time and improving efficiency in international business. Thus it is frequently used in business correspondences and documents.

2.1.2. The use of formal words

As we have mentioned above, formality is one of the main features of business documents. Business correspondence writing belongs to the formal style, therefore words must be formal. These words have the feature of being accurate in meanings and they make business correspondence writing more formal. Formal language rigorously follows Standard English conventions and it tends to avoid personal opinions, feelings, and experiences from private life. It also avoids idiomatic language. This is the most acceptable level for most published or broadly

disseminated documents, business documents, and academic documents. The formality of business correspondences is mainly expressed by the aspects presented in Table 1.

Table 1: Formality in business correspondence

Informal	Formal
Verb phrases	**Verbs**
say sorry	apologize/apologise
come up with	arrive
bring about	cause
think about	consider
get in touch with	contact
keep on; go on	continue
find out	discover
look at	examine
deal with	handle
add to	supplement
Prepositions &Conjunctions	**Prepositional phrases**
according to	in accordance with
for	for the purpose of
if	in the case of
about	with reference to; with regard to
so	therefore; thus
but	however
also	moreover; furthermore; additionally
anyway	notwithstanding
Emphasis words	
lots of/ a lot of	much; many
tons of; heaps of	large quantities of; a number of
totally	completely
really; very	definitely
Letters	
Hi	Dear Sir/Madam
Just wanted to let you know	I am writing to inform you
Love,	Yours sincerely,; Yours faithfully,
Hope to hear from you soon	I look forward to hearing from you

Source: http://www.engvid.com/english-resource/formal-informal-english/

2.1.3. Absence of emotion

Emotions are “a mental and psychological state associated with a wide variety of feelings, thoughts and behaviour. They can bring about great intensity in the performance of an action.” (Melé, 2009:106) In face-to-face conversation, the subject matter and its emotional content is enhanced by tone of voice, facial expressions, and nonverbal cues. It is not the case with written communication/digital communication.

The philosopher Aristotle once wrote of three different modes of persuasion - three different ways of appealing to the audience. The first two are logic (logos) and emotion (pathos). Many forms of business writing use one or both of these modes of persuasion, the third being to a certain extent underestimated. Yet, it has been argued that the third mode of persuasion is of the greatest importance for an appeal to credibility (ethos) directly concerns the way that the audience perceives the speaker.

Despite the fact that many believe that business writing should lack any sign of emotions, emoticons, or combinations of symbols that "loosely depict the human face, have made their smiley way from tween texts to the outboxes of legitimate business people. Obviously, there are arguments against them. They are childish, lazy, and also indicate that the writer of the message does not trust the reader to understand the written language." According to the same article in Huffington Post published in 2011 on the use of emoticons at work, Emerson, the author of the article, states that emoticons "may be a necessary evil, but that doesn't mean there isn't a right way and a wrong way to use them. First off, smiley faces are the only kind of emoticon allowed in business correspondence. No shocked faces. No winks. And no frowny faces." ("Emoticons at Work: Unprofessional or Necessary Evil?", 2011)

This is because as far as email is concerned, sarcasm or any other tone just does not exist. Emails are necessarily one dimensional which makes it almost impossible to express subtlety. Supporters of emoticons have several reasons why these "faces" should exist. They consider that emoticons can help create emotional connection between communicators from both sides. In other words, they bring the two sides involved closer. During communication via plain text such as chatting online with customers, the message is usually neutral while the tone is absent. It is very likely for the customers to look at the message in a negative way. Therefore, emoticons are necessary to clarify the tone. On the other hand, opponents believe that it is not professional to use emoticons during a business conversation and it only makes the person writing the message seem childish. Also, emoticons may offend some of the customers who feel uncomfortable to see such icons during a business conversation and think they are not taken seriously. They strongly believe that well-structured writing is clear enough and has no place for any emoticon.

Whether or not emoticons are used in business communication, the writer's aim should be to make sure that the messages are correctly interpreted by the customers thus reaching good customer satisfaction.

2.1.4. General syntactical mode of combining several ideas into one sentence

Sentences provide the framework for the clear written expression of ideas. The aim in writing is always to write in complete sentences which are correctly punctuated. Sentences always begin with a capital letter and end in either a full stop, exclamation or question mark. A complete sentence always contains a verb, expresses a complete idea and makes sense standing alone. Clarity in writing is one of the most difficult skills to master. (http://www2.le.ac.uk/offices/ld/resources/writing/grammar/grammar-guides/sentence)

From a syntactical point of view, business writing style is made up from compositional patterns of variants of this style which have their own designs. A sentence is a unit of thought. The longer the sentence, the more ideas the reader

must keep in mind at the same time. Considering its stylistic structure, the business document is one sentence. It looks like separate clauses often divided by commas or semicolons, and not by full stops, and they are often numbered. Every predicate construction begins with a capital letter in the form of a participial or an infinitive construction as it can be seen in the following examples:

1. In case of non-conformity of the quality of the goods actually delivered by Sellers with the contract specification, any claim concerning the quality of the goods may be presented within two months of the date of delivery;

2. No claim to be considered by Sellers after expiration of the above period;

3. No claim presented for one lot of the goods shall be regarded by Buyers as a reason for rejecting any other lot or lots of the goods to be delivered under the present contract (King 1997, c. 31).

4. No amendment, change or modification of this Agreement shall be valid unless in writing signed by the parties hereto. (http://hrcouncil.ca/docs/samplecontract.pdf)

On the other hand, the use of short sentences may make for clear and concise writing, but "it can also make your writing seem simplistic, choppy, angry or monotonous." (Levinson, 2000:66) The advice would be to vary the kinds of sentences used: short sentences with longer and more intricate ones. Other ways would be to join the sentences with a colon, to start with dependent clauses or transitional phrases or to invert the normal word order:

e.g. Particularly important is the emphasis on self-sufficiency.

Mixing different types of sentences the writer can create a rhythm that encourages the reader to follow his thoughts. According to Levinson (2000), "[v]ariety in sentence structure, length and rhythm ... represents the true relations among thoughts more accurately than a series of sentences will." (p.66)

3. The Tone of Business Documents

Business writers should also consider the tone of their message, whether they are writing a letter, report, or any type of business document. Tone is present in all communication activities. The tone of a message is a reflection of the writer and it does affect how the reader will perceive the message. Thus, the tone used in business documents is very important. Tone, as Obber (1995) states, refers "to the writer's attitude toward the reader and the subject of the message. The overall tone of a written message affects the reader just as one's tone of voice affects the listener in everyday exchanges. [...] The business writer should strive for an overall tone that is confident, courteous, and sincere; that uses emphasis and subordination appropriately; that contains nondiscriminatory language; that stresses the "you" attitude; and that is written at an appropriate level of difficulty" (Ober, 1995:88).

The only major exceptions to these principles are when the writer prepares a negative business message, such as denying a job offer or a customer request. Some general rules that the business writer has to keep in mind when considering what kind of tone to use in the business documents and how to present information

in that tone are: confidence, courtesy and honesty, the use of appropriate emphasis and subordination, the use of non-discriminatory language, the emphasis on the benefits for the reader and the use of an appropriate level of difficulty. In this view, there are many strategies to emphasize an idea or to subordinate it. To emphasize an idea, a short sentence should be used. A short and simple sentence will most effectively express an important idea. To subordinate an idea, this should be contained in a compound sentence. Ideas placed in the first paragraph of a document receive the most emphasis, followed by information placed in the last paragraph. Also, the writer should use active voice to emphasize the person or thing performing an action and passive voice to emphasize the action that is being performed. The different types of tone used in business writing are dependent on several different factors:

- audience –the tone used should appeal to the people addressed;
- message – the writer should think about the actual content of the writing and which types of tone are most appropriate. For example, the language used to promote a product is exciting and energetic. On the other hand, an apology for a returned product would use a more serious tone.
- medium – the platform where the writing will appear should be taken into consideration. For instance, the tone used in the press release of a company would be professional and informative. (Apud http://www.printwand.com/blog/importance-of-tone-in-business-writing-and-how-to-use-it)

All these factors contribute to the creation of a model for a tone that makes business writing more effective. Establishing the right tone for any document is related to an individual's ability to understand readers and adapt the communication to their needs. Writing from the reader's point of view is always helpful that is why the writer of the message should choose the tone that is most appropriate to the reader. Also, when deciding the tone, it is important to take into consideration the person's previous correspondence and use the same tone.

4. In conclusion

Business English writing has a very important role in all the business activities. Most professionals spend at least 15-20% of their time writing for business: emails, memos, business letters, reports and other business correspondence. Learning business writing skills can have a positive impact on an individual’s career advancement and also on the image of the company on behalf of which the document is written. Effective channels of communication make an organization run appropriately. Professional quality writing sent through these channels improves productivity and the ability of all functional areas to work together, especially in an increasingly global workplace where collaboration is of outmost importance. Whether we refer to a small business or a multinational corporation, employers and employees communicate with each other or with business partners, suppliers, etc. most often in writing. Obviously, there’s email and the traditional business letter, but most business people are also called on to write presentations, memos, proposals, business requirements, grant proposals, and a wide range of other documents. The aim in writing business documents is to send a clear, concise, effective message. Formal style of English has as main characteristics conventionality of expression, absence of emotions, encoded character of the

language and general syntactic mode of combining several ideas within one sentence. Informal language is more commonly used in situations that are more relaxed and involve people we know well. Written Business English style has borrowed from both formal and informal English, in spite of the fact that there are many believing that this particular style should be formal in essence.

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TEACHING SPEAKING SKILLS

Monica-Ariana Sim, Anamaria-Mirabela Pop
Department of International Business, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
Department of International Business, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
msim@uoradea.ro
mipop@uoradea.ro

Abstract: *The aim of teaching a foreign language is to make students able to communicate well. Speaking is one of the four skills of teaching English as a Foreign Language (EFL) and plays a significant role in daily communication and educational process. As a consequence of the fact that the communicative approach is increasingly used in EFL situation, we underline the importance of students' communicative competence. Learners have serious problems in mastering the communicative skills due to the fact that curricula pay more attention to English grammar, reading and vocabulary. Listening and speaking skills are not considered as important parts of many course books and teachers do not seem to pay attention to these skills while designing lessons. Speaking levels of learners are different from each other as this ability is affected by crucial factors. In many English language classes, the methods focusing on grammar are used for teaching and this method has proved inadequate to the demands for producing efficient English speakers. Speaking is a complex and dynamic skill that involves the use of several simultaneous processes and a speaker needs to almost instantly activate knowledge and skills. In spite of its undisputed importance, speaking has been a rather neglected skill in second language acquisition, research, teaching, and assessment. It is now widely accepted that speaking should be the basis of teaching practice and this is a serious challenge for English teachers; however, it is crucial in the development of English language communicative competence. However, there has been an increased focus on the speaking ability because of its perceived importance in language learning and teaching. This paper will briefly analyse the causes that create difficulties in speaking classes, in particular in the case of the advanced level of foreign language proficiency students. The difficulties examined concern the choosing of the appropriate framework and approach and suggest some speaking activities which seem appropriate for advanced language learners. Finally the paper will focus on a particular case that of preparing students for speaking tests they may sit for.*

Keywords: speaking, problems, methods, test

JEL classification: Y90

1. Introduction

Learning languages helps students realise their dreams, it opens doors to future careers, employers, organisations worldwide. Of all the four skills involved in teaching a foreign language, speaking seems more provocative.

First of all as Nunan (1991) wrote, "success is measured in terms of the ability to carry out a conversation in the (target) language." Therefore a great number of

people in general and students in particular consider that being able to speak a language means knowing the language and so they view learning the language as learning how to speak the language. Consequently students may lose interest and motivation in learning the language if they fail learning how to speak it or if they do not get chances to speak it during the language class.
Secondly, we simply have to admit that speaking is crucial to human communication. Only taking into account the amount of spoken exchanges we produce throughout a day compared to the written communication happening in the same period of time, it is obvious that speaking prevails over writing. Nevertheless the paradox is that during language classes the stress is not on speaking, most of the time being eaten up by reading and writing practice almost ignoring speaking and listening skills being simply left aside. Thus as Lawtie (…) rightly underlines, "if the goal of the language course is truly to enable students to communicate in English, then speaking skills should be taught and practised in the language classroom".

1.1. Problems in teaching speaking

Speaking is a highly complex and dynamic skill that involves the use of several simultaneous processes – cognitive, physical and socio-cultural – and a speaker's knowledge and skills have to be activated rapidly in real-time.
Its importance among the four skills involved when learning a foreign language has changed significantly: from being almost ignored in the Grammar – Translation Method, it became the leading skill in the Direct Method; moreover, audiolingualism (the principle based on oral discourse viewed as imitative routine behaviour in typical and predictable situations) brought more emphasis on speaking. In between there was the Cognitive Method which included activities in all language skills, considering them as equally important, whereas the Communicative Language Teaching added a more realistic dimension to teaching speaking by introducing numerous forms of interaction to the classroom where the language appeared in in natural or probable situations. Speaking is presently perceived as the most fundamental skill to acquire in spite of the inevitable different approaches, available methods, techniques or resources. Along with the rise of the communicative era, oral communication has been considered as the ultimate goal of language learning and its adequate development has become the point of interest of both teachers and learners. However, achieving proficiency in foreign language speaking in classroom conditions is not an easy task; there are many and frequent comments such as the following coming from teachers: "My students can read and write well, but it is a little bit more difficult they when it comes to speaking and listening" or "Some of my students are too afraid to talk in class. They are too shy to perform in front of their colleagues" or "My students can speak fluently but they make a lot of grammatical mistakes". On the other side, even advanced learners often finish a language courses being that they are not sufficiently prepared for speaking beyond the classroom.
Where does this difficulty come from? It may be the result of the little chances and inadequate frequency of speaking opportunities that may happen in the classroom compared to the numerous possibilities and genres real life provides. Selecting appropriate types of speaking situations for classroom practice is also a hard decision as the aim of the activity is to reflect the natural occurrence and distribution of communicative situations. Then the number of students in a class

should be around 10, while in fact normal classes frequently exceed 20 which burdens the activity-students are not at ease, they are too shy and less comfortable. Additionally, an advanced speaking activity should create optimal conditions for developing learners' sociocultural knowledge, that is "the culturally embedded rules of social behaviour" (Thornbury 2007: 31) and their linguistic knowledge, which includes discourse and speech act knowledge, and knowledge of the grammar, vocabulary and phonology of the target language.

There is not much difference between native and target languages in point of the processes involved in speaking: conceptualizing, formulating, articulating, self-monitoring and negotiating. Still, the skill of speaking is not automatically transferable from the speaker's first language into the second (Thornbury 2007). Even students with good command of grammar and vocabulary of the foreign language find it difficult to unleash their oral discourse, extensive knowledge does not guarantee success in oral communication; this knowledge should be properly integrated or accessed.

Problems in speaking may be augmented by excessive self-monitoring and the habit of formulating utterances in the native language first and then translating them in the target language. The teachers' severe monitoring and constant amending of each and every mistake create obvious costs in terms of fluency and may lead to producing artificial and less fluent and natural discourse.

As Ur (1995: 121) rightly points out the individual learners' personalities and attitudes are also among the problems that are commonly observed in the language classroom and these may fall into the following categories:

1. i*nhibition* – fear of making mistakes, losing face, criticism; 2*. shyn*ess; 3. *nothing to say* – learners have problems with finding motives to speak, formulating opinions or relevant comments; 4. *low or uneven participation* – often caused by the tendency of some learners to dominate in the group; 5. *mother-tongue use* – particularly common in less disciplined or less motivated classes, learners find it easier or more natural to express themselves in their native language. Such problems seem to appear in any language class regardless the level of proficiency.

1.2. Activities for teaching speaking skills

When taking up teaching speaking, designing the language speaking class greatly depends on a number of factors such as the age of the students, their level of knowledge of English, the context and also the aim of teaching.

There are different possible approaches of teaching speaking: the genre-based approach which primarily relies on imitating models which is not necessarily the way in which people communicate in real life; the task-based approach that focuses more on the process of using language rather than on the language that learners actually produce, the comprehension-based approach relying on listening tasks (Thornbury 2007: 121). Apart from different theoretical aspects, the obvious thing is that in order to learn to speak or develop this ability, *learners have to speak.*

The process of developing speaking skills consists of three stages **(**Thornbury, 2007: 40): 1. *awareness* – learners are made aware of features of target language knowledge, 2. *appropriation* – these features are integrated into their existing knowledge-base, 3. *autonomy* – learners develop the capacity to mobilize these features under real-time conditions without assistance. The level of proficiency

requires different stage to focus on, for example it seems that at students having an advanced level of foreign language proficiency should focus more on the stage of appropriation and its effective movement towards autonomy in target language use.

We will focus on teaching speaking activities to advanced students as this is our target group, in other words this is the level of English proficiency of the students we are working with- students in Economics. They are students of the Faculty of Economic Sciences, University of Oradea, following the majors: International Business, Management, Marketing, Finances. They all took English courses at high school before their undergraduate education in ELT. They all took an entrance exam in English as the necessary condition for them to study English at the faculty. The exam covered questions regarding vocabulary and grammar knowledge. All of the participants had the same English proficiency level (i.e. ranging somewhere in between intermediate and upper intermediate) based on their scores obtained at the entrance exam.

We have to start from the fact that **e**very learner enters any learning and communicative environment with his or her entire personality additionally shaped by their prior learning and communicative experiences, both positive and negative. And being aware of this truth is crucial as we meet students with good or very good knowledge of English who have difficulties when speaking. The only logical explanation of the situation is that they were not sufficiently trained in speaking and they were not given the opportunity to practice. Moreover, the lack is more profound: they admit that it is not only the foreign language class that does not give them space to state their own opinions, to express feelings, to comment on facts, it seems that this is the problem of the whole teaching system in Romania where students are seen as empty buckets that need to be filled up with information. Students are neither let nor taught to react, to express, to speak. Consequently we are yearly faced with generations of students who are used to look downwards, who are afraid to utter. Our task as teachers has proved even more difficult yet challenging and beautiful when in the end you see progress, you hear students speaking.

For the purpose of getting them to speak, there is need for a range of speaking tasks that encourage students, offers them a considerable degree of independence that is acquired only on extensive and assiduous oral practice. The activities may take the form of student-teacher or student-student interactions.

According to Thornbury (2007) conversations in foreign language classrooms are considered to be not the result of language learning but rather the context in which learning actually occurs. Obviously it is not easy to have very natural, spontaneous and unstructured pieces of conversation in a planned lesson.

A possible scenario could rely on conversation activities based on a set of selected themes which are previously negotiated with learners. For example each student will have to present a topic of his own interest at the beginning of the lesson as a warm-up activity. After establishing the rule of speaking in turns, students need to be taught useful conversational routines (opening and closing formulas, interrupting, asking for clarification) and helpful communication strategies (paraphrasing and reformulating, using vague language and hesitation fillers).

Other types of activities may begin from a more controlled context in which the

language is limited by instructions, or with the use of audio-visual materials; other examples of speaking tasks could be even the feedback sessions during which students analyse their own interactions (from grammar, vocabulary, even attitude and body language).
A class survey is another sample of speaking activity which, if properly conducted, may engage a large group of students in a speaking activity. For example, students prepare a set of survey-type questions connected with a particular topic (for example banking requirements when asking for a bank loan) and they move around the classroom, asking the questions and putting down the answers. Afterwards they return to their original groups, they analyse the information gathered, prepare a presentation that will be reported to the class by a spokesperson. (Thornbury 2007: 83).
Debates are also very popular and useful forms of classroom oral interaction. Debates involve discussing a topic from two opposing points of view which are earlier ascribed to members of the debating teams (Dakowska 2005: 246). Nevertheless, as Dakowska (2005: 245) points out, there are several requirements for the chosen topic: it is controversial enough to open different perspectives and interpretations (i.e. the recent law against smoking in Romania); students involved are given enough space and autonomy to choose the side and to express their personal opinions and ideas; students are interested in the topic and their general knowledge is sufficient enough to discuss it; the debate is planned as a complex activity for example working in groups or pairs followed by open discussions.
Other speaking activities that advanced students may practice include: storytelling, jokes, role-play and simulation activities (Thornbury 2007). To conclude, note that each speaking task needs to be productive, purposeful, interactive, challenging, safe and authentic (Thornbury 2007: 90) so as to be able to ensure effective language use.

2. Preparing students for speaking tests: IELTS

As presented on its official website IELTS (International English Language Testing System) or the International English Language Testing System is the most popular English language test in the world. More than 2.7 million people pass these tests every year as IELTS can create new opportunities for living, studying and working worldwide. The same site proudly announces that more than 9000 organizations in 140 countries accept IELTS, including government organizations, academic institutions or employment and that IELTS is the only English language test that is accepted for the purpose of immigration by all countries that require a language test.

2.1. The IELTS Speaking test

The Speaking test consists of a discussion with a certified Examiner. It is interactive and as close to a real-life situation as a test can get. It lasts between 11 to 14 minutes and it is divided in three parts as follows: in Part 1, the candidate answers questions about himself, his family, his work and his interests; in Part 2, the candidate speaks about a given topic. The candidate will be given a task card which asks him to speak about a particular topic and includes points that he can

cover in his talk. The candidate will be given 1 minute to prepare his talk and he is expected to speak for 1-2 minutes; in Part 3, the candidate has a longer discussion on the same topic. The examiner will ask the candidate further questions connected to the topic in Part 2.The Speaking test is the same for both Academic and General Training tests .The candidate's speaking is assessed on fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation. A band mark is awarded between 1 and 9 with 9 being the highest. The purpose of the IELTS Speaking test is to assess a wide range of skills. The examiner will want to see how well the candidate can communicate opinions and information on everyday topics and common experiences. To do this the candidate will need to answer a range of questions, speak at length on a given topic using appropriate language, organise ideas coherently, express and justify opinions, analyse, discuss and speculate about issues. The candidate will be marked on the four criteria of the IELTS Speaking Test Band Descriptors i.e. fluency and coherence, lexical resource, grammatical range and accuracy, pronunciation.

Speaking test format:

Part 1	Examiner and candidate introduce themselves, candidate answers general questions on familiar topics e.g. family, job, studies, free-time etc.	about 4 to 5 minutes
Part 2	Candidate asked to speak on a given topic (information is written on a task card) for 1-2 minutes. One minute of preparation in which the candidate can make notes is allowed.	4 minutes
Part 3	Discussion on more abstract issue related to the chosen topic in part 2 of the test.	about 4 to 5 minute

Source: https://www.britishcouncil.ro/examene/ielts/date-taxe locatii?gclid=CMCJ75j5-csCFTAz0wod5Y0I8Q

2.2. Tips for preparing the IELTS speaking test

IELTS measures the candidate's reading, writing, listening and speaking skills, and assesses his or her ability to communicate for work, study or life in an English-speaking country.

The Speaking test is a face-to-face conversation with a certified examiner. It is as close to a real-life situation as a test can get. The examiner will ask the candidate about familiar topics such as home, work or studies in part 1. This should help the candidate feel comfortable when speaking.

The decision to take an IELTS test made, enthusiastic students start preparing for it. They read, fill, write, listen and try to speak. After having tried the IELTS sample exam most students conclude that speaking was the hardest. They say: "I could have done better" or "I just couldn't think about what to say at the time" or "Two minutes is too long" - some admit to having been overcome by nerves. The

speaking test can be both frustrating and nerve wrecking for candidates.
IELTS candidates are assessed on their actual performance in an interview that shouldn't last longer than 14 minutes. To someone having to do a speaking test in a foreign language, 14 minutes may seem like a long time but in fact it is a very short time for a candidate to really show off their English speaking ability and perform at their best. There are several training activities that may help students prepare for all parts of the speaking test. Thus this part of the paper aims to provide ideas for activities similar to those students will encounter in the speaking exam.
The first step for the students is to make sure they understand the IELTS test format. They need to know what to expect on the test day. They need to study the test format by looking carefully at the content of each part of the IELTS test sample: listening, reading, writing and speaking and by getting to know the different types of questions they may be asked in each part. Candidates should be relaxed and talk fluently. They will need to speak naturally.

a. One idea suggested by the IELTS trainers themselves is that the students practise their long-turn speaking using questions they have made themselves. It is in fact very simple for the teacher to "create" the pattern questions, but there can be a real benefit in getting the students to do this themselves. They get to understand not just structure of the question, but also the type of response it requires. To see how the questions are modelled, look at this example:
Describe [an adventurous person who you know.] – insert your own topic
You should say:

- *who* [the person is] insert detail wh question
- *how* [you know this person] insert detail wh question
- *what* [this person does that is adventurous] insert detail wh question
- and explain *why* [you think this person likes to take risks.] insert explanation why question

The idea is that there is always a topic based on real life/experience that has to be expanded using detail and some explanation. If students to write their own questions, they are much more likely to see what type of detail they need to use. Also, psychologically they are much more likely to focus on answering the question (rather than provide some pat pre-learned language) if they have written thee questions themselves. That is as good exam practice as it gets.
Additionally, questions can be categorised into *People* (describe someone who..), *Places* (describe somewhere..), *Objects* (describe something that..), *Habits, Plans* and *Experiences.*

b. Another possible activity that proves useful is to make students look around, look at their possessions, go through their photo albums – make cue cards to describe those people, things and experiences – those are exactly the sort of things candidates need to talk about in the exam.

c. Other suggestions regarding the speaking test is to take time before the test to practise speaking with a partner, friend or teacher. Students are advised to talk as much as they can, talk as fluently as possible and be spontaneous, relax, be confident and enjoy using English, develop their answers, speak more than the examiner, ask for clarification if necessary, do not learn prepared answers; the examiner is trained to spot this and will change the question; the students are also

encouraged to plainly express opinions, to practise at home and record themselves.

d. Another useful piece of advice is to use natural spoken English as this will help students speak more fluently and improve pronunciation. Here are some examples of what works: short forms like *it's* instead of *it is*, words like *quite* that are used a lot in speaking, common spoken phrases like *I guess* and *I suppose.* The best way to learn this type of language is often to listen to native speakers. Students are also encouraged to extend their answers. For example, this is inappropriate: Question:" How many languages do you speak?" Answer: "Two. Chinese and English."

The better choice of answer would be:

Answer: "I speak two languages. My first language is Chinese and I speak English too. I've been learning English since I was 10. I started learning it when I was in primary school."

However there are situations when short answers are better, for example if students get a question they do not know very much about. Insisting on talking about it will bring along incoherency.

e. Students may very well give themselves time to think – repeat/reformulate the question. In parts 1 and 3 you there is no thinking time: the candidate is supposed to start speaking immediately. This does not mean, however, that you he/she has to start answering the question straight away. Instead s/he can start by repeating/reformulating or commenting on the question: "What did I enjoy doing as a child? Let me see…" or "That's not something I've thought about before. It's an interesting question.' This approach has several benefits. It is good communication as it allows a little more time to think.

f. It is always good thing for the student to correct himself if he can do it immediately. If the student mistakes and he can correct it immediately, he is advised to do so. This will show the examiner that he has control over the language.

g. This is a speaking test and not a listening test. If you the question is not properly understood, the examiner is encouraged to ask the examiner to repeat or explain it; if a question is not completely understood, the candidate will almost certainly become incoherent.

h. In addition, students are suggested to learn and use a range of functional vocabulary such as opinion language as the examiner will be listening to see whether the candidate can say *I think* and *I like* in different ways. This can be a tough skill to learn as it may require learning new speaking habits.

i. Part 2 of the test is the scary one where the candidate needs to speak for up to 2 minutes. This is a slightly unusual task and the candidate should effectively use the preparation time. An idea could be for the candidate to try and write 1 or maybe 2 sentences so that the ideas are clear before he starts speaking-sentences come easier than words out of a context.

j. The best advice for IELTS speaking test is very simply to listen to the question and its grammar and answer it. One example here is in part 1. If the question in the past tense "What sports did you play as a child?" the only good answer is to use the past tense as well, the examiner will be listening for this.

k. Trainers also suggest not to be afraid of repeating yourself – think

coherence – the “as I was saying” trick may save. Part of the score in speaking is fluency and coherence. One way to become more coherent is in fact to repeat yourself. This is something professional speakers do a lot. The trick is not to use the same words both times. A practical suggestion is to think about finishing the speech by referring back to something that has already been said. A key phrase here may be “As I was saying/As I said before” as it helps show the examiner that ideas are linked together and that in fact is what coherence is.

l. There are persons who find it difficult to explain things or tend to give short answers, and in this case giving examples may help as examples are great for explaining ideas and it is much easier to say for example than because. When offering examples, people just describe things they know and are familiar with and that takes very little mental effort.

m. Details are very good proofs of mastering vocabulary and IELTS is a language test therefore the more language used the better. For example, a question like: “When did you first start to learn English?” should be answered by giving extra details such as: “I first started to learn English when I was in primary school. We had around 4 classes a week with our form teacher and sometimes a native speaker came to help her out and talk to us in English. It was quite funny because we didn’t understand a word he said. At first I hated it because my teacher was very strict and forced us to write in English every day.”

n. Candidates should keep in mind that it is an exam and they need to show the best side of their spoken English. Relaxing too much and becoming too conversational, may harm English. That is not a true dialogue between two people: it is more of an interview with one person speaking and the other listening.

5. In conclusion

The paper was intended to stress the importance of teaching speaking to students of all level focusing on the category of students with advanced proficiency in English. This teaching of speaking should determine the roles played by the teacher, the learner and the materials. The main aim of speaking tasks is to help students develop the fluency of expert speakers where meaning is communicated with few hesitations and in a manner that is appropriate for the context. Learners may develop and improve their speaking performance through activities that focus their attention on language, skills and strategies are therefore an important part of teaching speaking. The paper also presented some possible activities that help learners develop their knowledge and also some tips that enhance their speaking ability.

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MÉTAPHORES CONCEPTUELLES AUTOUR DU THÈME « DÉVELOPPEMENT DURABLE » DANS *ALTERNATIVES ÉCONOMIQUES* (2000-2016)

Bogdan Veche
Department of Marketing and International Business Relations, Faculty of Economics and Business Administration, Timişoara, Romania
bogdan.veche@e-uvt.ro

Abstract: *This paper undertakes to identify and organize metaphorical occurrences in the long articles on sustainable development published in the French magazine 'Alternatives Économiques' between January 2000 and January 2016. The choice of the magazine was based on its well-established reputation, its broad scope of topics dealing with contemporary economic issues and its availability to the general public, which has a direct influence on the language used. The adopted theoretical approach is that of cognitive linguistics as illustrated by the work of G. Lakoff and M. Johnson (1980). Formerly a rhetorical or poetical device, the metaphor is now regarded as a naturally occurring phenomenon, deeply rooted in everyday life experiences and therefore present in language, thought and action in a way that is systematic. Metaphorical concepts are so pervasive and influential that they are at the core structure of our conceptual system. Since a metaphor is an interface between two different kinds of things allowing one to be understood in terms of another, a taxonomy that establishes three main categories of conceptual metaphors (structural, orientational and ontological) allows for a qualitative research whose purpose is to regroup the metaphors identified according to the general concepts that underlie them. Foreign to the field of economics, borrowed from domains as diverse as those of biology, medical science, mechanics, IT or gastronomy, these concepts allow cognitive access to economic activities linked to sustainable development by presenting them as living entities (human or not) in good or poor health, various machines and vehicles, sports and games or (usually harmful) substances, etc. Although heterogeneous, conceptual metaphors are more than just devices that enrich the language used: they are encoded pragmatically so as to make readers aware of sustainable development as a return to ethics and social responsibility as well as of the difficulties encountered in implementing associated policies.*

Keywords: conceptual metaphor; conceptual system; cognitive linguistics; economics; sustainable development.

JEL classification: Q01; Y80

1. Introduction générale

Étayée sur une approche cognitive, cette étude se propose de relever les occurrences métaphoriques dans les longs articles du magazine *Alternatives économiques* traitant du développement durable, sur la période allant de janvier 2000 à janvier 2016 (les magazines auxquels nous empruntons nos exemples seront identifiés par les initiales du titre suivies du numéro). Notre choix du corpus

et de la thématique s'est fait à partir d'un souci de cohérence – le magazine en question s'intéresse à tous les aspects économiques contemporains, regroupés dans des textes de synthèse ou d'analyse plus détaillée – enracinée dans un enjeu fondamental du présent. Le but de cette démarche est de montrer comment la langue de la presse économique dépasse le niveau informatif et s'enrichit de l'utilisation de la métaphore, aussi bien que d'identifier les domaines conceptuels source auxquels les auteurs ont emprunté des éléments à projeter sur le domaine envisagé.

L'idée importante dans les sciences cognitives par rapport à la métaphore est que cette dernière n'est pas seulement un aspect du langage, et encore moins un simple outil rhétorique et poétique ou un « ornement textuel » (Kheovichai, 2015 : 95), mais plutôt une partie essentielle de la connaissance humaine (Silletti, 2013 ; Gibbs et al., 1997). La métaphore structure notre système conceptuel, ce qui fait qu'elle influence notre manière de penser et d'agir, sans que nous soyons généralement conscients de ce système. L'agencement métaphorique est donc une sorte d'automatisme sélectif puisant dans des domaines sensoriels et perceptifs afin de nous faciliter l'appréhension des concepts abstraits (Iordache, 2013), autrement dit de nous permettre de comprendre et de faire l'expérience d'une chose en termes d'une autre (Lakoff & Johnson, 1980).
Le cadre théorique de notre approche s'appuie sur les idées principales de G. Lakoff et M. Johnson (1980). Ces deux auteurs regardent la métaphore comme un mécanisme sémantique et cognitif inspiré de l'expérience humaine – physique, sociale et culturelle – et conséquemment, capable de jeter un pont entre des domaines conceptuels variés à travers un déplacement de sens particulier. Leur approche met en relief la relation d'interdépendance « entre la cognition humaine et les facteurs contextuels et environnementaux » (Rollo, 2012). Cela veut dire que l'esprit devient catalyseur des interactions quotidiennes de l'homme avec son environnement, codifiées à travers les perceptions sensorielles. Le tout est organisé de manière systématique cohérente, afin de permettre une nouvelle appréhension du monde apte à être traduite au niveau du langage à partir des modèles cognitifs de référence.

La perspective conceptuelle de Lakoff et de Johnson (1980) identifie trois types de métaphores qui structurent notre système conceptuel et se traduisent au niveau du lexique : 1) *métaphores structurales* (« structural metaphors ») ; 2) *métaphores d'orientation* (« orientational metaphors ») ; 3) *métaphores ontologiques* (« ontological metaphors »).
1) Les *métaphores structurales* sont appelées ainsi parce qu'elles *structurent* un concept (d'habitude abstrait et complexe) en termes d'un autre concept (plus clair, mieux défini et articulé). L'exemple donné est « LE DÉBAT, C'EST LA GUERRE » (« ARGUMENT IS WAR »), à partir de l'idée qu'un débat contradictoire est un échange verbal dont le but est d'obtenir, à travers ses propos, la victoire sur son interlocuteur. Ainsi, le débat est structuré sous forme de « guerre », de combat verbal lors duquel on « attaque » et « défend » ses idées de manière « stratégique ».

2) Les *métaphores d'orientation* structurent non seulement des concepts individuels, mais des ensembles entiers de concepts auxquels elles donnent une

orientation spatiale (couples « dessus-dessous », « dedans-dehors », « devant-derrière », etc.). Il est évident qu'elles reposent sur des expériences sensorielles et que les concepts spatiaux dérivent en grande partie de notre perception physique (LE PLUS EST EN HAUT ; LE MOINS EST EN BAS), même si, d'un point de vue culturel, l'orientation peut être renversée (par exemple, dans une optique religieuse, la tempérance (EN BAS) est valorisée et l'excès (EN HAUT) incriminé).

3) Les *métaphores ontologiques* permettent de comprendre des expériences en termes d'objets et de substances, ce qui donne la possibilité de les évoquer, les catégoriser, regrouper ou bien de les quantifier : on peut avoir « beaucoup/peu/assez de patience » ou bien ressentir « la pression des responsabilités ». En même temps, un pays peut « sortir de la crise », car cette dernière est vue comme un conteneur, possibilité engendrée par la perception des êtres humains par rapport à leur propre corps délimité du monde, dans le monde, mais récipient de ses manifestations. C'est également à ce niveau que l'on rencontre des cas fréquents de personnification, procédé par lequel on attribue des caractéristiques ou des qualités humaines à des entités ou à des expériences non animées : la famine peut ainsi « frapper les pays pauvres » et l'inflation peut « rogner l'économie ».

De son côté, le développement durable est un concept encore en cours de… développement, qui reste à préciser au fur et à mesure que l'économie et la société contemporaines font la transition dans cette direction, et cela le rend particulièrement fécond au niveau du lexique que l'on adapte selon les circonstances.

2. Métaphores conceptuelles du développement durable

L'économie en général, et le développement durable en particulier se manifestent, bien évidemment, sous forme d'activités et de démarches concrètes au niveau de notre existence individuelle et sociale, mais dans le magazine envisagé – comme, d'ailleurs, dans tous les textes scientifiques informatifs – le rapport reste nécessairement référentiel. D'où la flexibilité supposée par le transfert métaphorique allant de l'abstrait vers le concret, qui fait parfois preuve d'un certain « degré d'indétermination et de flou terminologique » (Rollo, 2012).

Le développement durable étant donc une forme de développement cherchant à répondre aux besoins du présent sans empiéter sur la capacité des générations futures de répondre aux leurs, il vient à l'encontre des grands problèmes contemporains, à l'instar de la pollution et de la croissance économique et démographique démesurée. C'est la raison pour laquelle la carte jouée au niveau métaphorique est avant tout celle de l'écologisme, associé symboliquement au vert. La couleur ayant besoin d'une surface sur laquelle se refléter, la métaphore conceptuelle de base – de type ontologique – est *l'économie est un organisme vivant (caméléonesque,* pourrait-on ajouter*)*.

> « La France semble en particulier avoir renoncé pour l'instant à développer *une fiscalité verte* […]. » (AE 271)

> « Pour la grande majorité, *„le verdissement"* de la consommation répond à une demande de sens […]. » (AE 283)
>
> « […] les villes françaises prennent de plus en plus d'initiatives pour *„passer au vert"*. » (AE 287)
>
> « La Chine *se met (un peu) au vert* » (AE 287)
>
> « Les tout premiers *électrons „verts"* franchiront le détroit de Gibraltar en principe avant la fin de l'année. » (AE 298)
>
> « Une *économie verte* ? Yes we can ! » (AE 301)
>
> « L'enjeu, au fond, n'est pas tant de distinguer les *„emplois verts"* des autres pour pouvoir les compter que de *verdir tous les emplois…* » (AE 301)
>
> « […] investir 2 % du PIB dans la *croissance verte* signifie trouver environ 40 milliards d'euros chaque année. » (AE 301)

Ailleurs, cet organisme vivant se précise mieux grâce à la personnification – procédé métaphorique par excellence. Ainsi, la métaphore l'*économie est une personne* est habituellement associée à des contextes négatifs, le développement durable mettant en cause la conjoncture économique et sociale. L'économie actuelle, à travers certains aspects et fonctionnements, peut donc être incriminée, tandis que les tendances qui s'inscrivent dans l'éthique du développement durable sont valorisées. Parallèlement, elle passe par les grandes étapes de l'existence individuelle (conception, naissance, baptême, mariage, mort).

> « *La croissance […] provoque des catastrophes technologiques* majeures, comme le Japon en fait les frais aujourd'hui. » (AE 301)
>
> « *La croissance est* en effet aujourd'hui *au banc des accusés*. » (AE 301)

> « […] les jeunes ingénieurs les plus brillants, qui sont attirés par des *secteurs plus „propres"*, comme les énergies renouvelables, *qui recrutent aujourd'hui à tour de bras*. » (AE 271)
>
> « […] le terme de développement durable […] *acquit droit de cité* dans les instances internationales. » (AE 314)
>
> « capacités de production, encore *embryonnaires* » (AE 334)
>
> « Le but est de „*couper le cordon ombilical* avec les énergies fossiles", explique Laure Rondeau, directrice du développement durable de la firme. » (AE 355)
>
> « […] un Sommet de la Terre *baptisé* „Rio + 20". » (AE 314)
>
> « Quand le développement économique et social *se marie avec* la préservation du patrimoine naturel : la leçon des parcs naturels régionaux. » (AE 318)
>
> « Nos modes de consommation et de production sont *au bout du rouleau*. » (AE 301)

C'est dans ce sillage que s'ajoute la métaphore – ou plutôt le « bouquet métaphorique » – de la *santé*. Nous avons pu relever des occurrences variées de cette métaphore, à partir d'autant de perspectives. La mise en cause des réalités économiques, sociales et environnementales contemporaines transforme ces dernières en *substances nocives* qui *rendent malade* ou qui *tuent*. La planète devient alors *victime* d'une *contamination* de longue durée, aux effets à

neutraliser, mais dont la multiplication apporte de l'eau au moulin de la critique d'inspiration écologiste.

> « Planète *malade* : tout reste à faire » (AE 314)
>
> « Côté entreprises, sa vision […] donne aux *industriels de la région, éclopés et survivants d'une période meurtrière*, des raisons de croire en l'avenir. » (AE 337)
>
> « le caractère *mortifère* de trois dynamiques, incompatibles avec les limites de notre planète et de ses ressources naturelles : économie, pollution, démographie. » (AE 314)
>
> « La critique de la consommation *se porte bien*. » (AE 283)
>
> « Le retour de la contrainte écologique […] va cependant *redonner* parallèlement *du tonus au mouvement de critique de la consommation* dans les années 1990. » (AE 283)

Selon le dicton latin de Juvénal – « Mens sana in corpore sano » –, la santé de l'économie comme organisme vivant peut s'acquérir ou se manifester à travers des métaphores inspirées du contexte sportif ou des jeux (*l'activité économique est un jeu/un sport*). Ces domaines aident à représenter de manière plus dynamique les phénomènes et les tendances économiques tout en étant solidement ancrés dans la contemporanéité puisqu'ils valident un modèle culturel basé sur le triomphe et la supériorité à atteindre à n'importe quel prix. On peut également ajouter ici quelques occurrences de la métaphore *l'activité économique est une guerre*, et les acteurs des soldats, car elle repose sur la même idée de victoire et de décisions stratégiques. Les contextes négatifs, dans le cas du thème « développement durable » au moins, font appel à l'image du drapeau hissé à mi-mât en signe de deuil – ici de niveau insuffisant (du pouvoir d'achat, de la production, de la croissance).

> « Le développement de nouveaux médias […] ne freine pas l'usage du papier comme support de communication et n'a bien sûr aucun impact sur les autres usages du papier, sinon pour *doper la consommation* (et donc l'emballage, le *packaging* de plus en plus sophistiqué), via la publicité dans les médias. » (AE 269)
>
> « une économie mondialisée où *la concurrence fait rage* » (AE 301)
>
> « Le capitalisme saura *surfer sur cette aspiration* [le droit au bonheur] durant la période fordiste. » (AE 283)
>
> « Ces modélisations ne nous disent pas, en revanche, comment gérer sur le plan social *un tel chassé-croisé de l'emploi* […]. » (AE 301)
>
> « L'extraction du gaz de schiste en France et ailleurs en Europe pourrait-elle *doper notre croissance en berne* ? » (AE 334)
>
> « La *„feuille de route"* de Bruxelles est néanmoins jugée insuffisante par beaucoup d'analystes […]. » (AE 301)

Avant de quitter le domaine du biologique, mentionnons également quelques métaphores conceptuelles d'usage relativement fréquent, qui puisent dans le règne animal fossile afin de renvoyer à des entreprises de grande taille, impliquées d'une manière ou d'une autre, dans notre corpus, dans le soutien du développement durable même si, parfois, le rendement est inférieur aux attentes.

> « Au fil des années, Rainforest Alliance est devenue un *mastodonte* de la certification sociale et environnementale. » (AE 322)
>
> « Avant même d'être entrée en service, la centrale biomasse de Gardanne fait déjà figure de *dinosaure*… » (AE 346)

La biologie végétale n'est, elle non plus, oubliée. Au contraire, les énergies renouvelables sont associées à des plantes, car elles permettront le « verdissement » du système économique dans l'ensemble. C'est à cette occasion aussi que certains auteurs d'articles font appel à des locutions à valeur métaphorique.

> « […] les énergies renouvelables pourraient être au cœur du *bouquet énergétique* de demain. » (AE 304)
>
> « […] les éoliennes *poussent comme des champignons* […]. » (AE 304)

Le système économique complexe que nous connaissons aujourd'hui offre l'image d'un ensemble doué d'une mécanique propre, ce qui engendre un cadre référentiel métaphorique fécond. *L'économie est une machine/un véhicule* et cela en fait un concept plus clairement structuré. Presque tous les moyens de transport apparaissent, avec une prédilection pour la voiture. Le fonctionnement est, tour à tour, complexe et bien aiguillé, mais souvent entravé, ou bien pervers, faussé et impossible à contrôler. Ainsi, l'activité économique, orientée vers ou contre le développement durable, crée un nouvel organisme complexe et fréquemment perçu comme autonome une fois « en marche » (sic !).

> « […] le capitalisme, en dépit – ou du fait – du ralentissement de la croissance, est parvenu à entretenir *la machine à créer du désir*. » (AE 283)
>
> « […] *rouleau compresseur* idéologique du système dominant » (AE 283)
>
> « Des avancées… suivies de *coups de frein* brutaux. » (AE 309)
>
> « […] le *coup de frein* brutal donné à l'essor du photovoltaïque, les *bâtons dans les roues* mis au développement de l'éolien […]. » (AE 309)
>
> « Les régions ont donc de nouveaux pouvoirs, mais leur capacité d'action reste *bridée*, notamment par leur faible autonomie fiscale. » (AE 351)
>
> « Les pratiques d'autopartage et de covoiturage *vont dans le bon sens*. » (AE 350)
>
> « Le *dérapage* du carbone tricolore. » (AE 306)
>
> « Au Burkina Faso, une école forme les ingénieurs dont le continent noir a besoin pour *s'engager sur les rails* d'un développement qui ait une chance d'être durable. » (AE 304)
>
> « Reste à *atterrir* en douceur [rendre socialement acceptable la transition écologique]. » (AE 323)
>
> « « L'Inde a, elle aussi, adopté un plan en 2008 : il prévoit une baisse de 16% des émissions de l'industrie et de 30% à 40% de celles des bâtiments à l'horizon 2030 par rapport à la tendance *„au fil de l'eau"*. » (AE 285)
>
> « […] une évolution *„au fil de l'eau"* (suivant la tendance actuelle)" (AE 301)

Évidemment, il y a d'autres métaphores conceptuelles dans le corpus choisi. Quoiqu'elles manquent de systématicité, elles ne sont pas pour autant moins

riches de sens. Par exemple, le carbone qui, plus haut, était surpris en plein « dérapage » (les émissions augmentent), à l'instar d'un véhicule, subit ailleurs un processus similaire de *solidification métaphorique* sous forme de bien monétisé, puisqu'il acquiert « une valeur sonnante et trébuchante » (AE 276). Dans le même contexte, les pays qui évitent de contribuer autant que les autres à l'effort collectif vers un développement durable deviennent des « passagers clandestins » (AE 301).
L'inventivité des auteurs est parfois surprenante à travers des emplois métaphoriques particuliers. On s'inspire de domaines aussi hétéroclites que la cuisine. Le développement durable en tant que série d'actions à entreprendre de manière bien agencée est associé à une sauce en train de s'épaissir, et cela requiert l'intervention des connaisseurs : « des chargés de mission spécialisés ayant vocation à *faire prendre la mayonnaise* du développement local » (AE 318). En même temps, les immeubles mal isolés sont des « *passoires thermiques* » (AE 317) et on garde le contrôle sur la redistribution envisagée comme un liquide, ce qui fait que l'on peut parler de « la fermeture du robinet » (AE 318). Ailleurs on exploite le domaine informatique, y compris à travers des *inventions* d'ordre métaphorique : répondre aux exigences imposées par le développement durable n'est pas facile pour une entreprise qui est responsable envers bien des tiers et l'on se demande alors où « *mettre le curseur* » (AE 271). Choix difficile aussi lorsqu'il s'agit des Objectifs du Développement Durable (ODD), associés, à cause de leur nombre, à « une sorte de *catalogue de La Redoute du développement* où aucun sujet n'a été oublié » (AE 349).

De temps à autre on est surpris par des phrases plus élaborées, mêlant métaphores structurales, d'orientation et ontologiques :

> « Alerte orange sur les marchés de l'électricité ! Prix de gros *en berne*, *envol* des prix de détail, *retour en force* du charbon, centrales au gaz à l'arrêt, marché du carbone *moribond*, les signes de dysfonctionnements se multiplient en Europe. » (AE 333)
>
> « La Fondation Nicolas Hulot vient de *jeter un pavé dans la mare* de *l'orthodoxie budgétaire* en proposant que les États européens se donnent le droit d'emprunter à taux zéro auprès de la Banque centrale, autrement dit de *„faire tourner la planche à billets"* pour financer ces *investissements verts*. » (AE 301)

Quelquefois on fait des choix métaphoriques en fonction du phénomène évoqué, ce qui aboutit à des effets d'échos sémantiques particuliers (électricité-problème électrique ; source d'énergie renouvelable-énergies renouvelables) :

> « *Le marché de l'électricité en surtension* » (AE 333)
>
> « […] *le vent a tourné pour les renouvelables* en Europe. » (AE 333)

3. Conclusion

Ainsi présentée, la métaphore est avant tout « création de sens » et « une forme de pensée impliquée dans l'expression linguistique à plusieurs niveaux de complexité, un outil cognitif au pouvoir heuristique permettant de catégoriser les

expériences humaines » (Rollo, 2012). Par conséquent, elle est inévitablement présente dans la quotidienneté de notre système conceptuel. De ce fait, elle ne reste point cantonnée aux textes littéraires, mais devient instrument lexical utilisé fréquemment dans les textes à visée informative aussi. Si elle nuance de manière naturelle le discours politique, la médiatisation croissante de l'économie a favorisé un emploi de plus en plus marqué de l'outil métaphorique qui vient colorer et enrichir un lexique autrement standard et parsemé de termes techniques difficilement déchiffrables, inaptes à faire comprendre à tout un chacun les enjeux économiques comme ressort *sine qua non* de notre existence individuelle et collective.

Il convient cependant d'attirer l'attention sur le fait que l'emploi des métaphores conceptuelles n'est point anodin. Si le corpus a un caractère principalement informatif, les emplois métaphoriques sont étayés pragmatiquement. Le développement durable n'est pas un thème traité en toute neutralité ; au contraire, c'est une nécessité à l'échelle mondiale et presque chaque métaphore conceptuelle met en valeur une réussite, critique un échec ou sonne l'alarme face à un danger. Ainsi, les réalités présentées métaphoriquement s'articulent en un plaidoyer pour une attitude plus responsable envers le monde que nous habitons.

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SECTION: ECONOMICS, BUSINESS ADMINISTRATION, TOURISM AND ECONOMIC STATISTICS

SUB-SECTION: ECONOMICS

IS TRAINING A SUNKEN COST?

Yahya Alshehhi[1]
[1]*Károly Ihrig Doctoral School of Management and Business, University of Debrecen, Debrecen, Hungary.*
yahya.alshehhi@econ.unideb.hu

Abstract *Training investment tends to portray diverse advantages for any company, regardless of its cost-effectiveness. The decision for training depends on the utilization of organizational benefits. The aimed of this study to investigate the relationship between decision of training investment and the theory of cost in perspective of accounting and economics. The foundation of collecting data was a secondary resource and employed analyzeing the previous researches as methodology approach. The study found the decision of investing in training is likely depended on opportunity cost concept as a stratrgic tools to gain competitive advantage and benefits in economicst view. More than that a framework and definition term created regarding a notable negative relationship between sunken costs and turnover.*

Keywords*: Training investment; decision making; cost theory; sunk cost; company turnover; sunken training cost.*

JEL classification: D03; D21; M53

1. Introduction

Training can be a sunken cost even in one way. When a training investment is in such a manner that it is constantly done to replace a higher rate of turnover ratio then it becomes a sunken cost. It is important to ensure that a balance between turnover ratio and training investment is achieved for the avoidance of training becoming a sunken cost (Noe, 2010). As much as the individual cost relates to knowledge and commitment, they contribute significantly to determining the sunken cost of any organization. Individual capital is related to any organizations value, especially regarding the procedures, routines, systems and technologies.

2. Litureture review

Training (Definition)

Training often referred to as organizational training, is teaching or providing a person usually an employee of a particular organization with the required and necessary skills and knowledge that helps him or her meet the organization's goals, values and objectives (Noe, 2010).

Benefits of training

Organizational training ensures an employee equips himself or herself with the outstanding capabilities for improved productivity and performance. It is evident that training provides the best determinant factors for the establishment of steadily

sunk cost since it determines turnover (Ahmed Al-Dujaili, 2013). These adjustments are vital for the performance of the organization and, therefore, their mastery boosts the competitive advantage of the organization. Furthermore, training is a mechanism of creating intellectual capital that is important in the advancement of any organization. Noe (2010) asserts that training improves self-motivated creativity that correlates with the performance of any organization.

Expectations from training

According to Ahmed Al-Dujaili (2013), the expectations of training are diverse depending on the scope and type of organization as well as the organizational structure. It is notable that many companies are continuing to involve their employees in higher-leverage training with an expectation of meeting and exceeding the business goals and objectives. Likewise, these trainings are geared towards creating an outstanding instructional design process that benchmarks the organization in a direction aimed at competing in the international market.

Secondly, investors presume training as a mechanism of developing competitive skills that help in outdoing new entrants into the market (Forrester, 2012). As much as the decision for training depends on the financial situation of the organisation, most companies expect it as a mechanism of attracting more customers by creating the power of positive engagement. As much as training is good for any organization in its chain to performing better, and effectively, it also contributes significantly to diverse losses if not managed well (Noe, 2010).

Investment training and how it is recorded in the books of account

Training is recorded as an increased value of intangible assets as well as the human capital. Ideally, training is an intangible asset, and human capital continues to attract more companies, as it is perceived as a method of gaining an advantage over competitors (Forrester, 2012). The reason training is recorded as intangible is the fact that it increases the organization's value. However, it also considers other elements such as customer capital, intellectual capital and social capital. Nevertheless, all these subsidiary assets relate to training that forms the core determinant. Likewise, human capital constitutes diverse attributes, life experiences, inventiveness, enthusiasm and knowledge. According to Forrester (2012), boosting of the human capital require training resulting in its recording in the books of accounting and economics as intangible assets. Any organisation with outstanding human capital tend to have a greater market share and continuous penetration into the market.

Training cost in perspective of accounting and economics

Training costs in the accounting perspective refer to a combination of gains and losses that form part of organizational business operations. In short, it provides the comparison of one aspect of economic action with another (Noe, 2010). The determination of these costs depends on money, time and resources. Accounting comprises of costs such as a variable cost, sunken cost, and opportunity cost. The determination of these costs depends on the other related factors such as training investment.

From an economic perspective, training investment decision investment is only worth venturing in if the results of measuring the business costs, with the inclusion of opportunity costs and ignoring sunken costs, gives a profit of zero or better (Liang, Lee and Tung, 2014). However, this principle does not apply in measuring the performance regarding accounting profit.

Cost Theory (Definition)

The definition of costs differs slightly from accounting and economics. In the accounting perspective, cost refers to the value of money already used up in the production process and, therefore, not available for any other use (Forrester, 2012). Under this perspective, the amount is only recoverable if the amount of money expended provides additional accounts of profit. In the economic perspective, cost refers to gains and losses in money, resources and time of one course in comparison with another. Dwomoh (2015) further notes that the comparison involves gains and losses that result from taking an action or from an action already taken. The major difference in these perspectives is that economic cost also includes opportunity cost.

Types of costs

In economics and accounting, there are diverse costs. An opportunity cost is a substitute cost that requires earlier prediction for the effective pursuance of a particular action. It incorporates certain benefits to businesses. An opportunity cost is an alternative cost for pursuing a given accomplishment. Opportunity cost determines the level of output (Karevold and Teigen, 2010).

The second one is sunken cost. A sunk cost is one that is already used in business operations and cannot be re-used. A sunk cost draws a considerable distinction from other impending costs such as R&D expenses and inventory costs. Sunk costs are autonomous of other future events (Peltokorpi, Allen and Froese, 2014). Moreover, sunken costs are an indication of the cost that is already incurred and there are no any other means of reversing them. Training investment decision depends on these opportunity costs and sunk costs to maintain a balance in the overall performance of an organisation.

The variable cost is also significant in economics and accounting. Variable costs are those costs that fluctuate depending on the volume of production of an organisation (Forrester, 2012). For instance, as the production increases the variable costs rises and as the production decreases variable cost also reduces. On the other hand, there is also fixed costs which do not change with the changing production volume. Often, it involves costs of organizational assets.

Term cost as recorded in accounting and economics

Term cost entails measurements related to accounting principles with limited implications for managerial perspectives of businesses. For example, accounting standards assert for a balanced in the long-lived assets; the organisation should spread the cost over the life of the asset. Financial accounting constitutes the particulars on depreciation (Noe, 2010). However, business perspectives,

especially training investment decisions involve all the expense incurred from the time of the asset acquisition if borrowing was essential in obtaining the asset.
Karevold and Teigen (2010) note that there are certain term costs that are considered irrelevant in the decision making in the perspective of accounting. For example, the costs incurred by the owner of an asset, such as time and effort are considered as tax return and are only relevant to the owner and the not the person acquiring the asset. Therefore, such costs are considered as sunken costs, although they only apply to the owner of the business in the process of deicing on training as a scheme of improving performance.

Definition of sunk costs

A sunk cost is an incurred cost that cannot be recovered. It differs substantially from other future costs such as R&D expenses and inventory costs (Wang & Yang, 2001). Sunk costs independence makes them unique to other costs. Sunk costs involve activities that connect with corporate and governmental innovation through the R&D scheme. Roth, Robbert and Straus (2014) outline that the aim of the sunken cost is to build the R&D of an organization through the provision of innovative ideas and talents.

Factors that affect sunk costs on economic decision-making

Familiarity with sunken costs and decision-making

Familiarity, which relates to sunken costs, has a significant impact on the economic decision making, especially regarding training investment (Khawsaad, 2013). Nevertheless, that impact differs between the progress of decision making and utilization. It is worth noting that there has been a consistent confrontation of the utilization decisions of the decision makers on a daily basis. In fact, some of the decision makers do not even understand that there are making an economic decision, and therefore, do not apply to the domain-specific knowledge.

Time delay in sunk costs and decision-making

The relationship between sunk cost, opportunity cost and training decision making is also evident in the domain of time (Karevold and Teigen, 2010). The time delay in the process of planning for other training sessions is itself a sunk cost as it limits that progress of other operations. Time also has a significant impact on other costs such as opportunity costs that also varies depending on the fluctuations of sunk costs. Furthermore, time contributes considerably to mental accounts, with training investment in particular. For instance, the delay in allocation of funds for subsequent trainings may result in irrelevancy of the training progress resulting in increased sunk costs. Consequently, this is likely to create significant impact on the decision making process. The impact of time on sunken assets and decision making comprise of two important economics aspects, that is, the prospective accounting and coupling (Roth, Robbert and Straus, 2014).

Company Turnover (Definition)
Turnover is the act of replacing one employee with another employee (Peltokorpi, Allen and Froese, 2014). The cause of replacement can be due to various reasons such as retirement, termination of contract, transfers, resignation, death and interagency. Therefore, to cater for the shortage in the workforce, the organization is likely to opt for replacement resulting in a turnover.

Effects of turnover in an organization
First, turnover results in an expensive training of new employees on the skills and talents required for the smooth running of the organization. The process of carrying out an interview as well as job postings to find another new qualified person is always hectic (Khawsaad, 2013). In turn, an organization is likely to incur extra costs in finding the right person as well as ensuring that these people train to acquire the necessary knowledge. Often, people who have worked in the organisation for long retire or rather resign without a plan resulting in such negative implications (Roth, Robbert and Straus, 2014). Furthermore, coupling tends to moderate the impact of payment on consumption in such a manner that there is an attenuation in the consumption, utility as well as buffering of the pain of paying for the consumption pleasure.
Second, the concentration of the analysis on the performance of employees further links turnover to a training investment decision. From the results, it is evident that there is a notable increase total expenditures as the amount of employees' replacements increase. As outlined by Dwomoh (2015), the variance in Net Property together with New Capital Expenditures at the same time is an indication of the relationship between capital investments and labor. Ideally, the size of labor, which depends on training, determines the turnout. Nevertheless, Peltokorpi, Allen and Froese (2014) records that creating a sufficient reason for the relationship has been still not effective since additional employment and training results in reduced turnover.

The rate of turnover used
Exploring the rate of turnover uses U.S. Census Bureau's annual data. The data which majorly focus on the entry and exit of employees in the industry in the United States provide a close understanding of the turnover rate which is presently at 12% (Dwomoh, 2015). The review of the turnover rate involves the perspectives of economics and accounting. Understanding turnover ratio builds the relationship of sunken costs and turnover entails the consideration of two different sunk costs' proxies such as the Total Capital Expenditures for Structures as well as Equipment for Companies with Employees.

The relationship between training investment, sunk costs and turnover
According to Noe (2010), the normative principles of economic decision-making are dependent on the sunk cost effect. As much as some economists assert that education and training are likely to reduce the incidence of sunken cost effect, skill acquisition and analogical reasoning elaborate that training only influences

superior knowledge storage, more accurate problem-solving skills, and retrieval abilities. Furthermore, the access of knowledge differs from an expert to another limiting the significance of education and training in solving the issue of sunken costs.

3. Discussion and summary

Noe (2010) posits that training investment decision is an aspect of intellectual capital accounts that relates to creativity. Even though the context of the training investment account is difficult to understand, it provides a link to various determinants of business capital such as opportunity costs and sunken costs. The financial structure together with the investment decision-making entails distinct costs such as financial capital, structural assets as well as individual capital, which are also the key determinants of sunken costs and opportunity cost.

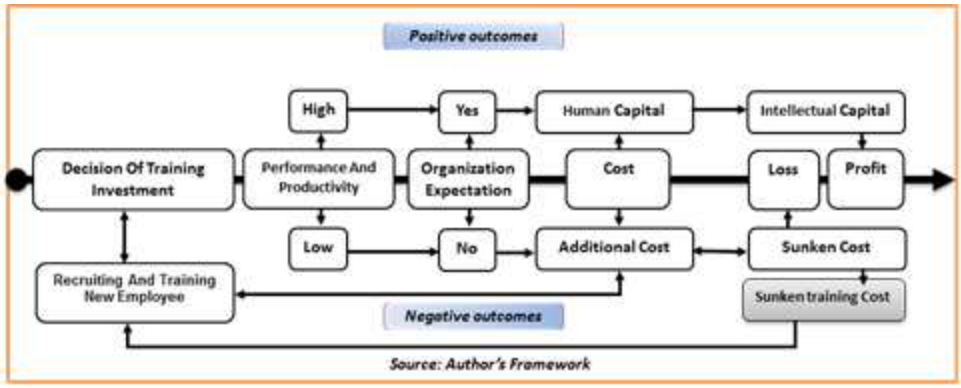


Figure 1: Sunken Training Cost's Framework
Source: The author's framework.

The author's framework above (Figure 1) has two dimensions. The above of center crossing line is representing the positive outcomes, and the below is representing the negative outcomes. The framework shows the relationship between decision investment training and other facets that regulate business costs. It represents the author's idea of how sunken cost influences decision training investment. Notably, recruiting a new employee as presented in above contributes to additional costs such as human capital and intellectual capital that results in a loss of an organization. It is important for any organization to limit the incidences of quitting a given job position as it results in unwanted additional starting costs of training. An extensive and consistent recurring of such costs contributes to other components such as reduced performance and productivity. Furthermore, the organizational expectations go down to an extent that it results to losses. The process of recruiting and training a new employee contributes specifically to sunken training cost . The continuous existence of such costs sums up in the long run, contributing to the entire organizational sunken costs. Therefore, training investment significantly contributes to sunken costs.

It is worth noting that at times a training investment can be a sunken cost if in the process of turnover, the new employee is incapable of meeting the organizational goals and objectives (Karevold and Teigen, 2010). It is evident that some of the new employees in an organisation are likely to incur adverse cases of unproductivity limiting the operational systems of the organisation. The authors assert that the organisation will be not in a position to meet its other systems resulting in unbalanced management. Under such circumstances, training investment becomes a sunken cost.

In general, there is a notable negative relationship between sunken costs and turnover. The aggregated sample of turnover together with sunk costs shows a negative coefficient depicting a negative relationship. Thus, sunken training cost defined as The continuous existence of such costs sums up in the long run, contributing to the entire organizational sunken costs in help by high ratio of job turnover and the employee not meeting oragnazition's goals and objective after been trained.

Chung (2015) posits that an introduction of opportunity cost in the regression results in a controlled size of the number of employees in the turnout, making it a significant element. In fact, opportunity costs have a significant positive effect on controlling the size of any industry as well as its decision-making. Therefore, for efficient decision making, particularly in training investment, it is important to incorporate business opportunity cost as it makes a significant contribution to balancing turnover and sunk costs. It is important to note that the existence of any outstanding business performance depends on its opportunity cost as a strategic tool for gaining competitive advantage (Khawsaad, 2013).

4. Conclusion

Decision training investment, just as presented in the framework is dependent on other factors including sunken costs. Companies with higher sunk costs tend to experience more volatile profits and higher turnover. Further, these companies tend to experience lower training investment decisions. Also, their opportunity costs are always low as they are not able to balance their turnover and sunk costs. For competitive advantage, it is vital for any organisation or organisation to maximize its present value, especially on entry costs such as turnover and opportunity costs. On the other hand, that organisation needs to focus on scraping values unforeseen expenditures such as sunk costs. Nevertheless, for effective decision-making, it is important to consider all the economic and accounting costs. The existence of lower turnover together with lower opportunity depicts the inability of an organisation to make a positive decision on investing more in training as it is likely to result in adverse consequences.

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COMPETITEVENESS PROFILE VERSUS HUMAN DEVELOPMENT PROFILE: THE CASE OF ROMANIA

Anca Otilia Dodescu, Ioana Crina Pop Cohuţ, Afrodita Borma
Department of Economics, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
adodescu@uoradea.ro
ipop@uoradea.ro
bormaafrodita@yahoo.fr

Abstract: *Starting from Porter's well-known approach to a nation's competitiveness and decomposing prosperity, this paper attempts to highlights connections between competitiveness, prosperity, human development and labor productivity and labor utilization in the case of Romania. The comparative analysis of Romania's competitiveness, prosperity and human development profiles was conducted based on The Global Competitiveness Report, Legatum Prosperity Index and Human Development Report. The paper concludes that Romania is currently facing four major categories of challenges directly related with labor utilization: population ageing, the urban-rural dualism, unemployment paradoxes and labor migration which can affect the positive trends and future progress in the areas examined.*

Keywords: country competitiveness, prosperity, human development, labor productivity, labor utilization

JEL classification: F63, O15, O4,

1. Competitiveness and decomposing prosperity – theoretical background

Being one of the most misused and misunderstood terms in the theoretical field, there is no consensus on how to define, measure, explain and predict competitiveness as applied to a nation (Smit, 2010; Ketels, 2006; Daniels, 1991: 56). As Paul Krugman shows, "competitiveness is a meaningless word when applied to national economies" (Krugman, 1994:44).

The most influential approach to the competitiveness of nations belongs to Michael E Porter. According to Porter, "a new theory is needed, that must move beyond the comparative advantage to the competitive advantage of the nation […] must be beyond cost and explain why companies from some nations are better than others at creating advantages based on quality, features, and new product innovation" (Porter, 1990:77). According to Porter's Diamond Model, factor conditions, demand conditions, related and supporting industries and the structure and culture of domestic competition are "the attributes of a nation that individually and as a system constitute the diamonds of the national advantage" (Porter, 1990:78).

Although there is no consensus in defining and quantifying competitiveness, the most used definition of competitiveness of the nation are: a measure of a country's advantage or disadvantage in selling its products in international markets (OECD,

2001); “a sum of economic, social, political factors that contributes to the growth of the welfare of a country (…), a more competitive economy is one that is likely to grow faster over time” (WEF, 2015:4). Also, the Global Competitiveness Index (GCI) produced by World Economic Forum (WEF) is largely recognized as the best competitiveness index.
The Global Competitiveness Index framework is based on 12 pillars grouped into 3 categories: Key for factor-driven economies (1. Institutions, 2. Infrastructure, 3. Macroeconomic environment, 4. Health and primary education); Key for efficiency-driven economies (5. Higher education and training, 6. Goods market efficiency, 7. Labor market efficiency, 8. Financial market development, 9. Technological readiness, 10. Market size); Key for innovation-driven economies (11. Business sophistication, 12. Innovation) (WEF, 2015:4-9). The Global Competitiveness Report 2014-2015 covers 144 economies, classified as in Table 1, by stages of development.

Table 1: Stages of development

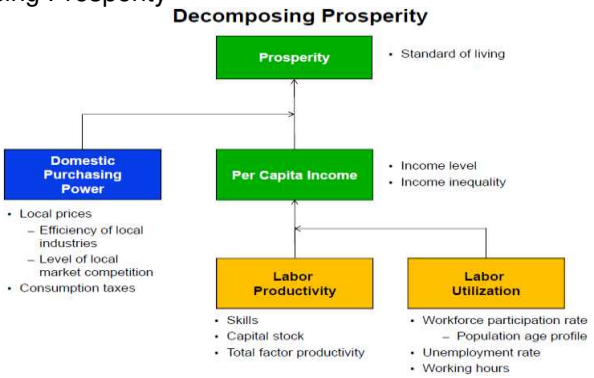
	Stage 1: Factor-driven	**Transition from stage 1 to stage 2**	**Stage 2: Efficiency-driven**	**Transition from stage 2 to stage 3**	**Stage 3: Innovation-driven**
GDP per capita (US$)	<2,000	2,000–2,999	**3,000–8,999**	9,000–17,000	>17,000
Weight for basic requirements subindex	60%	40–60%	**40%**	20–40%	20%
Weight for efficiency enhancers subindex	35%	35–50%	**50%**	50%	50%
Weight for innovation and sophistication factors	5%	5–10%	**10%**	10–30%	30%

Source: World Economic Forum (2015a:10) The Global Competitiveness Report 2014-2015, [Online], Available: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf, [March 19, 2016].

Porter revealed the role of the microeconomic factors in shaping aggregate productivity and national prosperity seen as standard of living (Delgado, et all, 2010:4), stating from the premise that “the only meaningful concept of the competitiveness at the national level is productivity” (Porter, 1990:76). Porter’s explanation is the following: “endowments create the foundation for prosperity, but

true prosperity is created by the productivity in the use of endowments; macroeconomic competitiveness sets the potential for high productivity, but is not sufficient, productivity ultimately depends on improving the microeconomic capability of the economy and the sophistication of local competition" (Porter: 1990; Delgado et all., 2010:4). So, the level of productivity sets the level of prosperity that can be reached by an economy. Further, the productivity of employed workers and the ability to employ a large share of the available labor force influence overall prosperity (Delgado, et.all., 2010:9). In Porter's view, as shown in Figure 1, the scheme of decomposing prosperity is the following: prosperity depends on per capita income (income level, income inequality) that is higly dependent on labor productivity and labor utilization and domestic purchasing power (local prices: efficiency of local industries, level of local market competition and consumption taxes) (Porter, 1990; Ketels, 2008).

Figure 1: Decomposing Prosperity



Source: Ketels, Ch. (2008). Competitiveness: The New Learning, Institute for Strategy and Competitiveness, Harvard Business School, available at: http://ftp.sgh.waw.pl/aci/Conf12june2008/docs/Competitiveness_New_Learning.pdf?PHPSESSID=485476c49be2b8725f8f7628f45d8bc9, [April 20, 2016].

2. Romania: Competitiveness profile

The need for the Romanian economy to become more competitive at the global level is an imperative nowadays. The first AmCham's Romania Competitiveness Report, conducted in 2011 by the American Chamber of Commerce in Romania, presents Romania's position in various rankings of competitiveness concluded by various organizations as shown in Table 1 below:

Table 1: Romania's position in various rankings of competitiveness, 2011

Where Romania Ranks in Competitiveness	Ranking 2011
World Economic Forum's The Global Competitiveness Report 2011-2012 (www.weforum.org)	77
IMD World Competitiveness Scoreboard (imd.ch/wcc)	50
Doing Business 2011, World Bank (www.worldbank.org)	72

Legatum Prosperity Index (2011) (www.prosperity.com)	58

Source: American Chamber of Commerce in Romania, AmCham's 2011 Romania Competitiveness Report, p. 3, [Online], Available: www.amcham.ro, [April 21, 2016].

The evolution of Romania's competitiveness during 2011-2015 according to the World Economic Forum (WEF) can be seen in Table 2.

Table 2: The evolution of Romania's competitiveness indicators during 2011- 2015, World Economic Forum

Competitiveness Report	Romania's Rank
The Global Competitiveness Report 2011- 2012	77 of 142
The Global Competitiveness Report 2012- 2013	78 of 144
The Global Competitiveness Report 2013- 2014	76 of 148
The Global Competitiveness Report 2014- 2015	59 of 144

Source: Data collected by the authors from the World Economic Forum, The Global Competitiveness Report 2012; 2013; 2014; 2015a.

Other analysts of global competitiveness place Romania on similar ranks with a tendency to improve the rank obtained worldwide. According to IMD World Competitiveness Center, Romania's rank has improved from 50 of 59 in 2011 to 47 of 61 in 2015 (Table 2). Thus, the analysis of the IMD World Competitiveness Center analyzed four categories of factors: Economic Performance, Government Efficiency, Business Efficiency, and Infrastructure. Each of these factors is divided, in turn, into 5 sub-factors which highlight every facet of the areas analyzed. Altogether, the World Competitiveness Yearbook features 20 such sub-factors. These 20 sub-factors comprise more than 300 criteria, although each sub-factor does not necessarily have the same number of criteria (for example, it takes more criteria to assess Education than to evaluate Prices) (IMD, World Competitiveness Center, 2015a).

Table 3: The evolution of Romania's competitiveness during 2011 - 2015, IMD World Competitiveness Center

Competitiveness Report	Romania's Rank
IMD World Competitiveness Report 2011	50 of 59
IMD World Competitiveness Report 2012	53 of 59
IMD World Competitiveness Report 2013	55 of 60
IMD World Competitiveness Report 2014	47 of 60
IMD World Competitiveness Report 2015	47 of 61

Source: Data collected by the authors from IMD World Competitiveness Center, IMD World Competitiveness Report 2011, 2012, 2013, 2014, 2015

The Global Competitiveness Report 2014-2015 places the Romanian economy in Stage 2: Efficiency-driven (Romania is ranked 59 of 144) – GDP – 189.7 billion

US$; GDP per capita: 8,910 US$. (WEF, 2015a: 318). According to the WEF, overall, the situation of the Romanian economy's competitiveness has improved in the last five years; the most noticeable improvement can be seen in the positive developments in the last period 2014-2015 (position 59 of 144). Romania's profile of competitiveness for 2015 is outlined in the following Table (Table 5):

Table 5: Romania: The profile of competitiveness, 2015

The index of competitiveness, 2015 = Rank 59 of 144		
Index	Rank (best)	Score (1-5)
Basic requirements (40%)	77	
– Institutions		88
– Infrastructure		85
– Macroeconomic environment		46
– Health and primary education		88
Efficiency enhancers (50%)	50	
– Higher education and training		58
– Goods market efficiency		89
– Labor market efficiency		90
– Financial market development		64
– Technological readiness		47
– Market size		45
Innovation and sophistication factors (10%)	78	
– Business sophistication		90
– Innovation		66

Source: World Economic Forum, 2015b, The Global Competitiveness Report 2014-2015, [Online], Available: http://reports.weforum.org/global-competitiveness-report-2014-2015/economies/#economy=ROU, [March 21, 2016].

The analysis of Romania's competitiveness profile shows that our highest ranking has been recorded in the case of Market size (rank 45), followed by Macroeconomic environment (rank 46), Technological readiness (rank 47) and Higher education and training (rank 58). The current stage of the Romanian economy - efficiency-driven stage of development - and its ranking according to the *World Economic Forum's The Global Competitiveness Report 2014-2015,* show that it reaches the efficiency stage: productivity and wages have increased, the economy is growing, but in order to become more competitive, Romania must begin to develop the production sectors more efficiently and pay much more attention to the increase of the quality of processes and products. Otherwise, the wage growth will lead to higher prices and loss of the competitive advantage gained. Further increase of the competitiveness depends on more complex elements that should be addressed in a manner of priority: increasing the quality of higher education and research – Pillar 5, increased efficiency of the goods market – Pillar 6, development of labor market functionality – Pillar 7; development of the

financial markets – Pillar 8; ability to better value the benefits of the existing technologies - Pillar 9, development of the internal and external market - Pillar 10.
For the year 2015, Legatum Prosperity Index Rankings places Romania on rank 50 of the 141 countries studied. The Prosperity Index analyzes the following indicators: Economy, Entrepreneurship and opportunity, Governance, Education, Health, Safety and security, Personal freedom and Social capital (Legatum Institute, 2015:3). The majority of indicators are in the Upper middle category (31st - 71st): Economy, Entrepreneurship and opportunity, Governance, Education, Health, Safety and security, Personal freedom (Table 6), but in the case of Social capital we note that the situation is worrying (rank 109 of 141).

Table 6: The Romanian Prosperity Index Rankings, 2015

Overall prosperity rank	Country	Economy	Entrepreneurship and opportunity	Governance	Education	Health	Safety and security	Personal freedom	Social capital
50	Romania	69	48	63	61	69	46	37	109

Source: Legatum Institute (2015) The Legatum Prosperity Index Rankings, 2015. [Online], Available: http://media.prosperity.com/2015/pdf/publications/PI2015Brochure_WEB.pdf, [April 4, 2016].

Compared with its neighbors, in terms of prosperity, Romania is ranked after Hungary (rank 45), before Bulgaria (rank 51), Ukraine (rank 71), Serbia (rank 73) and Moldova (rank 92) (Legatum Institute, 2015:3).
While Romania's situation in terms of competitiveness is average, in terms of prosperity it is above average. We can now proceed to examine where Romania ranks in terms of human development.

3. Romania: Human development profile

In terms of human development, according to the United Nations Development Programme (UNDP) 2015, Romania is ranked 52 of a total of 187 countries analyzed; Romania's Human Development Index was 0.793 in 2014, compared to the world average of 0.711, which places Romania in the category of High Human Development countries (UNDP, 2015).
Compared to its neighbors, Romania is only outranked by Hungary, which ranks 44, while Bulgaria is ranked 59, Serbia is ranked 66 and Ukraine is ranked 88. In the period 1990-2014 (Table 7: Human Development Index trends, 1990–2014), we can note a significant increase in the years 1990-2010, followed by a slight increase in the years 2010-2014. Overall, Romania's Human Development Index

has recorded steady growth with an average rate of 0.5% per year. (UNDP, 2015:208).

Table 7: Human Development Index trends, 1990–2014

	Human Development Index (HDI)							HDI rank		Average annual HDI growth			
	Value								Change	(%)			
HDI rank	1990	2000	2010	2011	2012	2013	2014	2013	2009–2014[a]	1990–2000	2000–2010	2010–2014	1990–2014
HIGH HUMAN DEVELOPMENT													
50 Belarus	..	0.683	0.786	0.793	0.796	0.796	0.798	51	4	..	1.41	0.39	..
50 Russian Federation	0.729	0.717	0.783	0.790	0.795	0.797	0.798	50	8	–0.17	0.88	0.47	0.38
52 Oman	..	..	0.795	0.793	0.793	0.792	0.793	52	–4	..	..	–0.06	..
52 Romania	0.703	0.706	0.784	0.786	0.788	0.791	0.793	53	–1	0.04	1.06	0.26	0.50
52 Uruguay	0.692	0.742	0.780	0.784	0.788	0.790	0.793	54	4	0.70	0.50	0.40	0.57
55 Bahamas	..	0.778	0.774	0.778	0.783	0.786	0.790	55	2	..	–0.06	0.51	..
56 Kazakhstan	0.690	0.679	0.766	0.772	0.778	0.785	0.788	56	6	–0.15	1.20	0.73	0.56
57 Barbados	0.716	0.753	0.780	0.786	0.793	0.785	0.785	56	–3	0.50	0.36	0.18	0.39

Source: United Nations Development Programme (2015) Human Development Report, (2015). [online], Available: http://hdr.undp.org/sites/default/files/2015_human_development_report.pdf, [April 5, 2016].

Romania's high Human Development Index, as compared to the world average, has several explanations. Life expectancy at birth in Romania is above the world average (74.2 compared to 70.1), the mean and expected years of schooling are above the world average (10.4 compared to 7.5, and 14.5 compared to 11.6, respectively), and social inequality is low (UNDP, 2013). Education and health care are available, provided by public bodies; adult literacy rates and the literacy rate of the population with secondary education are high compared to the world average (97.7% and 86.8% compared to 81.3% and 57.7%) (UNDP, 2013), the early school leaving rate is low (4.9 compared to the world average of 18) (UNDP, 2013) and remains well above the EU average (EC, 2015:5); the gross rates of enrollment in education are above the world average (primary education - 96%, secondary education - 95% and tertiary education – 63.8%) (UNDP, 2013).

There are, however, many deficiencies in Romania's education and health care systems. The level of satisfaction regarding the quality of education is significantly lower than the world average, and the level of satisfaction regarding the quality of medical care is lower than in any other new EU member state, while the budget allocations for education and health care are significantly lower than the European average (EC, 2015; UNDP, 2013, 2015). In the last reports, the European Commission stressed insistently that Romania – the EU Member State with the highest Roma community - provides limited availability and access of early childhood education and care services for the Roma community (EC, 2015:5). While the problems of the Roma community are old and have been reported in past reports, too, the urban-rural divide in Romania is starting to become worrying, namely poor access to the education and health care systems for the rural population.

In our view, while the deficiencies of Romania's health care system are decreasing, those of the education system are getting worse. The PISA rankings place Romania on rank 14 of 17 countries in the region, the general indicators – reading, mathematics, science and the quality of higher education - are well below the

OECD average (OECD, 2014). The European Commission calls attention to the recent increase in early school leaving rate, to the tertiary attainment rate that is the second lowest in the EU, and to the participation in lifelong learning that is far below the EU average (EC, 2015:5), and especially to the problems of higher education: inadequate quality, inadequate labor market relevance and the accessibility for disadvantaged groups (EC, 2015:5). There are no Romanian universities in the Academic Ranking of World Universities or the QS World University Rankings, and there is only 1 university – Politehnica University of Bucharest - in the top 500 Webometrics Ranking (Webometrics Ranking, 2013). In the year 2015, in the World University Rankings, the University of Bucharest was ranked 860, while Politehnica University of Bucharest was ranked 1492 (Webometrix Ranking, 2015).

Conclusions

The situation of the Romanian economy's competitiveness, and also that of human development was, overall, noticeably improved in 1990-2015. By comparing Romania's competitiveness and human development profiles, we could conclude that the average ranking in the terms of competitiveness and the high ranking in terms of human development are encouraging. In our opinion, Romania is currently facing 4 major categories of challenges that can affect the positive trends analyzed in this paper and the future progress:

1. **Population ageing.** Romania's population is *shrinking from year to year* (21.3558 mil. inhabitants on January 1, 2012 compared to 21.4138 mil. inhabitants on January 1, 2011) due to negative natural growth (-3.6 people per 1,000 inhabitants in 2012, which is by far the worst situation registered since 1960) and due to *migration* (-2.8 in 2011). Romania's population is also in an accelerated ageing process. In 2012, the average age in Romania was 39.0 years compared to 33.4 years in 1992, while the dependency ratio of the elderly population (the population aged 65 and over in relation to the population aged 15-64) was 21.5 % (the EU average is 26.8 %) compared to 16.6% in 1992 (Eurostat, 2013).
2. **Urban-rural dualism**. According to the AMIGO Survey conducted quarterly by the National Institute of Statistics (INSSE) in individual households, in 2010, at a national level, the agricultural sector comprised 31.9% of the total employment, while 52% of the active rural population was working in agriculture (INSSE, 2010). By occupations, the largest share in total employment is held by farmers and skilled workers in agriculture (25.7%) and craftsmen (14.7%) (INSSE, 2010). Also, 87.4% of people engaged in secondary and multiple activities and 90.1% of those who said they were own-account workers and unpaid family workers (farm work is their secondary activity) live in rural areas. (INSSE, 2010).
3. **Unemployment paradoxes** refer, in particular, to the low rate of unemployment and in contrast to the chronic problem of youth unemployment. The surprisingly low unemployment rate in Romania – 6.8 % compared to the EU average of 11.4% in December 2014 (Eurostat, 2015) – hides, in fact, that labor migration and employment in subsistence

agriculture coexist with a rate of exclusion of young people compared to the total population almost double the EU average (44.4 % in Romania compared to the EU average of 29.8 %, in 2011) (Eurostat, 2013). Moreover, the problem of youth unemployment has become chronic in Romania, and the labor market integration of graduates is seriously threatened by requests for work experience made by employers. Romania has taken steps to address youth unemployment, in particular through the Youth Guarantee, but there have been delays in implementation (EC, 2015:4).

4. **Labor force migration.** According to the National Institute of Statistics, in 1990-2010, a negative migration balance of 298,569 people has been recorded as a result of the emigration of 404,396 people and the immigration of 105,831 people (INSSE, 2011). According to the World Bank, in 2009, the number of Romanian emigrants was 2.769 million and this has represented 13.1% of the total population. The amount of money sent by them to Romania accounted for 4.4% of GDP (World Bank, 2012). Romania is ranked 10 in a global ranking on immigrant remittances; the value of remittances was estimated at 8.38 billion dollars in 2010, 4% of Romania's GDP (World Bank, 2012).

In our view, population ageing, the economic vulnerability of the rural areas as compared to the urban areas, the rural labor market dominated by the active people engaged in subsistence economy, the problem of chronic youth unemployment aggravated by the problems of adapting the education system to the labor market and labor migration are the factors that may hinder Romania's future progress in terms of competitiveness and human development. The lack of urgent and coherent strategies to meet the above-mentioned challenges will lead to: lower quality of the remaining workforce in the country, diminishing quality and competitiveness of Romanian products and services, depopulation in rural areas, increased crime rates and insecurity in urban areas, weakening social security systems etc.

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A CONCEPTUAL MODEL REGARDING THE INFORMATION TO BE MADE AVAILABLE ABOUT PROJECTS FINANCED BY THE EUROPEAN SOCIAL FUND

Cristina-Elena Ciocoiu
Faculty of Agro-food and Environmental Economics, the Bucharest University of Economic Studies, Romania
cris.ciocoiu@yahoo.com

Abstract: *Providing information to the general public about the interventions that receive financial assistance from the European Social Fund (ESF) is a requirement of the European Union (EU) regulations that member states must fulfill. Although, these requirements have evolved from 2007-2013 to 2014-2020, they still offer a very limited insight into the achievements made possible by the EU assistance. The introduction of the new e-cohesion concept in the implementation of the EU-funded programmes offers the national authorities new opportunities in terms of information that could be easily made available to the citizens. The paper presents an empirical study of the information already presented by the new member states that joined the EU after 2004 (except Croatia) with regard to the projects funded by the European Social Fund in 2007-2013, identifying best practices in terms of types of data that are published. Building on the experience gained in 2007-2013 and taking into account the new requirements imposed by the European Commission for 2014-2020, the paper suggests a conceptual model for data to be made available to the general public about ESF projects for the years to come. The suggested model is more result-oriented, shifting the focus from the information regarding what is to be achieved to what has actually been achieved. As it is still an early stage in the implementation of the 2014-2020 generation of ESF operational programmes, the model could be useful for the authorities in charge of their implementation when designing the webpages that publicize the use of the EU funds. The model offers an increased transparency of the ESF spending in the member states and allows a wider range of data to be used for different types of analyses and research the results of which would contribute to an increased efficiency of the EU regional policy implementation.*

Keywords: regional development; European Social Fund; information and publicity; e-cohesion; data availability

JEL classification: R58; C80

1. Background

The European Social Fund (ESF) is one of the structural funds provided by the European Union (EU) to the member states, within the framework of the regional

policy. The ESF addresses development needs in areas such as employment, labour market, education, lifelong learning, improvement of public policies and services.
The assistance granted by this fund must be publicized, both the authorities responsible for its implementation and the beneficiaries receiving the financial support having obligations imposed by the European regulations in this respect. For 2007-2013, the minimum information required was the name of the beneficiary, the title of the project and the value of the granted amount (European Commission, 2006). The member states were able to decide to make publicly available additional information or not.
The amount of information required for 2014-2020 increased significantly. In addition to the information mentioned above, the responsible authorities have to provide details regarding the start and the end of the project, a brief summary, the eligible expenditure and the percentage of EU assistance (as established at priority axis), the location of the project and the classification of the project according to a predefined list of criteria established by the European Commission, covering 8 dimensions, such as intervention field, type of territory covered and economic activity (European Commission, 2013). New features are also required, such as spreadsheet format (.CSV/.XML) and single website/portal with information about the operational programmes implemented in the member state.
We foresee that the amount of information that could be made publicly available could also be increased as a consequence of the implementation of the e-cohesion concept, which transforms the communication between the beneficiary and the national authorities from a flow of paper documents to an electronic flow of data. The member states expressed their willingness to provide additional information (Technopolis Group, 2010) despite the additional burden involved.

2. Purpose

The paper explores the information currently available with regard to the ESF projects implemented in the member states that joined the EU after 2004 (except Croatia, due to its late admission). The purpose of this analysis is to build a conceptual model for data to be made available to the general public, taking into account the requirements imposed by the European Commission and building on the experience gained in 2007-2013. The model suggests a shift of focus from the financial aspects of the projects to a more technical approach, shading more light on the achievements obtained as a result of implementing the ESF-funded interventions. Since the implementation of the 2014-2020 ESF operational programmes is still in its early stages, the model could be taken into consideration when elaborating the design of the webpages that publicize the use of the EU funds at the level of the member states.

3. Methodology

The process of building the conceptual model included 3 stages. First, an empirical study of the information already available to the general public was performed. In this respect, the analysis focused on the webpages of structural

funds from the selected member states (that joined the EU after 2004, except Croatia): Bulgaria, Romania, the Czech Republic, Estonia, Latvia, Lithuania, Cyprus, Malta, Slovakia, Slovenia, Poland and Hungary. These countries were selected as it was considered that they form a more homogenous group due to their similar experience regarding the implementation of structural funds.
Although making data available to the general public was mainly a responsibility of the managing authorities in 2007-2013, all member states analysed have dedicated webpages, managed at national level, that include accessible information regarding the projects implemented within all operational programmes or at least all the ESF programmes (the Czech Republic). The webpages used are presented in Table 1.

Table 1: National webpages containing information about EU-funded projects

Member state	Webpage
Bulgaria	http://umispublic.government.bg/Default.aspx
Cyprus	http://www.structuralfunds.org.cy/
Czech Republic	http://www.esfcr.cz/modules/projects/index.php?lang=1
Estonia	http://www.struktuurifondid.ee/
Hungary	http://emir.nfu.hu/kulso/jelek/index.php
Latvia	http://esfondi.lv/aktivitates
Lithuania	http://www.esparama.lt/igyvendinami-projektai
Malta	http://eufunds.gov.mt/en
Poland	http://www.funduszeeuropejskie.2007-2013.gov.pl
Romania	http://old.fonduri-ue.ro/baza-de-date-proiecte-contractate
Slovenia	http://www.eu-skladi.si/kohezija-do-2013/razpisi#c1=upravicenec&c0=5v
Slovakia	http://www.nsrr.sk/sk/mapa-realizovanych-projektov-po-2007-2013/

Source: Author's own adaptation

The information available was grouped in 5 main categories: beneficiary, financing contracts – financial, financing contracts – technical, results obtained – financial, results obtained – technical, as explained in Table 2. The compulsory information was not taken into consideration (name of the project's beneficiary, title of the project and public grant).

Table 2: Content of categories of information

Category of information	Explanation of content
beneficiary	information regarding the beneficiary, including project partners
financing contracts – financial	committed amounts as reflected in the financing contract
financing contracts – technical	non-financial information included in the financing contract (general data and to be achieved)

Category of information	Explanation of content
implementation results – financial	amounts spent as a result of the implementation of the project, resulting from the beneficiary's reimbursement claims and payments made by the authorities
implementation results – technical	information regarding the non-financial information resulting from the beneficiary's progress reports (achieved)

Source: Author's own adaptation

Special attention was paid to identifying best practices across the member states, in terms of the types of available data. The best practices were later on included in the suggested model.

In the second stage, an analysis was performed on the data to be collected from the beneficiaries by the responsible authorities in order to grant the ESF assistance in 2014-2020. This reflects the amount of data that could be made available to the general public, with due regard to the constraints imposed by the regulations on intellectual property. For 2014-2020, this information is formally imposed by the EU regulations in the form of data to be included in the national monitoring IT systems for structural funds.

Finally, in the third stage, the model for data to be made available to the general public about ESF projects was built. The model is just a starting point, the more authorities decide to make public the information about the interventions that receive financial assistance from the ESF, the more transparent becomes the entire process of granting and using the support.

4. Results

4.1 The information available regarding 2007-2013 ESF projects

As mentioned above, 5 categories of information were used in the analysis. The first one concerns data about the beneficiary and, in addition to the name of the beneficiary which is compulsory, according to the EU requirements, 4 different types of information were identified: address, fiscal identification code, legal form and name of the partners involved in the implementation of the project. Figure 1 reflects the distribution of this information across the 12 member states analysed.

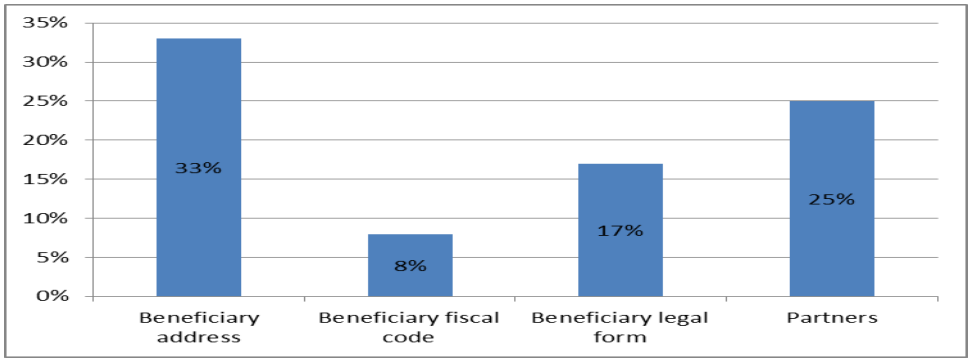


Figure 1: Member states providing additional information about beneficiaries
Source: Author's adaptation of information from Table 1

Most information is provided by Bulgaria, the Czech Republic and Latvia, who publish information about the address of the beneficiary and about the partners. A best practice is provided by Poland, where the fiscal identification code and the legal form of the beneficiary are available.
The second category of information analysed is the financial data from the financing contracts concluded between the beneficiaries and the responsible authorities. The analysis revealed 4 pieces of information, apart from the compulsory data regarding the grant awarded: the ESF amount, the eligible budget, the beneficiary's contribution, the total budget. Figure 2 presents the availability of information at the level of the member states.

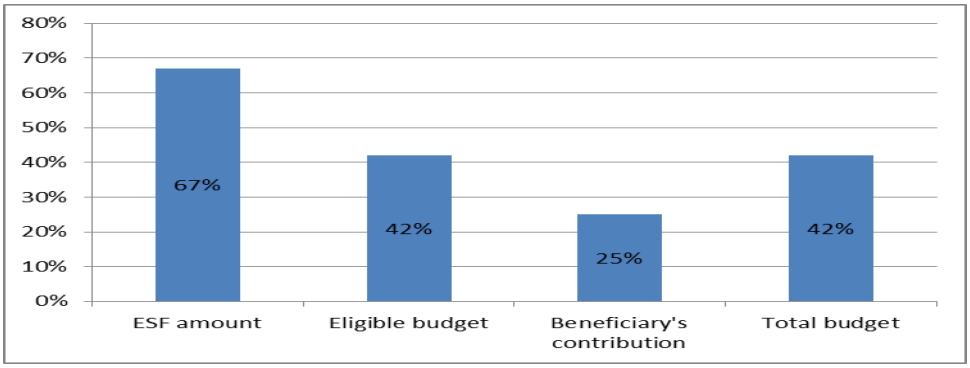


Figure 2: Member states providing additional financial information about projects
Source: Author's adaptation of information from Table 1

Poland provides all the 4 types of data mentioned above, followed by Latvia and Slovakia with 3 types of data. Most member states publish the value of the ESF assistance and only 3 the contribution of the beneficiary.
One of the most interesting categories of information includes technical data from the financing contracts. A wide range of information is included in this category, from important dates (start date and end date of the project, financing agreement date, financing proposal date), to short description, objectives, activities, expected results, as presented in Figure 3.

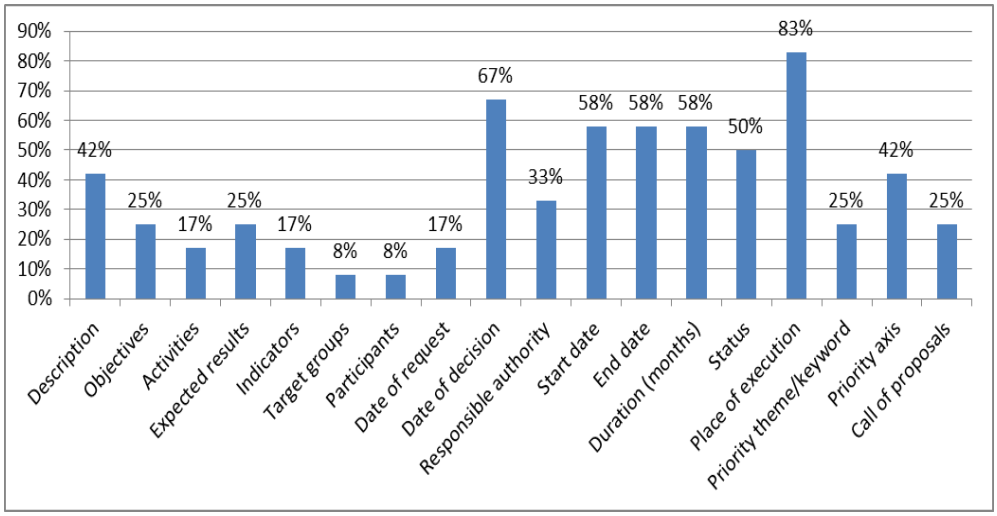


Figure 3: Member states providing additional technical information about projects
Source: Author's adaptation of information from Table 1

Most information is provided by the Czech Republic (11 data), Latvia and Lithuania (10 data) and Bulgaria (9 data). A good practice can be identified in the case of Poland and Romania, who publish the priority theme, which is a classification of interventions provided by the European Commission. Also, in the case of Slovenia, a keyword describing the scope of the project is published, such as training, employment, social inclusion.

The fourth category of information regards the financial results obtained. In this category, 4 pieces of information were found: amount actually paid, amount actually paid per funding source, amount actually paid per year and year of final payment. How many member states publish this type of data can be observed in Figure 4.

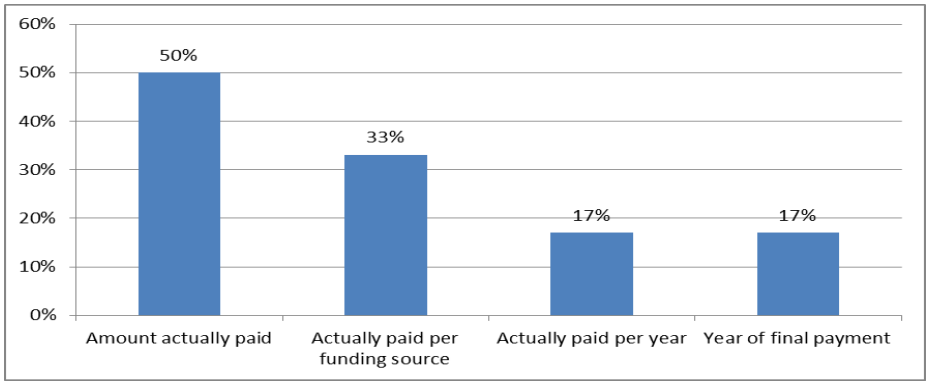


Figure 4: Member states providing additional financial information about implementation of projects
Source: Author's adaptation of information from Table 1

Most detailed information is provided in this case by Bulgaria and Romania. A best practice can be identified in the case of Romania, which makes available detailed information about the reimbursement claims of the beneficiaries and their related payments, per funding source.
Finally, the fifth category of information regards the implementation of the projects. Very little information was identified falling in this category, namely achieved results and list of contractors. Only Slovakia publishes data on the results obtained by the projects and Bulgaria on the names of contractors. Nevertheless, a best practice is provided by the Czech Republic, which has a separate database of studies, reports, methodological papers, training programmes etc., resulting from the implementation of the ESF projects. A similar approach was identified in Lithuania, allowing users to identify the results of the implemented projects, for instance strategies, studies, training programmes etc. in a specific programme, year and domain.

4.2 The information collected for 2014-2020 ESF projects

The 2014-2020 regulations ask member states to collect a large amount of information with regard to ESF projects, namely 113 pieces of information (European Commission, 2014). This information is to be stored in electronic format within the national IT systems managing the EU-funded programmes and projects. The main types of data are reflected in Table 3.

Table 3: Data to be collected by member states for 2014-2020

Category of information	Data collected
beneficiary	name/unique identifier, type (private or public), contact details
financing contracts – financial	eligible budget, public expenditure, public support
financing contracts – technical	name/unique identifier, short description, date of request, start date, end date, priority axis, type of region in question, classification of project according to categorization criteria (intervention field, thematic objective), target for each indicator broken down by gender
results obtained – financial	date of each payment claim from beneficiary, date of each payment made, eligible expenditure claimed, out of which public, payment value
results obtained – technical	actual end date, achievement for each indicator per year, broken down by gender, name/unique identifier of contractors, contract value, contract type, procurement type

Source: Author's adaptation of List of data to be recorded and stored in computerized form in the monitoring system (European Commission, 2014)

4.3 Conceptual model for data to be made available to the general public about ESF projects

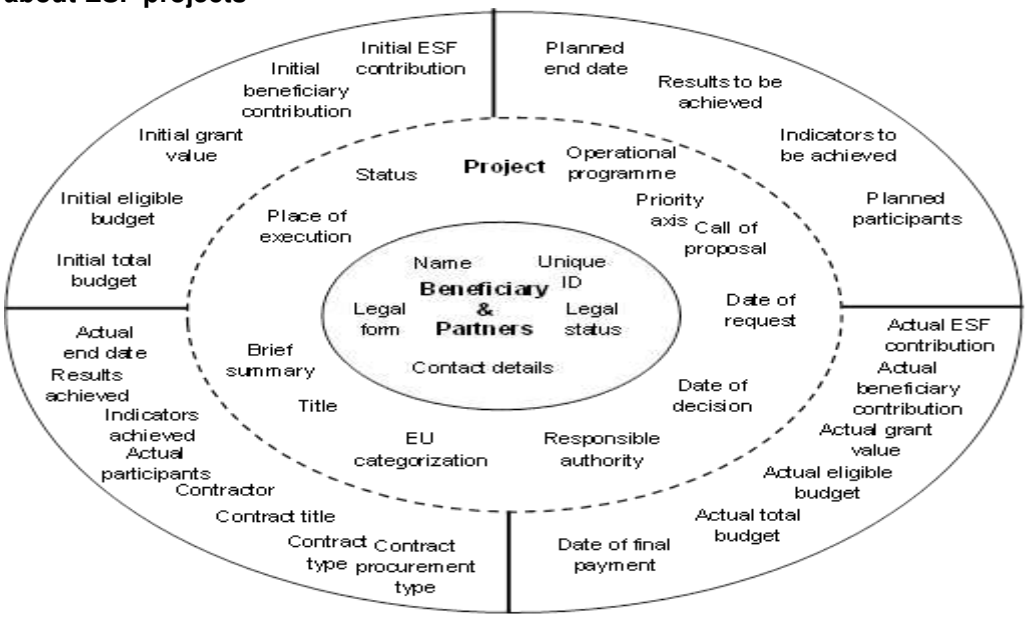


Figure 5: Model for data to be made available to the general public about ESF projects

Source: Author's adaptation

The model we propose has 6 different sections. The first one concerns the beneficiary and its partners and includes data regarding the name, a unique identifier, which could be the fiscal registration code, in case the name suffers modifications, contact details, in the sense of an email address where additional information can be requested, the legal status (public or private) and the legal form (such as microenterprise, small, medium or large enterprise etc.).

The second section describes general information about the project, including information such as the operational programme, the priority axis and the call of proposal under which the project receives the financial support, the date of request of funds (the date when the financing proposal was received), the date of decision (the date of the financing contract), the responsible authority (the name of the intermediate body, if the case or the name of the managing authority), the compulsory dimensions of EU categorization, the title of the project, a brief summary (such as objectives and main activities), the place of execution (at least the name of the locality and of the region) and the status of the project (in implementation/finalized/interrupted).

The third and fourth sections include financial information from both the financing contract (planned) and the implementation of the project (actual). The last 2 sections include nonfinancial information. One section covers the initial stage of the project, containing data such as results and indicators to be achieved, planned end date and participants (in terms of typology and number). The other section

focuses on the implementation of the project and includes data regarding achievements; the actual end date of activities; procurement contracts (title, contractor; type – works, services, infrastructure; procurement type – direct award, open procedure etc.).
The model presented above represents minimal information that authorities should consider making available to the general public. Any additional information could also be added.

5. Conclusions

The amount of information currently available for the general public for 2007-2013 ESF projects varies considerably among the new member states. Some member states, such as Bulgaria, Latvia, Slovakia and the Czech Republic, publish a large amount of data, while others, such as Cyprus, Slovenia and Malta provide very little information, apart from what is required by the EU regulations.
Also, the typology of the public information is diverse. More than half of the member states analysed publish data regarding the ESF amount, the amount actually paid, the date of decision, start and end date of the project, duration, place of execution and status. In terms of implementation results, only 2 member states make available information regarding contractors and results obtained. An interesting feature was identified in the Czech Republic and Lithuania, where separate databases of studies, reports, training programmes etc. resulting from the implementation of the ESF projects, are available. The analysis performed showed that there is a large room for improvement in this area.
New opportunities regarding data availability arise also from the implementation of the e-cohesion concept, according to which all communications between the beneficiaries and the authorities will be carried out electronically. From financing requests to financing contracts, reimbursement claims and reports of progress, a large volume of data will be available in real time in an electronic format.
Taking into consideration the new requirements of the European Commission, regarding the information and publicity, the data to be electronically collected and the e-cohesion concept, the available amount of data will allow the responsible authorities to increase the information that they make available to the general public.

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CONSIDERATION REGARDING BUDGETARY POLICY IN ROMANIA

Ruxandra Curea-Pitorac[1], Nicoleta Sîrghi[2]
[1]East-European Center for Research in Economics and Business (ECREB), Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, Romania
[2]Economics and Economic Modeling, Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, Romania
ruxandra.curea@e-uvt.ro
nicoleta.sirghi@e-uvt.ro

Abstract: *This paper aims to study the dynamics of the government expenditures, revenues and budgetary balance and to determine the type of budgetary policy adopted in Romania, in the period 1999-2015. The research starts with a theoretical review of the budgetary policy which includes the actions of the governmental authorities, regarding revenue collection and budget expenditures, channels and means of attracting resources. This policy is considered to be a tool in influencing the economy to attenuate the cyclical fluctuation in economy, by accepting the budgetary deficit as a viable solution for the revival and simulation of economic growth. The real value of budget balance represents the actual balance recorded during a certain period and the cyclic balance indicates the difference between the actual balance and the structural balance. This research is focused on the study of budgetary policy implemented in Romania by making a quantitative analysis of the following macroeconomic indicators: governmental expenditures and revenues, budgetary deficit and real GDP. Moreover, a correlation between the dynamics of the structural budgetary deficit and the sign of the output gap has been done, and the results have indicated that, in the analyzed period, a restrictive budgetary policy was adopted in 2000-2004 and in 2011-2014, and an expansionist budgetary policy was implemented from 2005 to 2010. The results of this research highlight the main particularities of the budgetary balance in Romania and the actions taken through this channel in different phase of the business cycle.*

Keywords: GDP, government revenue, government expenditure, budgetary deficit, budgetary policy

JEL classification: H5; H6

1. Introduction

The issue of budget deficit has become a main concern in the macroeconomic policy starting with the 80's when several countries have recorded budget deficits. This concern is a legitimate one, because a high level of budget deficit implies future growths in taxes, as well as cutting off expenses which leads to a drop in the economic growth.

The objective of this research is to study the dynamics of the government expenditures and revenues and the type of budgetary policy adopted in Romania, from 1999 to 2015.
First, we made a quantitative analysis of the representative macroeconomic indicators for the budgetary policy (government expenditures and revenues and budgetary deficit), then the research continues with the determination of the structural budgetary deficit and of the cyclical component of the GDP and its trend, using Christiano-Fitzgerald filter in Stata software.
Finally, we analyzed the dynamics of the structural budgetary deficit in correlation with the output gap and determine the type of the budgetary policy adopted by the governmental authorities in Romania, in the analyzed period.
The paper is organized as follows: Section 2 reviews the related literature on the budgetary policy, Section 3 presents the empirical strategy and the data, Section 4 emphasizes and discusses our main results, and Section 5 concludes.

2. Literature review

In the context of general macroeconomic policy, a special place is given to budgetary policy. The state involvement in the smooth running of the economy, in adjusting imbalances and regulating activities requires a growth in public expenses determined by budgetary policy measures. This includes the actions of the governmental authorities, regarding revenue collection and budget expenditures, channels, means of attracting resources, using them according to their intended meaning, to ensure balance and economic revival. The budgetary policy is mirrored in the state budget as a key element of the public budget, being the policy of budgetary resources and expenditures.
Based on state budget, budgetary policy can be defined as an “assembly of options and decisions regarding the formation, allocation and efficient use of budgetary resources and balancing the budget for a durable development of society”. (Filip, 2002: 50) This policy has a wider range than fiscal policy as “the intervention tools are non-fiscal revenues, expenses, surpluses and budgetary deficits.’’ (Samuelson, 1967: 519)
The budgetary policy is regarded as a major tool in influencing the economy to pursue the task of attenuating the economic cycle fluctuations and reducing the deviation of inflation or deflation by choosing and pursuing adequate policy measures of budgetary expenditures alteration.
The real value of budget balance represents the actual balance recorded during a certain period, and the cyclic balance indicates the difference between the actual balance and the structural balance. The cyclic balance shows the influence of the economic cycle phases on public revenue and expenditures. The structural budget balance, known as balance of full employment, is the budget balance when economy is at its full usage of production capacities, if the actual GDP coincides with the potential GDP. The structural balance is influenced by discretionary measures: tax rates, welfare levels, defense expenditures level etc. (Samuelson and Nordhaus, 2000: 746-747)
The significance of the cyclic balance is especially important when choosing the

policy options. The actual balance doesn't only show the alteration of budget expenditures and expenses, but also the results of their automatic adjustment to the state of the economy. If the actual deficit grows, this evolution is not necessarily due to the state intervention in economic simulation, but can also be due to a decline in economic activities. This is why, for the foundation of budget balance policy the cyclical component of the budget is taken into account.

The option of a surplus budget balance is legitimate in times of economic boom, when there is an accelerated pace of production growth. In these conditions the facilitation of a budgetary surplus is correlated to the adoption of the right measures to reduce demand through taxes and public expenditures, so as to appear correlated to the option of a balance deficit, being adopted according to the actual state and evolution of the economic activity. (Samuelson and Nordhaus, 2000: 770)

The macroeconomic adjustment to budgetary deficit has been set on the grounds of the economic crisis phenomena, when the classic idea of budget balance was dropped out, by accepting the budgetary deficit as a viable solution for the revival and simulation of economic growth. In this case the budget deficit is a key component of the expansionist fiscal and budgetary policies, of influencing the aggregate demand.

The decisions of developing and implementing the adjustment budgetary policy, according to the budget balance are made differently: *(1)* expansionist budgetary policy, based on stimulation of growth, in the case of budget deficit; *(2)* restrictive budgetary policy of influencing the demand and a policy based on influencing the supply, in the case of budget surplus; and *(3)* expansionist budgetary policy, based on stimulation of growth and restrictive in influencing the supply, in the case of budget equilibrium, by altering the public expenses at the same rate and in the same direction.

The efficiency of budgetary policy also depends on the type of policy used, thus: during the stage of slowing down or stagnation of activity, it is more convenient to increase expenses than reduce taxes, because it is easier to implement a revival policy than a restrictive policy.

During periods of recession, that bring along crises and unemployment, the state investments to create workplaces and stimulating production, determine a growth of the deficit, considered to be a "starting button" that impels the economic stagnation and a source of support for future generations. (Galbraith, 1997: 56)

In terms of acceptation and limitation of budget deficit, the state intervention through budget deficit in macroeconomic adjustment must be made only during the stages of recession, thus avoiding the prolongation of the budget deficit state. While limiting the intervention, the evolution of public debt must also be taken into account, because, as Paul Samuelson showed, "as long as uninterrupted deficits result in a growth of the public debt which is faster than the growth in the net national income, an economic welfare cannot be supported." Samuelson (in Văcărel, 2000: 415)

The restrictive budgetary policy represents a type of macroeconomic policies implemented in countries that demand financial assistance from institutions, to cover the external payments balance deficit, having as main cause the surplus of

internal demand

3. Methodology and data

Starting from these premises, the paper studies the relevant macroeconomic indicators of the budgetary policy (government expenditure and revenues and budgetary balance) by using a quantitative analysis and a correlation to the real GDP for determining the type of budgetary policy adopted in Romania. The data series were collected from the EUROSTAT database for the period 1999-2015, at quarterly level.

We perform Augmented Dickey-Fuller test for unit root for the data series, we choose the model with intercept and 0 lags and obtain that: the natural logarithm of Real GDP has a T statistic of -4,224 lower than critical value (at 5% level) of -2,917 and for the budgetary deficit (as % of GDP) T statistic is -5,871 lower than critical value (at 5% level) of -2,917. Therefore, the null hypothesis is rejected and the data series are stationary.

Using Christiano-Fitzgerald filter we extract the cyclical component from the series, obtaining the output gap and the structural budgetary deficit.

Taking into account the budget deficit and the signs of output gap, we can identify the type of budgetary policy used by Romanian authorities during the analyzed period: restrictive or expansionist, counter-cyclical or pro-cyclical.

If year on year the structural budget deficit increases, the economic theory states that government authorities implemented an expansionist budgetary policy but, if the output gap is positive, then the policy is pro-cyclical and if the output gap is negative, counter-cyclical;

If a decrease of structural budget is recorded, a restrictive budgetary was implemented, and if the output gap is positive the policy is counter-cyclical, else pro-cyclical. Also, in times of recession, an expansionist policy is recommended and in expansion periods, a restrictive one.

Table 1: Dynamics of the budgetary balance and GDP in Romania

Time	Government expenditure (%GDP)	Government revenue (%GDP)	Budgetary deficit (%GDP)	GDP (mil RON)	Price index (2010=100)	real GDP (mil RON)
1999Q1	43.3	35.5	-7.8	9,664.7	13.424	71995.68
1999Q2	38.1	36.7	-1.3	12,655.0	16.263	77814.67
1999Q3	37.3	32.1	-5.2	15,843.2	16.709	94818.36
1999Q4	38.9	34.9	-4.0	17,316.5	17.781	97387.66
2000Q1	40.3	37.3	-3.0	14,708.7	20.118	73112.14
2000Q2	40.8	35.5	-5.3	18,176.4	22.493	80809.14
2000Q3	33.5	30.3	-3.2	22,867.1	23.540	97141.46
2000Q4	40.1	33.6	-6.5	25,523.1	25.757	99091.90
2001Q1	42.4	37.6	-4.9	21,537.9	28.661	75147.06
2001Q2	40.0	35.6	-4.3	26,994.2	32.097	84101.94
2001Q3	31.0	28.9	-2.1	33,124.1	31.707	104469.36
2001Q4	34.1	30.8	-3.3	36,671.0	34.734	105576.67
2002Q1	42.0	40.5	-1.5	27,574.0	35.436	77813.52
2002Q2	36.6	34.8	-1.8	35,438.0	39.817	89002.18

Time	Government expenditure (%GDP)	Government revenue (%GDP)	Budgetary deficit (%GDP)	GDP (mil RON)	Price index (2010=100)	real GDP (mil RON)
2002Q3	30.2	29.6	-0.6	42,440.5	38.555	110077.81
2002Q4	33.6	29.9	-3.7	47,177.5	42.355	111385.90
2003Q1	38.2	36.3	-1.9	36,087.2	44.070	81886.09
2003Q2	33.6	36.1	2.5	45,272.1	48.475	93392.68
2003Q3	32.5	29.7	-2.9	55,219.3	47.170	117064.45
2003Q4	30.7	27.8	-2.9	62,182.5	52.967	117398.57
2004Q1	41.5	40.6	-0.9	45,225.4	52.104	86798.33
2004Q2	36.1	34.3	-1.8	56,315.5	56.361	99919.27
2004Q3	28.1	28.4	0.3	69,219.9	54.022	128132.80
2004Q4	31.3	29.0	-2.3	77,986.8	60.526	128848.43
2005Q1	38.9	39.0	0.1	54,460.6	59.281	91868.56
2005Q2	35.9	34.0	-1.9	66,300.4	63.367	104629.22
2005Q3	30.7	29.7	-1.1	79,891.1	60.689	131640.17
2005Q4	30.6	29.2	-1.4	89,836.7	66.986	134112.65
2006Q1	35.7	37.4	1.7	65,302.0	66.048	98870.52
2006Q2	30.0	34.6	4.6	79,167.6	69.898	113261.61
2006Q3	29.2	30.6	1.3	93,662.4	65.698	142565.07
2006Q4	44.1	31.5	-12.6	108,872.3	75.195	144786.62
2007Q1	40.3	40.2	-0.1	78,168.1	74.112	105472.93
2007Q2	36.0	37.7	1.7	95,567.1	78.986	120992.45
2007Q3	31.9	32.3	0.4	112,064.1	73.919	151603.92
2007Q4	44.0	33.4	-10.6	132,458.6	85.139	155579.23
2008Q1	44.7	42.3	-2.3	99,042.4	86.071	115070.58
2008Q2	39.9	35.5	-4.3	121,805.6	90.928	133958.30
2008Q3	33.9	31.5	-2.3	143,875.8	85.797	167693.28
2008Q4	38.8	27.4	-11.4	159,664.9	98.085	162782.18
2009Q1	49.9	40.8	-9.2	98,906.9	91.728	107826.29
2009Q2	42.8	33.7	-9.1	119,631.6	97.400	122825.05
2009Q3	37.7	29.1	-8.6	136,070.5	88.065	154511.44
2009Q4	35.5	26.0	-9.5	155,913.8	101.765	153209.65
2010Q1	47.7	38.8	-8.9	103,791.6	97.895	106023.39
2010Q2	43.2	34.2	-9.1	125,279.8	102.244	122530.22
2010Q3	34.8	31.4	-3.4	145,033.7	95.213	152325.52
2010Q4	35.7	28.8	-6.9	159,776.0	104.428	153001.11
2011Q1	43.9	40.3	-3.5	110,356.3	103.535	106588.40
2011Q2	39.0	35.6	-3.4	131,176.9	106.702	122937.62
2011Q3	33.3	30.0	-3.3	156,218.5	99.887	156395.23
2011Q4	41.6	31.4	-10.2	167,345.5	108.833	153763.56
2012Q1	44.4	42.2	-2.2	113,796.0	106.505	106845.69
2012Q2	37.2	34.3	-3.0	140,715.6	112.134	125488.79
2012Q3	30.2	29.2	-1.0	164,408.8	105.647	155620.89
2012Q4	36.2	30.4	-5.9	176,446.9	113.795	155056.81
2013Q1	42.0	37.6	-4.4	121,620.7	111.352	109221.84
2013Q2	35.5	34.3	-1.2	148,256.7	116.302	127475.62
2013Q3	31.5	32.9	1.4	176,151.3	108.615	162179.53
2013Q4	34.0	29.3	-4.8	191,427.3	117.251	163262.83
2014Q1	40.6	39.7	-1.0	129,643.5	113.830	113892.21
2014Q2	34.3	33.4	-0.9	156,353.5	120.603	129643.13
2014Q3	29.6	31.5	1.9	183,672.1	109.688	167449.58
2014Q4	36.6	31.5	-5.1	197,908.3	117.885	167882.51

Time	Government expenditure (%GDP)	Government revenue (%GDP)	Budgetary deficit (%GDP)	GDP (mil RON)	Price index (2010=100)	real GDP (mil RON)
2015Q1	37.0	39.1	2.1	140,355.7	118.128	118816.62
2015Q2	34.4	34.5	0.1	162,661.5	121.292	134107.36
2015Q3	32.2	32.6	0.4	197,252.5	113.750	173408.79

Source: EUROSTAT, http://ec.europa.eu/eurostat

In Table 1 are presented the governmental expenditure and revenues, at quarterly level, based on which was calculated budgetary deficit (revenues – expenditures), as percent of GDP.
Also, real Gross Domestic Product (expressed in millions RON) was estimated using nominal GDP and price index, with the base year 2010.
The research continued with transformation of the real GDP from monetary units in natural logarithm and then, using Christiano-Fitzgerald Filter (CF Filter) was extracted the cyclical component and determined the output gap.

Table 2: Dynamics of the output gap and structural budgetary balance in Romania

Time	Real GDP (millions RON)	ln_real GDP	Budgetary deficit (%GDP)	Output gap	Cyclical Bugetary Balance	Structural Budgetary Balance
1999	341349	12.7407	-4.575	-0.0101673	0.2887121	-4.863712
2000	349511	12.7643	-4.5	-0.0050001	-0.1401002	-4.3599
2001	369057	12.8187	-3.65	0.0152297	-0.2583084	-3.391692
2002	388194	12.8693	-1.9	0.0135894	0.2691635	-2.169163
2003	409639	12.923	-1.3	-0.0006279	-0.2231587	-1.076841
2004	443875	13.0033	-1.175	0.0028966	-0.6383756	-0.5366244
2005	462392	13.0442	-1.075	-0.0313946	-0.2427441	-0.8322559
2006	499639	13.1216	-1.25	-0.0169533	0.721258	-1.971258
2007	533935	13.188	-2.15	0.0058509	1.499536	-3.649536
2008	579102	13.2692	-5.075	0.0645406	0.2668412	-5.341841
2009	538180	13.1959	-9.1	-0.0146683	-2.613618	-6.486382
2010	533881	13.1879	-7.075	-0.0207136	-0.3856061	-6.689394
2011	539519	13.1984	-5.1	-0.009853	0.7654649	-5.865465
2012	542981	13.2048	-3.025	-0.0115047	1.231897	-4.256897
2013	562155	13.2395	-2.25	0.0049362	0.0777609	-2.327761
2014	578791	13.2687	-1.275	0.0088814	-0.6935316	-0.5814684
2015	600415	13.3054	0.866667	0.0197719	0.247201	0.6194657

Source: made by the authors, in Stata, using data from Table 1

Budgetary deficit is composed of cyclical budget deficit (automatic stabilizers) and structural budget deficit (discretionary policies). Using CF Filter we extracted the cyclical component and obtained the structural budgetary deficit.

4. Results and discussion

First, we analyze the cyclical component of the gross domestic product to obtain the phases of the business cycle. We can see from Figure 1 the economic boom from 2007-2008 (output gap having a positive sign) and then the collapse of real GDP from the 2nd quarter of 2008 until 3rd quarter of 2012, when the output gap is negative.

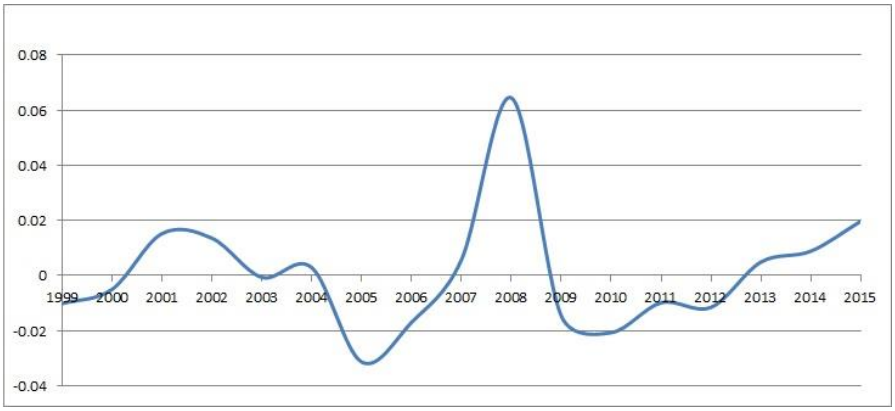


Figure 1: GDP cyclical component from CF Filter
Source: Table 2

Governmental expenditure is the main indicator of the budgetary policy, because it shows the way the budget is distributed. According to the economic literature, its value should increase in recession periods to maintain or boost the aggregate demand.
This can be observed in the period 2007–2012, which includes the recent economic crisis, when public spending reached, in average, the level of 40% of GDP. In the expansion period, from 2003 to 2006, the share of the governmental expenditure in GDP was, in average, 34%.

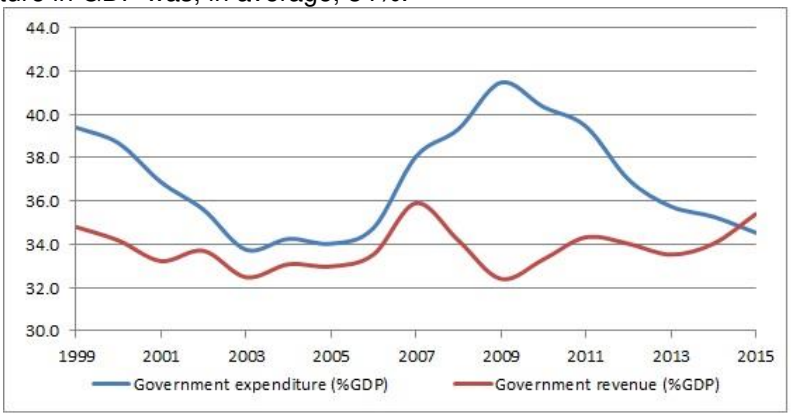


Figure 2: Dynamics of the Government expenditure and revenues in Romania
Source: Table 1

Analyzing the government expenditures in comparison with governmental revenues we observe that the government expenditures are higher that the governmental revenues, especially in 2008 – 2011, when the difference is visually noticeable in the Figure 2. In that period budgetary deficit recorded the highest levels of -5%, -9% and -7% of GDP.

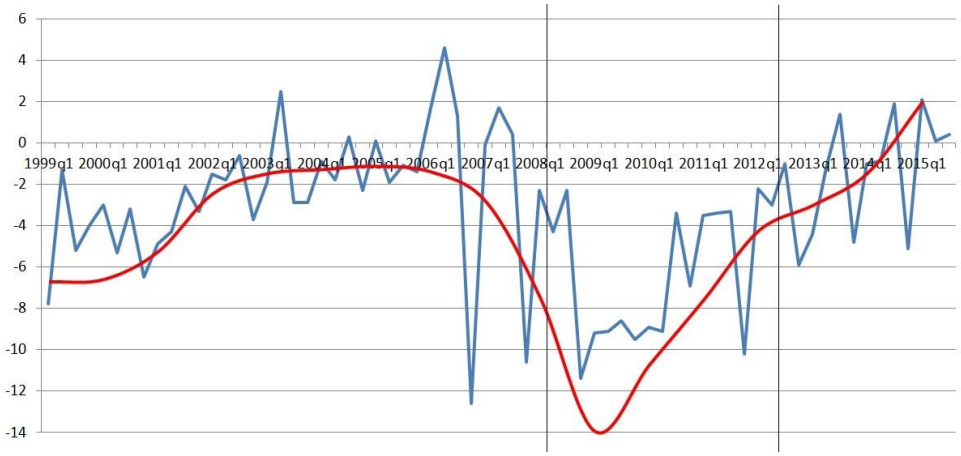


Figure 3: Dynamics of the budgetary balance in Romania
Source: Table 1

The same statement we can make from Figure 3, where is more clearly shown the dynamics of the budgetary deficit at quarterly and annually level.

The overall analysis of the representative indicators of budgetary policy shows that the average value of governmental expenditure was 37% of GDP, the average value of governmental revenues was 33,8% of GDP and the average value of budgetary balance was -3,2% of GDP.

By making a comparative analysis of these two indicators according to the presented methodology, the type of budgetary policy implemented in Romania between 1999 and 2015 was obtained. (Table 3)

Table 3: Type of budgetary policy implemented in Romania from 1999 to 2015

Years	Output gap	Budgetary Deficit	Budgetary Policy	
1999	negative			
2000	negative	decreasing	Restrictive	Pro cyclical
2001	positive	decreasing	Restrictive	Counter cyclical
2002	positive	decreasing	Restrictive	Counter cyclical
2003	negative	decreasing	Restrictive	Pro cyclical
2004	positive	decreasing	Restrictive	Counter cyclical
2005	negative	increasing	Expansionist	Counter cyclical
2006	negative	increasing	Expansionist	Counter cyclical

2007	positive	increasing	Expansionist	Pro cyclical
2008	positive	increasing	Expansionist	Pro cyclical
2009	negative	increasing	Expansionist	Counter cyclical
2010	negative	increasing	Expansionist	Counter cyclical
2011	negative	decreasing	Restrictive	Pro cyclical
2012	negative	decreasing	Restrictive	Pro cyclical
2013	positive	decreasing	Restrictive	Counter cyclical
2014	positive	decreasing	Restrictive	Counter cyclical
2015	positive	increasing	Expansionist	Pro cyclical

Source: made by the authors using data from Table 2

The data in Table 3 indicate a high level of inconsistency in the type of budgetary policy, the longest period during which the same type of budgetary policy was maintained was 2 consecutive years.
If we compare the indicators with the type of party that governed in that period, we obtain that the Social Democratic Party (who governed from 2001 to 2004 and from 2012 to 2015) preferred a restrictive budgetary policy and the National Liberal Party (who governed from 2005 to 2008) and Democratic Party (who governed from 2009 to 2011) preferred an expansionist budgetary policy, all of the parties alternating counter-cyclical with pro-cyclical type.
Of course, the type of policy has to be analyzed in the context of the phase of the economic cycle and as a general rule, the policy it is preferable to be counter-cyclical. The results indicate that from 2005 to 2010 was implemented an expansionist budgetary policy, which meant a reduction of the fiscal pressure by introducing the flat rate in 2005 and the growth of governmental expenditures. We consider that this measure came too early, as the economic crises started only in 2008, 2nd semester and contributed to the economic boom and instability.

5. Conclusions

The research performs a theoretical review of the literature associated with budgetary policy and using scientific observation, as research methods, illustrates its objectives and instruments. Correlating the phases of the business cycle with the budgetary policy, the economic literature recommends that in recession periods to be implemented an expansionist budgetary policy, and in expansion periods to be adopted a restrictive one.
Taking into account the budget deficit and the signs of output gap, was identified the type of budgetary policy implemented by Romanian authorities: from 2000 to 2004 was adopted a restrictive budgetary policy, from 2005 to 2010 was implemented an expansionist budgetary policy and from 2011 to 2014 was adopted a restrictive budgetary policy.
From the analysis of the main instruments of budgetary policy, we obtained that the average value of governmental expenditure was 37% of GDP, the average value of governmental revenues was 33,8% of GDP and the average value of budgetary

balance was -3,2% of GDP.
The results of the empirical research highlights the main particularities of the economic activity in Romania and the fact that the economic policy was guided by the criteria of minimizing the cost on the short term, by promoting measures aimed at achieving quick results in the production (by reacting to the changes that occurred in the economic context, such as economic crises) and the structural reforms that would have created a framework for sustainable growth have been delayed.

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UNDERSTANDING THE DECLINE OF GREECE

Raluca Gabriela Dulgheriu
Department of Economics, Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iași, Romania
raluca.dulgheriu@yahoo.com

Abstract: The research conducted in the present paper is mainly aimed at analyzing the causal relationships between the budget deficit and following macroeconomic variables: the gross domestic product, the *harmonised index of consumer prices*, the public debt and the real effective exchange rate, for Greece, during the period 2001-2014. The empirical study, conducted using the Vector Autoregressive Model (VAR) indicates that the analyzed variables are cointegrated, existing a reverse proportionate relationship between the budget deficit and the gross domestic product, and a directly proportional relationship between the budget deficit and the public debt. Therefore, the comparative approach of the effects determined by an unexpected rise in the budget deficit indicates a high speed and amplitude, with great persistence of the effect generated by the increase in the deficit on the real economy. Regarding the impact on public debt, it appears to be faster and with an increased amplitude and persistence. The study results do not illustrate any direct connection between the budget deficit and the other two macroeconomic variables - inflation and real effective exchange rate in the case of Greece. Hence, the exchange rate and the inflation variable react with a lower speed, less powerful and for a shorter period of time to the unanticipated increase in the budget deficit. The results reinforce the problem the arises increasingly more often, that is, if the Greek exit from the eurozone will come true or not. In terms of the accumulated debt default, the exit from the euro zone's most indebted member state of the Union seems inevitable, and the so-called Grexit could have serious consequences on both the Greek State and the stability of the whole European economy.

Keywords: Greece; Economic Decline; Macroeconomic Variables; Vector Autoregressive Model

JEL classification: F45; H62; H63

1. Introduction

With the transition to the euro, the fiscal and budgetary situation have known a constant deterioration in Greece. Since 2001, the government pushed the population on a spiral of lending, spending far more than their income. The pursuit of some short-term political advantages brought great harm to the long-term economic development, fostering the corruption spreading, the excessive bureaucracy and, finally, political collapse when the level of the public debt surfaced. Since 2009, we speak increasingly often about the so-called Grexit scenario, given that Greece is dominated by political instability and blockage of reforms.

The objective of this paper is to provide a quantitative analysis of the Greek economy since the adoption of the single European currency by 2015, using the VAR method. In this regard, attention was focused on the impact of an unanticipated increase in the budget deficit on the following macroeconomic variables: gross domestic product, *harmonised index of consumer prices*, public debt and real effective exchange rate.
The study is divided into five parts. The first part contains a brief description of the specialized literature, the second part focuses on model specification, the third section describes the data and methodology, and the penultimate section presents the empirical results. The study ends with a set of conclusions that complete scientific content by pointing out the most representative aspects captured by the VAR analysis for Greece.

2. Literature Review

The sequence of events in Greece in the recent years has attracted much debate among economists, analysts and institutions regarding the consequences of a voluntary or forced exit from the eurozone and the consequences of such a scenario both for the Greek State and also for the entire monetary union (Koutsoukis and Roukanas, 2014).
The Greek governments bought social peace and votes through large public spending and government loans. Entering the euro area, the loan wave could continue at low interest rates. Thus, the budget deficits and Greece's debt did not appear overnight but were gradually accumulated over recent decades. Also, the irresponsible policies were tolerated for too long (Jovanovic, 2012).
In the specialized literature on budget deficits there is no clearly defined theoretical foundation concerning the relationship between budget deficit and other macroeconomic variables. However, there are some studies that have granted a special interest relationship.
Evans (1985) and Barro (1987) found no causal link between budget deficit and interest rate. On the other hand, Hoelscher (1986) and Cebula and Koch (1989) proved that budget deficits have contributed to high levels of interest rates and Bernheim (1989) argues that budget deficits do not affect interest rates and consumption.
In another work, Evans (1987) argues that budget deficits are a signal of weakness in an economy and a possible future inflation sign. The author argues that the budget deficit affects the aggregate demand and may increase price levels, which would lead to a depreciation of the national currency.
Agreeing with Evans, McMillin (1986) argues that budget deficits cause inflation. Contrary to them, Karras (1994) and King and Plosser (1985) shows that budget deficits do not contribute significantly to higher inflation.
A recent study by economists Georgantopoulos and Tsamis (2011) argues that there is a unidirectional causality relationship between the nominal effective exchange rate and the budget deficit, and between the budget deficit and the GDP. The study results also illustrate the fact that there is a significant link between the budget deficit and inflation in Greece.

3. Model Specificity

Given the following system:

$$AY_t = C(L)Y_{t-1} + D(L)X_t + B\varepsilon_t (1)$$

where: *matrix A* includes all coefficients that describe simultaneous relationships between variables, *matrix C (L)* includes all coefficients that describe relations with lags between variables, *matrix D (L)* includes all coefficients that describe the relationships between endogenous and exogenous variables, *matrix B* is a diagonal matrix and *vector ε* includes residual terms. By multiplying the VAR system with the reverse of matrix A, we obtain the following relation:

$$Y_t = A^{(-1)}C(L)Y_{t-1} + A^{(-1)}D(L)X_t + A^{(-1)}B\varepsilon_t (2)$$

which can be rewritten as equation:

$$Y_t = aY_{t-1} + bX_t + \mu_t (3)$$

where: $a = A^{(-1)}C(L)$, $b = A^{(-1)}C(L)$, $\mu = A^{(-1)}B\varepsilon$

Equation (1) describes the *structural model* and equation (3) represents the *reduced form of the model*, the latter may be observed empirically.

Therefore, the considered VAR model has the following representation in the *reduced form*:

$$Y_t = aY_{t-1} + bX_t + \mu_t$$

where: Y_t is the endogenous variables vector, X_t is the vector of exogenous variables, μ_t is the vector of residuals (white noises), *a* is a matrix comprising all coefficients that describe the relationships between endogenous variables and *b* is a matrix that includes coefficients that describe the relationships between variables of endogenous and exogenous.

Thus, the considered VAR model will have be represented as shown in equation (4). In our case, *the vector of exogenous variables* contains the following variables: gross domestic product in the euro area (gdp_ea) and *harmonised index of consumer prices* in the euro area (hicp_ea). *The vector of endogenous variables* contains the following variables: gross domestic product in Greece (gdp), *harmonised index of consumer prices* in Greece (hicp), the budget deficit in Greece (bd), the public debt in Greece (pd) and the real effective exchange rate in Greece (reer).

$$\begin{bmatrix} gdp \\ hicp \\ bd \\ pd \\ reer \end{bmatrix} = a \begin{bmatrix} gdp_{t-1} \\ hicp_{t-1} \\ bd_{t-1} \\ pd_{t-1} \\ reer_{t-1} \end{bmatrix} + b \begin{bmatrix} gdp\_ea \\ hicp\_ea \end{bmatrix} + \mu_t (4)$$

The exogenous variables are included to help solve the so called *puzzle between the variables* designating the counterintuitive empirical results currently identified in the VAR literature. Treating these variables as exogenous implicitly presumes that there is no impact from endogenous variables to the exogenous ones. At the same time, a contemporary impact of exogenous variables on endogenous variables is allowed.

4. Data and Methodology

The used sample has quarterly data starting with 2001, when Greece joined the euro area and ends in 2014. The variables included in the analysis are: Greece's GDP - as chain linked volumes (index 2010 = 100), euro area's GDP - as chain linked volumes (index 2010 = 100), Greece's *harmonised index of consumer prices* - as index (2005 = 100), euro area's *harmonised index of consumer prices* - as index (2005 = 100), Greece's budget deficit - expressed in millions euro, Greece's public debt - in million euro and Greece's real effective exchange rate - as index (2005 = 100) considering 42 trading partners. The source is Eurostat, the data being processed using the statistical EViews8 program.

All series except the real effective exchange rate were adjusted to eliminate the seasonal factors with the help of *the X12 procedure used by the US Census Bureau*. Also, all series were *logarithmic*.

For the considered variables the stationarity testing was done with the *Augmented Dickey - Fuller Test*, its results indicating that the variables are not stationary. Most variables are *integrated of order 1 (I (1))* and some of *order 2 (I (2)).*

Table 1: Augmented Dickey - Fuller Test (ADF)

ADF	Log_gdp_sa	Log_hicp_sa	Log_bd_sa	Log_pd_sa	Log_reer	Log_gdp_ea_sa
Level	(-2.2935) [0.1778]	(-2.6096)** [0.0969]	(-3.5310)** [0.0104]	(-1.4016) [0.5755]	(-1.7209) [0.4157]	(-1.8105) [0.3719]
1st difference	-2.4414 [0.1354]	-	-	(-8.9635)*** [0.0000]	(-8.0810)*** [0.000]	(-4.5609) [0.0005]
2nd difference	-6.7922*** [0.0000]	-	-	-	-	(-9.5509)*** [0.0000]

Notes:

t - statistics in parentheses; p - value in square brackets;

, **, * signifies the rejection of the null hypothesis (the presence of unit root or absence of stationarity) at a significance level of 1%, 5%, 10%.*

Source: author's calculations

The variables used in the VAR analysis don't need be stationary. Sims (1980), among others, argues against the differentiation, even if the series contain a unit root, the differentiation causing the loss of information. Important for the strength of the VAR results is the overall system stationarity. Moreover, the use of variables in levels provides the ability to maintain long-term relationships (if present) and does not affect the statistical inference.

The cointegration testing, using the methodology developed by Johansen, highlights the existence of a number of cointegrating vectors, *r*, such that *0 <r <number of endogenous variables* (in our case 5), at a significance level of 0.05 (result based both on the *Trace Test* and the *Maximum Eigenvalue Test*). Such a result together with those obtained from the stationarity tests highlight *the possibility of estimating the model with variables expressed in levels.*

Table 2: Johansen Tests to determine the number of cointegrating equations

Lag	H_0	λ_{trace}	p-value	CE_{trace}	λ_{max}	p-value	CE_{max}
1	n = 0	85.95843***	0.0015	2	35.54184**	0.0314	1
	n ≤ 1	50.41658**	0.0282		24.96257	0.1045	
	n ≤ 2	25.45401	0.1459		12.22175	0.5259	
	n ≤ 3	13.23226	0.1066		9.173966	0.2720	
	n ≤ 4	4.058294**	0.0439		4.058294**	0.0439	

Notes:
Lag refers to the number of lags in first difference;
H_0 is the null hypothesis test statistics and λ_{trace} and λ_{max} where "n" is the number of cointegration vectors;
CE_{trace} and CE_{max} indicate the number of cointegration equations indicated by statistics λ_{trace} and λ_{max} at a significance level of 5%;
, **, * denote rejection of the null hypothesis at a significance level of 10%, 5%, 1%.*
Source: author's calculations

The choice on the number of lags was done based on the *evaluation criteria of informational content (Likelihood ratio test*, *Final prediction error, Akaike information criterion, Schwarz information criterion and Hannan-Quinn information criterion),* these signaling in all cases the selection of a single lag. The verification of the result was achieved by applying the *Lag Exclusion Wald test* to exclude insignificant lags that confirmed the continuation of the number of lags specified by the prior informational criteria.
The identification of the shocks that involve imposing a zero-restriction for the coefficients of the A and B matrices in the relationship $\mu = A^{(-1)}B\varepsilon$ is achieved through a Cholesky decomposition. Identification scheme of the shocks in the case of the considered VAR model is reflected in the equation (5).

$$\begin{bmatrix} \varepsilon_t^{gdp} \\ \varepsilon_t^{hicp} \\ \varepsilon_t^{bd} \\ \varepsilon_t^{pd} \\ \varepsilon_t^{reer} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ a_{20} & 1 & 0 & 0 & 0 \\ a_{30} & a_{31} & 1 & 0 & 0 \\ a_{40} & a_{41} & a_{42} & 1 & 0 \\ a_{50} & a_{51} & a_{52} & a_{53} & 1 \end{bmatrix} \begin{bmatrix} \mu_t^{gdp} \\ \mu_t^{hicp} \\ \mu_t^{bd} \\ \mu_t^{pd} \\ \mu_t^{reer} \end{bmatrix} \quad (5)$$

The considered VAR model is confirmed if it is *stable*, and the residual terms are *white noise*. Otherwise, the confidence intervals for the impulse-response functions cannot be built. The stability of the model was verified by applying the AR *roots* tests as a graphic and a table. The obtained results illustrate the stability of the models considered for all cases, the opposite roots being subunitary, not exceeding the circle of unit radius, as can be observed in Figure 1.

Roots of Characteristic Polynomial
Endogenous variables: LOG_GDP_SA LOG_HICP_SA LOG_BD_SA LOG_PD_SA LOG_REER
Exogenous variables: LOG_GDP_EA_SA LOG_HICP_EA_SA
Lag specification: 1 1

Root	Modulus
0.995054 - 0.092085i	0.999306
0.995054 + 0.092085i	0.999306
0.852464	0.852464
0.761900	0.761900
0.294130	0.294130

No root lies outside the unit circle.
VAR satisfies the stability condition.

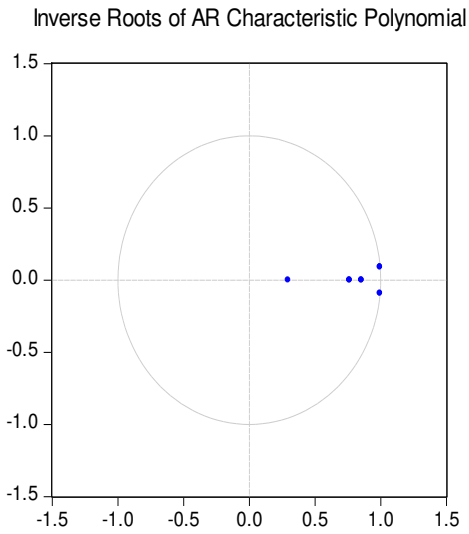


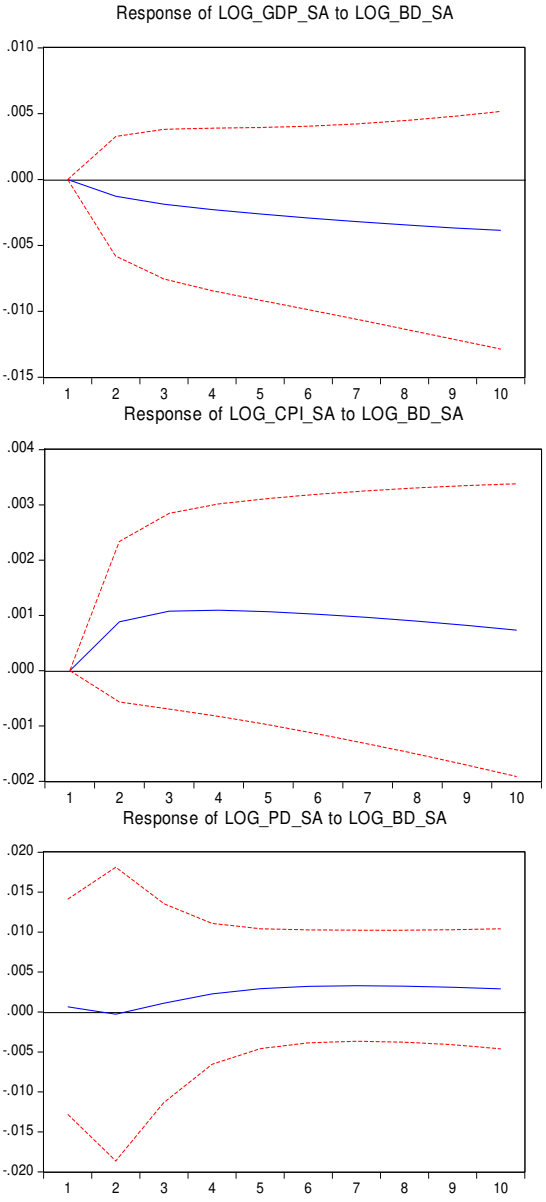
Figure 1: The verification of the VAR model stability
Source: author's calculations

Testing the hypothesis of serial residue non-correlation test was performed with the *Portmanteau test*. It checks the partial correlation to a certain specified lag, usually with a higher order towards the VAR model (in the present case the first 2 lags have been checked). The null hypothesis is the lack of autocorrelation.
The testing for normal distribution of errors was performed by the *Jarque-Bera test,* comparing the asymmetry and vaulting coefficients to those of a normal distribution. The assumption of normality was accepted as a consequence of a p-value that is greater than the significance threshold (5%).
The homoscedasticity of the residual terms was tested by the White test. The null hypothesis is that the errors are homoscedastic (their variation is constant.). The value of p-value was greater than 5%, which allowed us to accept the null hypothesis and state that the residual materials do not violate the homoscedasticity hypothesis.
The stability testing results and residuals indicate the fact that the considered model has the ability to provide a satisfactory picture of the dynamics of interactions between analyzed variables.

5. The Estimation Results

The analyses based on autoregressive vectors offer two main results: *the function of response to shock (impulse-response) and the variance (dispersion) decomposition.*
The functions of response to shock present the results obtained on the effects of a monetary policy shock on economic variables of interest for the monetary authority, providing information on both the *sign of response* (positive or negative) and on the

amplitude, *speed* and *persistence* of the effects of various shocks.
In the following figure, the confidence interval is of 95%, the shock is standard deviation, and time on the horizontal axis is expressed in quarters.



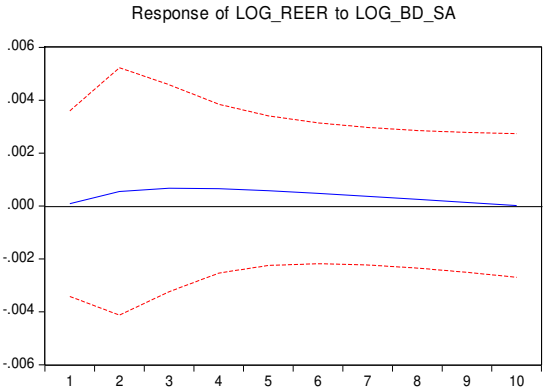


Figure 2: The variables response included in the model to an unanticipated increase in the budget deficit
Source: author's calculations

For the 2001q1: 2014q4 horizon, Figure no. 2 highlights:

- at an unanticipated increase in the budget deficit, the GDP decreases from quarter 1 and reaches the maximum size in quarter 10; the reduction persists uninterrupted over the 10 quarters, highlighting a persistent negative response to the gross domestic product, according to the analysis by the autoregressive vector;
- at an increase in the budget deficit, the inflation increases in turn, reaching the maximum value after about four quarters from an unanticipated growth of the budget deficit in the VAR approach;
- an unanticipated increase of the budget deficit indicates a persistent positive response to the public debt; the increase of the public debt reaches a maximum level at an interval of 7 quarters of the manifestation of unanticipated shock caused by an unanticipated increase in the budget deficit, according to the VAR analysis;
- an unanticipated increase in the budget deficit leads initially to an increase in the real effective exchange rate, over the 4 quarters in the analyzed period, which means an appreciation of the national currency and a loss of the Greek economy competitiveness. Subsequently, the answer of the real effective exchange rate shows a slight decrease, reflecting the depreciation of the national currency at an unanticipated budget deficit.

The effects due to an unanticipated increase of the budget deficit on the considered macroeconomic variables are quantified in terms of three fundamental characteristics: *speed* (V), *amplitude* (A) and *persistence* (P) thereof. The *speed* refers to the period of time expressed in quarters from the moment of the shock manifestation and until the moment in which the effect size becomes maximum, the *amplitude* represents the maximum of the effect caused by the contractionary shock upon the variable of interest and is quantified as a percentage in a standard deviation (the shock being represented by a standard deviation) and the *persistence* represents the number of quarters in which the shock effect is maintained over the considered variable.

Table 3: Synthesis of the results based on the impulse-response analysis

2001q1:2014q4	gdp			hicp			pd			reer		
	V	A	P	V	A	P	V	A	P	V	A	P
VAR	2	-0.0038	10+	2	0.0010	3	3	0.0032	5	1	0.00067	3

Note: V - speed with which the maximum effect of shock is reached (quarters); A - amplitude of the effect caused by shock (percentage of a standard deviation); P - persistence maintaining the effect generated by shock (quarters)
Source: author's calculations

The comparative approach of the effects induced by an unexpected rise in the budget deficit indicates a higher speed and amplitude, together with a high persistence of the effect genrated by the increase of the budget deficit on real activity. Also, an unexpected increase in the deficit is likely to cause a similar effect, but with a lower persistence on the inflation expressed by harmonized index of consumer prices. Regarding the impact on the public debt, it appears as faster and with a amplitude and increased persistence. The exchange rate reacts with a lower speed, less powerful and for a shorter interval to unexpected increase the budget deficit.
The variance decomposition allows determination, at different time horizons, of the proportions from the variance of endogenous variables that are due to their own shocks and shocks occurring at the level of the other variables considered in the system. So by the variance decomposition we obtain information on the importance of shocks manifested at the level of an endogenous variables on all other endogenous variables included in the VAR models.

Table 4: The variance decomposition of the gross domestic product variable (GDP)

Period	S.E.	LOG_GDP_SA	LOG_HICP_SA	LOG_BD_SA	LOG_PD_SA	LOG_REER
1	0.014991	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.021366	97.43733	1.239182	0.355413	0.000343	0.967737
3	0.026593	93.62232	3.455585	0.725304	0.076043	2.120745
4	0.031307	89.26367	6.235012	1.052122	0.361221	3.087972
5	0.035736	84.54448	9.371207	1.341985	0.924024	3.818300
6	0.039995	79.54209	12.74042	1.602647	1.775317	4.339519
7	0.044147	74.33107	16.24842	1.838032	2.892722	4.689760
8	0.048229	68.99871	19.81251	2.049477	4.237292	4.902006
9	0.052263	63.64023	23.35702	2.237057	5.763103	5.002595
10	0.056257	58.35157	26.81290	2.400381	7.422522	5.012620

Source: author's calculations

According to Table no. 4 at a time horizon of four quarters, the GDP variation is explained in proportion of 89.26% of personal innovations, 6.23% of shocks in the *harmonised index of consumer prices*, 3.08% shock of the real effective exchange rate, 1.05% shock of the budget deficit. Also, the change in GDP is not significantly

influenced by debt. On a longer time horizon (eight quarters), the variation in GDP is explained in the proportion of 68.99% of personal innovations, 19.81% of shocks in the *harmonised index of consumer prices*, 4.90% shock of the real effective exchange rate, 4.23% shocks of the public debt and 2.04% shock of the budget deficit.

Table 5: The variance decomposition of the *harmonised index of consumer prices* variable

Period	S.E.	LOG_GDP_SA	LOG_HICP_SA	LOG_BD_SA	LOG_PD_SA	LOG_REER
1	0.004755	0.075825	99.92418	0.000000	0.000000	0.000000
2	0.006647	0.066241	96.59768	1.770596	1.419244	0.146236
3	0.008215	0.163172	93.05263	2.873984	3.734333	0.175877
4	0.009639	0.449448	89.66622	3.378018	6.346750	0.159560
5	0.010975	1.000127	86.37145	3.551275	8.939910	0.137242
6	0.012244	1.873010	83.11428	3.549281	11.34344	0.119988
7	0.013456	3.110691	79.85900	3.452476	13.46730	0.110539
8	0.014616	4.742214	76.57696	3.303210	15.26661	0.111013
9	0.015727	6.783564	73.24464	3.124914	16.72220	0.124688
10	0.016792	9.237263	69.84539	2.931429	17.83002	0.155898

Source: author's calculations

In the case of the variable variance decomposition, the *harmonised index of consumer prices*, at the level of four quarters, this is explained in the proportion of 89.66% of personal innovations, 6.34% shocks of the public debt and 3.37% of the budget deficit. In terms of gross domestic product and the real effective exchange rate, they do not significantly influence the variation of the *harmonised index of consumer prices* variable. On a longer time horizon (eight quarters), *harmonised index of consumer prices* variation can be attributed to their innovations in a proportion of 76.57% and shocks the public debt at a rate of 15.26%.

Table 6: The variance decomposition of the budget deficit variable

Period	S.E.	LOG_GDP_SA	LOG_HICP_SA	LOG_BD_SA	LOG_PD_SA	LOG_REER
1	0.472705	0.044555	1.378672	98.57677	0.000000	0.000000
2	0.490810	0.767708	1.444340	97.09043	0.077755	0.619763
3	0.495763	1.715368	1.630108	95.48559	0.295679	0.873259
4	0.499456	2.761126	1.689650	94.08900	0.551320	0.908907
5	0.502990	3.894867	1.678753	92.77301	0.756659	0.896711
6	0.506620	5.109281	1.656490	91.45772	0.882373	0.894140
7	0.510460	6.381742	1.664410	90.10374	0.935991	0.914112
8	0.514588	7.677357	1.735712	88.68907	0.940876	0.956988
9	0.519063	8.954540	1.899653	87.20069	0.925216	1.019900
10	0.523928	10.16985	2.182020	85.63202	0.917113	1.098996

Source: author's calculations

Table no. 6 points out that, at a time horizon of four quarters, the budget deficit variation is explained variation in proportion of 94.08% of their innovations and 2.76% of the shocks of the gross domestic product. On a longer time horizon, the budget deficit variation is explained at a rate of 7.67% of shocks occurring at the level of the gross domestic product. Regarding the relationship between the budget deficit and the index of consumer prices, the public debt and the real effective exchange rate, could not establish any significant variance.

Table 7: The variance decomposition of the public debt variable

Period	S.E.	LOG_GDP_SA	LOG_HICP_SA	LOG_BD_SA	LOG_PD_SA	LOG_REER
1	0.034122	4.029917	0.123219	0.049177	95.79769	0.000000
2	0.043345	2.689743	1.207679	0.037178	95.15067	0.914725
3	0.048831	2.230658	2.275603	0.030486	93.73004	1.733209
4	0.052596	2.614491	3.058914	0.027176	92.12357	2.175848
5	0.055397	3.785746	3.522025	0.026705	90.34874	2.316787
6	0.057626	5.677959	3.706055	0.030408	88.30480	2.280779
7	0.059523	8.199521	3.680607	0.040843	85.91042	2.168610
8	0.061245	11.22592	3.529890	0.061195	83.13457	2.048423
9	0.062898	14.60127	3.346731	0.094759	79.99584	1.961405
10	0.064559	18.14708	3.226801	0.144460	76.55303	1.928634

Source: author's calculations

Regarding the variance decomposition of the public debt at a time horizon of four quarters, its variation is explained in a very small proportion compared to the shocks occurring at the level of the gross domestic product, *harmonised index of consumer prices*, the budget deficit and the real effective exchange rate. At a time horizon longer than eight quarters, the public debt variance is influenced on a rate of 83.13% of innovations and 11.22% of gross domestic product shocks.

Table 9: The variance decomposition of the REER variable

Period	S.E.	LOG_GDP_SA	LOG_HICP_SA	LOG_BD_SA	LOG_PD_SA	LOG_REER
1	0.013961	5.074794	1.876620	0.003848	0.106275	92.93846
2	0.016625	9.634983	1.551321	0.112436	0.665034	88.03623
3	0.018137	14.03554	2.382868	0.232059	1.337836	82.01170
4	0.019251	17.96883	3.465980	0.321727	1.714624	76.52884
5	0.020157	21.48094	4.401900	0.375894	1.832662	71.90860
6	0.020936	24.68242	5.070316	0.400652	1.810377	68.03623
7	0.021631	27.66350	5.464575	0.404215	1.733446	64.73426

8	0.022270	30.48210	5.620699	0.394251	1.645428	61.85752
9	0.022870	33.16777	5.590842	0.377369	1.562469	59.30155
10	0.023444	35.72725	5.433464	0.359159	1.487785	56.99234

Source: author's calculations

Regarding the decomposition of the public debt variance decomposition at a longer time horizon (eight quarters), exchange rate variation is explained 61.85% of the personal innovations and 30.48% of the occurred shocks at the level of the GDP. The analysis conducted reveals no significant relationship between the real effective exchange channel and the rate inflation, budget deficit and public debt.

6. Conclusions

This paper was focused on a quantitative analysis of the Greek economy since the adoption of the single European currency until 2014, using the VAR method. In this regard, the attention was focused on the impact of an unanticipated increase in the budget deficit on the following macroeconomic variables: gross domestic product, *harmonised index of consumer prices*, government debt and real effective exchange rate.

According to the impulse response analysis to an unanticipated increase in the budget deficit, the paper highlighted: a negative response from the gross domestic product, which is a decrease persistent throughout the analyzed period, a positive response from the other three macroeconomic variables: harmonized index of consumer prices, public debt and real effective exchange rate.

The comparative approach of the effects determined by an unexpected rise in the budget deficit indicates a high speed and amplitude, with great persistence of the effect generated by the increase in the deficit on the real economy. Also, an unanticipated increase in the deficit causes a similar effect, but with a lower persistence of the number of quarters in which the shock effect is maintained on the inflation variable, expressed in price index. Regarding the impact on public debt, it appears to be faster and with an increased amplitude and persistence. The exchange rate reacts with a lower speed, less powerful and for a shorter period of time to the unanticipated increase in the budget deficit.

The results of the present study reinforce the problem the arises increasingly more often, that is, if the Greek exit from the eurozone will come true or not. In terms of the accumulated debt default, the exit from the euro zone's most indebted member state of the Union seems inevitable, and the so-called Grexit could have serious consequences on both the Greek State and the stability of the whole European economy.

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SELECTIVE INCENTIVES AND TRADE UNION DENSITY

Nora Ilona Elek
University of Debrecen, Faculty of Economics and Business, Debrecen, Hungary
elek.nora@econ.unideb.hu

Abstract: *Trade unions often emphasise their objective of protecting and representing workers' common interest. They provide not only a means of achieving common goals but many other services as well. It is a hallmark how are these large organizations able to fulfil this important mission. At present, however, there is a declining trend in trade union densities. We can ask why do workers think that the unions' performance has deteriorated? What is the difference between the past and the present? The key question of the theory is related to employees' willingness to join a large organization. If the most important trade union services are collective goods which are obtainable without costly membership, then why would a rational individual become a union member? The most widespread response among economists comes from the logic of collective action which is used, in general, as a starting point in studies for explaining trade union membership or density growth. According to this theory, there must be some form of pressure or positive incentives, i.e. union excludable incentive goods such as legal aid or strike pay, which can reward contributors and punish free-riders. This article would like to highlight the relevance of positive and negative selective incentives in connection with trade unions. Therefore, it conducts a survey of theoretical and empirical studies. The paper focuses on economic approaches, thus it devotes a relatively little attention to theories of social sciences, for example the social custom theory. Instead of this it emphasizes union security methods (e.g. obligatory union membership) and presents union-run, government subsidised unemployment insurance, the so-called Ghent-system in detail, because these seemed to be the most important factors which influence trade union density. More accurate identification of union security practices and data collection of pure private goods provided by the union would be needed to allow for analysing the effects of unions' selective incentives.*

Keywords: trade union density; union excludable incentive goods; closed shop; Ghent-system.

JEL classification: J51.

1. Introduction

Trade unions have a significant impact on the economy, therefore these organisations are important and interesting subjects of the economic analysis. Nowadays, the most striking observation regarding trade unions is the worldwide declining trends in union density. Many economists have attempted to explain the union membership or density growth over time.

Examination of the short and long term trends is not only the one at the centre of attention. In Estonia trade union density is less than 6%, while in Finland or in Sweden it is almost 70%. Thus, exploring the factors that cause differences across countries may also be important.
Institutional approaches can help to explain both the evolution of the trends and cross-country differences. The purpose of this paper is to survey empirical studies analysing European countries in order to provide an overview of the negative and positive selective incentives that can motivate the individual to join to a union.
Therefore, the structure of the paper is as follows. Section 2 reviews the related literature on institutional factors which can influence union density. Section 3 describes union services, while in Section 4 trade union trends and incentives are presented in the selected European countries. Section 5 concludes general remarks.

2. Literature review

Various theoretical and empirical approaches to union membership and union density can be found in surveys (e.g. Riley, 1997; Schnabel, 2002) or at the beginning of empirical studies (see for example Ebbinghaus – Visser, 1999; Schnabel – Wagner, 2007; Fitzenberger – Kohn – Wang, 2006; Ebbinghaus – Göbel – Koos, 2011). As Schnabel (2002) remarks, theory and empirical research have developed together in this field and in many cases empirical findings have provided new perspectives and ideas for theorists.
There are economic and sociological theoretical approaches. The basis of economic thinking is the cost-benefit framework. In this rational-choice explanation an individual's union membership decision depends on membership fees (costs) and the collective and private goods provided (pecuniary and non-pecuniary benefits), as well as external factors like individuals' income and enthusiasm for unions. Individuals maximise their utility, and the equilibrium level of unionism is determined by demand for union representation and services and the supply of these benefits by trade unions (Schnabel, 2002). The main question of the theory is that if key benefits (such as higher wages or better working conditions) are public goods that are non-rival and non-excludable, then why would a rational individual join a union instead of being a free-rider? The starting point of economic thinking about overcoming the free rider problem is Olson's (1965) by-product theory. According to this theory, large organizations need to offer negative and positive selective incentives to mobilize the latent group, and lobbying activity is a by-product of this. Negative incentives include sanctions such as social pressure or a closed shop. Positive incentives should be available only for members: - these include union-provided club goods such as legal support or social insurance (Ebbinghaus – Göbel – Koos, 2011). According to Moreton (1999), union members enjoy greater job security via a reduced probability of dismissal, and this private good can be interpreted as a selective incentive. Some social scientists have emphasized the importance of union monopoly on the supply of excludable incentive goods because the attractiveness of a union declines as these goods become available at lower cost elsewhere (Neumann and Rissman, 1984; Booth

1985; Hechter, 2004). In addition to material incentives, Booth (1985) – following Akerlof (1980) – suggests an important factor is reputation derived from complying with social norms.
Supplementary explanations in social and political sciences discuss other factors (class consciousness, values and composition of the workforce) and theories, e.g. frustration-aggression, rational choice and interactionist theory (Wallernstein 1989; Klandermans, 1986). Ebbinghaus – Göbel – Koos (2011) incorporate the concept of social capital into their analysis.
In empirical research three approaches have emerged: cyclical, structural and institutional (Schnabel, 2002). The short and long-term development of the trade union movement is explained by analyses that connect union membership or density growth to the business cycle. These studies use aggregate time series. The main cyclical factors are price inflation, changes in the nominal wage, employment growth, unemployment rate or its change, lagged density, labour friendly politics and labour force composition. Microeconomic determinants of structural approaches such as gender, age (work experience), nationality, education, white or blue collar workers, earnings, etc. help to explain differences in unionisation by cross sectional methods. Institutional factors may also have a significant impact on the level of unionization. Several studies have pointed out that institutions matter (Ebbinghaus – Visser, 1999; Holmlund – Lundborg, 1999; Ebbinghaus – Göbel – Koos, 2011). Findings suggest that union-run unemployment insurance (Ghent system) or unions' access to the workplace provide an important contribution to understanding the trade union movement.

3. Trade union's services

Usually, membership fees finance trade union activities and services. Sometimes state subsidies or application funds may provide the amounts needed.
Many studies draw attention to the fact that there are two groups of services provided by a trade union: collective and private goods. Typical collective goods which unions fight for are higher wages, equal pay, reduced working time, better working environment, etc. These are available for all employees. If the main services are non-excludable and non-rivalry collective goods then how can we explain their success in overcoming free-riding?
Inter alia, Ebbinghaus – Göbel – Koos (2011) refers to Olson's (1965) selective incentives. The most obvious advantage would be the wage premium of union members but it is not typical in the OECD countries (Goerke and Pannenberg, 2011). A typical trade union provides several services that are obtainable only for members: legal aid, cultural and sport services, discount shopping (e.g. member cards), subsidised holidays, training and education, insurance, grievance and promotion procedure, fringe benefits, salary advances, journals and strike pay. Do any of these selective incentives play a role or a more important role than others in interpreting the employees' willingness to join a trade union, and correspondingly in understanding union density growth?

4. Trends in union density in selected European countries

Studies confirm declining European and worldwide trends in unionization (e.g. Carley, 2009; Blanchflower, 2007). So trade unions have less and less members compared to the potential members.

It appears to be obvious to identify a trade union member as 'a member of a trade union'. However, databases can differ according to whether they consider pensioners and the unemployed. The International Labour Organisation does not calculate these two groups of people (Hayter – Stoevska, 2011: 2). The Organisation for Economic Co-operation and Development considers only active union members, with membership covering only wage and salary earners. On the basis of this definition, trade union density is the number of trade union members divided by the total number of wage and salary earners (OECD.Stat, 2016).

For analysing trends and presenting empirical findings in connection with the effects of selective incentives, we can distinguish two groups of countries according to their insurance systems: those with compulsory national insurance and those with state-subsidised voluntary unemployment insurance administered by trade unions (Dimick, 2012). The third group of countries involves post-socialist countries in which trade unions had transmission-belt function.

4.1. Western Europe

Unemployment insurance has been controlled and administered by the state from the beginning in the United Kingdom (1911), Ireland (1923), Austria (1920), Germany (1927) and Italy (1919) (Dimick, 2012). This means that trade unions do not have unemployment insurance administered by them to attract and retain members.

Concerning trade union density trends in the United Kingdom and Ireland the continuous decline started around 1980, preceded by an increase. In Germany a slow decrease of union density was observed (from around 35% to 31.2%) at the beginning of the 1980s. After reunification in 1990 the participation rate grew back to 36% but since then union density has decreased constantly (it is now 17.7%) (OECD.Stats, 2016).

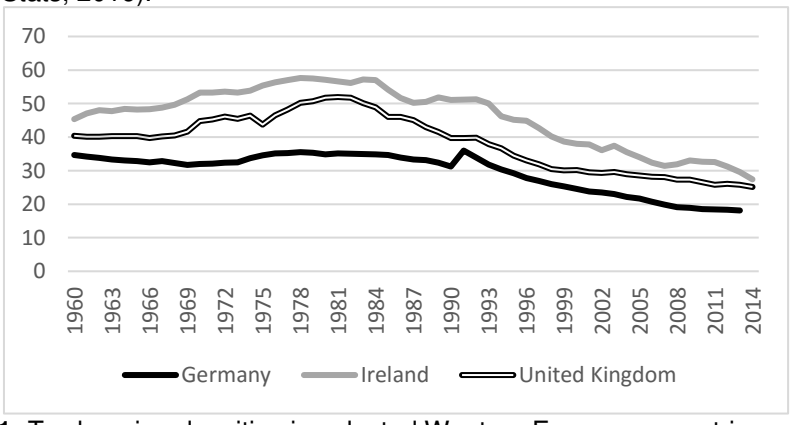


Figure 1: Trade union densities in selected Western European countries
Source: Compiled by the author, according to OECD.Stat (2016)

Practices of enforced membership as negative selective incentives – e. g. closed-shop agreements – may positively affect trade union density by helping to overcome the free-rider problem.

Closed shop means that the precondition of employment is to be a member of a certain trade union. Actually, in Europe, closed shop practice was legal only in the United Kingdom till 1990 (IER, 2012) and in Ireland, where it operates even nowadays, however, it is less prevalence (ILO, 2016). The empirical evidence on the effect of compulsory membership is controversial. Ebbinghaus and Visser (1999) showed that closed shop practice in combination with union's workplace access was a necessary condition for a medium level of unionization but it could not stop decline. Blaschke (2002) found that in the United Kingdom closed shop exerted a positive influence on union density, while in Ireland it did not necessarily stimulate union growth. According to Bryson (2008: 6) there is a strong relationship between closed shop practice and high union density in the United Kingdom. Windolf and Haas (1989) analysed the workers' willingness to join a union in West Germany and found that there was a quasi-compulsory membership enforced by works councils. The employees were motivated to join because works councils had a great impact on promotion, requalification and redundancy programs. Thus, trade unions could attract and retain their members.

If there is no possibility for any forms of union security (for example the above mentioned one) and discriminatory wage policy, other incentives must be needed (Beck and Fitzenberger, 2004). Such incentives may include greater job security or legal aid. In general, empirical studies have not directly tested for the selective incentives. Moreover, investigations usually refer to a certain point of time. Beck and Fitzenberger (2004) and Fitzenberger et al. (2011) identified age and job satisfaction as determinants of the trade union membership. The age variable can show higher demand for job security, while low job satisfaction can indicate that legal aid and financial support provided by a union are more important services for a worker. According to the above mentioned two articles related to Germany, age had a concave impact on union membership decision with the maximum at about 50 years, while job satisfaction was negatively correlated with the joining propensity (Beck and Fitzenberger 2004) or had no considerable effect on willingness to join a union (Fitzenberger et al, 2011).

Booth and Chatterji (1995) examined directly the influence of excludable incentive goods and found that these selective incentives (grievance procedures, bargaining over physical conditions and redeployment, managers limited by formal union agreement) significantly and positively correlated with British manual workers' union density. In addition, Moreton (1999) used British establishment-level data and showed that higher union effectiveness (i.e. higher job security via the lower achieved dismissal rate) and pseudo closed shop (in which management strongly recommends union membership) could raise union density.

Following Akerlof (1980) and Booth (1985), testing social custom theory is quite widespread. Goerke and Pannenberg (2004) confirmed that the presence of social customs might hinder free-riding behaviour. They noted that comparing the effects of excludable incentive goods with the influence of social customs would have been a valuable part of the literature.

4.2. Nordic countries and the Ghent-system

Nordic countries chose another way to solve the problem of unemployment.
These countries have the highest union density rates compared to other European countries. In Iceland trade union density was 67.2 percent in 1979, after which it started to grow rapidly and in the last ten years it has been about 84-85 percent. Sweden and Finland had the highest level of union density around 1994 (above 80%), then membership rates decreased continuously and nowadays densities are slightly below 70 percent in both countries. After its peak of 80.2% in 1982, the Danish level of union organization fell steadily, but since the late 2000s it has been approximately 67%. Norway's union density is moderately high and stable at around 53-55%. Belgium, with density of around 55% is not a Nordic country but it is the birthplace of the Ghent system that characterises four out of five Scandinavian countries. Figure 2 shows the union density rates in these countries.

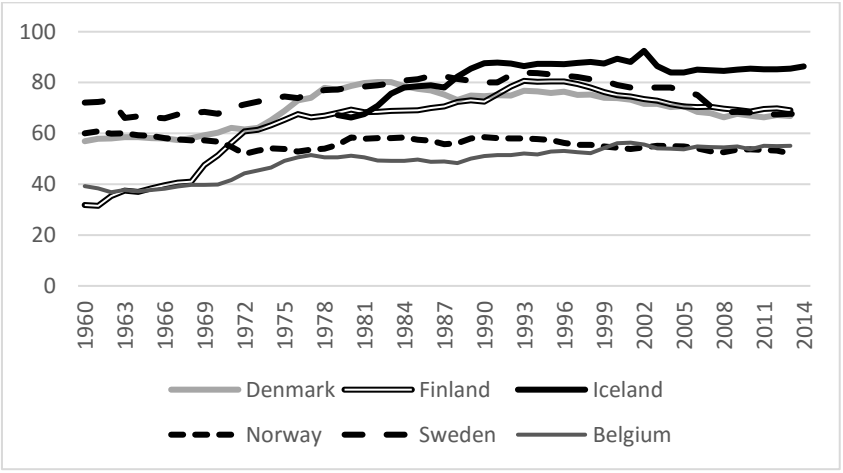


Figure 2: Trade union densities in Nordic countries and Belgium
Source: Compiled by the author, according to OECD.Stat (2016)

Voluntary unemployment insurance subsidised by the state and administered by a trade union is referred to as the Ghent system (Vandaele, 2006: 647). The origin of this system was the need to deal with unemployment in the 19th century. To solve this previously unknown problem Belgian unions established unemployment funds. Due to their evolving financial difficulties unions turned to the city council in Ghent. A communal unemployment fund subsidised by the Ghent municipal authority was set up in 1901 (Vandaele, 2006). Soon, similar institutions emerged in many European cities. Later on, provincial governments started to subsidize unemployment funds and the system became more centralized. The first countries to introduce the Ghent system at a national level were France (1905) and few a years later, Norway and Denmark. In the next 30 years the Netherlands (1916), Finland (1917), Belgium (1920), Switzerland (1924) and Sweden (1934) launched national voluntary unemployment schemes as well. Subsequently, the role of

governments in the control and administration of unemployment insurance provision increased, at the expense of unions. Finally, the Ghent system is operational in only a few countries today (Dimick, 2011). Although there are important differences in current systems with regard to rules of membership, eligibility for unemployment benefits, administration of the system, financing and the level of unemployment benefit, similarities also can be found.

Workers are free to decide about taking out an unemployment insurance policy, but membership of an unemployment insurance fund is required to obtain unemployment insurance. These funds are usually established and administered with considerable trade union involvement. In 'Ghent countries', trade unions and the unemployment insurance funds established by these unions are often interwoven because trade unions establish and control these funds in the same occupational area in which workers are organised. Furthermore, these organisations often use common buildings and offices, therefore workers cannot really think of them as separate entities, even though they pay separate membership fees for trade unions and unemployment funds. Municipalities provide lower and means-tested social benefits for those who have no membership of an unemployment fund and no entitlement to unemployment benefits (Lind, 2009).

In addition, other articles emphasise that trade union membership is not a precondition for receiving earnings-related unemployment benefits via unemployment insurance funds (Scruggs, 2002; Böckerman – Uusitalo, 2006; Kjellberg, 2006; Lind, 2009) and that unemployment insurance funds are formally independent organisations. Nonetheless, there is a strong relationship between membership of a trade union and membership of an unemployment insurance fund. One reason for this is that the right to join an unemployment fund without union membership was not widely known (Kjellberg, 2006). Moreover, trade unions had the means to make it unprofitable to join unemployment funds directly. They have had the ability to reward union members and punish non-members through the discriminating allocation of benefits and the impact on individuals' prospects for re-employment (Scruggs, 2002).

Due to fundamental changes in the economic and political environment this connection has been weakened in recent years. However, it is still a substantial selective incentive that influences the decision to join or leave trade unions. At least – following Olson (1965) – several studies have identified union-run unemployment insurance – the Ghent system – as a selective incentive, some of them providing empirical evidence (e. g. Scruggs, 2002; Ebbinghaus – Visser, 1999; Ebbinghaus – Göbel – Koos, 2011). The selective benefits of being enrolled in a union-administered unemployment insurance system help overcome difficulties of collective action, namely the problem of free riding. Sruggs (2002) explains in detail how the Ghent system contributes to mobilize latent collective interests, i.e. how it operates as a selective incentive. He suggests three ways through which the Ghent system may work. The first is that a union-administered unemployment fund works largely on an actuarial basis. A trade union gains a surplus for providing collective benefits, and an individual can obtain benefits that are private because if there is no insurance then there is no unemployment benefit for them. The profit derived from the union's activity serves the collective goals of

the organisation. The second is that non-members pay higher prices for unemployment insurance, so the costs of union membership appear to be less. However, according to Scruggs (2002), the above mentioned mechanisms are not the most important ones. The main mechanism is the possibility of discriminating between members and non-members in the implementation of the insurance program. This does not occur by violating the general parameters of the rules of eligibility, but in the day-to-day operation of determining who is eligible for benefits and for more beneficial replacement jobs. This possibility creates a greater propensity for workers to join a union, in order to be in the 'insider job queue'.
The declining tendencies in Nordic countries reported in studies are partly due to the weakening relationship between union membership and enrolling in unemployment insurance funds. The reason for this is that it has become very costly for employees to take part in both. The main contributing factor in Finland is the foundation of the independent unemployment insurance fund (YTK) in 1992. The situation in Sweden is similar, and the proportion of non-union members in unemployment funds is increasing. This process was furthered by the hollowing-out of the unemployment insurance with complementary insurance and unfavourable changes in the political environment. The same the case in Denmark where cross-industry unemployment funds have emerged and gained popularity.
Certainly, there are many other factors that cause declining trends in various countries (risk of unemployment, composition of the workforce, younger workers' lower joining propensity, etc.).

4.3. Post-socialist countries

Union density trends are quite similar and declining in the post-socialist countries. Now, the union membership rate is 13.3% in the Slovak Republic, 10.5% in Hungary, 12.7% in the Czech Republic, 5.65% in Estonia and 12.7% in Poland (Figure 3).

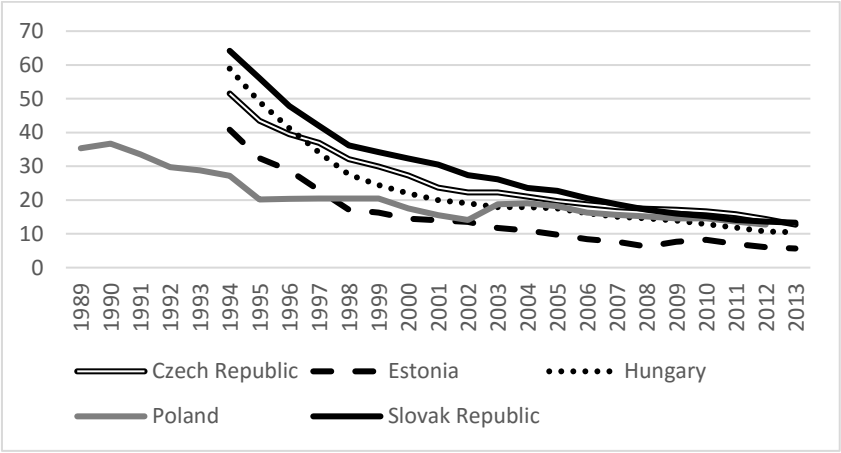


Figure 3: Trade union densities in post-socialist countries
Source: Compiled by the author, according to OECD.Stat (2016)

Trade unions had similar structures and functions in the Central and Eastern European Countries under the influence of the Soviet Union. They were not for protection of workers' interest, but agents of the ruling party dealing with social matters, e.g. holidays or housing. Union membership was obligatory, but after 1989/1990, it has become a free choice (Kohl, 2008). The consequence is shown in Figure 3.
After collection of sufficient data it would be interesting to investigate the effects of negative and positive selective incentives in these countries.

5. Concluding Remarks

The effects of negative and positive selective incentives can probably be important mechanisms in investigating the trade union density trends. All empirical studies refer to Olson (1965) in the literature review part. Nonetheless, one can hardly find a study which examines the influence of other incentives than closed shop practice or the Ghent-system. A plausible explanation for this is that these are the most significant factors. In addition, there may be difficulties in collection and comparison of data or problems with the measurement of variables. As Goerke and Pannenberg (2004) suggest, it would be valuable to develop pure private goods model. Moreover, it may be worth considering union security methods. Perhaps, closed shops are mostly illegal, but certain forms of pressure can exist.

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EXAMINING EUROPEAN BUSINESS ENVIRONMENTS AND LABOUR MARKETS. A COUNTRY-CLUSTERING PROPOSAL

Marina Ferenț-Pipaș, Gabriel Armean
MSc. Econometrics and Applied Statistics, Faculty of Economics and Business Administration, Babeș-Bolyai University, Cluj-Napoca, Romania
marinaferent@gmail.com
gabriel.armean11@gmail.com

Abstract
In 2010 the European Commission presented the Europe 2020 strategy with a focus on smart, sustainable and inclusive growth. Linking one of the agenda's main targets, i.e. increasing the employment rate among the European Union's countries, with the current policy liberalization debate, the present study analyses the business environment and labour market policies for 30 European countries and provides an empirical classification of the two based on 2013 indicators. The most commonly approached labour market output is the unemployment rate. Thus a first section of this paper introduces the reader into the previous researches conducted on its evolution in the liberalization policy context, i.e. the impact of the labour market and business environment factors on the unemployment rate's series. Further on, it presents a classical classification of the European labour market regimes as proposed by the literature. Grounded on a quantitative research paradigm and a positivist philosophy, the paper follows the existing literature and extends the current classification frameworks, proposing two country groupings based on business and labour market related factors. The analysis is conducted through exclusive clustering methods. As such, six clustering methodologies are applied (Ward, Exact Maximum Likelihood, Flexible-Beta Method, McQuitty's Similarity Analysis, Single Linkage and K-means). Three country-clusters are emphasized for both analyses performed (business environment and labour market). No cluster emphasized purely liberalized policies, neither purely tight ones, but rather different mixtures of the two. The clustering aims at providing a common framework for analysing different markets' outputs and assessing the strengths and weaknesses of different policy models. An exemplification of its utility is provided in the end section of the paper by analysing the cross-country differences in two highly traced outputs, i.e. unemployment rate and job vacancy rate. The regime-based cross-country comparison tests for the existence of a preferred model by searching for a model that systematically outperforms the others.
Key words: economic policy, labour market, business environment, clustering, unemployment rate, job vacancy rate
JEL classification: E24, I38, J08

1. Introduction

One of the most stringent challenges in contemporaneous policy setting is to be found in supporting a better social desideratum while accounting for the cost

pressures imposed on the one hand by the current fiscal positions and by the increasing social costs on the other. Among all, recent unemployment levels imposed new pressures on the European Union's social cohesion, emphasizing the importance of the next lustrum's policy settings in the recovery and growth of the European economy (European Commission, 2010).
Thus, one of the Europe 2020 agenda's main targets on steering the process of a successful exit from crisis is to be found in fostering a high-employment economy. Among the agenda's initiatives, there is the establishment of an environment favourable to the small and medium enterprises' development and creating new jobs, establishment of a platform aiming at supporting the labour force migration inside the European Union as well as investing in the life-long learning schemes.
Given the current policy liberalization debate context, the present paper proposes an empirical characterization of the labour market typologies, going beyond classical characterizations proposed by the literature by grounding the research into key features of the 2013 European labour markets. Moreover, it examines the existing policies in the business environment and proposes a grouping of the EU-28 countries based on the found typologies. The usefulness of the two country groupings is to be latter exemplified by analysing the differences between the created country clusters in terms of unemployment rates and job vacancy rates, respectively in search for an outperforming labour market and business environment model, respectively.

2. Literature Review

During the first years after the fall of the communism, Romania along other communist countries, have primarily focused on passive protection actions, i.e. granting financial benefits. The premise behind the unemployment policies was that, under certain limits, this represents a natural phenomenon in the context of a free market economy; the objective of the undertaken measures was that of controlling the phenomena and avoiding its large scale increasing chronicity.
The debate on the policy liberalization can be traced back to Milton Friedman, gaining an increased focus in European countries in the years following the recent financial crisis. Even in the decade prior, researchers such as Mortensen (1999) developed labour market models calibrated to the US and European markets in order to assess the effects of policy differences in explaining the differences in unemployment rates.
Firstly, considering the business environment reforms, Blanchard et al. (2013) claim that lowering barriers to entry of new firms is likely to produce a lager growth payoff than reform in labour markets by leading to an increased competition which in turn leads to an increase in total factor productivity and a decline in the average rate of unemployment. In this regard, Nicoletti and Scarpetta (2004) suggest a negative effect of the high tax wedges on the employment opportunities of the low-skilled by increasing the minimum cost of labour and depressing the labour demand in these sectors.
Secondly, considering the job market reforms, Bouvet (2012) has showcased that

stricter employment protection legislation and higher union density are associated with lower unemployment rates; more generous unemployment benefits are weekly associated with an increased inefficiency in the labour market matching mechanism, while the enforcement of a minimum wage policy has a positive impact on the increasing efficiency in the matching mechanism.
Blanchard et al. (2013) argue that a rigid regime generally leads to high unemployment rates in sectors in which there is high competition between companies and/or low labour skills are required. In analysing the impact of the minimum wage policy, they showcase that a minimum wage set above 40% of the median wage has a negative impact on the unemployment rate for the low skilled workers. Further on, regarding the unemployment benefits, they argue that in the long-run, it prolongs the unemployment duration due to higher labour costs.
To continue, the authors also analysed the European labour market from the perspective of a broad classification based on the state's degree of involvement in the employment protection and unemployment insurance. As such, there are described three labour market regimes, namely: the "Anglo-Saxon" model, the "Nordic" model and the "continental" model; the first one is characterized by a low degree of state protectionism and the latter one is characterized by a highly regulated labour market, whereas the "Nordic" model relies on moderate to high regulatory powers grounded on conditional, active measures (Figure 1).

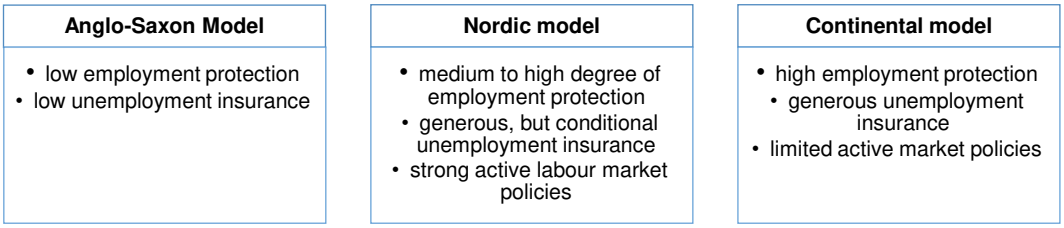


Figure 1: European labour market regimes – classical classification
Source: Authors' processing based on Blanchard et al. (2013)

Last but not least, Puss et al. (2010) provide an empirical grouping of the EU-12 social models. As such, based on clustering analysis they determine five country clusters for monetary poverty and inequality and six clusters for public policy. While their work is useful in assessing the economic development in the sense of living and working conditions of the EU-12 countries, the present study makes a more focused attempt on characterizing specific areas of the socio-economic policy with direct impact in the labour market outputs.

3. Research Methodology

The data set used in the present study contains information belonging to the 28 European Union's member states plus Norway and Island, analysed over the 2013 year (the year prior to the Europe 2020's enforcement). The two non-member states of the European Union were included in the research based on their membership in the European Economic Area and due to their association in the

Europe 2020 strategy after signing the agreement from May 2014 in the European Economic Area Committee (European Commission Press Release, 2014). Dataset was compiled from doingbusiness.org and Eurostat databases and includes indicators belonging to both the business environment and the labour market.

3.1. Country Clustering – Business Environment

Business related factors are split into six broad categories as follows: starting a business, getting electricity, getting credit, paying taxes, as well as trading across borders (Table 1).

Table 1: Business environment factors

Variable	Computation/Measurement	Source
Starting a business		
Days/Procedure	= number of calendar days required to complete each procedure needed to legally start and operate a number of procedures needed to legally start and operate a company	Measure constructed by authors based on business indicators provided by doingbusiness.org.
Cost incurred to complete each procedure	= percentage of income per capita	Indicator provided by doingbusiness.org.
Paid-in minimum capital	= percentage of income per capita	Indicator provided by doingbusiness.org.
Getting electricity		
Days/Procedure	= number of days to obtain an electricity connection/number of procedures needed to file in order to obtain an electricity connection	Measure constructed by authors based on business indicators provided by doingbusiness.org.
Cost incurred to obtain a connection	= percentage of income per capita	Indicator provided by doingbusiness.org.
Getting credit		
Strength of legal rights index	Takes values from 0 to 10. Analyses 10 features of collateral and bankruptcy laws, assigning 1 point for each feature enforced by the legislation in place.	Indicator provided by doingbusiness.org.
Depth of credit information index	Takes values from 0 to 6. Analyses 6 features of credit bureau and credit registry, assigning 1 point for each feature that applies.	Indicator provided by doingbusiness.org.
Credit registry (bureau) coverage	= number of individuals and firms listed in a credit registry (the largest credit bureau) as percentage of adult population	Indicator provided by doingbusiness.org.
Paying taxes		
Hours/Payment	= number of hours to prepare, file returns and pay taxes/number of tax payments per year	Measure constructed by authors based on business

		indicators provided by doingbusiness.org.
Total tax rate	= firm tax liability as percentage of profits before all taxes borne	Indicator provided by doingbusiness.org.
Trading across borders: Exports(Imports)		
Days/Document	= number of days needed for documentary compliance and border compliance when exporting a product/number of documents required when exporting (importing) a product	Measure constructed by authors based on business indicators provided by doingbusiness.org.
Cost to export (import)	= deflated US$ per container	Indicator provided by doingbusiness.org.

Source: Authors' processing based on *doingbusiness.org* data

In order to construct the country grouping, it was employed the methodology of exclusive clustering. Considering the optimum clustering method, Hamalainen et al. (2013) recommend the usage of methods which require only pair-wise distances between data points such as hierarchical methods in case of data which contains both numerical and categorical variables, the easiest choice is using. Moreover, Puss et al. (2010) use the k-means clustering method along with Ward in developing their European social models. As such, six clustering methods were used, namely: Ward, Exact Maximum Likelihood (EML), Flexible-Beta Method (FLE), McQuitty's Similarity Analysis (MCQ), Single Linkage (SIN) and K-means.

A first step in conducting the clustering analysis is to be found in disseminating among the optimum number of clusters. As such, three criteria were employed, i.e. the Cubic Clustering Criterion (CCC), Pseudo-F as well as Pseudo-t^2. The first two are maximization criteria, i.e. the larger the values of CCC or Pseudo-F, the better the solution. On the one hand, CCC is a comparative measure of the deviation of the clusters from the distribution expected if data points were obtained from a uniform distribution (Sarle, 1983):

$CCC = \ln\left[\frac{1-E[R^2]}{1-R^2}\right] * K$, where: $E(R^2)$ – expected R^2; R^2 – observed R^2; K – the variance-stabilizing transformation.

Thus, a larger value for CCC would indicate a larger difference from a uniform distribution, i.e. a "no clusters" distribution, suggesting the optimal number of clusters to be formed.

On the other hand, the Pseudo-F statistic is a ratio of the mean sum of squares between groups to the mean sum of squares within group (Lattin et. al, 2003):

$Pseudo - F = \frac{(T-P_G)/(G-1)}{P_G/(N-G)}$, where: T – total sum of squares; P_G – within-group sum of squares; G – number of clusters; N – number of observations.

Thus, a larger value for Pseudo-F statistic would indicate a better clustering solution.

To continue, the Pseudo-t^2 statistic quantifies the difference between two clusters that are merged at a given step:

$Pseudo - t^2 = \frac{B_{KL}}{((W_K+W_L)/(N_K+N_L-2))}$, where: B_{KL} – between-cluster sum of squares; W_K and W_L – within cluster sum of squares of clusters K and L, respectively; N_K and N_L – number of observations in clusters K and L, respectively.

Following, the dendogram provides a visual tool for examining the optimum number of clusters. As such, the graph should be "cut" by a vertical line where the distance between one level and the previous one is the highest, the number of clusters being given by the number of intersection points between the drawn vertical line and the horizontal lines.

Figure 2 portrays the output of the three criteria for Ward, EML, FLE, MCQ and SIC methods. As described previously, in selecting the optimal number of clusters researchers should search for points of global maximum in case of CCC and Pseudo-F and points after which the Pseudo-t^2 distribution starts stabilizing. In the present case, except for the SIN method, the optimal number of clusters suggested by all of the three criteria is 3. On the other hand, the dendograms (Figure 3) might suggest an optimal number of 2 clusters.

Sarle (1983) suggests that the aforementioned selection criteria have only a guidance role, the decision in selecting the optimal number of clusters remaining at the researcher's viewpoint. The clustering was carried out considering an optimal number of three clusters based on the first three selection criteria. In the end, the results provided by McQuitty's Similarity Analysis showcased the most homogenous groups. They are presented and discussed in the following section.

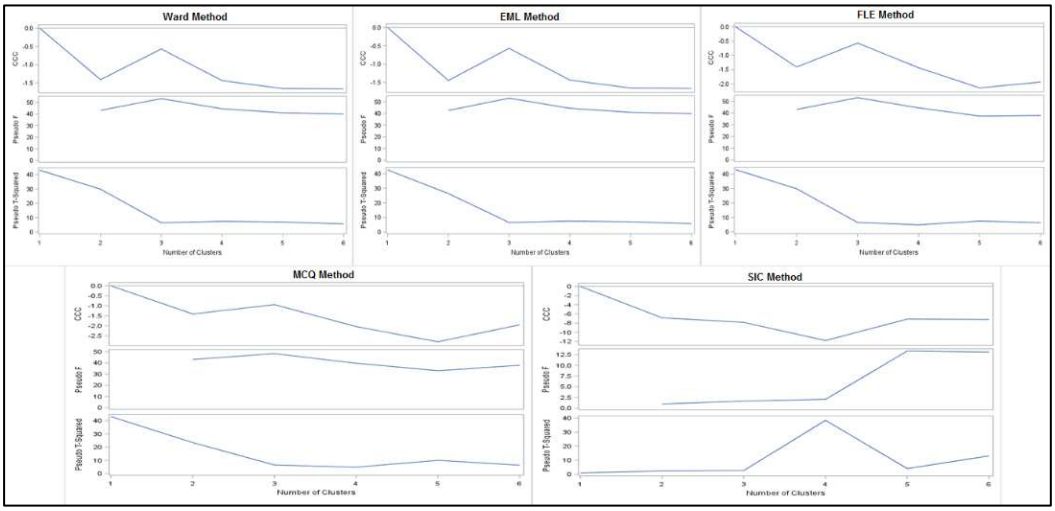


Figure 2: CCC, Pseudo-F and Pseudo-t^2 for Ward, EML, FLE, MCQ and SIC Method

Source: Authors' processing in SAS

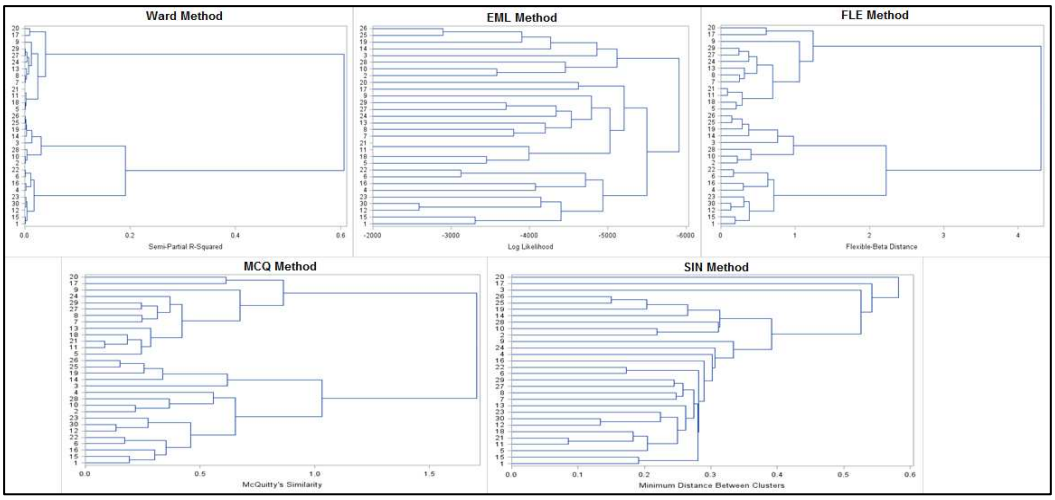


Figure 3: Dendograms for Ward, EML, FLE, MCQ and SIC Method
Source: Authors' processing in SAS

3.2. Country Clustering-Labour Market

The labour market factors comprise the level of unemployment benefits and minimum wage and employment protection policies (Table 2).
In order to construct the country grouping for the labour market factors it was followed the methodology presented in the above section. In order to discriminate the optimal number of clusters, there were analysed the CCC, Pseudo-F and Pseudo-t^2 criteria (Figure 4) and a dendogram was also plotted (Figure 5).

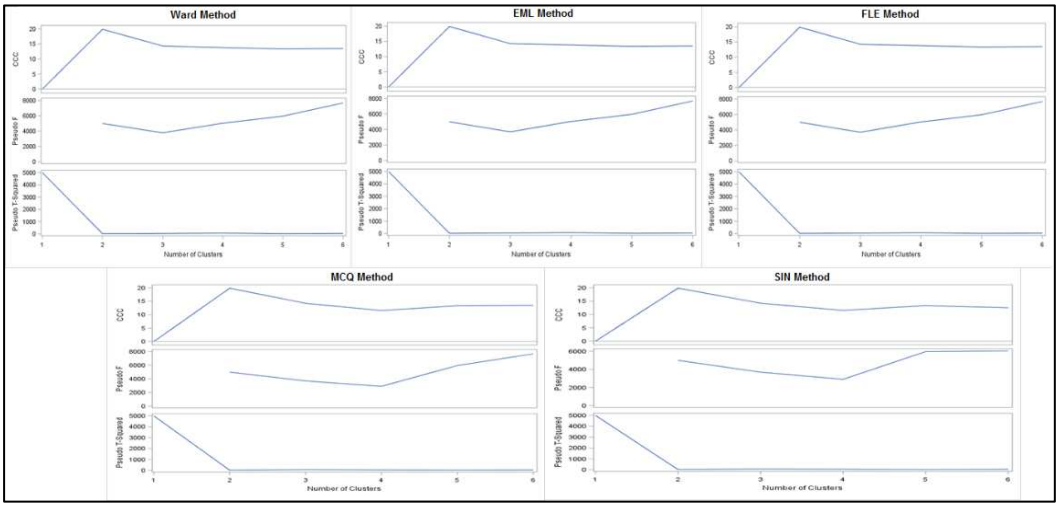
Table 2. Labour market factors

Variable	Computation/Measurement	Source
Unemployment benefits	= percentage of GDP	Indicator provided by Eurostat.
Minimum wage	= percentage of median wage	Indicator provided by Eurostat.
Employment protection legislation		
Are fixed-term contracts prohibited for permanent tasks?	Binary indicator, noted as "yes" in case of prohibition and "no" otherwise.	Indicator provided by doingbusiness.org.
What is the maximum cumulative duration of a fixed-term employment relationship, including all renewals?	= maximum cumulative number of months of a fixed-term employment relationship in case such a period is defined by the regulator, and 999 otherwise	Indicator provided by doingbusiness.org.

Must the employer notify a third party before dismissing one redundant worker?	Binary indicator, noted as “yes” in case of notification requirement and “no” otherwise.	Indicator provided by doingbusiness.org.
Must the employer notify or consult a third party prior to a collective dismissal (9 employees)?	Binary indicator, noted as “yes” in case of notification requirement and “no” otherwise.	Indicator provided by doingbusiness.org.

Source: Authors’ processing based on *Eurostat* and *doingbusiness.org* data

Figure 4: CCC, Pseudo-F and Pseudo-t^2 for Ward, EML, FLE, MCQ and SIC Method



Source: Authors’ processing in SAS

Figure 5: Dendograms for Ward, EML, FLE, MCQ and SIC Method

Source: Authors’ processing in SAS

After performing all the six clustering algorithms, the results provided by Ward method showcased the most homogenous groups. They are presented and discussed in the following section.

4. Findings and Discussions

The previous section described the clustering algorithm and the goodness-of-fit measures used for both business environment and labour market clustering. Present section shows the results obtained and showcases several regime-based cross-country comparison statistics in order to test for the existence of a systematically outperforming model.

To begin with, in respect to the business environment, three groups of countries sharing broadly similar characteristics have been identified. A first consideration drawn from Figure 6 would be that there is no country cluster which exhibits pure business environment liberalization as there is no pure rigid model either; the first and the last cluster present a mix of lighter and tighter business environment factors whereas the second cluster present moderate and high levels in all the analysed indicators. Thus, countries in Cluster 1 have low trading burdens, but increased setup costs and taxes as well as increased corporate tax rates; on the other hand, countries in Cluster 3 exhibit low corporate taxation and setup cost at increased trading across borders burdens. Countries in Cluster 2, however, present increased taxation rates as well as increased trading burdens. The more powerful indicators in forming and differentiating the clusters were those in the class of starting a business.

Further on, in respect to the labour market, three groups of countries sharing broadly similar characteristics have been identified. As in the case of business environment, a first consideration drawn from Figure 7 would be that there is no country cluster which exhibits pure labour market liberalization. As such, high minimum wages are to be found in countries with low unemployment benefits (Cluster 3) and vice-versa (Cluster 1 and 2). Similarly, high regulation on fixed term contracts are associated to moderate or no employee dismissal protection (Cluster 3) and vice-versa. The more powerful indicators in forming and differentiating the clusters were dismissal notification in case of one redundant worker, prohibition of fixed-term contracts and the size of unemployment benefits.

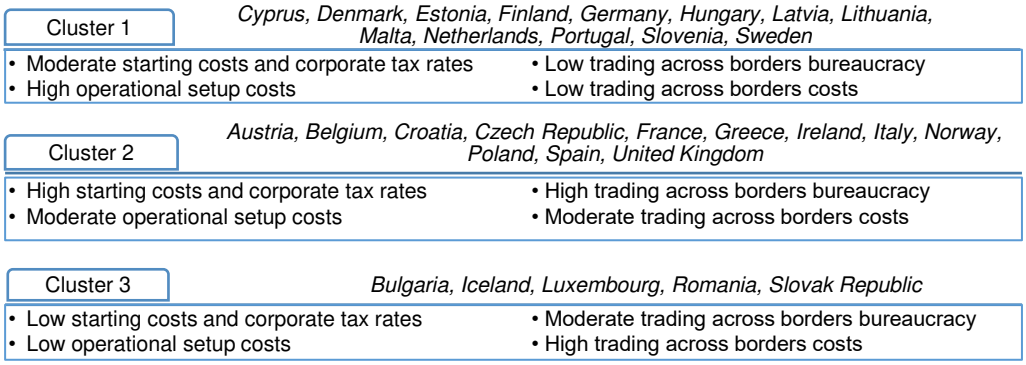


Figure 6: Country clusters – Business environment
Source: Authors' processing based on MCQ clustering procedure

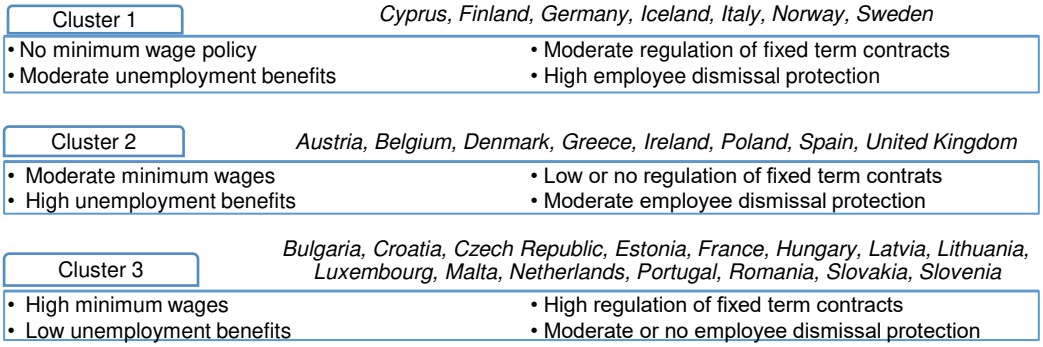


Figure 7: Country clusters – Business environment
Source: Authors' processing based on Ward clustering procedure

In the end, average unemployment and job vacancy rates were computed for the created clusters along with the maximum rage of the values undertaken (Table 3 and 4). The two basic statistics were considered as to account less for country specificities. Values suggest that there is no preferred model in terms of a systematically outperforming one and that there is still place for research in the area.

Table 3. Labour market outputs – business environment clusters

Cluster	Cluster 1		Cluster 2		Cluster 3	
Indicator	Unemployment	Job vacancy	Unemployment	Job vacancy	Unemployment	Job vacancy
Mean	9.77	1.21	11.7	1.12	9.12	0.84
Max. range	11.2	2	24	2.1	8.8	0.5

Source: Authors' processing based on *Eurostat* data

Table 4. Labour market outputs – labour market clusters

Cluster	Cluster 1		Cluster 2		Cluster 3	
Indicator	Unemployment	Job vacancy	Unemployment	Job vacancy	Unemployment	Job vacancy
Mean	8.33	1.57	13.11	1.01	10.5	0.95
Max. range	12.4	1.4	22.6	0.7	11.4	0.9

Source: Authors' processing based on *Eurostat* data

5. Conclusions

Present study followed a detailed radiography of two of the policy regulated areas impacting the labour market outputs, i.e. business environment and labour market, proposing two country groupings based on different policy indicators. The analysis was carried out based on clustering algorithms. Three country clusters resulted for both domains. Considering the policy liberalization context, no cluster emphasized purely liberalized, nor purely rigid policies, but rather different mixtures of them. When assessing for the regime-based cross-country differences in labour market outputs, i.e. unemployment and job vacancy rates, there were no evidence in favour of an outperforming model suggesting that there is still room for empirical research in attaining the better-social desideratum.

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LABOUR MARKET INTEGRATION ISSUES RELATED TO MIGRANTS ARRIVING TO HUNGARY

Péter Miklós Kőmíves
Károly Ihrig Doctoral School of Management and Business, University of Debrecen, Hungary
komives.peter.miklos@econ.unideb.hu

Krisztina Dajnoki
Department of Human Resource Management, Institution of Management and Organization Sciences, Faculty of Economics and Business Administration, University of Debrecen, Hungary
dajnoki.krisztina@econ.unideb.hu

Abstract: *The migration flows appearing in the recent years have gained central relevance in Hungary. Previously people were having no opinion about the current situation of issues related to migration but the increased media attention lead to the development of mixed attitudes among people. Some people feel sorry for the families who are coming from the war zones and lost their homes, others have fear of losing their position at work, or their families because of the acts they have heard from the media and they are hostile to the issue of integration whether it is about education or the labour market. According to the statistical data; in the third quarter of 2015, more than hundred thousand asylum-seekers arrived to Hungary, which dropped drastically in the fourth quarter caused by the significant transformation of the asylum process. This study is intended to serve two objectives: first describe the comprehensive picture of labour market attitudes towards migrants and secondly to identify factors that affect the employment of foreigners in Hungary using secondary data sources. Based on this analysis those questions can be formulated, which may constitute a basis for further labour market researches for the integration of migrants. From our point of view there are vital aspects of the migrants' successful social integration; we have to integrate the migrants who are coming to our country and plan to stay for a longer time to the field of education and the labour market. The social integration of migrants in a country is closely linked to employment, to the integration into the labour market, and in many cases one of the obstacles in this regard is the prejudiced behaviour and negative attitudes towards migrants which manifests itself as the discrimination in the labour market. The results of the European Commission confirm that in Hungary the ethnicity as a variable appears to be the second on the list of the most serious discrimination factors. Research results show that labour market discrimination is clearly increasing, the location of disadvantaged groups encounter difficulties. Based on the results, the rejection in the case of job seeking and dismissal, redundancy commonly occurs due to the educational attainment and the age, while in the case of office administration the discrimination occurs most often due to the origin. The European Social Survey based on their research for the period of 10 years highlighted that in Hungary in connection with the ethinic Hungarians living abroad, most of the people are refusing to settle down them in their national country. The Institute of Management and Organization Sciences, University of Debrecen launched its research in 2016 which aims to present*

attitudes towards migration, migrants primarily among university students and employers in labour market terms. Parts of the survey show that the MA-students who consider themselves basically tolerant are rejecting migrants in action. The answers related to the educational level of the migrants have shown that basic qualification and professional knowledge can be assumed if the respondents considered that the migrants have any measurable school education. The migrants' attitudes towards work are generally wrong according to the respondents. Only a low proportion of the respondents would like to work together with migrants or would be their mentor, applying them as an entrepreneur or manager. However, the ratio of uncertain people in all three cases was above 50% which means if we can show positive examples of migrant workers to the students the ratio can be reduced. The researches on the employment of migrants show a mixed picture. The qualified multilingual workforce often experiencing the benefits of the non-Hungarian nationality. Based on studies conducted among immigrants, nearly half of the respondents arrive to Hungary for employment purposes, while nearly one from five to study.

Keywords: discrimination, attitudes, migration, integration, employment, prejudice

JEL classification: J62, J63, J70, J71

1. Introduction

In 2015 the number of migrants coming to Hungary and to the European Union has increased significantly. We must be prepared to continuously receiving large number of citizens from third countries who cannot or do not want to return to their home countries, however, they would like to work at their place of residence. During the preparation of the study our point was that there are foreigners coming to Hungary who intend to stay here permanently. In terms of the age they can represent several generations, they do not have knowledge of the Hungarian language, their educational qualifications are incomplete or difficult to reveal by official documents. This research aims to analyze the challenges of the active migrant population who are able to work, or studying in Hungary.

The aim of this article is to analyze the labour market chances for the migrants who arrived or will arrive to Hungary, foremost from the perspective of the challenges connected to the labour market integration. After analyzing the statistical data we are considering the elements playing a role in the labour market integration and describing the division of labour market discrimination based on the results of researches conducted in Hungary.

2. Wave of migration to Hungary in the light of statistical data

In recent years, especially in 2015 the number of migrants arriving to Hungary increased significantly. According to data released by the Central Statistical Office Hungary (2016), only in the third quarter of 2015, 109.175 asylum seekers arrived to Hungary, and in each of the first and the second quarters of 2015 the number of asylum seekers was around 33.000. (Figure 1)

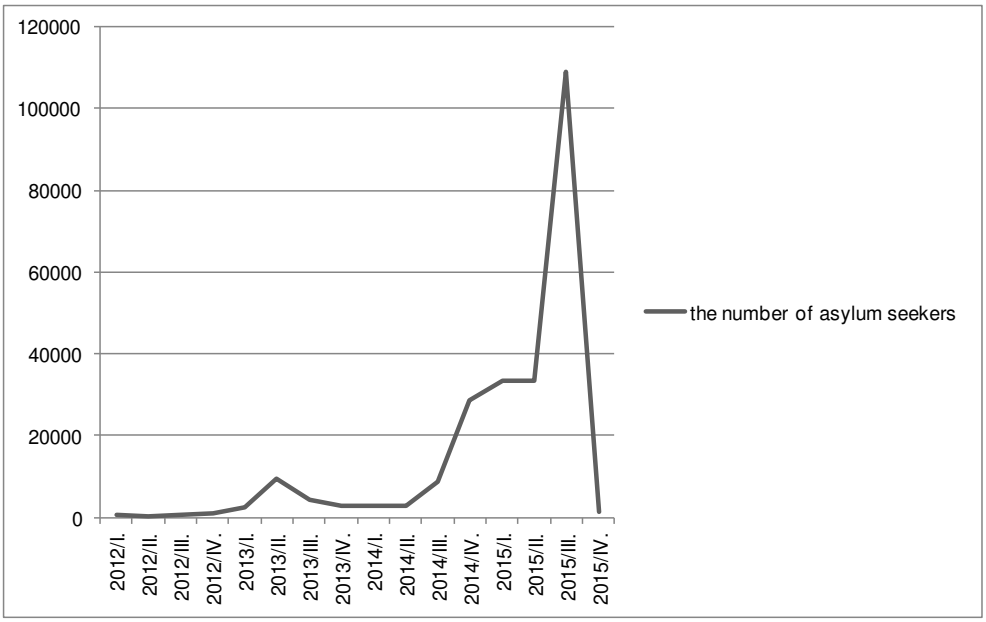


Figure 1: Changes in the number of asylum seekers from 2012-2015 (people)
Source: CSO, 2016

This significantly exceeds the aggregate data from the year 2014, when 42,777 asylum applications were registered in Hungary. That rate surpasses many times the 2013's headcount with 18,900, and especially the 2012's full year aggregate data when the total number of asylum seekers was 2157. The prominent - and growing - number of asylum seekers dropped drastically in the last quarter of 2015; in this case total of 1172 asylum-seekers were registered. The latter decline is related clearly to the closing of Hungary's southern border and major transformation in the asylum legislation - in particular the asylum procedures.

The results clearly illustrate the changes in the nature and volume of migration to Hungary. The data from the Immigration and Naturalization shows that in 2014 the highest proportion of refugees came from Kosovo (21,453 people), Afghanistan (8796 people) and Syria (6857 people). The refugees arriving to Hungary are submitting their application as asylum-seekers but everyone doesn't get the refugee status. The number of people who get the refugee's protected and tolerated status in each examined quarter is very low. According to the Official data from 2010 the aggregated number was only 273 people, which in 2011 reduced to 205 people. In 2012 the number has raised to 462 people, and in the subsequent years it has remained above 400 people (419 people in year 2013 and 483 in 2014). Among the Member States of the European Union in 2014, Hungary became the fifth from those states who register the most asylum applications. Most applications were submitted in Germany (202 thousand). It was followed by

Sweden (81 thousand), Italy (65 thousand) and France (64 thousand). In Hungary, nearly 43 thousand asylum applications were registered, compared to the 2012 figures, when only 2157 asylum applications were submitted. At the same time from nearly 43 thousand submitted applications there was a possibility of prosecution only for 5 people (Statistical Mirror, 2015).
By the first-half of 2015, the number of asylum seekers from Kosovo exceeded the prior years' numbers and reached to 23,920 people. The number of asylum seekers from Afghanistan has increased dramatically (17,906), but also the number of Syrian asylum seekers exceeded the figure of ten thousand (10,975 people) in six months. The number of the other citizens applying for asylum has increased from the number of 4299 (2014) to 7478 (first half of 2015) (Immigration and Citizenship Office).
The results from 2015, which are several times higher than the previous migration headcounts made the phenomenon of migration really visible in almost entire Hungary. In fact, only small geographic parts of Hungary were affected by the migrants' routes, which mean in the other parts of the country, the local and national press' choice of topics had a strong influence on the emerging impressions about migration because of indirect examples.
However, we should not ignore the fact that average Western European citizens spend 15% of their income and Hungarians spends 27% of their income on food as compare to African and Asian citizens, who spends 60-80% of their income on food. In this situation if food prices continue to grow and these people will not be able to pay, then millions can start coming to Europe in the hope of making a living that can lead to mass immigration. "The challenge of Europe is not the financial and economic crisis, but the migration from Africa in a time when the EU is a failed multi-cultural model of society" (Science Focus, 2012).

3. Migrants' Integration Opportunities in the labour market

"The need is increasingly realized in the European Union's integration policies for researchers to be able to characterize the social integration of the immigrants objectively on the basis of the social science research and with more or less standard social metrics"(Osvát, 2013). The practical realization of social integration is closely linked to employment and integration into the labour market, and in many cases one of the obstacles in this regard is prejudiced behaviour and negative attitudes which is manifested in the form of discrimination in the labour market.

3.1. Discrimination in the labour market

Unemployment doesn't mean the same vulnerability for all workers. The risks of the labour market are affecting certain groups more deeply and increasingly threaten them with the danger of becoming unemployed. In the vulnerable groups the employees are often classified based on "natural" basis. The common feature of these groups includes their weak market strategic defence potential, the low position in the social structure and as a result of both: the disadvantaged situation in the labour market (Csehné, 2008). There are other factors that also contribute to the difficulties of such groups e.g. in many cases the tools to tackle the unemployment cannot be applied automatically, or the lasting results in their

employment can only be achieved with the consideration of their specifics. The international standards and experience suggest that the development and operation of multiple and coordinated state-funded programs can and should reduce the risk of unemployment of disadvantaged groups. Csehné et al, (2009) offer few guidelines in this regard:

- The existing employment policy instruments should be made available for vulnerable groups
- In order to improve their position in the labour market their lags should be reduced, their converted values and abilities should be recognized and activated
- For the people struggling with employment disadvantages, special employment policy instruments should be developed and the existing ones should be expanded in this direction. Forms of employment should be developed and supported in order to approve and utilize the endowments and limits of this specific labour force.

The groups that are particularly vulnerable to unemployment include: young people and entrants, those who are close to retirement age, the elderly, women, ethnic minorities; people with reduced working capacity; long-term unemployed people, as well as refugees and immigrants.

Based on statistical data of the past few years (CSO, 2013), labour market discrimination clearly shows an increase. Employment opportunities for disadvantaged groups are difficult. Based on the results of the year 2012, 15% of the respondents between the ages of 19-64 felt that for some reason in some areas they were discriminated. Based on the results, in case of job seeking, dismissal or layoff after the educational level and age, the candidate's state of health is the cause of the rejection or the layoff Almost a quarter of the respondents marked the option at the point where they were asked about discrimination at the field of office routine that they are discriminated because of their origin, the following most common answers were educational attainment and health status. The disadvantaged groups are facing difficulties when it is about employment opportunities. In the case of office administration the origin related discrimination was identified by almost quarter of the respondents that is followed by the educational attainment and health status. The respondents marked the educational attainment with the highest rate (27,8%) as the main cause of the discrimination experienced in the labour market (Table 1), and these results are consistent with the findings of the previous studies.

Table 1: Distribution of the discrimination experienced in the labour market, according to the incidence and cause (%)

The reason for discrimination	Job seeking	Layoff, Rejection	Office administration	Sum
Educational attainment	29,3	27,1	21,8	27,8
Age	25,5	24,2	15,6	24,0
Health status	12,8	17,0	16,8	14,4
Family	12,4	11,1	12,8	12,0

circumstances				
Origin	9,3	9,6	24,2	10,9
Sex	6,5	6,3	5,3	6,3
Other cause	4,3	4,7	3,4	4,7
Sum	100,0	100,0	100,0	100,0

Source: Statistical Mirror, 2012

The second highest rated factor causing discrimination in labour market is age (24%). In the background of this, duality can also be experienced. The employers on the one hand can consider the candidate too old for the job or too young, which often results in the lack of experience or practice, and this can cause the rejection of candidate in case of job seeking, but similar reasons may exist in the case of layoffs. After the age, health status (14.4%), family circumstances (12%) and origin (10.9%) was marked by the respondents as a cause of discrimination. Only 6.3% of the respondents marked that discrimination is related with sex, however, it can be stated that the family circumstances as a cause of discrimination are almost exclusively marked by women, meaning that it is far from reality that men and women equality in the labour market had been achieved (Statistical Mirror, 2012).

The European Union also examined the discrimination from many dimensions in 2012 (European Commission, 2012). The results of workplace discrimination have shown that the most serious discrimination factors in Hungary are: age over 55 years (75%), ethnicity (70%), disability (54%) and gender (44%). Hungary is ahead of the average of the EU27 in the above-mentioned factors. Discrimination is causing serious problems in the countries of the European Union and in Hungary as well. The prohibitive legal frameworks do not always protect against discriminatory behaviour. To reduce discrimination, according to Csizmár - Münnich (2005) – it would be necessary to launch changes in people's behaviour and on the level of the attitudes, and norms.

3.2. Labour Market Attitudes towards migrants

In theory strengthening of receptive attitude towards migrants would allow the creation of a more multicultural society than today's in Hungary. According to Grunzó (2013) the public attitudes gradually changed towards the migrants who were initially positively received by the Western European societies - and after the Second World War were treated mostly as guest workers -, as it became clear that the newcomers' political culture is different from the local. Csege (2015) also confirms that migration can trigger a number of positive social impacts, as well as it has the ability to meaningfully stimulate the economy. However, the fact remains that identification of both legally and illegally arrived migrants are very difficult enforcement tasks which any country's authority has to deal with.
Bogáromi (2015) pointed out – by analyzing the European Social Survey data recordings from 2002 to 2012 - that in Hungary in connection with the ethinic Hungarians living abroad, most of the people are refusing to settle down them in their national country. In addition, it was also found during the analysis of the

survey results, that the Hungarians do not like the non-Hungarians who intend to settle in Hungary.

The Institute of Management and Organization Sciences, University of Debrecen launched its research in 2016 which aims to present attitudes towards migration, migrants primarily in labour market terms. The questionnaire-based study was conducted among university students and employers. Parts of the results from the survey conducted among university students (n=120) found that 46% of the respondents agree with the integration of the test group, while 54% do not support it. The answers related to the educational level of the migrants have shown that basic qualification and professional knowledge can be assumed if the respondents considered that the migrants have any measurable school education. During the research respondents were asked about the relationship between the migrants and work. The negative attitude unfolded this question as well. According to the results, 46% thought that the migrants coming to Hungary have specifically work-shy behaviour. Similar proportion, 44% of the respondents' opinion was that not happily but they work, and only 8% thought that migrants are eager to work. The migrants' attitudes towards work are generally wrong according to the respondents. Respondents were also asked about their willingness, if they would like to work together with migrants, would be their mentor or would apply them as an entrepreneur or manager. The answers are clearly showing uncertainty, since the ratio of uncertain people ("I cannot tell") in all three cases was above 50% but at the same time the number of the people answering with yes was only about 10%. Based on these results it can be concluded that if the students are shown positive examples of migrant workers their willingness to work with migrants can be increased.
According to the results of the survey it can be generally concluded that it is more likely to experience negative attitude among the respondents towards the issues with the labour market integration of the migrants. The respondents who consider themselves basically tolerant have a clearly negative picture of the migrants. This is even more puzzling master students were interviewed, who are about to become players in the labour market, who will not only become future group leaders, but based on their majors they will work as a human resource specialist. The results definitely point out that we should examine what factors influence the students' thoughts and what kind of information influence their dismissive opinions. The answers related to the educational level of the migrants have shown that the respondents assign low qualification to migrants; perhaps this is the reason that they don't fear their prospective jobs from them. However, we cannot forget that at the university there are foreign students (BSc, MA, PhD) with whom the respondents meet every day but from the word "migrant" they do not associate with the people who are in many cases their friends rather with those people who are part of those giant immigrant groups the media features.

3.3 The perception of the migrants' employment

In addition to the discrimination, however, this fact has to be mentioned that according to census data and administrative records: the employment situation of migrant population is better than the Hungarians'. The employment and the activity rate are higher than the average in the migrant population (Kováts, 2013). The economic activity of immigrants from third countries compared to the domestic population is high: based on the National Health Insurance Fund's data from 2009, more than 70% of them are active, while with the domestic society, this ratio is only 40% (Kisfalusi, 2012).

This is confirmed by the results of the research "Safe journey to the Hungarian labour market?!" that "third-country nationals believe that in Hungary after the difficult acquisition process of the necessary documents they have got similar chances to Hungarian citizens in the labour market. In fact, the skilled and multilingual workforce is often experiencing the benefits of non-Hungarian nationality."(Southern Great Plains Region Social Research Association, 2009)

The Research by the Corvinus University of Budapest in 2001 (n=500) conducted tests among immigrants. The basis of the sample was people over the age of 18, coming from a third country, who had a residence (52%), immigration (6,4%) or (national or European) permanent residence permit. The study was intended to investigate that what are the main purposes of the immigrants arriving to Hungary. The results of the study show that nearly 40% of the respondents came with the purpose of employment, 17,8% to study, nearly one third of them because of family reasons, and 10% came with the intention of settlement in Hungary, but without family reasons (Kisfalusi, 2012).

The research from 2011, titled "The challenges of the labour market integration in Hungary – Opportunities and limits of the integration of employees from third countries" (Juhász et al, 2011) examined the requirements of how much Hungary needs the work of the temporary or permanent immigrants in the present and in the future. The basis of the research was expert interviews and questionnaire survey that reflects the controversial image of the migration from third countries.

It can be stated based on the classification of factors playing a role in the employment of foreigners (Table 2), that the average values are homogeneous and relatively got closed to the main value. Looking at the ranking, the respondents pointed out that foreign workers are more flexible, more mobile and cheaper to employ. In the case of entrepreneur respondents, the low mobility of the internal labour force indicated the highest average value; followed by a more flexible supply and the knowledge of the Hungarian language were the main factors affecting the employment of foreigners.

Table 2: Classification of the factors playing a role in the employment of foreigners from 1 to 5

	All answers	**Entrepreneurs**
Foreigners are more mobile, flexible supply	3,41	3,17
Foreigners working for less	3,25	2,83

The internal labour force mobility is low	3,25	3,58
The knowledge of the Hungarian language	3,22	3,00
Nationals do not undertake the specific work	3,18	2,92
The foreigners are more unassuming with the working conditions	3,12	2,75
There are no properly qualified domestic labour force	3,12	2,67
Existing social networks	3,10	2,58
They work fairly and reliably	2,65	2,08

Source: Juhász et. al, 2011.

The research also examined that according to expert's opinion (employee representative, business, National Employment Service, state government bodies, researchers, Non-Government Organizations) what is the impact of foreigners' labour market participation on the Hungarian economy and society. Based on the results, the most highlighted positive impact is that the less attractive, low-paid jobs can be filled. The work of the foreigners at home conserves the poor working conditions (3,00) and contributes to the growth of prejudice (2,9) and these are considered by them the most significant negative effect.

Conclusion and suggestions

The integration of migrants and refugees is a very significant challenge that must be faced by building massive integration systems by the EU and its members. The integration should mean a two-way process in which the social partners, the local government and civil society also play a significant role. It should be a priority to manage the access of migrants to the labour market, more specifically the recognition of their qualifications and the technical and language training (European Migration Strategy, 2015). This study provides a brief, non-exhaustive overview about the background of the immigrants', migrants' integration, giving a particular view on the labour market situation, by which the issues can be formulated, those that are faced during the integration of migrants.

Research possibilities and proposals in the field of the labour market integration are as follow:

1. Integration of refugees in the labour market – building up a possible model
2. Survey and analysis of the jobs which could be filled by refugees
3. The relevant questions from the side of HR about the inclusion and integration of the refugees
4. The assessment and development of the refugees' entrepreneurial competences
5. The preparation of Hungarian employers for receiving and implicating workers from third (non-EU) countries
6. Examination of the migrant's involvement with the domestic population

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SUSTAINABLE USE OF GEOTHERMAL WATERS IN BIHOR COUNTY FROM LEISURE BATHS TO ELECTRICITY PRODUCTION

Călin Florin Mocan
Doctoral School of Economics, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
mocancalinflorin@gmail.com

Abstract: *Through this work I wanted to conduct an empirical research of the evolution of the utilization of geothermal water over the last 15 years in Bihor county, from activities that use low temperature geothermal water such as leisure baths to activities for obtaining electricity through high temperature geothermal water. Geothermal energy holds an important place among the renewable energy resources together with wind energy, solar energy, hydro energy and energy obtained from biomass. One of the advantages of using geothermal water for the purpose of obtaining energy is the fact that there is a reduced amount of waste and there are not any additional costs for waste depositing or for the environmental pollution. Up until the end of the last century geothermal energy was used especially from leisure baths or balneology to greenhouse heating or residential spaces and district heating. There were identified geothermal water resources in over 80 countries and the resources were registered in 58 of these countries. The continual growth of global requirements and tendencies concerning the obtaining of electrical energy out of non-polluting sources and without generating gas with greenhouse effects, led to investments in technologies that obtain electricity out of geothermal waters with temperatures over 100 degrees Celsius (after 2000). In Bihor County the main usage of geothermal waters was for leisure baths and balneology in Baile Felix and 1 May Resorts. After 2000, the usage of geothermal water expanded for leisure baths through the construction or modernization of certain pools in Marghita, Madaras and Sarcau. The activity of heating up residential districts in 2000 was in primary state. Due to the involvement of Transgex SA, one of the main companies in the area that exploits geothermal water on a national level and through the Oradea City Hall contest and the mayors of Beius, Salonta, Marghita, Nojorid-Livada,Sacuieni-Sanicolau-de-Munte, Bors-Santion, the number of residencial districts that are heated up using geothermal water resources extended considerably. In 2000 there were 21 countries all over the world where geothermal energy was converted to electricity. In 2012 Transgex SA installed in Oradea, in Iosia Neighborhood the first unit in Romania that generates electrical power using geothermal water, having a capacity of 50kW. This investment is a primary step in the field of electricity production using geothermal water as sustainable use of renewable resources.*
Keywords: geothermal waters, sustainable use, geothermal energy, renewable resources.
JEL classification: P28, Q01, Q42, Q56

WHY DO WE NEED HUMAN CAPITAL INDEX?

Csaba Nagy
Department of Economy
Faculty of Economy
"Eftimie Murgu" University of Resita, Romania
c.nagy@uem.ro

Abstract: *As technology advances, it establishes and operates on knowledge emerged from the factors of production increased from the role of the human factor, above all, be seen by a unit value that has growing resources and is able to move more and more production value to produce as before. Human resource development therefore plays an important role in an entity, a village, a region, a country's performance greatly affects the value established by the size of the observed area of development and development opportunities. Human capital endowment measures the cost of all types of education and training a person receives. The human capital stock of an economy is made up of the human capital endowment of an average person multiplied by the number of individuals participating in the economy. The human capital endowment referred to a sum of total investment in five types of human capital development, including not only formal education but also, quite prominently, informal education of both children and adults. Each component can be measured either in terms of direct expenditures or in terms of opportunity cost. The United Nations Development Programme publishes every year since 1990 the Human Development Index, with a view to the world countries in human development of the measure and compare. The Human Capital Report generates the Human Capital Index. The Index quantifies how countries are developing and deploying their human capital and tracks progress over time. It takes a life-course approach to human capital, evaluating the levels of education, skills and employment available to people in five distinct age groups, starting from under 15s to the over 65s. The Index covers 124 countries, representing between them 92% of the world's people and 98% of its GDP. Human capital is not a one-dimensional concept and can mean different things to different stakeholders. In the business world, human capital is the economic value of an employee's set of skills. The Human Capital Index reveals several trends and challenges in the current education, skills and jobs agenda and the future outlook for major economies it helps to rethink how the world's human capital endowment is invested in and leveraged for social and economic prosperity and the well-being of all. Ageing economies will face more and more of their population's cross into the 65 and over age group and their workforces shrink further, necessitating a better integration of youth, female workers, migrants and older workers. Youth-bulge economies face burdens of a different kind as a very large cohort of the next generation-one that is more connected and globalized than ever before-enters the workforce and with very different aspirations, expectations and worldviews than their predecessors. The Human Capital Index is among the set of tools that we hope will enable better decision-making in this direction.*

Keywords: human capital, human capital index, education, labour market, labour force, knowledge.

JEL classification:
O15 - Human Resources • Human Development • Income Distribution • Migration,
J24 - Human Capital • Skills • Occupational Choice • Labor Productivity.

1. The Human Capital

Wikipedia defines human capital us follows: „*Human capital is the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labour so as to produce economic value*".
Human capital in part of the individual's accumulated knowledge, experience and part of the developed abilities, including the emotional richness of and the desire to act. According to the OECD (1998) human capital is the individual's knowledge, skills, competencies and attributes.
Human capital, human resources and human factors concepts in publications often used as synonyms for authors, although the difference between them is essential. The capital is generally defined as a commodity produced, human capital is also a result of production within family, as well as through training takes place. In this definition I use the training in the broadest sense, which includes training implemented in different educational institutions, and self-education by means of which the human intellectual, physical qualities to develop. Human capital is therefore a productive factor, which is involved in the process of production value.
A comprehensive human capital specification must consider all the investments that people can carry with them to improve productivity. Such investments include formal, non-formal and informal skills acquired through training and workplace experience learning through practical activities. Moreover, these effects of human capital on economic growth have not been validated empirically, due to the lack of consensus in particular the theoretical basis of estimation methods that weaknesses in each approach, shortcomings can be two ways: either the method used does not adequately reflect the key elements of human capital or the data used are of questionable quality.
Valuing stock of accumulated knowledge is therefore essential for territorial development, given that we are witnessing a reduction of material resources, increasing competition in global markets. The accumulation of human capital is the source of economic growth but also the consequence thereof. Any territorial development strategy must take into account both quantitative and qualitative characteristics of current and future human resources, highlighting strengths and weaknesses and prefigure developments to intervene effectively. Valuing human capital can be a competitive advantage in the territorial when classical resources are lacking.

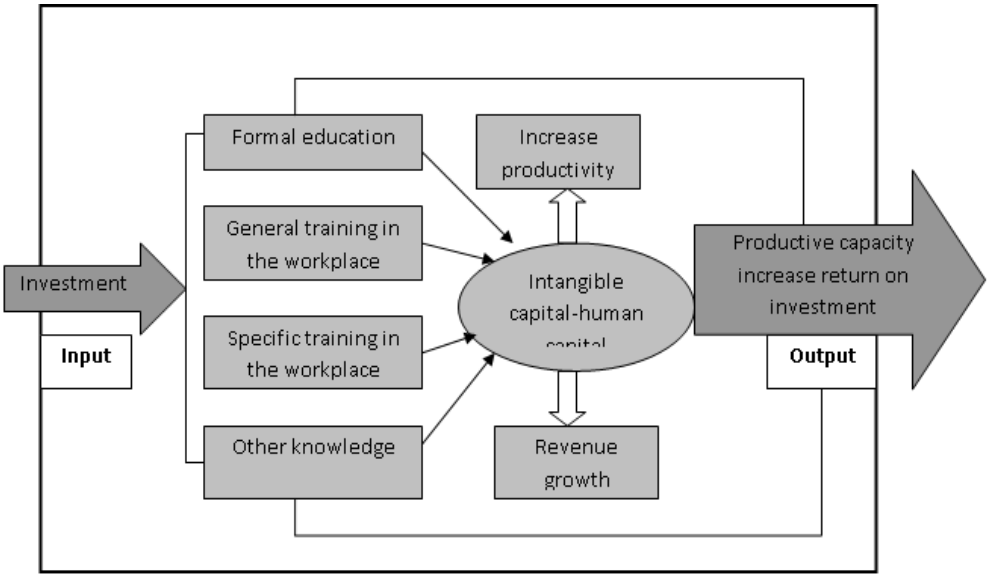


Figure 1: The human capital model
Source: Zula, K., Chermanck, T. (2007), Integrative Literature Review: Human Capital Planning: A Review of Literature and Implications for Human Resource Development. Human Resource Development Review, 6

The production resource took broader category is meant to include unutilized productive forces. So the human resource includes the population of working age not in employment as well. The human factor is more complex than both categories in which the economic and social side of the human body is intertwined.

2. Human capital components

Traditionally, human capital was regarded by education and experience, the latter being reflected both training and learning by doing, so education is the most important component of human capital. High educational capital requires a higher amount of labour due to increased productivity.
But in recent years, health (including the physical, cognitive function and mental health) has come to be seen as a fundamental component of human capital. In addition, the value of human capital is determined by the context of critical physical, social and economic fabric of society, because this particular context that determines how attributes that a person owns can be rewarded.
Education, training, healthcare, personal development activities are included in human capital, because they lead to improved health, increased incomes and causes lifelong learning (Becker, 1992) .
Human capital consists of resources or labour, capital, education and biological capital. Investments in health, education, talent and creativity in individuals as

providing a favourable environment in which these investments to be transformed into productivity for the economy are essential.

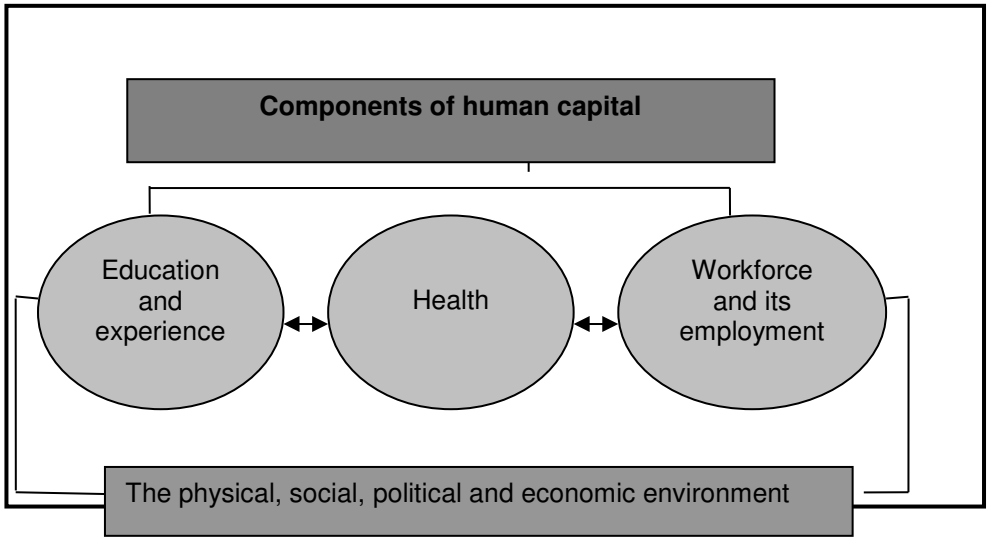


Figure 2: Human capital components
Source: edited according to OECD, 1996

In our century, the human factor has become one of the most important resource. As technology advances, it establishing and operating knowledge emerged from the factors of production increase the role of the human factor, above all, be seen by a unit value has growing resources and is able to move more and more production value can produce as before the production.
Human resource development is therefore plays an important role in an entity, a village, a region, a country's performance greatly affects the value established by the size of the observed area of development and development opportunities. The human talent, ability, wealth of the nation give reason to give more importance of this aspects.

3. The measurement of human capital development

A key factor in the growth of human capital, development differences result in polarization of the world. In developed countries, human assets and economic growth in areas faster than the smaller allocated human capacity. Human capital endowment measures the cost of all types of education and training a person receives. The human capital stock of an economy is made up of the human capital endowment of an average person multiplied by the number of individuals participating in the economy.

The human capital endowment referred to a sum of total investment in five types of human capital development, including not only formal education but also, quite prominently, informal education of both children and adults. Each component can be measured either in terms of direct expenditures or in terms of opportunity cost.

4. Human Development Index

The United Nations was first reported in 1990 in a publication entitled Human Development Report, which first published the human development index, with the aim of measurement and comparison of the world's 160 countries human development level. The method of calculation of the HDI due to the on-going debate and criticism since its release several times changed. The index's main advantage is that, unlike the previous one-dimensional approaches - because of the complex nature -is a realistic alternative to human development capture. Thanks to a simple structure and a relatively small data requirements is easily calculated for all countries in the world. In addition to the benefits listed in the index, however, it has been criticized for it.

The United Nations Development Programme publishes every year since 1990 the Human Development Index, with a view to the world countries in human development of the measure and compare. Human development means creating an environment in which people can develop their full resources, productively and creatively live in accordance with their needs. The human development level measuring index of drafting was the basic idea that the developed and developing countries - measured by gross domestic product - economic development by using a complex index of the human development level can be comparable. However, more an attempt was made to smaller regions to apply the indicators.

The method of calculation of the HDI - saw the light of day due to criticism - since the release of the index changed several times, the study of the current index calculation method is described, making reference to some of the major changes.

For each component an index is calculated in the Human Development Index as follows:

$$I_i = \frac{X_i - X_{min}}{X_{max} - X_{min}}$$

Where: Xmax and Xmin showing the two extremes,

Xi is the i-th country's territorial integrity and instructions.

The World Economic Forum’s Global Challenge Initiative on Employment, Skills and Human Capital analyses causes of unemployment and the skills gap, to anticipate future trends in labour markets and to identify successful practices and engage stakeholders in finding solutions.

The Human Capital Report generates the Human Capital Index. The Index quantifies how countries are developing and deploying their human capital and tracks progress over time. It takes a life-course approach to human capital, evaluating the levels of education, skills and employment available to people in five distinct age groups, starting from under 15s to the over 65s. The Index covers 124 countries, representing between them 92% of the world’s people and 98% of

its GDP (WEF, Human Capital Report 2015). On the labour market of these days quantify human capital, set growth targets, investing in human capital is more than necessity. The human capital is the most important resource of a nation, which is the base of long term economic development.
The first edition of the World Economic Forum's Human Capital Report explored the factors contributing to the development of a healthy, educated and productive labor force. The second, revised edition attempts to deepen the analysis by focusing on a number of key issues and realize a better design of education policy and improved workforce planning.

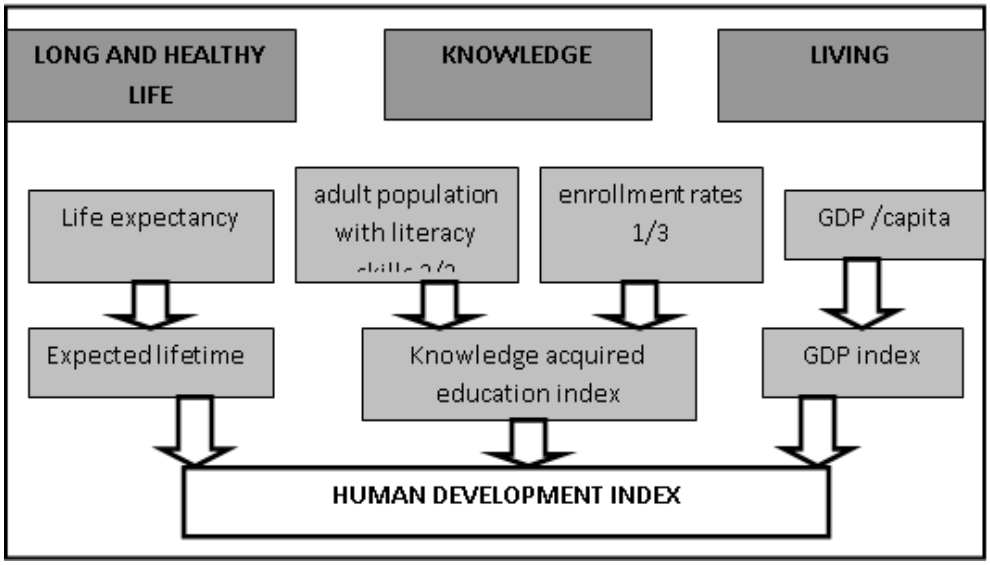


Figure 2: The Human Development Index Components
Source: edited according to the Human Development Report, 2001.

Human capital is not a one-dimensional concept and can mean different things to different stakeholders. In the business world, human capital is the economic value of an employee's set of skills. The Human Capital Index contains two horizontal themes—Learning and Employment—running across five vertical age group pillars of the Index (Under 15; 15–24; 25–54; 55–64; and 65 and Over). In total, the Human Capital Index covers 46 indicators. Exactly half of these are the result of disaggregating by age education indicators (primary, secondary and tertiary attainment) and labour market indicators (labour force participation rate, unemployment rate and underemployment rate).
The first horizontal theme, Learning, contains several sub-themes related to education: enrolment in education and quality of education, which impact the future labour force; the educational attainment in the labour force; workplace learning-the level of opportunity in a country to acquire new skills both through formal on-the-job training as well as through learning-by-doing, tacit knowledge

and learning from colleagues. These sub-themes are distributed across the five age group pillars.
Human capital endowment measures the cost of all types of education and training a person receives. The human capital stock of an economy is made up of the human capital endowment of an average person multiplied by the number of individuals participating in the economy.
The human capital endowment referred to a sum of total investment in five types of human capital development, including not only formal education but also, quite prominently, informal education of children and adults. Each component can be measured either in terms of direct expenditures or in terms of opportunity cost.

5. In conclusion

The Human Capital Index reveals several trends and challenges in the current education, skills and jobs agenda and the future outlook for major economies. These developments imply that we need to rethink how the world's human capital endowment is invested in and leveraged for social and economic prosperity and the well-being of all. Similar to all global challenges in which our existing systems, structures and formal institutions no longer suffice, the world needs a new level of global cooperation on education, skills and jobs. Governments, business leaders, educational institutions and individuals must each understand the magnitude of the change underway and fundamentally rethink the global talent value chain. In order to be proactive in our response to both the current predicaments and a highly uncertain future, we must re-think what it means to learn, what it means to work and what is the role of various stakeholders in ensuring that people are able to fulfil their potential.
Many of today's education systems are disconnected from the skills needed to function in today's labour markets and the exponential rate of technological and economic change is further increasing the gap between education and labour markets. The premise of current education systems is on developing cognitive skills, yet behavioural and non-cognitive skills that nurture an individual's capacity to collaborate, innovate, self-direct and problem-solve are increasingly important. Current education systems are also time-compressed in a way that may not be suited to current or future labour markets. They force narrow career and expertise decisions in early youth. The lines between academia and the labour market may need to blur or disappear entirely as learning, R&D, knowledge-sharing, retraining and innovation take place simultaneously throughout the work life cycle, regardless of the job, level or industry.
Education delivery and financing mechanisms have gone through little change over the last decades. In many countries, many youth and children may find their paths constrained depending on the type of education they are able to afford, while others may not have access to even basic literacy and learning. On the other hand, many developed world education systems have made enormous increases in spending with little return. Early childhood education and teacher quality remain neglected areas in many developed and developing countries, despite their proven impact on learning outcomes; both areas also suffer from lack of objective, global

data. The emergence of potential disruptors is only just starting to open the space for re-imagining education delivery mechanisms.
Rapid demographic changes and the ability to forecast them offer a valuable opportunity for planning, while creating unprecedented pressures in markets and societies, and adapting to these changes requires a mind-set from policymakers that transcends political cycles. Ageing economies will face as more and more of their populations cross into the 65 and over age group and their workforces shrink further, necessity of a better integration of youth, female workers, migrants and older workers. Youth-bulge economies face burdens of a different kind as a very large cohort of the next generation-one that is more connected and globalized than ever before-enters the workforce and with very different aspirations, expectations and worldviews than their predecessors.
Human capital is one of the engines of development at social, community and individual levels. Hence, in the context of the investment of individuals in higher education is low, representing an act less frequently than in other countries, but also reduced in frequency across Romanian society focused on the development of educational capital is both an attitude of active adaptation oriented growth, but also a risky act. Educational capital, health and current revenues are strong interrelated, both at individual and aggregate level. Human capital and economic resources are in the same sphere of development, their levels are in largely interdependent.
Addressing the challenges of the current system requires a fundamental and holistic re-thinking of what it means to learn, to work and to fulfil one's potential as an individual, of how companies should plan for and invest in talent, of how education is delivered and what its substance and timing should be, and of how governments should be addressing not just today's short-term concerns but also planning now for the needs of tomorrow's generations. The Human Capital Index is among the set of tools that we hope will enable better decision-making in this direction.

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ABOUT THE ROMANIAN TOYS AND GAMES MARKET

Nela Șteliac
Department of Political Economy, Faculty of Economics and Business Administration, "Babeș-Bolyai" University, Cluj-Napoca, Romania
nela.steliac@econ.ubbcluj.ro

Abstract: *Toys and games are essential in the life of every child. Many of these contribute greatly to the children's good physical and psychological development since they are especially designed for this purpose. The technological development inevitably gave rise to important changes in the supply of toy and game manufacturers. What characterises the current toys and games market is the continuing increase of the hi-tech toys and games industry, or of the so-called sophisticated toys and games. There are multiple explanations, but the analysts in the field refer mainly to the children's "age compression". This paper aims at bringing into the readers' attention important aspects of the toys and games market in general and of the market in Romania in particular. We intended to present the current situation of the Romanian market in the light of supply, demand and external trade. The presence of famous foreign brands causes the failure of Romanian manufacturers –few in number- in managing to achieve significant domestic market presence. However, they succeed in selling their products abroad where traditional and ecological toys and games are sought after. The main external partner of Romania in the toys and games industry is the EU.*

Keywords: toys and games market**,** supply, consumption, external trade

Jell Classification: D11, F10, L69

1. Introduction

Toys and games are present in the daily life of every child. Their role and presence in the life of children are essential. The toy is an indispensible friend of a child starting at an early age. It plays an extremely important role in the formation of the adult and fulfills a series of functions: it ensures the child's psychological development; it stimulates the child's creativity, imagination and originality; it allows the development of sensory and intellectual skills; it develops the child's motor skills, affections and imitation; it allows interaction and social communication. According to the data of the European Commission for 2010, the toys and games industry represents the most dynamic business segment in the EU and 60% of the products sold each year were newly created. The main European manufacturers are the following: France, Germany, Italy, Spain, Great Britain, Denmark, Czech Republic, Malta and Poland. Unfortunately, Romania is not found among these countries. In terms of market value, the market shares at EU level for 2014 were divided as follows: Great Britain – 18.4% -; France – 15.1% -; Germany – 13.4% -; Italy – 8.3% -; Spain – 5.1% -; and the rest of Europe – 39.8%.

The data of Toy Industries of Europe (TIE) show that the EU represents the biggest games and toys market worldwide, with consumption expenditure exceeding EUR 16 billion (EUR 16.5 billion in 2011). The EU is closely followed by the USA with EUR 15.6 billion and other important markets at global level are: Japan (EUR 4.3 billion), China (EUR 3.9 billion) and Brazil (EUR 2.2 billion).
In the same year, the toy manufacturers in the EU, over 5,000 in number, registered a value of production of EUR 5.6 billion. The SMEs made up an extremely high percentage of the European manufacturers (over 99%). 88% of the toys and games manufacturing companies are micro-enterprises with less than 10 employees each.
Some of the most well-known and successful companies worldwide (Lego-Denmark, Brandstätter Group-Germany) carry out their activity in the EU. The number of jobs ensured by the games and toys industry was of 220,000. The value added to the toys sector was of EUR 8.1 billion (http://www.tietoy.org/publications/).

2. Toys and games market segments. Traditional toys and games vs. hi-tech games and toys

There are two important manufacturer and buyer segments on the toys and games market: the traditional and the modern (hi-tech) toys and games. The technological evolution in the last years generated the adaptation of this sector to the new technological innovations, thus, creating electronic and sophisticated toys and games. These former, although, do no longer manage to fulfill entirely the functions concerning the children's physic and psychological development (do not ensure the development of certain motor abilities necessary for playing with building blocks; do not develop children's imagination; do not develop social skills; cause addiction, aggression and anti-social behaviours; do not ensure the development of creative thinking; are based on competition and dictate exactly what children have to do in order to win etc.), gain more and more ground compared to traditional toys and games. The development of this market segment is determined as well by the so-called "age compression" phenomenon and by the loss of the child's interest in traditional toys, especially in the case of boys starting at age 8.
The psychologists and analysts in the field identified a series of factors which determined this orientation of the children towards the hi-tech toys and games segment. Children's spare time represents one of the most important factors, which, at the moment, becomes less and less, since they are engaged in various activities that undermine their spare time. Psychologist Michael Cohen states in this context that currently the focus is on the performance of education starting at a young age, which forces children to allocate more and more time to homework and school and less to playing. Another extremely important factor would be as well the fact that children start surfing on the Internet at a younger age and, therefore, are more familiar with technology than the previous generations. From this point of view Reyne Rice, a toy trend specialist for the US Toy Industry Association, thinks that for this reason they prefer more sophisticated toys. In this context Rice states that "they are born with a mouse in their hand" (http://da.zf.ro/dupa-afaceri/la-restaurant-cu-peter-imre-2907337).
Not all toys and games existent in the market are adequate and useful for children,

and mostly the most sophisticated ones. In choosing the most adequate toys and games, psychologists Kathryn Hirsh-Pasek from Temple University and Roberta Golinkoff from University of Delaware, USA, make a series of recommendations to the parents. Thus, these should (https://www.sciencedaily.com/releases/2007/11/071123204938.htm):

• *be „10% toy and 90% child"*. Toys must not guide the children's activity by pushing some buttons or handles to make them sing or speak. Children must not be guided by toys, but toys should be directed by children;

• *be certain accessory for playing, and must not direct*. These must wake up the imagination and uniqueness of each child;

• *allow the children to manifest their creativity*. Toys that can be dismantled into pieces and can be rebuilt in order to create another toy are ideal;

• *stimulate social interactions*. Through playing, children can learn negotiation skills which they will need in the adult life;

• *not promise the development of brain*. The inscription on the packaging of toys of such promises should be a warning signal (chances are great that these would not become true even if parents take part in playing);

• *not cost much*. Usually, the cheapest toys (balls, dolls, marionettes, building cubes, colouring pencils or putty) are more adequate for children, since these allow to the children to develop imagination and creativity.

In the category of the toys and games recommended above are especially included the traditional ones. The increase of traditional games and toys sale, however, is limited. Mario Moreno, senior economist at IHS Maritime & Trade, states that one of the factors which limit such increase is exactly the technological progress. Thus, referring to the USA, Euromonitor estimates that traditional toys and games will register a modest increase up to USD 23.4 billon until 2019, while the video game market will increase up to USD 22.6 billion in 2019 (http://www.agerpres.ro/economie/2015/12/24/star-wars-7-a-dat-industriei-jucariilor-un-mult-asteptat-impuls-13-17-33).

At EU level, in 2011 the volume of sale of traditional toys and games represents 28% of the total worldwide sale (http://ec.europa.eu/growth/sectors/toys/).

In Romania, the market of traditional toys and games was approximately of RON 580 million in 2014, having registered an increase by 6% compared to the previous year. Mattel Inc. company from the USA, the manufacturer of the famous Barbie dolls, holds the biggest market share, being closely followed by Lego Group company from Denmark, with a turnover of RON 38.5 million in 2013 (EUR 8.7 million) and a market share of 7% (http://www.zf.ro/companii/lego-sufla-in-ceafa-liderului-barbie-pe-piata-de-jucarii-de-peste-500-mil-lei-13802069). For 2014, Lego Romania had a turnover increase by 45.81%, that is, RON 56.14 million (EUR 12.5 million). Besides these two manufacturers there is also Habro Inc. These three manufacturers are worldwide leaders on the traditional toys and games market.

3. Romanian toys and games market

3.1. Supply

Euromonitor, a market research company, considers that the Romanian toys and games market has the greatest potential in the Eastern Europe area

(http://mtc.md/consulting/Stiri%20si%20Analize.htm).
Slightly over 100 manufacturers carry out their production activity in this market, with a turnover of approximately EUR 30 million (in 2013). 20 out of them achieve approximately 90% of the total of this business (http://www.zf.ro/companii/retail-agrobusiness/romania-mai-produce-jucarii-si-jocuri-de-doar-30-mil-euro-in-retail-magazinele-specializate-au-doar-10-din-piata-12940546).
In the first three places among the most profitable domestic toy manufacturing companies are included the following: D-Toys SRL, From Product SRL and Airguee SRL. The turnover and net profit of these three manufacturers in the period 2011-2014 were the following (see table 1 and table 2):

Table 1: Dynamics of turnover (2011-2014)

Company	Turnover - thousand RON (million EUR)				
	2011	2012	2013	2014	±Δ2014/2013
D-Toys SRL	14,473 (3.35)	13,334 (3.01)	14,486 (3.23)	14,161 (3.16)	-325 (-0.7)
From Product SRL	11,411 (2.6)	12,977 (2.9)	11,852 (2.6)	15.951 (3.6)	+4,099 (+1.0)
Airguee SRL	5,273 (1.221)	8,391 (1.895)	9,595 (2.139)	12,507 (2.790)	+2,912 (+0.651)

Source: http://www.risco.ro/

Table 2: Dynamics of net profit (2011-2014)

Company	Net profit – thousand RON (million EUR)				
	2011	2012	2013	2014	±Δ2014/2013
D-Toys SRL	3,278 (0.76)	2,205 (0.498)	2,354 (0.525)	1,665 (0.371)	-689 (-0.154)
From Product SRL	481 (0.111)	579 (0.13)	-78 (-0.174)	1,030 (0.23)	+1,108 (+0.377)
Airguee SRL	211 (0.049)	192 (0.043)	-132 (-0.029)	210 (0.047)	+342 (+0.076)

Source: http://www.risco.ro/

The figures above are insignificant compared to the biggest toy and game manufacturers' in the EU and worldwide. Nonetheless, we can make some remarks. D-Toys SRL had a fluctuating evolution concerning the turnover; however, it outran the other competitors. 2014 is an exception when From Product SRL managed to outrun it in terms of turnover. Nonetheless, compared to the other manufacturers, D-Toys SRL manages to obtain a higher level of profit in the entire period. The same fluctuating evolution can be noticed as well in the case of the second greatest domestic toy manufacturer. Nevertheless, in 2014, compared to the previous year, the increase of the turnover was significant (34.58%). On the contrary, the first manufacturer registered a decrease of over 2% in 2014. Airguee SRL is the only company which registered each year an increase in the turnover. The dynamics of the net profit for all three companies was tortuous. In contrast to D-Toys SRL, which still registered profit in the entire period, From Product SRL and

Airguee SRL had losses as well (in 2013).
Few domestic manufacturers find a place in the Romanian market. The competition between the suppliers in this market is quite intense, the reason why a series of domestic manufacturers had to export their products to save business. On the other hand, however, although a part of the Romanian manufacturers produce traditional ecological toys, they do not manage to impose on the domestic market due to the lack of domestic consumer education in this respect. They sell their products especially in the European market where they are sought after.
The Romanian toys and games market is dominated by imported toys and games. 90% of the total toys and games sold come from abroad. The international brands present in Romania are the following: Lego, Chicco, Disney, Hasbro, etc. In addition, many of the toys come from Asia, inferior in terms of quality and much cheaper.
The sales on the domestic market are dominated by the big manufacturers Mattel Inc. and Hasbro Inc. Nonetheless, there are domestic manufacturers as well present in the Romanian market which are successful (e.g. Noriel company).

3.2. Consumption – level, preferences

The annual average budget allocated to toys and games for children by a family in Romania was, in 2006, of EUR 15. Unlike Romania, in the neighbouring countries (Slovenia, Czech Republic, Hungary) the annual budget allocated for a child is far greater, of approximately EUR 50, already since 2003 (http://www.business24.ro/bursa/stiri-bursa/piata-romaneasca-a-jucariilor-va-creste-cu-30-peste-cea-est-europeana-891398).
In 2013, the annual average expenditures with the purchase of toys and games for each child in Romania were increased to EUR 50. The amount, however, is much more inferior to the one registered in other countries from the world top 5. We are talking about: Australia ranking first with EUR 835; Great Britain (EUR 765); Japan (EUR 700); Germany (EYR 690); Hong Kong (EUR 665) (http://specialarad.ro/tara-cu-cei-mai-generosi-parinti-cheltuie-de-16-ori-mai-mult-decat-romanii-pe-jucarii/).
In order to obtain information about the toy buying behaviour among Romanians, the research company Exact C&C carried out a study in 2015. The interviewed persons came from urban area, had children aged 1-10 and aged between 18-60 years. The results of this study revealed the following aspects (http://www.revista-piata.ro/index.php?c=newslist&m=detaliu&id=11423):
• 55% of parents purchase toys at least once/month, while: 25% only once in 2-3 months; 11% once in 4-5 months; 1% once in 6 months; 2% once in a year and 6% lass than once a year;
• toys and games most often are bought by parents aged 18-29 years. 70% of them buy at least once/month;
• by regions, the most frequent buyers are from Bucharest, at the opposite pole there are the Transylvanians;
• 69% of the interviewed parents buy toys without a specific reason; 14% buy for their children's birthday; 13% buy for Easter and 4% for Christmas;
• young parents prefer to purchase from hypermarket/supermarket/cash/carry chains, while parents aged between 40-60, buy from specialised toy shops;

• only 9% of the interviewed buy toys online;
• depending on the level of education, 66% of parents with higher education prefer to purchase from hypermarkets, while 36% of parents with high school and general education prefer convenience stores. By area, people from Bucharest buy in a proportion of 65% from hypermarkets, while people from Moldova only in a proportion of 38% and the national average for this buyer segment is of 46%. Most people from Transylvania (28%) are oriented towards convenience stores, and the fewest in Muntenia (9%).
By preferences, the most highly sought after toys are dolls, cars and soft toys. Many of these are, however, of low quality and cheap. Nevertheless, most of the time dangerous toys or toys rejected by the EU can be purchased in the Romanian market, such as toys made of PVC. Although, in the European countries mostly ecologic toys made of wood, cardboard or textiles are sought after and bought, in the Romanian market such products, - made as well in Romania -, do not have the success registered abroad. The explanation of the specialists lies in the lack of Romanian consumer education in this respect. The traditional wood cubes, wooden or textile toys are put aside or cannot even be found in stores (http://www.business24.ro/ing/stiri-ing/romania-a-intrat-in-elita-producatorilor-de-jucarii-care-vand-in-uniunea-europeana-75650)
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3.3. External trade

Until 2004 inclusively, the trade balance of Romania for toys, games and sports items registered surplus. After this year, however, the balance becomes negative. The highest balance deficit is registered in 2014, while the lowest in 2005. The highest surplus corresponds to 2003, while the lowest to 2004. (see the table below)

Table 3: Trade balance for toys, games and sports items (million EUR)

Toys, games, sports requisites													
Indicators	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total export	89	113	111	100	79	107	111	94	99	117	136	108	114
Total import	51	60	83	109	125	189	255	189	167	282	285	280	329
Foreign Trade Balance	**38**	**53**	**28**	**-9**	**-46**	**-82**	**-144**	**-95**	**-68**	**-165**	**-149**	**-172**	**-215**

Source: processed by the author based on ITC data

3.3.1. Exports

The volume of exports was tortuous, with increases and decreases. The lowest value was registered in 2006 (EUR 79 million), and the highest in 2012 (approximately EUR 136 million).

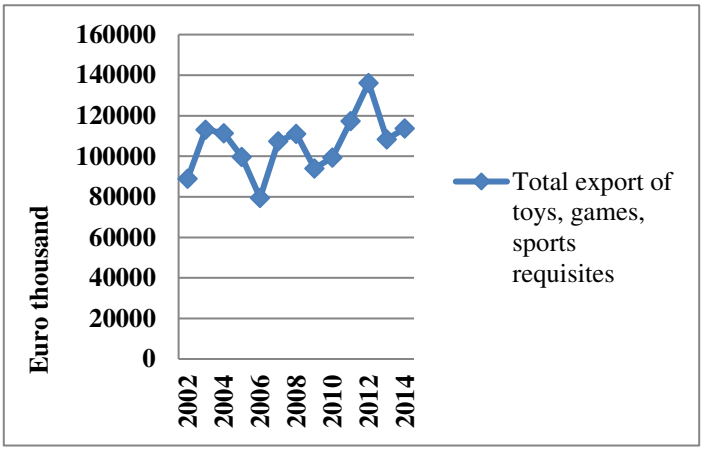


Figure 1: Export of toys, games and sports items (2002-2014)
Source: figure made by the author based on the International Trade Center data

The analysis of main destinations for Romanian toys and games highlights the following aspects:
- the only country which continues to be among the top 3 main country destinations is Italy. This occupies: the first place in 2009 and 2010; the second place in the period between 2002-2004 and 2011-2013, as well as in 2007 and 2008; the third position in 2005, 2006 and 2014;
- France appears in this ranking for a longer period (between 2002 and 2010), after which it disappears;
- The Netherlands, Hungary and Bulgaria are represented in the top 3 main country destinations only for a short period (see table 4).

Table 4: Countries from the top 3 main country destinations

Period			Years 2011, 2013, 2014	Year 2012
2002-2004	2005-2007	2008-2010		
France, Italy, Netherlands	France, Hungary, Italy	France, Italy, Austria	Austria, Italy, Germany	Austria, Italy, Bulgaria

Source: processed by the author based on ITC data

From the analysis of ITC data for the interval 2010-2014, we found that over 92% of the total volume of exports was directed towards the EU28. At this level, the main countries of destination were the following: Austria (weight in total exports EU28 with values between 22.34% and 31.44%); Italy (weight between 11.09%-24.78%); Germany (8.95%-15.55%); France (6.09%-21.99%) and Poland (4.92%-8.41%).
For the same period, the exports towards the countries of Central and Eastern Europe (CEE) registered significant values for countries such as Poland (with minimum values of 17.41% in total CCE exports and minimum values of 45.23%); Slovakia (with a minimum of 12.13% and with a maximum of 32.46%); Bulgaria

(with a minimum of 9.1% and a maximum of 57.06%) and Hungary (with a minim of 5.98% and a maximum of 23.45%). The weight of exports to CEE in total Romanian exports of toys, games and sports items was, in the interval studied, between a minimum of 14.78% (in 2010) and a maximum of 27.75% in 2012.
It is worth mentioning the fact that from the total Romanian exports of games, toys and sports items only between 0.43% and 1.31% were exported to the Asian continent. Nonetheless, in the case of these exports, the highest weights were reported for the following countries: Turkey (with values between 19.54% and 71.52% in total export to Asia); Japan (minimum: 4.10% and maximum: 23.01%); Singapore (27.98% in 2011); Kazakhstan (25.13% in 2012) and Georgia (11.19% in 2012).
Unfortunately, the lack of some official data concerning the structure of Romanian export of games and toys impeded the analysis of their dynamics.

3.3.2. Imports

The volume of the imports included two periods of increase: between 2002 and 2008 and between 2010 and 2014. The current economic and financial crisis was the main factor which interrupted the volume of games and toys imports.

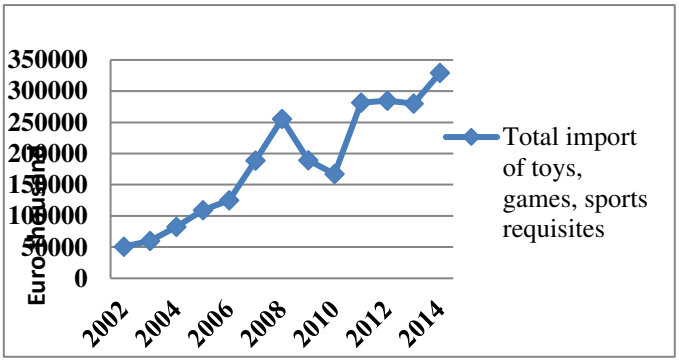


Figure 2: Import of toys, games and sports items (2002-2014)
Source: graphic made by the author based on the International Trade Center data

The ranking of games and toys supply countries included: Italy, China, Spain, France, Hungary, Germany and Bulgaria.
The analysis of the dynamics of the top 3 main suppliers highlights the following:
- Italia ranked first in 2002 and in 2003, than was defeated (in the period 2004-2014) by China;
- Spain was the first for a relatively short time (between 2002-2005) placing 3rd;
- France and Bulgaria appear in only one year in this ranking;
- Hungary placed 2nd for a long period (in 2008, 2010-2014), and 3rd in 2007 and 2009;
- Germany was ranked only 3rd in 2008, 2010, 2012 and 2013.
The processing of ITC data for 2010-2014 revealed an increase in the percentage of the volume of imports from the EU to the detriment of the volume from China. Thus, if in 2010 the weight of games and toys import from the EU was over 63%, in

2014 this reached over 76%. The evolution of imports from China is the following: from over 27% in 2010 to approximately 20% in 2014.
The distribution of imports in 2010-2014 by member states of the EU28 can be seen in graphic 3. As it can be noticed, Hungary is the leader of the main European suppliers. Depending on years, Germany and Italy ranked second.
The main games and toys imports from Central and Eastern Europe (CEE) come mainly from Hungary. Their weight is significant with over 40%, sometimes even over 57% (in 2010). Hungary was followed either by the Czech Republic (in 2010, 2011), or by Bulgaria (in 2012-2014) – see graphic 4.
The weight of games and toys imports in Asia in total imports of such products had a minimum of 21.96% in 2014, and a maximum of 30.61% in 2010. The most important games and toys imported from Asia come from China (in a proportion of approximately 90%), while the fewest come from Taipei (graphic 5).

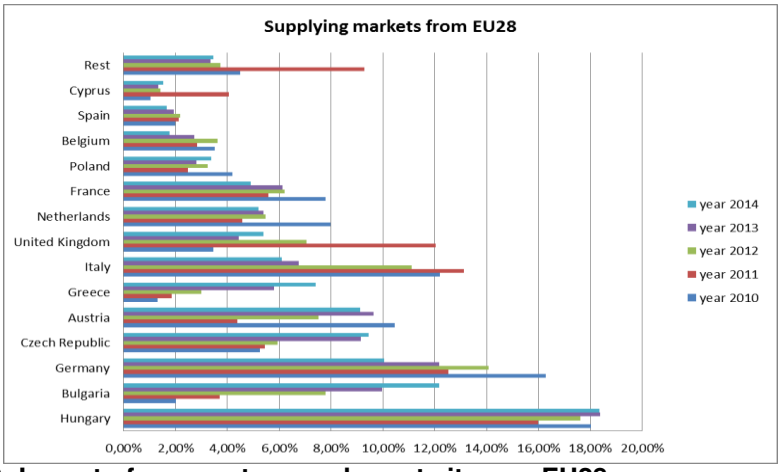


Figure 3: Import of games, toys and sports items - EU28
Source: graphic made by the author based on the International Trade Center data

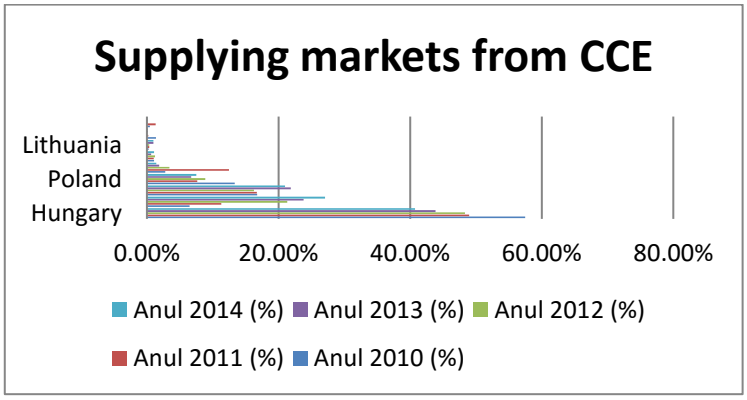


Figure 4: Import of games, toys and sports items – CEE

Source: graphic made by the author based on the International Trade Center data

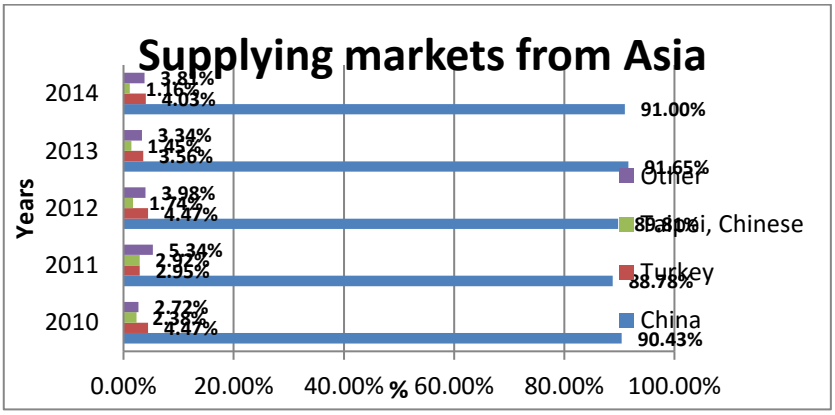


Figure 5: Import of games, toys and sports items – Asia
Source: graphic made by the author based on the International Trade Center data

4. Conclusions

The games and toys market is extremely dynamic due to the technological developments from the last years. It reconfigures the structure of the market by the increase of hi-tech toys segment and limiting the traditional games and toys segment.

The Romanian market is not as developed as in other states and it is among the biggest manufacturers in the EU. Foreign competition directs the Romanian manufacturers towards other countries where Romanian toys and games are sought after. Asian products with an inferior quality level but with a price acceptable for many parents predominate in the Romanian market. Many of the toys are considered dangerous for the children.

Even though an increase was noticed in time, the annual average expenditures for toys and games purchase by each child in Romania are extremely low compared to those registered in other intra- and extra-Community countries.

Both in case of imports and exports, the main external partner for Romania in the field of toys and toys is the EU.

A decreasing tendency can be noticed in the case of volume of toys and games imported from China in the favour of those imported from EU member states.

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THE INFLUENCE OF SOCIAL CONTRIBUTIONS ON THE ECONOMIC GROWTH

Andrada Pop
Finance, Faculty of Economics and Business Administration, Babes-Bolyai University, Cluj-Napoca, Romania
andradadianapop@gmail.com

Abstract: *One of the most important law regarding taxes that influence the development of the private system is the social contributions law. The evolution of social contributions in Romania shows that its integration in the European Union has not positively influenced these taxes. In this context, the European funds have given a welcomed opportunity for companies to grow their businesses and therefor increase the number of employees but the social contributions along with other taxes are a factor in the slow economic progress. Our analysis shows that there is a growth in the number of employees thus there is an increase in the social contribution. We aim to prove that the state must encourage and support in a grater measure the use of structural funds.*
Keywords: social contributions, taxes, European funds, economic growth, gross minimum wage
JEL classification: H22, H30

Benjamin Franklin wrote in a letter to Jean-Baptiste Leroy that *,,…in this world nothing can be said to be certain, except death and taxes"*. Taxes are an imperative in the sustainability of a state. But when do taxes become an obstacle in its well-being?
Romania is a European country since 2007, but its fiscal system is more complicated by the year. One of the most important law regarding taxes that influence the development of the private system is the social contributions law. This law binds both employers and employees to pay pre-established percentages over the gross wage, by the employers and from the gross wage by the employees to the National Budget for Social Securities. In addition the law implies a share of 16% to the State Budget for the income for wages or income taxes.
Table 1: Employer's contributions to the National Budget for Social Securities

Destination of the contribution	**Employer (% over the gross wage)**	**Observations**
Social securities	20,80	normal working conditions
	25,80	difficult working conditions
	30,80	special working conditions
Health insurances	5,20	
FNUASS	0,85	
Unemployment relief	0,50	
Salary outstanding	0,25	

debts		
Insurances for risks and working accidents	0,15-0,85	
Labour Chamber	0,25-0,75	

Source: Law nr. 227/2015 regarding the Fiscal Code

The quota that must be paid by the employer ranges from 28% to 39,2% according to the work conditions provided to its employees. Even though, we are on the second place in the rank of cheapest workforce in Europe, these contributions make foreign investors think twice before choosing Romania for their businesses. Moreover, Romanian companies are forced to lower wages or even reduce positions in their companies in order to afford these taxes.

Table 2: Employee's contributions to the National Budget of Social Securities

Destination of the contribution	**Employee (% from the gross wage)**
Social securities	10,50
Health insurances	5,50
FNUASS	0,00
Unemployment relief	0,50
Salary outstanding debts	0,00
Insurances for risks and working accidents	0,00
Labour Chamber	0,00

Source: Law nr. 227/2015 regarding the Fiscal Code

After a rough calculation of the contribution an employee has to pay to the state, in Romania a person with minimum wage benefits from a net salary of 785 lei which represents about 173 euro. Even if the state increases the minimum gross wage to 1.250 lei the net salary will improve by 140 lei, meaning 31,21 euro. This is an insignificant difference. The real difference would make a reduction of the contribution quota.

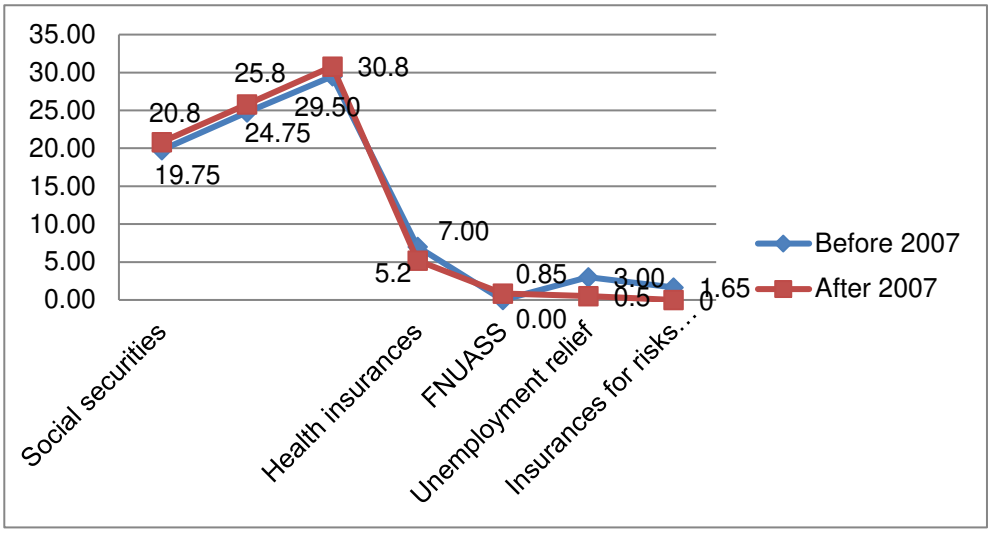


Figure 1: Evolution of social contributions
Source: Law nr. 227/2015 regarding the Fiscal Code

The evolution of social contributions in Romania shows that its integration in the European Union has not positively influenced these taxes. In this context, the European funds have given a welcomed opportunity for companies to grow their businesses and therefor increase the number of employees but the social contributions along with other taxes are a factor in the slow economic progress.

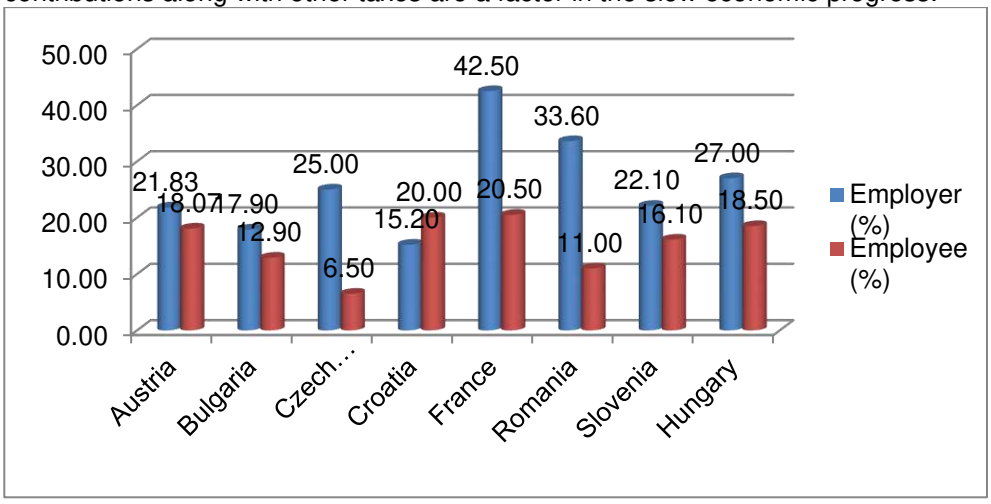


Figure 2: Social contributions through EU
Source: PWC Worldwide Tax Summaries Corporate Taxes 2015/16

With a minimum gross wage below 200 euro Romania is among the European countries with the highest social contributions. This is a major obstacle in creating a sustainable and growing economic environment for local and foreign companies. The Romania fiscal system suffocates small and medium enterprises which sustain

the entire public system.
We have conducted a study on eight SMEs that used structural funds in order to improve their business. Our analysis shows that there is a growth in the number of employees thus there is an increase in the social contribution. We aim to prove that the state must encourage and support in a grater measure the use of structural funds.

Table 3: Project value

	Total eligible amount (lei)	**Grant eligible value (lei)**
I	974.650,89	591.491,77
II	1.533.273,00	1.064.091,46
III	1.862.555,28	1.063.168,92
IV	2.278.947,35	1.360.915,91
V	386.049,12	234.408,93
VI	330.832,00	206.610,60
VII	75.558,00	52.890,60
VIII	1.774.017,00	1.064.410,20

Source: Author's research

Looking at the table above we easily see that the grant eligible value reported to the total value of the project represents, in most cases, more than 50%. This value is in the total benefit of the users of grants because their co-financing is reduced.

Table 4: Turnover evolution

	Turnover I	**Turnover II**
I	9.707.304,00	10.345.784,00
II	17.634.919,00	18.103.467,00
III	36.298.106,00	42.736.084,00
IV	26.075.419,00	28.855.059,00
V	9.438.645,00	9.750.053,00
VI	22.500.000,00	31.500.000,00
VII	4.078.898,00	4.873.805,00
VIII	11.876.769,00	12.729.441,00

Source: Author's research

Using grants led the beneficiaries from this study to an increased turnover. The conclusion is that benefiting from grants is more efficient than using funding sources that involve costs.

Table 5: Evolution of wage contributions

	Average number of employees I	**Average number of employees II**	**Total expenditure on wages I**	**Total expenditure on wages II**	**Additional wage contributions**	**Additional jobs**
I	72	73	1.557.052,00	1.783.929,00	100.393,07	1

II	44	64	512.347,00	736.055,00	98.990,79	20
III	160	179	4.685.914,00	5.218.744,00	235.777,28	19
IV	166	172	4.519.173,00	4.751.851,00	91.326,12	6
V	61	75	2.923.734,00	3.352.587,00	189.767,45	14
VI	50	100	751.500,00	1.575.000,00	364.398,75	50
VII	28	35	381.941,00	438.335,00	24.954,35	7
VIII	57	73	808.012,00	1.037.823,00	101.691,37	16

Source: Author's research

Provision of structural funds for our country, as for other Member States aims to reduce economic disparities and create conditions to ensure additional sources for the state budget and social insurance budget. We note that the beneficiaries of these funds achieved this target.

Conclusion

In conclusion, taxes are a sensible subject worldwide. This paper intends to highlight a real problem faced by SMEs in 2016. The tax burden severely hampers business development in that it compels managers to think twice before hiring new people. For a country in the European Union, Romania is far from what it means encouraging a skilled workforce, free movement of human capital and creation of a large number of new jobs. This affects the SMEs on the competitiveness plane. Without sufficient qualified staff the offers of products and services are not up to the level of other EU countries. The managers' reluctance to invest in human capital also decreases the desire of young people to pursue higher or specialized education, leading to a significant shortage of skilled labor. We believe that by encouraging the use of European funds we increase the chances to improve the current situation. This support encourages a long-term development for the SMEs, and therefore human resource development. Of course the use of structural funds is not enough. Firstly, we propose a reduction of the budgetary system; then simplify taxation, especially reducing contribution rates. Only through real support from the state, we can expect an improvement in the economic environment.

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CULTURAL AND CREATIVE INDUSTRIES

Diana Sava
University of Oradea, Faculty of Economic Sciences, Oradea, Romania
dianna_sava@yahoo.com

Abstract: *The creative economy has appeared as a new trend in the current economic reality, where information, knowledge and original creations as products of individual or work are represented as driving forces in the economic development. The main advantage brought up by the creative economy is its inexhaustible raw materials, the human capital with his creative mind. Nowadays, a company's tangible assets or power of influence are no longer its most valuable possessions; there is something more valuable, more precisely, the intellectual capital, its human resources operating by their own will and leaving the company at the end of each working day. Any organisation, but mostly those conducting artistic or knowledge based activities must prove the ability to attract, retain and motivate valuable employees in order to exploit their arsenal and their ideas to be transformed into goods or services. Considering all the advantages of the new economic sector, a limit of the creative economy is the subjective way of assessing the created products and services' value, the degree of satisfaction experienced by consuming such products being influenced largely by psychological factors. Creative economy presents itself as a novelty in the scientific economic field with its own terminology; thus referring to this economic sector it is required to address what is particular for it, such as: knowledge, creativity, creative industries, cultural industries, creative class, etc. This paper is a theoretical approach and it aims to present some of the specific concepts of the creative economy, more exactly the cultural industries and the creative industries. Also in order to achieve a better understanding and distinction I will present several classifications known in the literature of internationally recognised organisations such as UNESCO, UNCTAD, World Intellectual Property Organization, and others as well. Besides reviewing these approaches, the paper will show the author's own vision on the mentioned concepts.*

Keywords: creative economy; creative industries; cultural industries; classification.

JEL classification: A10; L16; O14; Z10.

1. Introduction

Few years ago new concepts appeared in the economic science, such as: creative economy, creative industries and creative class, all of them being related to a new economic trend based on intellectual and artistic exploitation of the human capital. So nowadays the economy is considered to a have a new sector, named the

creative economy. As the other economic sectors were represented by distinctive activities, e.g. cultivation of cereals - activity of the agricultural sector, so the creative economy has to be depicted in certain sub-industries. This paper aims to present the main concepts related to this issue and also several classifications of the creative industries even if Potts et al. (in O`Connor, 2010:65) do not give much importance to the creative activities as to be to shape an exclusive industry, such as the creative industry; they are considered to belong rather to the innovation system of the economy.

2. The creative economy

The first time when the creative economy was brought into discussion was in 1998 in an official report of the United Kingdom's Department of Culture, Media and Sport, specifying that the creative industries are "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property"(Higgs et al., 2008:22).

This definition was immediately strongly criticised being considered too large „that it could include most of the pharmaceuticals industry and all research and development activity in engineering businesses" (Newbigin, 2010:23). In order to clarify the situation, the United Kingdom's Department of Culture, Media and Sport selected 13 certain sectors of cultural – economic activities, as it follows: „advertising, architecture, art and antiques market, crafts, design, designer fashion, film, interactive leisure software (video games), music, performing arts, publishing, software, television and radio" (Newbigin, 2010:23).

Subsequently, this classification was adopted by other countries or organisations and adjusted to their own interests by adding economic activities with a great importance to the national economy; what exactly is specific to the creative economy regardless of the adopted definition or classification is represented in the following figure:

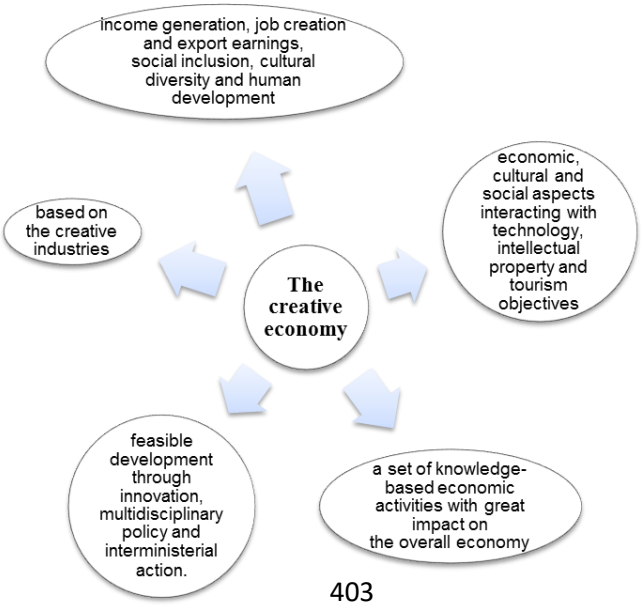


Figure 1: The creative economy in the vision of UNCTAD
Source: UNCTAD, *Creative economy report 2010,* p. 10, at http://unctad.org/en/Docs/ditctab20103_en.pdf, accessed on 06.03.2016

3. Related concepts: cultural and creative industries

The creative economy is associated with several terms, such as the knowledge economy, the information economy, the creative class, but also the cultural industries and the creative industries.
The notion of cultural industries refers to the cultural production and consumption, to those industries aiming to produce and sell goods and services with a symbolic or expressive role, " which, at the time they are considered as a specific attribute, use or purpose, embody or convey cultural expressions, irrespective of the commercial value they may have" (UNESCO Bureau of Public Information, 2006 :1).
It has been considered that the cultural industries include an expansive range of fields, such as fashion, music, writing, art, design, and media industries (Creative Economy Report, 2013:20). But the concept was widened and so appeared the notion of creative industries which also include architecture, visual arts and performing arts (UNESCO Bureau of Public Information, 2006 :1), and mostly those industries "that depend on innovation, including many types of research and software development" (Creative Economy Report, 2013:20).
In the reports of UNESCO, the cultural industries are presented as a part of the creative industries, being referred to as „forms of cultural production and consumption that have at their core a symbolic or expressive element" (Creative Economy Report, 2013:20). So the cultural industries include only those activities which regard music, art, fashion, design, publishing, film, radio and television, whereas the creative industries comprise a much wider range, along with the cultural industries are involved also research and development activities and everything related to innovation.
The concept of the creative industries is used to describe activities which "focus on creating and exploiting symbolic cultural products (such as the arts, films and interactive games)" (Higgs et al., 2008:18) or on providing specific services (marketing, architecture, software etc.). But also, something particular for the creative industries is that the goods and services resulted have an expressive value given by their cultural significance which mostly has nothing to do with the cost or usefulness of the products and services (Newbigin, 2010: 15-16). To support this affirmation I give as an example the fashionable clothing items or works of art belonging to renowned artists.
UNCTAD refers to the concept of creative industries, assigning them the followings:

- "are the cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs;
- constitute a set of knowledge-based activities, focused on but not limited to

arts, potentially generating revenues from trade and intellectual property rights;
- comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives;
- stand at the crossroads of the artisan, services and industrial sectors;
- constitute a new dynamic sector in world trade" (UNCTAD, 2010:8).

In an attempt to be more clear about cultural and creative industries, I would recognise as creative industries all those economic activities conducted or resulted from intellectual or artistic work processes and whose goods or services have a market value dependent on numerous subjective factors. Regarding cultural industries, they represent part of the creative industries, bringing together only those economic activities that have a symbolic or cultural trait and by which national and moral values are identified.

4. Classifications of the creative industries

As mentioned before, the creative industries contain a wide range of fields and their classification differs depending on the criteria adopted. In the next part of the paper I will present some of the most important classification known worldwide.

4.1. The Department of Culture, Media and Sport

In the United Kingdom, according to the Department of Culture, Media and Sport, the creative industries were parted in:

- „Advertising and Marketing;
- Architecture, Visual Arts and Design;
- Film, TV, Radio and Photography;
- Music and Performing Arts;
- Publishing;
- Software, Computer Games and electronic Publishing" (Higgs et al., 2008:102).

4.2. The European Commission

The model used by the European Commission (O`Connor, 2010:58) is different from the first one because it is based on the reproductive performance of copyright industries and divided into three categories:

- Core arts fields - include non-industrial arts activities, copyrights may be applied:
  - Visual Arts;
  - Performing Arts;
  - Heritage.
- Cultural industries - massive reproduction and the copyright is essential:
  - Film and Video;
  - TV and Radio;
  - Videogames;
  - Music;
  - Books and Press.
- Creative industries and activities – non cultural sectors which employ

creative people:

- Design;
- Architecture;
- Advertising.

4.3. The Work Foundation

As I acknowledged in the first part of the paper, the classification of the creative industries depends on the interest to make up economic performance. The United Kingdom's Work Foundation, a non-profit organisation whose main activity is consultancy and labour research, proposes a classification that is very similar to the model used by the European Commission, addressing a pattern of concentric circles. In the creative core of this classification we can find all creative forms of original products, followed up by the cultural industries which include industries such as Film, Music, Radio etc. The concentric circles classification is based on the functionality and expressive value of the products, a value that is seen as "every dimension which…enlarges cultural meaning and understanding" (O`Connor, 2010:61). As it can be noticed in the next figure, the more distance from the core, the less expressive value products and services have, their functional value increasing.

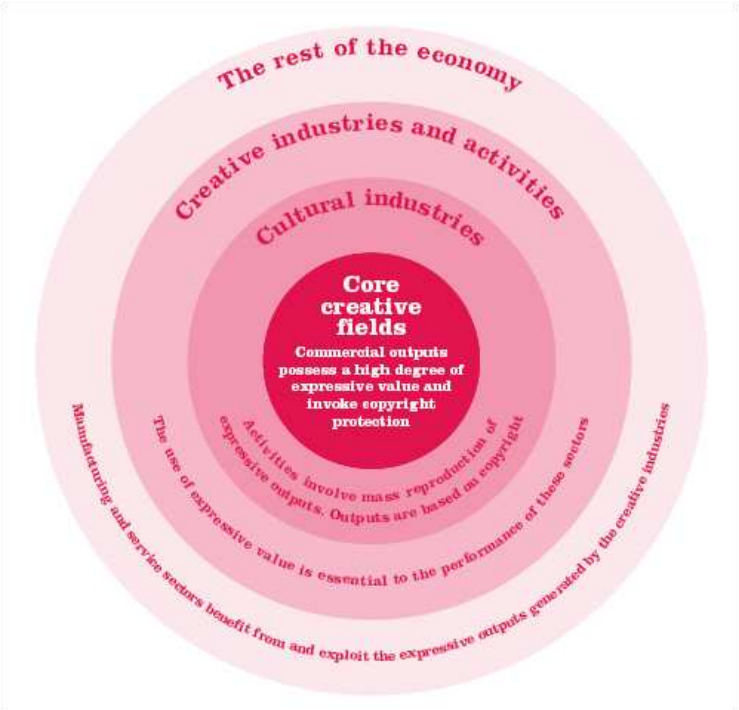


Figure 2: The creative industries – The concentric circles model
Source: Justin O`Connor, *The cultural and creative industries: a literature review – Second edition*, Creativity, Culture and Education Series, Newcastle, 2010, p. 60

4.4. UNESCO

The classification proposed by UNESCO divides the activities by cultural areas in core cultural domains and expanded cultural domains, as the following table presents:

Table 1: The classification of creative industries by UNESCO

Industries in core cultural domains	Industries in expanded cultural domains
Museums, galleries, libraries	Sound equipment
Festivals	Musical instruments
Performing arts	Advertising
Design , Visual arts, crafts	Architecture
Television, Radio	Printing equipment
Film, Video	Audiovisual hardware
Publishing	Software
Photography	
Interactive media	

Source: designed by the author based on the information from: UNESCO, *Creative Economy Report 2013 Special Edition – Widening local development pathways*, p. 22 at http://academy.ssc.undp.org/GSSDAcademy/Upload/CER13_Report_web_optimized.pdf accessed on 28.12.2015.

4.5. WIPO (World Intellectual Property Organization)

Given the primary role of intellectual property rights in ensuring the development of the creative economy, it seems necessary to present also the classification elaborated by WIPO; this one classifies the creative industries with regards to the importance of the copyrights in those industries (UNESCO, 2013:22):

- Core copyright industries: Advertising, Music, Performing arts, Film, Video, Publishing, Software, Television, Visual and graphic art;
- Partial copyright industries: Architecture, Fashion, Design, Household goods, toys;
- Interdependent copyright industries: Consumer electronics, Blank recording material, Musical instruments, photographic equipment.

4.6. Other classifications

Additionally I would like to give extra examples of the ways the creative industries are seen by specialists.

In order to avoid difficulties brought by the taxonomy, Alan Scott separates the creative activities within the so - called cultural commodity production sector, which is divided into two categories:

- service outputs based on information and entertainment: music, museums, etc.;
- manufactured products that ensure consumers “distinctive forms of individuality, self-affirmation and social display” (O`Connor, 2010:62).

Considering also the Romanian researchers (Bobîrcă et al., 2009:119-120), the

creative industries consist of:

- artistic creative industries (visual arts, performing arts, antiquities, etc.);
- cultural creative industries (heritage, traditions, crafts, libraries, etc.);
- creative industries producing media content (publishing, film, radio, software, etc.);
- creative industries producing intangible assets (design, advertising, architecture, etc.);
- related industries (hardware production).

In my opinion, the creative industry would be separated from the whole economy, including the following sub-industries:

- cultural industries: heritage, museums, crafts, performing arts, libraries, etc.;
- innovative industries: research, software, IT related industries;
- creative industries of media content: music, film, TV, radio, video games, publishing;
- creative industries providing specialised services: advertising, fashion, design, architecture.

5. In conclusion

Due to the great earnings resulted from intellectual and artistic exploitation of the human capital, nowadays it seems these activities are given a higher importance gathering and calling them as creative industries. This concept and all the other concepts regarding the creative economy are relatively new and with respect to a clearer image of these creative activities, there are several taxonomies elaborated from different point of views. The sub-industries included by every classification mentioned in this paper are mostly the same, only the framing may vary.

I consider the issue of classifying the creative industries important due to the need of focusing on certain activities, their evolution and the correlated industries which could determine economic growth.

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WHERE, HOW AND WHEN WORK PEOPLE IN BIHOR COUNTY?

Florica Ştefănescu, Delia Bekesi, Csaba Bekesi
Department of Sociology and Social Work, Faculty of Social Sciences, University of Oradea, Oradea, Romania
florica.stefanescu@gmail.com
georgianabekesi@yahoo.com
csaba_bekesi@yahoo.com

Abstract: *The last decades had brought major changes on the labor market, being necessary to look for new solutions which can adapt to the new condition of this market, both the employees and employers, but also the institutions that have responsibilities on this market. We are focusing on identifying some characteristics of the labor market in Bihor and explain some phenomena and economic indicators on this market, taking into consideration the statistic data from the Statistical Yearbook of the NIS (National Institute of Statistics and the Statistical Bulletins of the Bihor County Direction of Statistics. We analyzed four indicators that we consider relevant: employment, investments, wages and productivity. Capturing the evolution of these indicators in the Bihor County's economy and of the factors that determine them allowed us to draw some conclusions regarding the specific of the labor market in Bihor County, namely the specific structure of the labor market in Bihor, in so far as they have been influenced employment, unemployment and productivity by investments and technology, and explanations of low average salary in Bihor, reported to other macroeconomic indicators.*

Keywords: regional labour market, work, capital, productivity, investments

JEL classification: R11, J21, J31, O18

Introduction. Challenges for the labor market

The relationship man and work has been changing over time. Through work, a person transforms the environments to cover his or her needs, to achieve its goals, but transforms itself both in terms of biological and intellectual and emotional. Sometimes, the man was overwhelmed by work, sometimes he worked with please and brought him work rewarding, and sometimes it just felt like toil, like an obligation.

Long time, work was a direct relationship between man and the work instrument, but after technology was interposed between man and the object of his work, the work has become more complex, and the man more claimed. The technology has eased the physical labor of man, but it pressed the intellectual labor, and in the majority of cases, it replaced the man from the work place. Developed economies are currently experiencing profound changes generated primarily by the technological revolution, that brings new economics sectors based on telecommunications, biotechnology, microprocessors that make the shift

from industrial to services and that is one of those “Cycles of creative destructions”, provided by Schumpeter since 1950. (Hall and Soskice, 2001: 54).

The literature indicates a positive relationship between the technological development and the decreasing of the total hours worked (Gali, 1999; Francis and Ramey, 2002; Basu, Fernald and Kimball, 2004), but also a powerful effect of technology’s impact on employment, depending on the nature of the work (Chang and Hong, 2006).

Work location itself has changed (Aries and Duby, 1995), from work in nature to housework, then to work in factory, and currently to work “remotely”.

Work’s duration, in formal terms, has been steadily decreasing: from time expressed in the succession day-night, or the seasons day-light, to time in standardized units, in work hours/days, from 12 hours per day, then to 10, 8, and more recently, 6 hours, as well as the number of days or hours per week. In fact, the labor time, especially once with the increasing of competition in the labor market, is still increasing, extending over time from the work place, rushing over the free time, personal life, pushing people to “exploit themselves” (Schrenk, 2010).

Also the program of work has changed: absent at first, then fixed (for example from 8 to 15), currently making its way the flexible schedule in more and more companies, very appreciated by employees.

Labor market institutions and regulations in this market have progressed from deregulation to self-regulation and then to international regulation. Currently, the degree of regulation in the labor market is very different both in terms of employment laws and the legislation regarding labor relations. The deregulation is associated with a higher share of the economy, with a lower degree of employment and unemployment, especially among young people. Wider employment legislation is characteristic of leftist regimes and is joined by a focus on the social security. In a ranking based on an 2004 survey in 85 countries, the UK and USA are on the 8th and 9th as a degree of deregulation of the labor market, while Germany and Norway are on the 77th and 79th, which indicates the fact that there does not exist a direct relationship between the regulation in the labor market and the economy’s performance (Botero et al 2003: 47-48).

Social and occupational division of work has emphasized from what history calls “the first great division of labor”, that divides men into just two professional categories, farmers and shepherds, to more narrowed specializations from today, which requires the presence in the labor market of the experts on clear outlined areas. If this leads undoubtedly an increasing of the labor’s productivity, instead they threaten the interdisciplinary of holistic vision, with an impact on the satisfaction at the work place and even on the quality of the work’s life, the automatism that involve excessive specialization, often leading, paradoxically, to the increasing of the number of labor accidents.

But maybe, the biggest challenge for the labor market in the contemporary worlds is represented by the globalization that involves not only the spatial extent of work, but also emphasizing the interactions and even the addiction in the process of work. On one hand, local activities are under the impact of some global factors, and on the other hand, a phenomenon of dissemination of some practices in the work process, a kind of “imitation” (with the addition that the consume needs

are transmitted more fast than the production needs, G. Tarde, 1890), but not only in innovation, but a generalized imitation, whose main vectors are transnational companies, international organizations and international migrations, however inducing global transformations. Such forms of imitations are reflected in the fact that the structure and the basis strategy of companies is similar, competitiveness being associated with the costs of the labor force, resulting in many cases, relocation of production, despite the fact that the relocation often face low skilled labor and hence, low productivity of labor or poor quality production (Hall and Soskice, 2001: 55)

Globalization generates a "risk society" (Beck, 1992), facing global risks: terrorism, climate change, major economic crisis, the impact on the labor market in terms of interconnectability and independence of complex relations between regions, states and global economic agents.

If we add to all these the contraction of space under the transport and telecommunication development impact, which accelerates people's mobility and of all forms of employment and of doing business, and time dilation (meaning labor productivity growth), we have a holistic picture of the "wonderful new world of work" (Schrenk, 2010) in a "world system" (Wallerstein, 1974), or a "global village:" (McLuhan, 1962). The organization of the work undergoes significant changes in this context; the individual is drawn into networks and workflows that have nothing common with the classical organization of organizational type.

Man must adapt to changes so simple and expeditious, which often means defying the limits of biological, psychological, professional, and educational. Among the fundamental challenges of the contemporary worker, is the search for identity and reporting to a system or a scale of values to confer civic and emotional stability and consistency.

Employment – investments – wages - productivity. Where, how much and how the Bihor people work?

Despite the fact of the territorial structure (24% of the county is mountainous area, 32% depression, and 44% of the county is lowlands), hydrographic network, important subsiol natural resources, labor resources (90% of county population over 10 years have secondary or higher education), transport and communication network (road, railway and airport, telephone), geographical location (on the western border on the country), tourism resources (especially thermal waters), Bihor County does not record economic and social performance in accordance with the available resources. Infrastructure transport's quality is below the national average, the average lifespan of the population in Bihor county is 72/82 years lower than the nation average (73/77 years) or regional (73/82 years), the average salary is falls consistently below the national average since 1999 till now, labor productivity is low, especially in industry, infrastructure and R&D investments are reduced.

According to statistical data on 2014, Bihor County is the in the leading places in the country to a number of indicators: 7th to employed population and number of employees indicators, 6th in active enterprises, 6th in the agricultural area and number 1 at the number of tractors, has an important contribution to the

export of machinery and electrical appliances and electronic products, footwear, textiles, food. However, since 2006, GDP/habitant has declined as a share of the national average, from 99.76% to 91. 46% in 2011, and after monthly salary earning, Bihor County stood on the 41st place in 2013 (Bihor County Statistical Yearbook , 2014).

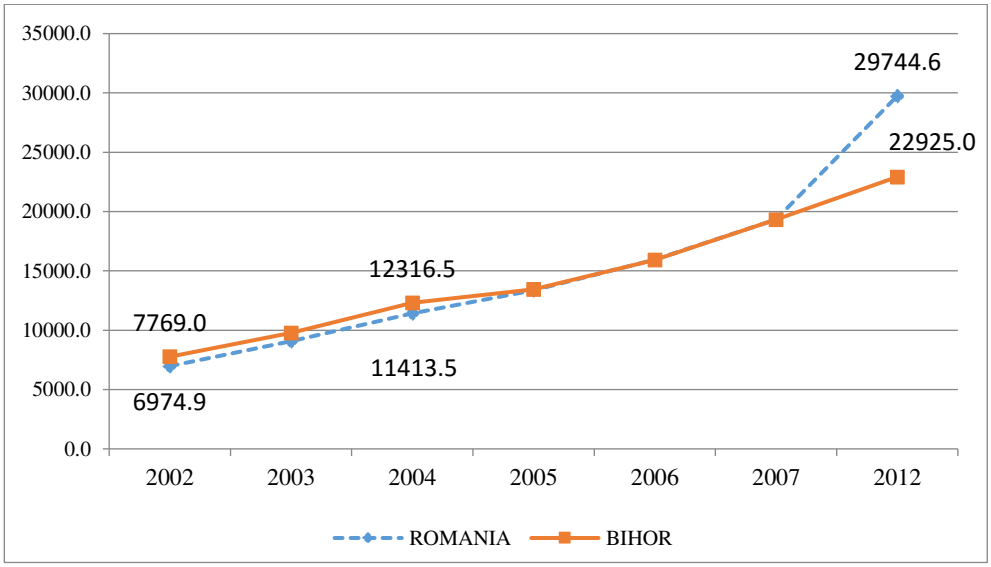


Figure 1: The evolution GDP per habitant (RON)
Source: NIS - Romanian Statistical Yearbook 2010, 2012; Bihor County Statistical Yearbook 2010, 2011, 2013; National Commission for Prognosis - Evolution of the main economic and financial indicators

We aimed to identify some characteristics of the labor market of Bihor and explain phenomena and Local Economic indicators in this market through the statistics included in the Statistical Yearbooks of the NIS and the statistical bulletins of the Bihor County Direction of Statistics.

The economic growth cannot be analyzed from the perspective of a single factor of production, given that inputs tend to bunch together, causing the concentration of economic activity (Easterly and Levine, 2001: 3). Therefore, it is important to correlate the technical and human capital, the investments, productivity, wages and national or regional policies for understanding the economic relations and for printing a certain trend of the economy.

The four indicators: employment, investments, wages and productivity, are not only eloquent in the labor market, but are closely linked. The investments are creating jobs, but can sometimes substitute jobs; employment can support or prevent investments. The labor productivity is influenced by investments, especially in technology, and it determines the evolution of salaries, but also the costs' reduction. Employment is in a close relationship with the wage level and productivity. Wage levels affect employment, meaning that a high level of salaries

is attractive to the working population. Also, it influences the consumption, and thus , the production volume, but also investments by the savings allocated in salary.

Capturing the evolution of these indicators in Bihor's economy and the factors that lead them, will allow us to draw some conclusions regarding the specific labor market in Bihor County.

Research questions:

1. What is the specific structure of Bihor's labor market?
2. To what extent were influenced the employment, the unemployment and the productivity by investments and technology?
3. How does it explain the low average salary in Bihor over other macroeconomic indicators?

What is the specific structure of Bihor's labor market?(by ownership, by sectors of the economy)

a) Bihor's labor market structure by ownership

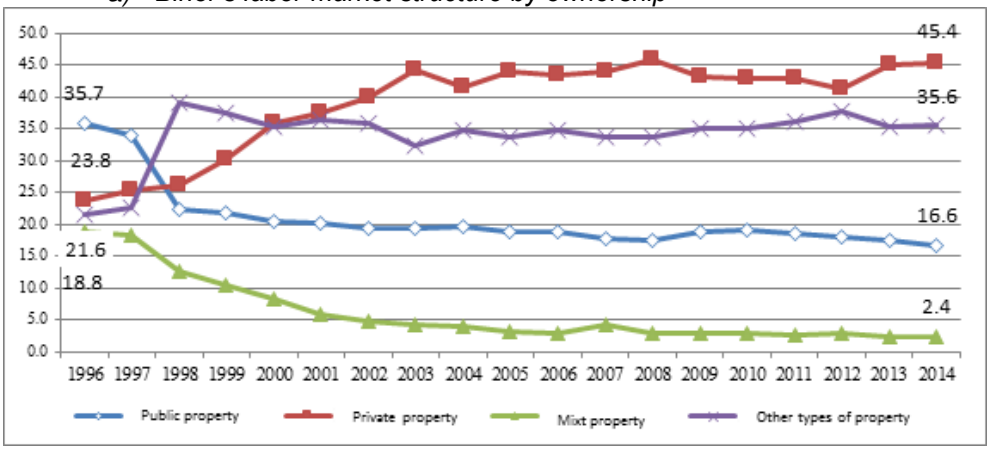


Figure 2: The evolution of employees by ownership on national (as a percentage of total employed population)

Source: NIS Tempo database

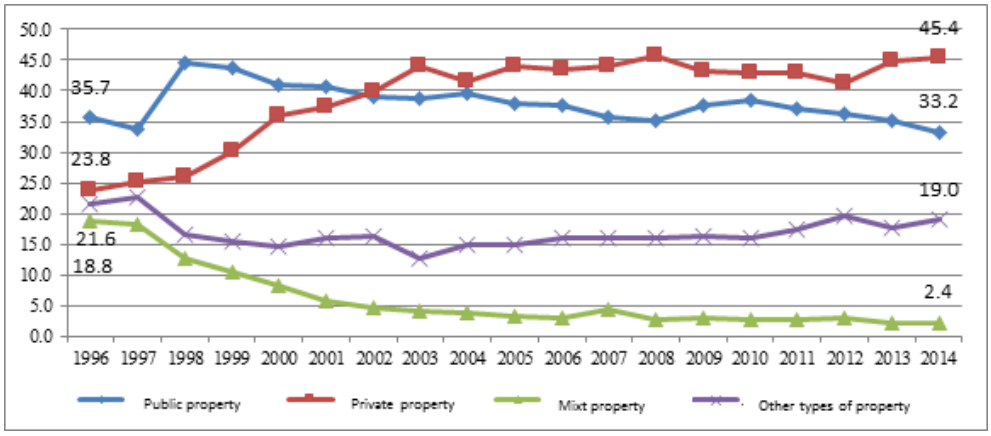


Figure 3: The evolution of the average number of employees by ownership in Bihor County (as a percentage of total employed population)
Source: NIS Tempo database

In relation to the situation at the national level, in Bihor County is a double weighting of public sector employees (33.2% vs. just 16.6%), which means that public institutions in Bihor County are more numerous than the national average, whether we are talking about administrative institutions, educational, health, public safety or welfare. Meanwhile, the separation of employees in the private sector as a higher share than those employed in the public sector was made only in 2002, as opposed to the national average, earlier in 1998. The explanation is that former privatization state enterprises were relatively few, and foreign investors were at first small investors, the large ones settling in the county, especially after the construction of the industrial park and the granting of facilities.

b) Bihor's labor market structure by economic sectors

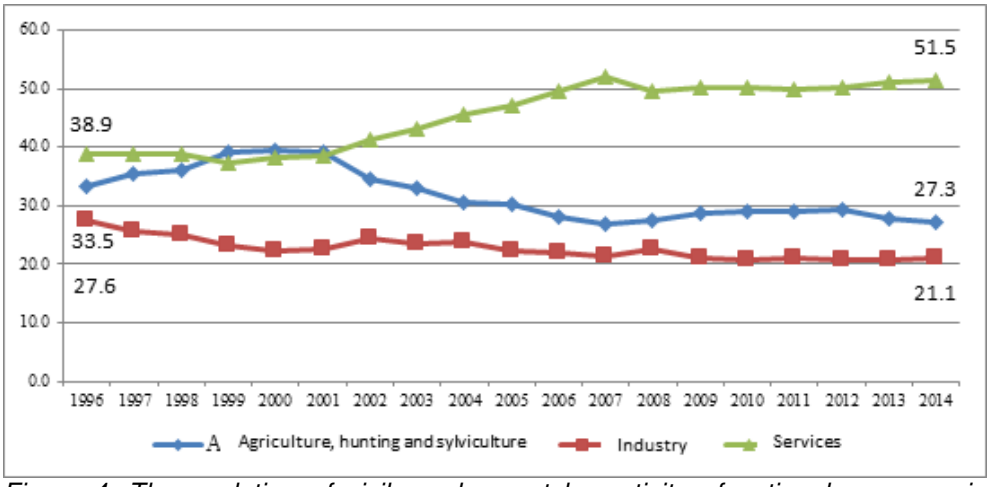


Figure 4: The evolution of civil employment by activity of national economy in Romania (% of total employed population)
Source: NIS, Tempo database

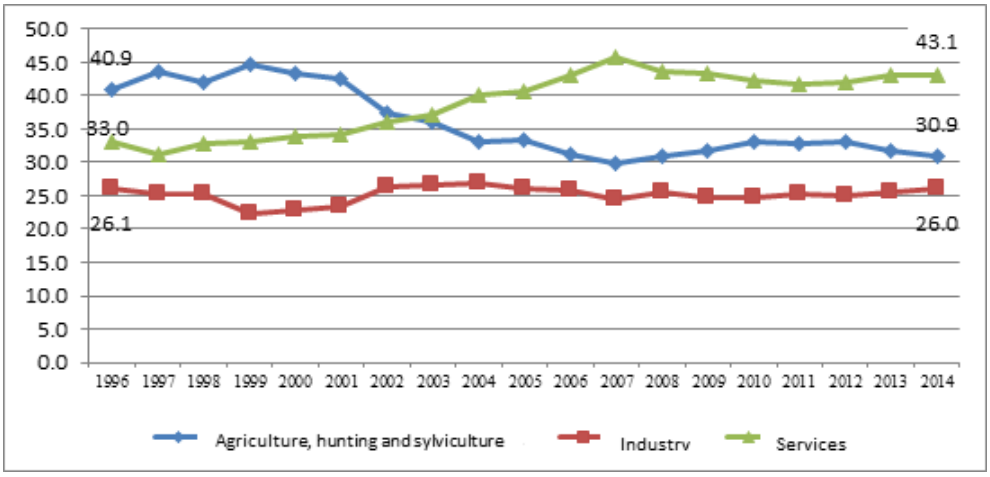


Figure 5: The evolution of civil employment by activity of national economy in Bihor County (% of total employes population)
Source: NIS, Tempo database

A first observation is that, in Bihor County, the population occupied in agriculture, the sector with the lowest productivity is 3% above the national average, in industry, 5% higher than the national average and in services, 8% less than the national average. This situation, indubitably affect the level of labor productivity and hence, the wages, adding to the low productivity in agriculture the higher productivity that is expected in the service sector, this sector being underrepresented in Bihor County.

Investments, employment and unemployment in Bihor County

a) Investments Level

Table 1: The evolution of the number of active local units by size class in Bihor County

Size class	Year						%increase compared to 2012
	2008	2009	2010	2011	2012	2013	
0- 9 people	16949	16424	14489	12927	13763	14291 (87,66%)	3,84%
10 – 49 people	1541	1507	1510	1633	1657	1687 (10,34%)	1,81%
50 –249 people	308	257	235	274	269	275 (1,68%)	2,23%
250 people and over	52	41	41	51	54	49 (0,30%)	-9,26%
TOTAL	18850	18229	16275	14885	15743	16302	3,55%

Source: NIS, Tempo database

Like everywhere else in the European Union, the small and medium enterprises represent the overwhelming majority of the total number of enterprises, but also of the number of employees. Their advantage lies in much greater flexibility in relation to large enterprises. In the above table, it can be seen that percentage, the large enterprise have suffered the most during the economic crisis, while losses among the remaining firms were smaller and with a faster recovery.

But if we take into account the number of employees and investments, they were registered in higher levels in large enterprises. Differences in productivity explain to a large extent the changes in income from various countries, and technology plays an important role in ensuring a high level of productivity. But cutting-edge technology is the prerogative of the highly developed countries or transnational companies, given the high costs that are involvedin research and development of new technologies. In this case, the chance of small countries lies in the diffusion of international technology, either through foreign trade or through foreign investment, which could lead to a convergence of levels or rates of productivity growth and increasing economic integration (Keller, 2004).

Table 2: The evolution of net investments for active local units, by size class (thousand lei, current prices)

Year	Total	of which: by size class, as average number of employees			
		0 - 9	10 - 49	50 - 249	250 and over
2004	**963,857**	210,462	220,502	155,923	376,970

Year	Total	of which: by size class, as average number of employees			
		0 - 9	10 - 49	50 - 249	250 and over
2005	**1,317,685**	352,917	295,080	292,329	377,359
2006	**1,633,911**	391,942	344,207	295,966	601,796
2007	**2,158,111**	697,303	514,991	410,289	535,528
2008	**1,969,297**	533,814	562,047	464,322	409,114
2009	**2,021,924**	455,989	537,894	319,762	708,279
2010	**1,830,745**	528,585	363,444	382,099	556,617
2011	**2,202,429**	489,522	522,939	571,207	618,761
2012	**2,037,340**	606,907	438,119	335,970	656,344
2013	**2,206,858**	796,994	467,613	244,161	698,090
	% of total				
2004	**100.0**	21.8	22.9	16.2	39.1
2005	**100.0**	26.8	22.4	22.2	28.6
2006	**100.0**	24.0	21.1	18.1	36.8
2007	**100.0**	32.3	23.9	19.0	24.8
2008	**100.0**	27.1	28.5	23.6	20.8
2009	**100.0**	22.6	26.6	15.8	35.0
2010	**100.0**	28.9	19.8	20.9	30.4
2011	**100.0**	22.2	23.8	25.9	28.1
2012	**100.0**	29.8	21.5	16.5	32.2
2013	**100.0**	36.1	21.2	11.1	31.6

Source: NIS, Tempo database

The largest share of investments is found in large enterprises, followed by micro, small and medium enterprises. On the one hand, the needs of large enterprises on investments are higher in relation to small and medium enterprises; on the other hand, large enterprises have easier access to finance. Along with investments size, must be taken into consideration their destination, because the technology investments are generating added value and thus an increase in productivity and income**.** Such investments are, however, more often the preserve, large enterprises, given the high cost of advanced technologies.

b) Employment

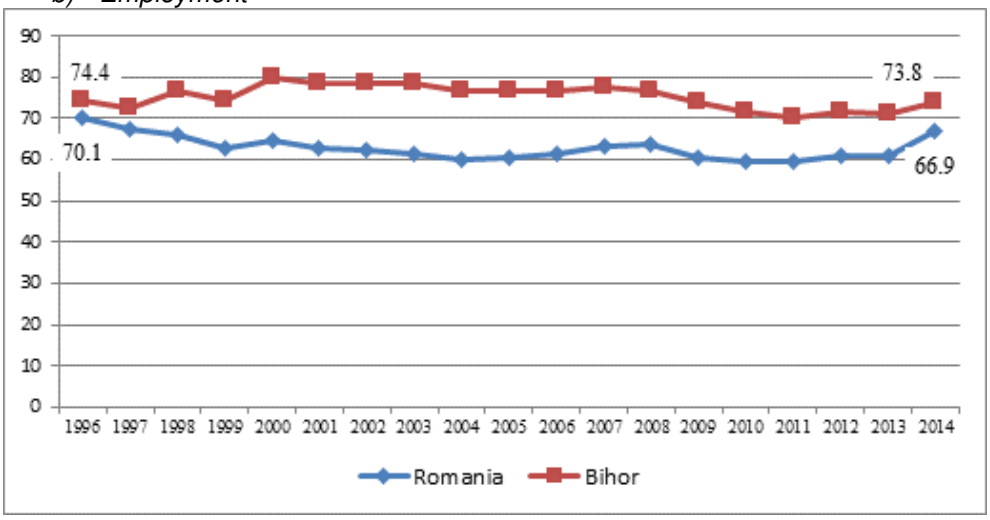


Figure 6: The evolution of employment rate of labor resources
Source: NIS, Tempo database

The employment rate in Bihor county is above the national level, similar to the European average, so in line with the objectives of the EU 2020 strategy, even if the Bihor economy's structure is not favorable to achieve higher productivity and a high level of average wages.

c) Unemployment level

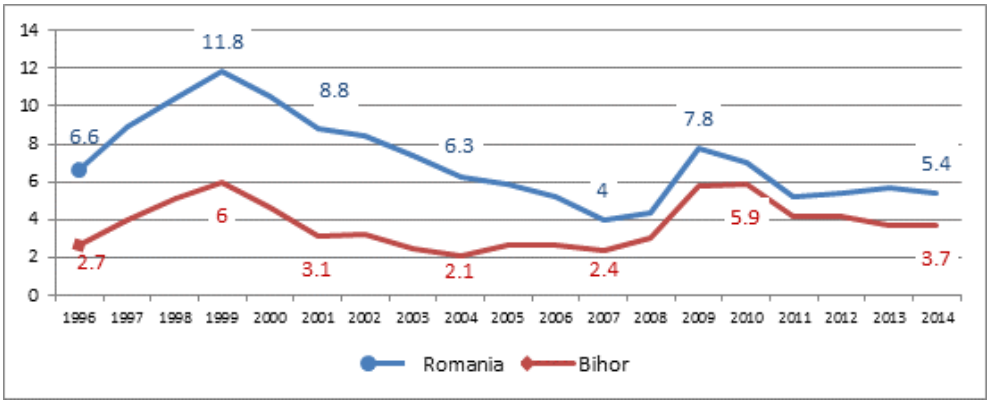


Figure 7: The evolution of unemployment rate
Source: NIS, Tempo database

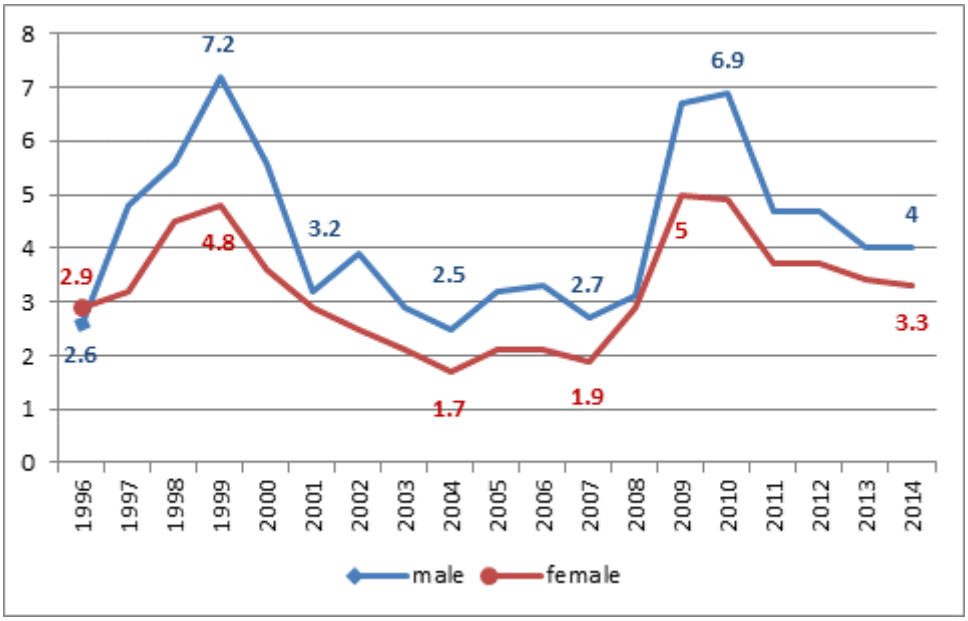


Figure 8: The evolution of unemployment rate by gender in Bihor County
Source: NIS, Tempo database

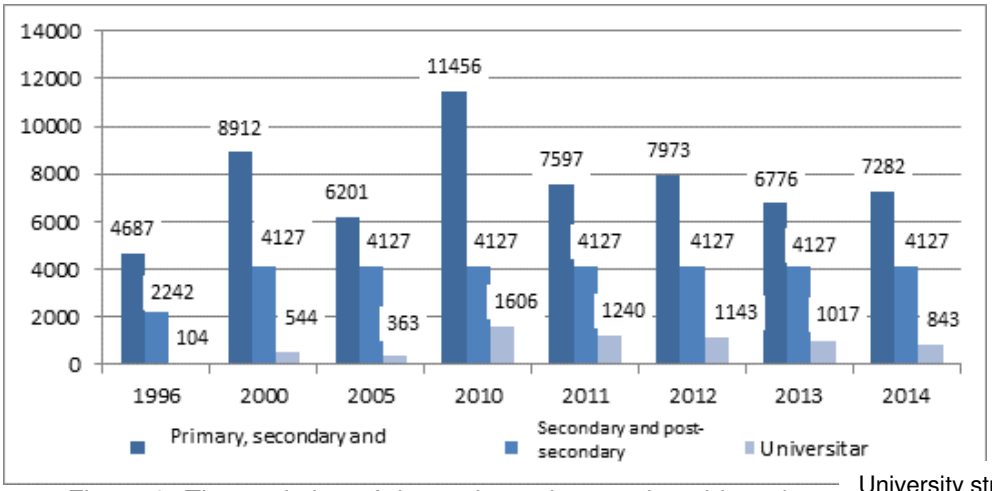


Figure 9: The evolution of the registered unemployed by educati University studies *Bihor county*

Source: NIS, Tempo database

The unemployment rate has been consistently lower in Bihor County,

practically half of the national average, except during the economic crisis (2008 - 2012) when the two levels approached. The situation is that manufacturing offers a large number of jobs, as well as commercial activities favored by positioning the county on the western border of the country; a part of the working age population has emigrated, and another part (hard estimated) is found in the informal economy.

The least affected by the employment are women (more influent in commerce and light industry, but also in areas of the budget) and those with a high level of education. Although neither those whose level of education is low, does not seem to be exposed to a serious risk of becoming unemployed; in fact, these categories, mostly, are dealing with agriculture in their own household, some of them working as day laborers . These categories are not formally registered as unemployed, in reality they represent a hidden unemployment.

Level of unemployment benefit (75% of the Reference Social Indicator, which is currently 500 lei, plus percentage rates vary according to length of employment), which is low and is granted for a relatively short period (6 -12 months) correlated with the minimum wage, plus the growth and diversification of the economy, as well as numerous training courses, determine employment option.

L***abor productivity and wages in Bihor***

One of the most efficient macroeconomic indicators used to measure economic performance of a country, a region a sector or a company, is productivity. This indicator is in its close interdependence with other indicator such as: employment, wages, investments, economic structure.

The complexity of labor productivity derives from the multitude of factors that influence and can be divided into several categories:

- Economics: investments, economy's structure, work's organization, employment rate
- Technics and technologies: technology production levels, leading economic branch
- Demographics: age and sex structure of the population
- Social: quality or workforce, education, attitude to work, quality of working environment, labor relations, quality of management
- Natural: relief, climate, hydrographic, soil's fertility, subsoil riches
- Biological: health and food quality
- Psychological: motivation, interests, skills
- Physico - chemical: temperature, humidity, noise, lighting

Equally, labor productivity is essential in terms of economic results that it generates: productivity growth, costs reduction, income growth, wages growth, saving labor resources, economic competitiveness.

Labor productivity is calculated as ratio between gross domestic product and employment, or for a greater economic efficiency, as the ratio of value added and total hours worked. In Romania, not only that labor productivity is below the EU average, but maintaining relatively constant in terms of increasing the EU average, productivity gaps are growing.

Table 3: The evolution of labor productivity (Euros/hour)

Country/year	2008	2009	2010	2011	2012	2013	2013/2008
Eu 28	31,2	30,7	31,4	31,8	31,9	32,1	+0,9
Eu 18	35,9	35,5	36,3	36,7	37	37,3	+1,4
Romania	5,6	5,4	5,3	5,4	5,4	5,6	0

Source: Eurostat, 2014

While the GDP per capita in Romania represents approximately 27.5% of EU-28 GDP, labor productivity (measured as the added value and the total of worked hours) is approximately 18% of the EU average, which can be explained on one hand, by the lower level of prices in Romania, but also the greater number of working hours (1st place in the EU in 2012, with 41.2 hours compared to Italy (38 hours), France (37.9 Hours) and Finland (37.6 hours), on the other hand (Eurofound, 2012), by the structure of the economy and the development rate of exchange. However, beyond these objectives, Romania is facing some problems regarding the labor efficiency in a range of economic activities, which could require greater attention on measures to boost the productivity.

A generic way to increase the productivity would be the design and the implementation of some economic policies that combine high productivity jobs with a high employment level, which would improve the structure of economy and technology investment performance. In other words, it requires the development of the services sector, especially those with a high added value, improving the technology used in industry and increasing the export value.

Currently, the agricultural sector productivity much below the national average and a large share of the workforce with technology modestly used in industry and a service sector underdeveloped, labor productivity, although increasing, remains below which could provide a significant wage growth. Romania's active population holds jobs with low productivity, achieving modest incomes.

Regarding the Bihor County, the GDP per capita in 2014 was 6384 Euros (much lower than the average of 7.500 Euros), with significant fluctuations in 2008-2014, a period that includes the economic crisis.

If we take into account that the highest productivity is in the banking sector (in services, in general) and the lowest in agriculture, branch where employment is still 30.9% (a decreasing of 10% compared to1996), but a higher percentage than the national average (27.31%), it is understandable that this is a major factor in the low level of labor productivity. Given the fact that employed population in the tertiary sector increased over the same period, (1996 - 2014) by 10%, the employed population in industry has remained relatively constant, and productivity in services should be higher than in industry, it is expected to grow the labor productivity in the Bihor economy's ensemble. The fact that it did not happen like that, can be explained by the lack of training effect of the labor productivity in the banking sector in the rest of economy, consisting of high costs of financial intermediations and the share of the informal economy and low productivity in services. It would be added and low investments in top fields of economy and

possibly a skills shortage in certain segments of the economy.

Given that in manufacturing, the highest productivity is recorded in the fields of coke, petroleum, tobacco, pharmaceuticals, metallurgy, automotive, and lowest in fields such as clothing, textiles, leather, furniture, first being less present in Bihor County, and least, predominantly, is understandable why labor productivity is low.

The largest share of all local active units in Bihor County is the wholesale and retail, followed by manufacturing, transport, construction and professional, scientific and technical. Most are labor-intensive industry, so they are less productive.

Labor productivity, separated from other productivity factors gives us only a partial image, possibly distorted, on the efficiency of economic activity.

Only an effort "of modeling and quantifying the total factors of production" (Easterly and Levine, 2001: 1) would be likely to intercept more objective the causes, but also the solutions for economic growth. The concept of "total productivity of the factors", is, however, not strictly defined, some researchers saw him as a "model of changes in technology", others highlight the role of external factors, some focusing on changes in the composition of the productive sectors, while others aim adopting production methods with lower costs." (ibid).

The wages represent the most important form of income. Their level influence not only the standard of living of employees, being the main motivation of labor, but also the productivity and investments, through the salary's part allocated to consumption, or saving.

Within the European Union, Romania occupies the penultimate place both on hourly labor cost (gross wages plus employer contributions), and in terms of gross hourly wages (Eurostat, 2015).

Often low hourly cost of labor is considered an element of competitiveness and profitability, causing even the relocation of economic activities by economic areas in which this indicator is low. In fact, competitiveness and profitability are associated with labor productivity that it depends on and the quality of the workforce, not just its low cost.

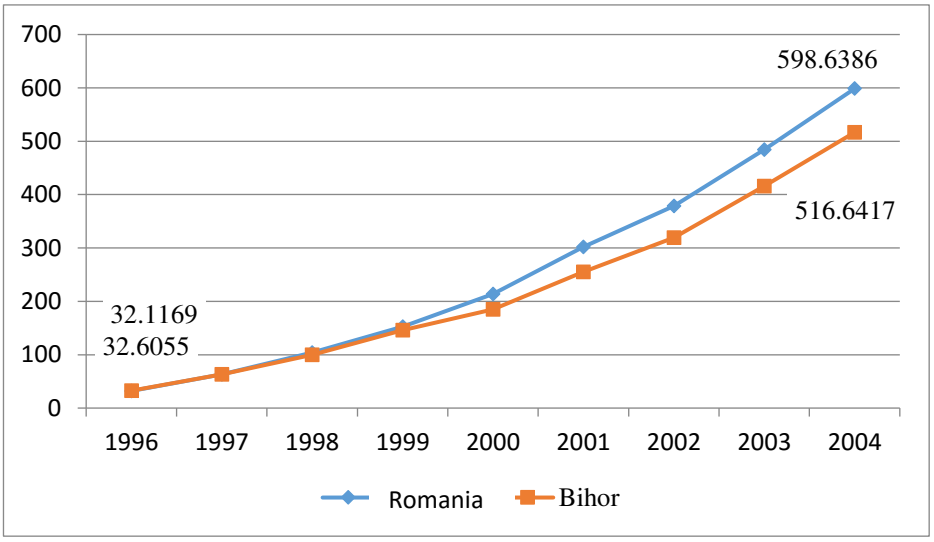


Figure 10: The evolution of the average net nominal monthly earning
Source: NIS, Tempo database

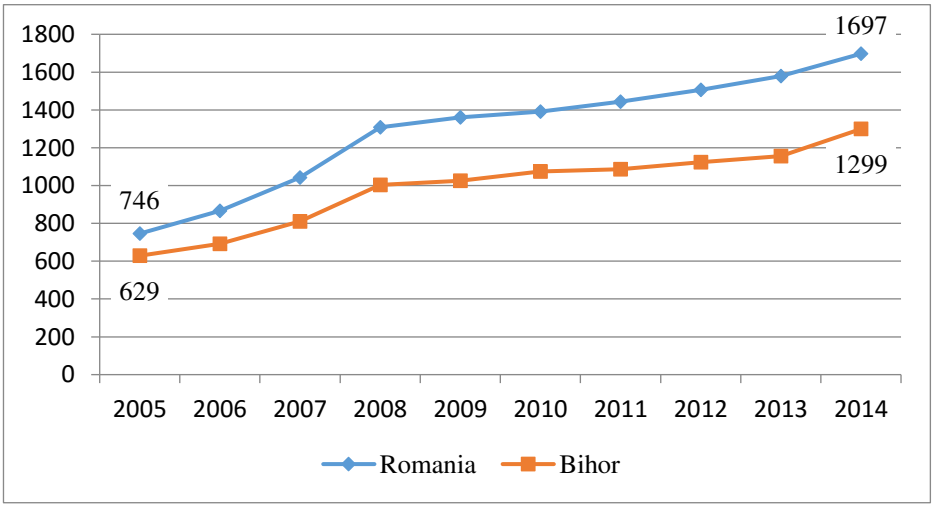


Figure 11: The evolution of the average net nominal monthly earning
Source: NIS, Tempo database

The low average wage in Bihor is a constant in recent years, from 1998 being

below the national average, with gaps that are increasingly higher, especially after 2005, which brought Bihor County on the 41th place among the counties of Romania in 2014. An analysis reveals that the main causes of this situation are:

- The economic structure of Bihor County. An economy where the share of agriculture, light industry, trade, ahead of manufacturing industry with high productivity and services sector, is providing low wages; in turn low labor costs attract investors engaged in labor intensive activities, type LOHN activities.
- A significant part of Bihor enterprises are bearing demands of modest qualified labor (vocation school graduates), which, by their lower level of education, accept lower wages
- Labor productivity is low and because of underinvestment in powerful technology which, itself, would contribute to higher productivity and hence wages.
- The level of public sector wages is lower than in other counties given that in Bihor are few regional institutions, many of them ongoing relocation to other counties, there are no institutions of national interest or subsidiaries, and some salaries, especially in the administration, depend on the size of the territorial administrative structure, a situation that can easily disadvantages Bihor County.
- The shortage of skills and abilities in relation to the application of certain high-skill areas (IT, engineers, doctors)
- The unequal territorial distribution of economic entities in the county, makes in certain areas, such as Oradea, to exist a high concentration of business and labor, and in other areas, for example Beiuş the number of employers to be small, hence low offer of employment and high demand which enables employers to establish low wage levels
- The low unemployment rate shows that Bihor people prefer to have a job and are willing to accept low-paid jobs

Conclusions

The Bihor's economy indicators follow the same logic as the national level: the employment rate is high, the unemployment is low, the average wage among the lowest and low productivity, noting that alhtough GDP per capita in Bihor County, at least until 2007, was at or above the national level, wages remaining consistently below this average. Guilty of this situation could be also the informal labor market, especially the gray market rather than the black, i.e., removing only a portion of the revenue from taxation. A pertinent study in this regard could argue the need for public policy to legalize the informal labor market.

The demographic changes: reducing the birth rate, aging population, labor migration have affected the labor market in Bihor County. Being a border district in the west part of the country, it was early and to a greater extent affected by emigration, which led to a lack of specialists in a number of fields. The rush of investors after profit at the expens of cheap labor, could be countered by a better

selection of investors, given the strength of highly qualified labor in certain areas in Bihor County, along with the provision of facilities, but also imposing conditions regarding the level of investment in performance technology. Investing in technology can increase the productivity and therefore income, including wages, but influencing the employment, often upside it (high earnings and good working conditions are attractive for employees), but it also could reduce the employment rate (due to layoffs imposed by the introduction of technology, namely due to staff reductions in productivity increase). Moreover, a study on the employment rate in Romania, shows that "in Gorj County is recorded a low employment rate, although earnings are high and, on the other hand, in Bihor County, although gains are small, the employment rate is high" (Aparaschivei 2012: 16); the paper concludes that the employment is exercised "a positive effect ... from gross earnings and investments and a negative effect exercised by the labor productivity" (ibid: 21).

The shortcomings identified in the labor market of Bihor County could be overcome by a more aggressive strategy of local authorities to attract investors who could improve conditions for the growth of wages, which could make better the upper qualified workforce in Bihor County, interested investors of the development of long-term projects in Bihor County. Another solution could be represented by the identification of specific ways of optimal distribution in the territory of the economic entities to create competition, including attracting the workforce.

A conclusion aimed not only in Bihor County, in each territorial administrative unit that lies in the need to know, anticipation and preparation to face the globally trends with implications on the local labor market: risks posed by deindustrialization, the relocation of transnational companies in recital labor cost, the disappearance of specific occupations of the industrial era and the emergence of new ones, specific to post industrialism, trend change on working time (decrease, but also its flexibility), the real needs in the future society. It is important also the design of a model of long-term growth and appropriate local policies that are able “to increase the efficiency of capital and workforce or alter the rate of endogenous technological changes, to boost productivity and thus, to accelerate long-term economic growth.” (Easterly and Levine, 2001:4)

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THE IMPORTANCE OF PHYSICAL EDUCATION AND SPORT IN THE LIFE OF THE STUDENTS OF THE ECONOMY COLLEGES

Corina Ţifrea
National University of Physical Education and Sports Bucharest, Romania,
Antoanela Giosan
Artifex University, Departament of Economy,Faculty of Physical Education of Sports, Bucharest, Romania
Raluca Costache
National University of Physical Education and Sports Bucharest, Romania
c_tifrea@yahoo.com
antoanela.giosan@yahoo.com
rally_kyn@yahoo.com

Abstract: *The easiest way to stop inactivity, stress and intellectual overload is represented by practicing physical exercises regularly and in an organized way.There is a strong relation between promoting health, a healthy life style and physical development. While training the students (future specialists in other areas apart from physical education and sport) we do not focus on the movement abilities that are subsequently requested at their work or those that help them in raising efficiency at work and adapting to working conditions. This statement is based on the disaccord between the current curriculum requirements in physical education and the requirements of the nonprofile universities (economic profile). In nonprofile higher education system the only way to improve physical activities, physical condition and to adopt a healthy life style is the PE class.The PE classes offer a minimum of physical exercise and help to maintain the quality of life and of all physical activities.*

Keywords: students; educational curricula; physical education; physical exercise; nonprofile universities.

1.1. The importance and topicality of the theme

The easiest way to stop inactivity, stress and intellectual overload is represented by practicing physical exercises regularly and in an organized way.

Guts Muths published “Gymnastics for the Young Ones” in 1973which is the base of introducing practicing gymnastics in schools and institutions. At the end of the 19th century England is renowned by “the modern Olympics”, an idea formulated by Pierre de Coubertin.

At the beginning, the interest for the physical training of young people was subordinated to some military tendencies. From 1940, in Italy and Germany physical education has become compulsory in higher education system regardless the profile of the faculty. Physical education was included in the university curriculum. The modern way of organizing physical education is often mistaken for

the early beginnings of college sporting events. The complex contents, to which the features of different cultures and civilizations have contributed, helped physical education and sport in general to become a daily concern of a modern citizen.

Practising exercises recorded have progressed and developed new ways of understanding the role it has in the life of a person or society.

The improvement of Europe's position in the world led to the European universities permanent optimization of the educational process offered to its citizens. Discovering personal performance domain needs a higher system of training.

Universities have a solution to a knowledgeable economy and society due to the outstanding role they play in the three specific domains:

- Education and training;
- Scientific research and innovation;
- Economic competitiveness and social cohesion.

As a result of implementing new school curricula, students get the necessary competencies needed for choosing a career, besides their general knowledge. The European Social Fund (ESF) helps and supports educational institutions in their process of building strong relationships with companies and employers in order to make the young people's transition easier from school to work.

- There is a strong connection between the specific offer of each subject and education. Researchers found out that education represents "the action of the adult generations on the young ones, in order to develop certain physical, intellectual and moral states needed for the social life for which they are meant (E. Durkheim, apud. E. Planchard, *Contemporary School Pedagogy,* E.D.P., R.A., 1992);
- Education doesn't mean preparing for life; it is life itself (Idem J. Dewey,);
- Through education one can look at achieving perfection that human nature is capable of (Idem Kant);
- Physical education in itself gives importance to physical and moving abilities. During classes we look at developing moving abilities, getting a better coordination, faster reactions, a higher speed, middle distance, balance, force and grace.
- Practicing and understanding the value of this activity are essential for their future education, at work and in their free time.
- There is a strong relation between promoting health, a healthy life style and physical development.
- A very important role that physical education has is that of young people personal development through developing self esteem and self confidence as well as willingness, responsibility, patience and courage.
- The European guides regarding "The Physical Activities Meant to Improve Health" estimated that up to 80% of the children of school age are involved in physical activities only at school even though they should have at least one hour of light physical activity daily. One hour of extracurricular activity can have a crucial contribution to a healthier and more balanced life style.

"In the educational curricula physical education should be

compulsory and children should have at least three classes of PE a week" it is mentioned in a report voted for in Strasbourg with 590 votes pro, 56 cons and 21abstains. This information is mentioned in a press statement for the digital financial newspaper.

Physical education is a physiological activity if we look at it from the point of view of the resources, a pedagogical activity by its results and a social activity if we take its effects into account.

If we look at it as an institutionalized activity, physical education implies a selection of the most efficient and adequate exercises out of the multitude of physical exercises, according to the pedagogical, physiological and hygienic and norms principles typical of the age and sex as well as educational purposes.

As an organized instructional activity physical education represents a bilateral process where, under the guidance of specialized staff, the subjects are systematically conformed to a series of influences that are in a permanent accordance with the educational objectives in general and with those for each phase regarding the progress of the movement ability and physical development.

As a conclusion, it is an undoubted necessity that, out of the number of school subjects used as tools in the process of growing and developing, including the first years as a student, training the young generation cannot be conceived without PE (physical education).

As a follow up of the research studies, scientists came up with some solutions that could have visible effects on the Romanian educational system. We can mention some of these:

- The necessity of alternating sporting competitions with free time activities;
- Introducing touristic sporting activities in the PE curriculum;
- Coordination of physical education activities practised outside universities with those from inside.
- Organizing recreational and preventive mass competitions and races for all the stages of PE training.
- The study on the young people depending on the degree of involvement in movement activities led to the following classification:
- The sedentary ones doing inactive jobs (economists, engineers, lawyers) showing the least interest in practising moving activities;
- The ones who show low interest in moving, without adopting a consistent attitude in this respect and who occasionally practise different moving activities;
- The active young people who feel a pleasure in moving along with getting the practice of systemic physical exercises. The interpersonal relationship these young people have is prosperous. They are highly valued by their fellow

The global social system aims at very well set goals and purposes for all domains: economic, political, military, cultural, educational etc.

In this context, the global educational system points at general goals which activate all formative resources of human personality in the process of social-

economic development (that is 'social action'). In this way, the educational system controls human personality dimensions: intellectual, technological, ethic, moral and physical.

In Romania, education has become an important tool for setting up ideals which our society has always aimed at and for which all citizens are involved and have access to, regardless their nationality, religion etc. Higher education institutions represent the main source of spreading culture.

The Romanian educational system is under an ongoing change having in mind raising education to the international standards of building up personality.

Every year there are less and less "rookies" (new students) who are interested in PE activity, refusing any form of movement even though the percentage of young people with physical disabilities is worryingly growing, especially among the ones with spine deficiency.

The process to motivate young generation is more and more difficult, researches conducted in educational area revealed the necessity of coming up with an educational offer in close connection with social-economical changes.

In university, PE teacher ensures the continuity of physical training to a superior level towards those got from school that will enable the student to have superior parameters of moving emancipation and physical training.

Due to multiple technical means which are at modern man's disposal, the situations in which the body is required to do physical exercises are significantly reduced.

Researchers have proved that the sedentary life along with its associated obesity contribute to the occurrence of serious illnesses such as diabetes and atherosclerosis.

Unfortunately, lately, the number of participants to mass sport decreased considerably and the obesity at national level increased especially when it comes to teenagers. The passing from one educational cycle to another determines a new approach of the time issue allotted to PE.

Building the personality of the young generation was and will be a concern of great interest of human community. By building the modern man it is understood his development from physical, psychological, aesthetical, moral, etc. point of view.

The main objectives followed in prevention and elimination of the deficiencies that appear in different professions and mostly in economical ones are:

- Maintaining joint suppleness
- Maintaining muscle strength endurance
- Maintaining good coordination skills and abilities of movement
- Maintaining correct posture and alignment
- Maintaining exercise capacity

The main benefits of the aforementioned objectives are:

- through exercises to maintain joint suppleness aims at increasing the range of motion in all joints
- exercises to increase muscle strength and endurance aims at counteracting muscle weakening and retention of the realized gain force
- through muscle toning aims at maintaining and correcting the muscle tone
- postural correction exercises aim at correcting cifosis, lordosis and

scoliosis which frequently appear among the graduates of economics universities

- an increased physical strength , increased blood and cardiac flow is achieved through exercises to maintain exercise capacity.

Physical exercise plays an important role in maintaining health, ensuring integrity and good functioning of the human body.

The International Health Organization stated that young people and adults who regularly practise physical exercises are mentally and emotionally healthier than sedentary people. The IHO recommends physical exercises like a means of reducing the risk of depression or anxiety.

A survey made by a nonprofit mental health foundation (Mind) shows that:

- 83% of the number of mentally ill people opt for physical exercises as a way to reduce stress and emotional control;
- 2/3 of these experience the benefits of physical exercise by lowering the intensity of depression symptoms and reducing stress and anxiety
- Involving in physical activities improves wellness and reduces anxiety or depression with the help of a regular program (2-3 times a week)**.**

2.1. Particularities of the curriculum of economic profile or non economic profile

2.1.1.Defining the terms of 'profile' and 'non profile'

In the higher education structure in Romania we find a great number of faculties of different profiles adapted to the social requirements and activities. The research field of PE teachers is called "sport and physical education domain", the term " non profile" being used for all the other faculties apart from PE Faculty.

The PE classes in non profile universities are based on more practice and less theory, whereas in the specific universities the ratio is the opposite. In physical education the process of teaching is based on a very clear methodology and the active participation of all the people involved in the educational process value the acquirements and competencies accomplished along the years.

3.1. The Romania higher education system – the role of physical education in nonprofile universities (economic profile)

The quality of life represents "the whole set of personal and social life aspects under the actions of objective, subjective and political factors". During the process of developing the future economy specialist's personality, the aspect of physical and sporting education is more and more important as a social necessity, on the one hand it is about the profile they are preparing for and on the other hand it is about the conditions under which they will do their job. Our contemporary society requires sport and physical education to get involved in developing physically healthy citizens capable of coping with requirements imposed by society.

Romanian and foreign specialists consider that students in the nonprofile universities should be provided a certain level of physical training that is able to

fulfill the requirements mentioned above as well as enough information so that these features can be maintained throughout their lives.

While training the students (future specialists in other areas apart from physical education and sport) we do not focus on the movement abilities that are subsequently requested at their work or those that help them in raising efficiency at work and adapting to working conditions. This statement is based on the disaccord between the current curriculum requirements in physical education and the requirements of the nonprofile universities (economic profile).

4. In conclusion

- The multitude of forms and approaches of physical education all contribute to professional development of the students in the economic universities. Training and improving students' moving capabilities influences their professional training.
- Specific operational structures contribute to the development of students' moving abilities in order for them to provide the necessary physical condition.
- Sport and physical education should represent that permanent concern for all factors that are responsible for training and physical instruction of teachers and professors.
- The quality of physical education is a combination of the way it unfolds, its objectives with focus on the contents of the training.
- Sport and physical education look at developing students' physical condition, strengthening their physical condition, taking part in sporting competitions, developing their effort capacity.
- Our modern life style, the gadgets, the online information have won against practicing the 'loisir' type of physical education by the students and the young people who have just graduated the nonprofile faculties.
- In nonprofile higher education system the only way to improve physical activities, physical condition and to adopt a healthy life style is the PE class.
- The PE classes offer a minimum of physical exercise and help to maintain the quality of life and of all physical activities.

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INVESTING IN JOB TRAINING IN ROMANIA

Mălina Lucia Turcuț
Doctoral School of Economics, University Of Oradea, Oradea, Romania
malinaturcut@gmail.com

Abstract: *This paper is about the importance that training has in Romanian SMEs and the way it can influence their productivity level in the future. The labor market in Romanian economic crisis manifested through a strong reduction in employment and increase in unemployment. Economic recovery followed the 2008-2012 crisis has put companies in Romania difficulty facing an acute shortage of qualified labor force. A measure available to entrepreneurs to mitigate the lack of qualified work force as a result of the effects of labor migration and aging population exacerbated is the qualification at work followed by the training staff. In a modern economy, investment in human capital is crucial to face with technological advances and requirements of a growing productivity. The training has a particular importance to the continuous training of staff. However companies in Romania do not focus on the leverage required for economic development. Training has a direct influence on labor productivity and the quality of production. This was considered to be an essential part of every job and SMEs are using the training in different ways and with varying degrees of success. Traditionally training focuses on technical knowledge, skills and abilities to work performed. Training increases the value of the employee both for the company that supports employee costs and other companies. When making the decision to invest or not in training staff, entrepreneurs also face a psychological factor decisive: the company invests in training risking losing their investment in favor of its competitors if the employee decides changing his job in a short time after finishing the training. Rather they take another way, by recruiting work force which is already formed by another company. But here we return to the first problem, namely the lack of qualified staff and need to adapt to current labor market conditions.*
Key words: training, labor force, SMES, education, productivity

JEL classification: J24, L25

Introduction

In the developed and developing countries small and medium enterprises generates the largest number of jobs, contributing greatly to the formation of national income and stimulate economic growth. For this reason, governments have created various strategies and human resources policies to support SMEs and to improve productivity and economic development.

The labor market in Romanian economic crisis manifested through a strong reduction in employment and increase in unemployment. Productive sectors that have been hardest hit by the crisis are those that had a broader development period, like construction, automotive and furniture but related sectors have suffered

consumption too.
In 2009 the economic crisis in Romania has affected men more than women, male unemployment rising from 4.5% in December 2008 to 8.3% in December 2009, while for women went from 4.4% to 7.1%. This was influenced by the fact that they have been most affected by the crisis productive sectors (construction and mechanical metal), where mostly men were employed. From an analysis of the distribution of the unemployed by age group show that was most affected by the crisis the most productive population, the persons between 30 and 49 years, who constitute 52% of the total population. In this context, the idea of going abroad for employment has become increasingly attractive for more and more Romanian. Jobs offered by the internal market have proved insufficient to meet the demand, also salaries were much lower than in previous years, thus countries where salaries have remained satisfactory and sufficient amount to maintain a standard of living was a decent solution. (Stanculescu et al, 2011).
According to a research done in 2011, based on a representative sample of households, more than 26% of total households had at least one person left to work abroad and 4.5% of households had at least one person turned because of the crisis, between September 2009 and August 2010. (Stanculescu et al, 2011).
Economic recovery followed the 2008-2012 crisis has put companies in Romania difficulty facing an acute shortage of qualified labor force, maintained by the situation described above. A measure available to entrepreneurs to mitigate the lack of qualified work force as a result of the effects of labor migration and aging population exacerbated (according to the National Council of Older People) is the qualification at work followed by the training staff. If for qualification to work, the government is involved directly providing support employer who enters into a contract of apprenticeship in the workplace and can receive monthly upon request from the unemployment insurance budget, during the course of the apprenticeship contract for that disciple an amount equal to 60% of the reference social indicator of unemployment insurance and stimulation of employment in force (the amount due is deducted by the employer from the contribution which it is obliged by law to remit the monthly account unemployment insurance Fund), the decision is left only for training at the unit level, the incentive coming from results.

1.Definition and typology

In a modern economy, investment in human capital is crucial to face with technological advances and requirements of a growing productivity. The training is of particular importance to the continuous training of staff. However companies in Romania do not focus on the leverage required for economic development.
The average percentage allocated to the training in Romania, the turnover of the company is 1.13%, quite unfavorable situation that reveals that entrepreneurs / managers Romanian invest relatively little in training human resources, given that staff training is a necessity, a requirement of sustainable development activities (Carta albă a IMM-urilor, 2015).
The terms training, education, development and learning may often be used interchangeably, but they can have very different, if overlapping, meanings in

different contexts. In terms of human resource development, it is often necessary to define and delineate these in a bid to clarify the associated activities and desired outcomes within an organization. Employee training, in particular, is associated with on-the-job skills acquired for a particular role, while education is seen as relating to a more formal academic background. However, in increasingly complex organizations, it may be argued that aspects of each are necessary to ensure full employee potential.

Training has been defined in various ways, including the following: 'A planned process to modify attitude, knowledge or skill behavior through a learning experience to achieve effective performance in any activity or range of activities. Its purpose, in the work situation, is to develop the abilities of the individual and to satisfy current and future manpower needs of the organization' (Manpower Services Commission (MSC), U.K., 1981: 62); 'Training endeavors to impart knowledge, skills and attitudes necessary to perform job-related tasks. It aims to improve job performance in a direct way' (Truelove, 1992: 273) 'Training is characterized as an instructor-led, content-based intervention leading to desired changes in behavior' (Sloman, 2005:2)

Opinions differ as to whether a 'changes of attitude' should be included in the definition of training. Wills (1994:10) argues against such a definition, both because attitudes are notoriously difficult to quantify, and because training alone, he argues, is insufficient to bring about major long-term changes in attitude. Instead, he defines training as 'the transfer of defined and measurable knowledge or skills'. Hare, Similarly, McLeod and King (1996: 25) state that training is 'any activity or course, either formal or informal (e.g. on-the-job) which has helped you to acquire the knowledge and skills to do your job. (Masadeh, 2012)

Ideally, training is best supplemented with practical, hands-on experience (Hughey and Mussnug, 1997). As Overman (1994: 62) observes, 'what people hear they forget, what they see they remember, what they do, they understand.' Likewise, Hughey and Mussnug (1997: 53) note that 'most employees simply do not learn very well when they are 'talked to'. They need to be more actively involved in the learning experience.'

Learning activities may be defined through a classification which provides operationalization and guidelines in particular for non-formal education and training - named classification of learning activities (CLA) - as follows:

- formal education and training is defined as 'education that is institutionalized, intentional and planned through public organizations and recognized private bodies and — in their totality — constitute the formal education system of a country;
- non-formal education and training is defined as any organized and sustained learning activities outside the formal education system. The CLA further distinguishes the following broad categories of non-formal education: non-formal programs; courses (which are further distinguished into classroom instruction, private lessons and combined theoretical-practical courses including workshops); guided-on-the-job training. Non-formal education therefore takes place both within and outside educational institutions and may cater for people of all ages. It covers educational programs and training to impart literacy, life skills, work skills, and

general culture.

- informal learning is less organized and less structured. It may include learning events that occur in the family, in the workplace, and in the daily life of every person, for example, coaching/informal tuition, guided visits, self-learning, learning groups or practice. Note that informal learning and formal education and training is not covered by this article (Cedefop, 2015).

Another typology consists of four training types: (i) in-classroom training programs; (ii) workplace training; (iii) the interaction of the previous two types, i.e., programs that provide training in classroom 'and' in the workplace; and (iv) even more inclusive programs that provide in-classroom and workplace training plus supplementary services such as counseling and mentoring, monitoring, job search and placement assistance, and soft and life skills training.(Jean, F. et al 2009).

Within the OECD area, a particular distinction can be made between Anglo-Saxon and Continental European countries. A rigorous analysis of evaluated programs shows that the transition towards comprehensive training does in fact pay off by increasing the likelihood of program success. The meta-analysis indicates that programs that combine different training approaches have a higher probability of positive labor market impacts on employment and/or earnings outcomes of trainees. In particular, the interaction of classroom and workplace training increases the likelihood of positive labor market impacts by 30 percentage points, as compared to in-classroom training alone. When this interaction is combined with other services, the probability of a positive impact increases by 53 percentage points, with respect to classroom training only. In addition to general findings, the meta-analysis highlights an important deficit in impact evaluation and cost-benefit analyses. This is particularly relevant since the absence of rigorous evaluations may lead to an overestimation of program impacts and misguide policy decisions.

While the former relied heavily on comprehensive training approaches over the years, the latter have a well established base of classroom vocational training and a rather recent move towards broader services. As a result, despite marked differences in their social protection assistance approaching, there is an increasing convergence towards comprehensive active labor market programs across OECD countries. (Jean, F. et al, 2009)

2. Training results in SMEs

Training has a direct influence on labor productivity and the quality of production. This was considered to be an essential part of every job and SMEs is using the training in different ways and with varying degrees of success. Traditionally training focuses on technical knowledge, skills and abilities to work performed.

Table 1 reports interesting correlations across firm profiles and training incidence. We divide the sample into training and non-training firms and summarize the main variables of interest. The evidence supports the common view that training firms tend to be larger, more open and older than non-training firms. They also operate in more capital intense sectors, have higher labor productivity and pay higher wages. Furthermore, they have a more skilled workforce and invest more in technology than non-training firms (Rita, A., Reyes, A., 2015).

Table 1 - Descriptive statistics, by training intensity

Variables	Training firms	Non-training firms
Number of firms	19260	29320
Micro	0,15	0,39
Small	0,33	0,40
Medium	0,28	0,14
Large	0,13	0,04
Age firm	18,62	15,06
Share of skilled workers	0,68	0,73
Managerial tertiary education	0,82	0,64
Technology Adoption	0,65	0,45
Investment R&D	0,38	0,18
Value added per employee	2,14	1,48

Source: Rita, A., Reyes, A., 2015

Even if there are plenty of studies that demonstrate the positive impact of the training, SMEs seem reluctant to make investments which involve debt because they feel personally committed to the risk (Gallo et al., 2004). Further, it is difficult to spare members during work hours and costs can be prohibitive (Macdonald et al., 2007) more for the firms with less than 5 employees.
Training increases the value of the employee both for the company that supports employee costs and other companies. When making the decision to invest or not in training staff, entrepreneurs also face a psychological factor decisive: the company invests in training risking losing their investment in favor of its competitors if the employee decides changing his job in a short time after finishing the training. Rather they take another way, by recruiting work force which is already formed by another company. But here we return to the first problem, namely the lack of qualified staff and need to adapt to current labor market conditions.

3. Decision to invest in training

For an entrepreneur to take the decision to invest in staff training, he must see the results of long-term. Companies may face problems of liquidity for investment in training if they fail to lend to gain further advantages in terms of labor productivity. SMEs are at a disadvantage when accessing resources and capabilities because of their financial limitations and attitudes towards perceived risk.(Fernández and Nieto, 2005; Ward, 1998).
The average percentage of employees who received training in Romania, in 2014 to 2013, according to the company's performance was 26% for companies that have much better results, 28.3% for those who had best results, 12.6% for those with identical results, 12.23% for those with worst and 9.36% for the much worse results, as presented in the figure below.

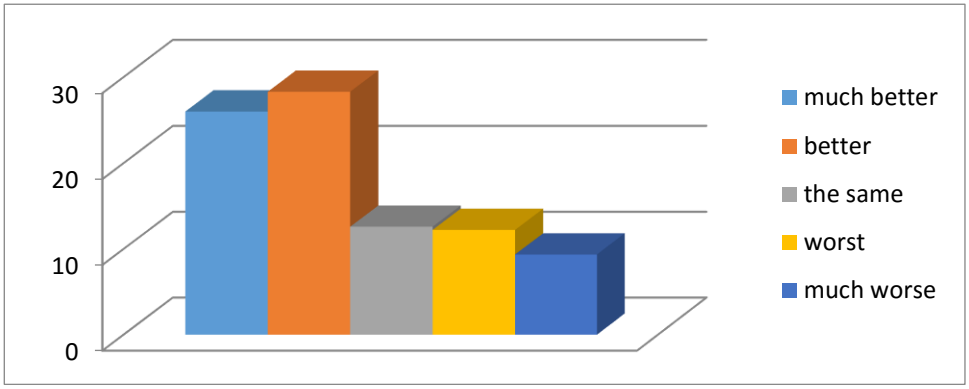


Figure1: The average percentage of employees who received training in Romania, in 2014 to 2013, according to the company's performance
Source: Carta albă a IMM-urilor 2015

The training budget is a significant matter for SMEs. How much they spend on training will depend on their operational characteristics and size. A key aspect to successful training is financial support. (Daly, 2002; Echols, 2005)
Thus, in Romania, in 2014, microenterprises were allocating 0.99% of their annual turnover for staff training, small enterprises 2.04% and medium enterprises 2.23%, as presented in Fig. 2

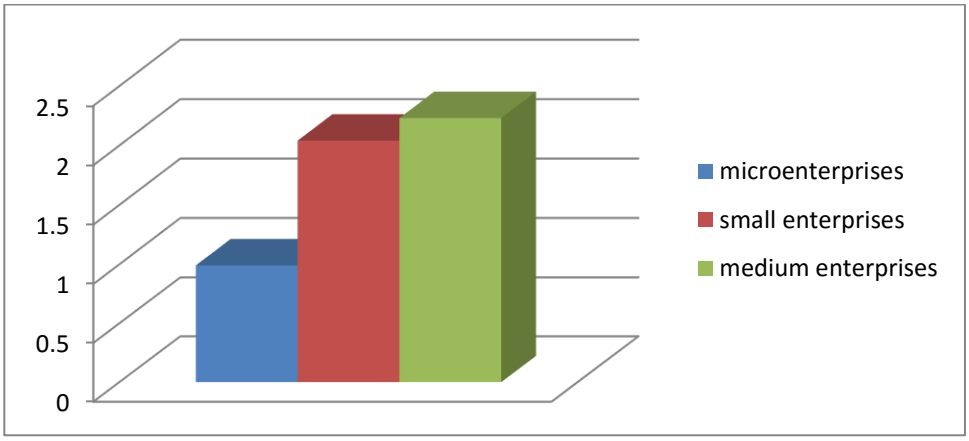


Figure2: Differentiation average percentage of turnover spent for employees training, depending on the size firms
Source: Carta albă a IMM-urilor

Depending on the industry SMEs in trade offers employee training rate of 1.34%, the industry 1.27%, while companies in services, tourism, construction and transport, less than 1%.

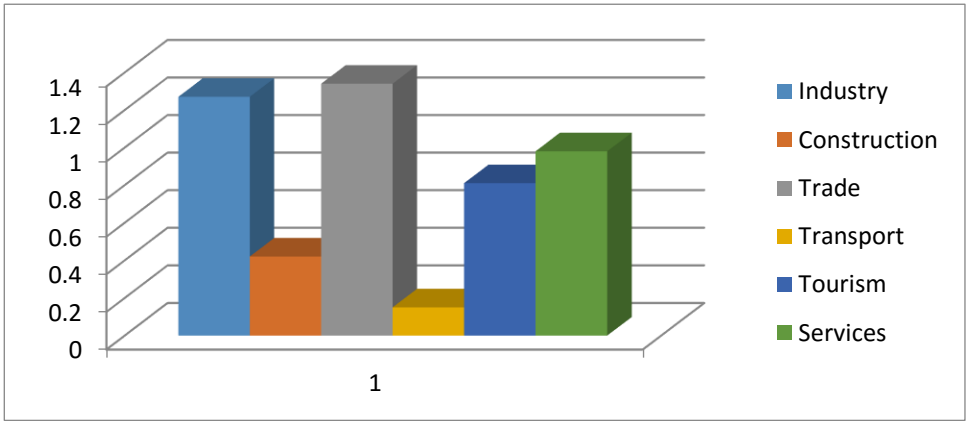


Figure3: Differentiation average percentage of turnover spent training employees, depending on the activity of companies.
Source: Carta albă a IMM-urilor, 2015

The lowest rate of participation in training is record among employees with low levels of education and low level of professional qualification, working in companies with less than 10 employees and having over 40 years. Training participation rate is also lower in rural areas than urban areas and lower at females than males.

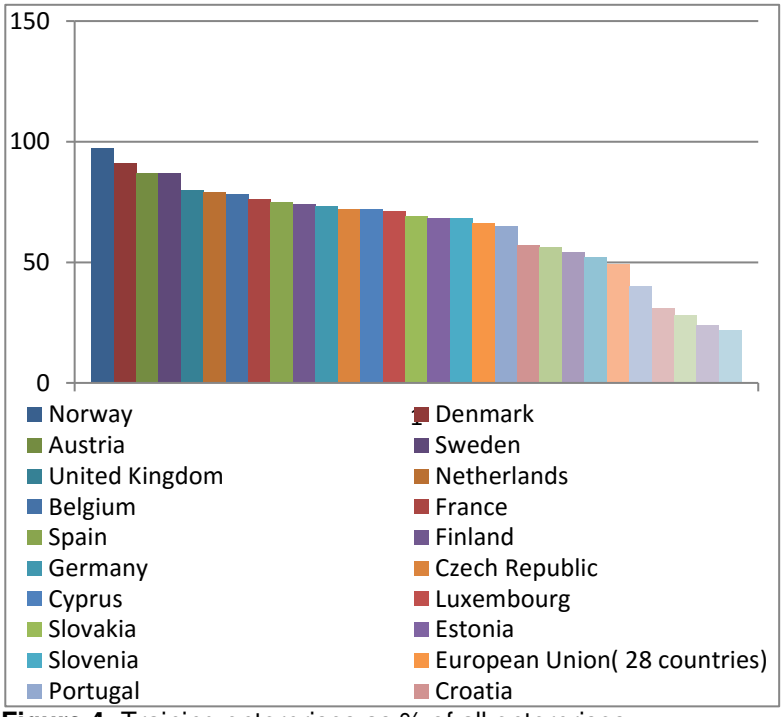


Figure 4: Training enterprises as % of all enterprises
Source:Eurostat, AES-2010 microdata, own calculation

Looking at Figure 4 it can be noted that in 2010 Romania was second lowest in the European Union taking into account the percentage of companies offering training to the employees from all companies.

Conclusions

As shown in body of this paper situation was not improved so far and there can be several reasons. Romanian entrepreneurs ideas must change because investment in human capital is certainly a profitable one for both the employer company and the labor market and overall for the entire economy.

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SUB-SECTION: BUSINESS ADMINISTRATION

THE INFLUENCE OF EDUCATION ON THE ENTREPRENEURIAL BEHAVIOUR IN ROMANIA

Bianca Avram[1], Simona Sabou[2]
[1] *Ph.D Candidate, Faculty of Machine Building, Technical University of Cluj-Napoca, Romania*
[2] *Ph.D, Department of Economics, Faculty of Sciences,* Technical University of Cluj-Napoca North University Center in Baia Mare*, Romania*
avrambia@gmail.com
simona.sabou@gmail.com

Abstract: *The aim of this paper is to analyze the existence of a correlation between education and the difficulties the Romanian entrepreneur faces. In order to reach this objective we studied specialized literature, which tried to define the entrepreneur, to identify his/her characteristics, behaviour, education, its importance and the link between the entrepreneur and the level of education. In the case study elaborated within this paper we analyzed quantitative variables, expressed as percentages, which describe the entrepreneur's level of education and the difficulties he/she faces in relation to obtaining contracts and to supply and demand. The data used are annual; they refer to a period of time between 1995 and 2013 and were collected by the Romanian National Institute for Statistics. We used as analysis instruments both Microsoft Excel 2010 and the SPSS 17 statistics programme (Statistical Package for Social Sciences). We elaborated statistical tests which would confirm or contradict the existence of certain tighter or weaker links between the entrepreneur's education and the difficulties he/she faces. The results have proven the existence of strong positive correlations between the entrepreneurs who face supply and demand difficulties and the primary, secondary and vocational levels of education. In other words, as the number of entrepreneurs with the above-mentioned levels of education increases, so does the number of entrepreneurs who face supply and demand-related difficulties. Things change when the number of entrepreneurs with high school and university education increases because the number of entrepreneurs who face supply and demand-related difficulties decreases. Limited access to credit, lack of technology and raw materials are not correlated with the entrepreneur's level of education. Moreover, the increase in education level increases the probability that the entrepreneur face difficulties related to the low market price, the fact that the company is not well-known and lack of marketing skills. This research his useful both from a theoretical viewpoint, and from a practical one, offering an answer with regard to the correlation between education and the difficulties the Romanian entrepreneur faces.*

Keywords: entrepreneur; education; Romania; demand; supply

JEL classification: I25; L26

1. Introduction

During the past years the European strategies and policies have a new direction and are meant to support the European Union's efforts for sustainable development. An important role in the sustainable development of any territory is held by education and continuing education (Rădulescu, et al., 2015). In this context the strategic framework for future European cooperation in the field of education and training was drawn up. It is structured into four chapters, in agreement with the four strategic objectives of the framework, as follows:

- Making lifelong learning and mobility a reality;
- Emproving the quality and efficiency of education and training;
- Promoting equity, social cohesion and active citizenship;
- Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training (European Commission, 2011).

Starting from the fourth objective, in this paper we set forth to analyze whether there is relation between the Romanian entrepreneur's level of education and the difficulties relating to supply and demand and obtaining contracts that he/she faces in his/her activities. This is even more important as there is a consensus regarding the importance of entrepreneurs for economic development (GEM, 2008).

In order to achieve this aim we shall take a look at the specialized literature which tries to define the entrepreneur, identify his/her characteristics, behaviour, education, its importance and the relation between the entrepreneur and the level of education.

2. Background

Many economists and academicians support the idea that entrepreneurship becomes a crucial factor in the development and wellbeing of societies; consequently many authors have tried to define the entrepreneur. Despite all these, there is no universal definition of the entrepreneur, unanimously accepted in literature (Gartner, 1989). Most of the specialized literature portrays the entrepreneur as an unambiguous individual, unhindered by incertitude, an individual with inclination towards novelty (Begley & Boyd, 1987). The entrepreneur is regarded as a creative individual, with the potential to create a vision practically starting from scratch, investing energy in the initiation and foundation process of a company, constantly trying to generate new business visions. These visions and actions are determined by the desire to take a calculated risk which implies personal, social, psychological, as well as financial aspects. He/She does every possible thing in order to reach the set goals and in order to avoid failure (Hisrich & Peters, 1998).

The entrepreneur bases his/her actions on knowledge, skills and attitudes:

- The knowledge an entrepreneur requires includes the capacity to identify available opportunities for professional activities, a better understanding of economy, of the opportunities and challenges an employer or an organization faces;
- The skills refer to the ability to plan, organize, administer, delegate, communicate, evaluate, negotiate, work both individually and as part of a team, identify strengths and weaknesses, as well as assess and take risks when these are justified;
- The entrepreneurial attitudes refer to innitiative, proativeness, independance and innovation in the personal life and at the job, as well as the motivation and determination to fulfil both personal and job-related objectives (European Commission, 2011).

As compared to the rest of the population, the entrepreneur has a higher need for achievement, inclination towards risk-taking, innovation and control capacity (Collins, Hanges, & Locke, 2004). Business cycles are viewed as result of innovation, which resides in generating a new idea and materializing it into a new product, process or service, which leads to the dynamic growth of the national economy, the increase of employability, as well as the creation of profit for the innovative enterprise (Thurik & Wennekers, 2001). Moreover, each entrepreneur's vision on the action plan on the market will determine the type of business in which he/she will get involved (Hahn, 2013). Besides, the status of entrepreneur is perceived as attractive (Hordău, 2015).

Within the context of this study, the entrepreneur is any person who carries out economic activities with the purpose of obtaining certain benefits.

In order to be able to respond to the requirements of the modern knowledge-based economy, Europe needs graduates who are highly qualified, equipped not only with specific knowledge, but also with transversal skills such as communication, flexibility and

entrepreneurial spirit, which will allow them to succeed on today's labour market (European Commission, 2011). The probability that a manager reach his/her objectives increases as he/she participates in continuing education courses (Zima, 2013). The companies where continuing professional development and overcoming one's own limitations are a priority have greater chances of success (Vele, 2013). Entrepreneurial skills do not appear at birth; they are developed throughout one's life (Kuratko, 2005). Certain authors recommend in this regard partnerships with schools in order to develop common educational programmes (Pop & Borza, 2016).

Thus education seems important for stimulating entrepreneurship for several reasons. Firstly, education offers a sense of independence, autonomy and trust in oneself to individuals. Secondly, education raises people's awareness as to alternatives in choosing their career. Thirdly, education broadens an individual's horizons, creating people that are better prepared for recognizing opportunities and offers knowledge which can be used by individuals in developing new entrepreneurial opportunities (Sánchez, 2010).

3. **Methodology**

This study was based on the analysis of quantitative variables, expressed as percentages, which describe the entrepreneur's level of education and the difficulties he/she faces with regard to obtaining contracts, supply and demand. The data used are annual; they refer to a period of time ranging from 1995 to 2013, and were collected by the Romanian National Institute of Statistics. The entrepreneur's level of education is described by means of four variables, which represent the international standard classification of education. *Primary level* or early education: its main objective is to get young children accustomed to a learning process different than the one available within the family. This level of education, which usually targets children not older than 10 or 11 years of age, supports the emotional, physical, social and cognitive development of the pupil. The *Secondary level* aims at continuing with the results obtained at primary level, so it is based on human development, trying to create a basis for lifelong learning. Another feature which characteristic for this level is the pedagogical education of the teachers in various subjects, trained to offer pupils help in consolidating theoretical concepts in a wide range of subjects. The *vocational level* is part of the formal educational system and contains planned educational programmes for the pupils who wish to acquire knowledge, skills and abilities specific for a certain job or profession. Usually, within this level the focus falls on practice, which leads to a relevant qualification of the pupil on the labour market. The *high school and university level* provide a more diversified, profound and specialized education. As regards university education, it focuses on practice and offering specific professional knowledge, skills and competencies. (UNESCO Institute for Statistics, 2012).

The difficulties faced by the entrepreneur in terms of obtaining contracts are studied by the Romanian National Institute of Statistics only by means of three quantitative variables (percentages): without difficulties, supply and demand related difficulties, and difficulties related to supply or demand. For this analysis we used only the first two variables because we did not want to complicate the analysis by introducing the third variable, similar in terms of the difficulties entrepreneurs face.

Unlike the previous case, the difficulties the entrepreneur faces with regard to demand are presented by the Romanian National Institute for Statistics by means of five quantitative variables presented as percentages: clients with limited funds, high competition, too low market price, company is not well-known, and lack of marketing skills. The same characteristics appear in terms of supply as well, except the quantitative variables, which express these difficulties, change: lack of resources, limited access to credits, lack of clients, or clients who pay too late, limited access to well-paid employees, lack of technologies and raw materials.

In order to analyze the link between the entrepreneur's level of education and the

difficulties he/she faces in his/her activity, we used both Microsoft Excel 2010 and the statistics programme SPSS 17 (Statistical Package for Social Sciences) as analysis instruments.

4. Results and discussions

Before carrying out statistical tests which would confirm or contradict the existence of certain tighter or weaker links between the entrepreneur's education and the difficulties he/she faces, in figure 1 we created a chart which presents the evolution of the four levels of education of the Romanian entrepreneur from 1995 to 2013. After 1989, Romania has been through a long reform and restructuring period, thus the Law of education was adopted only in 1995.

If one takes a look at the evolution of the primary level of education of Romanian entrepreneurs, one can notice the existence of a decreasing tendency, even though in 1999 the percentage of entrepreneurs with this level of education at the moment of the founding of the business recorded an increase as compared to the previous year (4% of the total number of Romanian entrepreneurs had primary level of education in 1998, one year later the percentage increases to 6.40% of the total recorded entrepreneurs, this being the maximum values within the period of time analyzed). Within the analyzed period of time there exist other periods during which the percentage of entrepreneurs with primary level of education increases; these are the years 2004-2005 and the years 2008-2009, yet these increases are not as great as in the case presented. If we were to analyze the minimum value of the percentage of entrepreneurs with primary level of education, we can notice that this is recorded in 2013. Moreover, from 2006 to 2013 the percentage of entrepreneurs with primary level of education does not exceed 2%. One of the factors which lead to this phenomenon is Romania's accession to the EU, which took place in 2007.

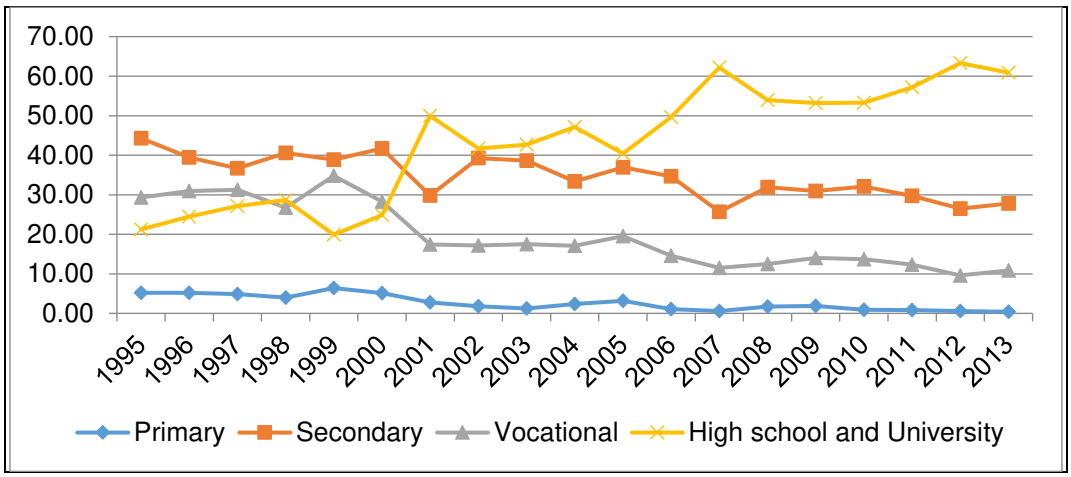


Figure 1. Evolution of the level of education of entrepreneurs in Romania

It until year 2000 the percentage of entrepreneurs with vocational level of education records limited oscillations, it drops dramatically after this year due to the closing down of vocational (industrial) schools, thus reaching in 2015 5,000 graduates of vocational schools/year – 20 times less than in 1990.

Romania's accession to the economic and political European Union generated positive effects in terms of the entrepreneurs' other levels of education as well. Thus after 2007, the secondary level started showing a decreasing tendency, which could be also explained

through the increase within the same period of time of the percentage of entrepreneurs whose level of education was vocational or high school or university.
The evolution of the percentage of entrepreneurs whose education ended at secondary level recorded over the analyzed period three sudden decreases in: 2001, 2004 and 2007; it is noteworthy that at the same time there were significant increases of the percentage of entrepreneurs with high school education or even university education. The period 2000-2003 characterized by a significant increase of the percentage of entrepreneurs with high school/university education was also the period wring which most visas were eliminated, Romanian was invited to join the North-Atlantic Alliance (NATO), The National Investment Fund collapsed, there were numerous street protests generated by the increase in unemployment and delays of the salaries. Beside these data which can explain the spectacular increase in the percentage of entrepreneur with high school or university education, one should also mention the spectacular increase of accredited higher education institutions. If in 1990 there were only 48 universities, in 2004 their number reached 122 (including private universities) (National Institute for Statistics). If one were to analyze the entire high school/university level for entrepreneurs, one would notice another massive increase of this percentage recorded between 2005-2007; this increase was generated by the political measures taken by the state institutions in order to increase the population's level of education, on the background of the accession to the European Union, amongst these measures being the introduction of the Bologna system, which lead to the reduction of undergraduate courses by one year.
If above we presented a descriptive statistics of the Romanian entrepreneurs' level of education, hereafter we will create tests which will confirm the existence or lack of a link between this level and the difficulties the entrepreneur faces. One noteworthy observation is that due to the small number or participants in the poll (N=19) in order to achieve the correlation we will use non-parametrical tests which do not require similarly restrictive conditions. The first correlation subjected to our analysis was the one between the primary level of education and the difficulties which occur in obtaining contracts.
Hypothesis 1. There is a link between the entrepreneur's level of education and the difficulties in obtaining contracts.
In order to establish if there is a link between the two and what the intensity of the link is, we express the null hypothesis "there is no link between the Romanian entrepreneurs' primary level of education and the hypostasis where the entrepreneur does not have any difficulty in obtaining contracts", and the alternative hypothesis, namely that "there is a link between the Romanian entrepreneurs' primary level of education and the hypostasis where the entrepreneur does not have any difficulty in obtaining contracts" and we calculate the Spearman correlation coefficient presented in table 1.

Table1. Correlation coefficients for difficulties in obtaining contracts

		Primary	Secondary	Vocational	High school/ University
Without difficulty	Correlation coeficient	-.875**	-.858**	-.723**	.818**
	Sig. (2-tailed)	.000	.000	.000	.000
Difficulties related to supply and demand	Correlation coeficient	.603**	.584**	.537*	-.568*
	Sig. (2-tailed)	.006	.009	.018	.011

The result p of the statistic test (Sig's value) is lower than the chosen significance threshold (0.05), which means that we reject the null hypothesis and admit the alternative

hypothesis as real.
The same procedure is applied when dealing with the variables which describe the secondary , high school and university education levels. From table 1 one can notice that the value of p is lower than 0.05, which leads to the rejection of the null hypotheses and the acceptance of the alternative ones, which means that no matter the entrepreneur's level of education, there is a link with the fact that he/she does not face any difficulty in obtaining contracts. After having established that there is a link between the entrepreneur's level of education and that there is no record of difficulties met with when obtaining contracts, we analyzed the correlation coefficients (primary level – 0.875; secondary level – 0.858; vocational level – 0.723; high school/university level 0.818) whose values prove that this link is strong no matter the entrepreneur's level of education. The sign to be found in front of the correlation coefficients in the case of the primary, secondary and vocational levels proves that there exists an inverse link between these and the difficulties faced in obtaining contracts, namely, for example, if the number of entrepreneurs with primary level of education increases, then the number of entrepreneurs who do not face any difficulties in obtaining contracts decreases. When referring to the high school and university level, the correlation is positive; thus, as the number of entrepreneurs with this level of education increases, so does the number of those who do not face any difficulty in obtaining contracts.
When analyzing the existence of a link between the entrepreneurs' level of education and the difficulties linked to supply and demand, we obtain values of the p that are lower than the chosen significance threshold (0.05), which leads to the proof of the existence of a link between these variables. Yet the sign of the correlations changes in relation to the link between the level of education and the lack of difficulties faced by entrepreneurs. Thus there are strong positive correlations between the entrepreneurs who face difficulties in terms of supply and demand, on the one hand, and the primary, secondary and vocational levels, on the other hand. In other words, as the number of entrepreneurs with the above-mentioned levels of education increases, so does the number of entrepreneurs facing difficulties in relation to supply and demand. Things change when the number of entrepreneurs with high school and university education increases because the number of entrepreneurs facing difficulties with supply and demand decreases. In order to see into more detail what the difficulties entrepreneurs face in relation to supply and demand are and which have a direct link with the former's level of education, we created two tables with the correlation coefficients regarding the supply-related difficulties and the demand-related difficulties, and expressed two other hypotheses.
Hypothesis 2. *There is a link between the entrepreneur's level of education and the supply-related difficulties.*
As regard supply-related difficulties, the following quantitative variables were available as percentages: lack of resources, limited access to credits, lack of clients or clients who pay late, limited access to well-paid employees, lack of technology and lack of raw materials. After calculating the Spearman correlation coefficients and testing the null hypotheses (these state that there are no links between the level of education and all the supply-related difficulties) we discovered that the entrepreneurs' level of education determines the occurrence of difficulties relative to the lack of resources, client-related issues and the limited access to well-paid employees (all the values of the significance threshold for the four levels of education are lower than 0.05). The correlation between the primary, secondary and vocational education level on the one hand, and the lack of resources on the other hand, is a positive one, thus when the number of entrepreneurs with such a level of education increases, so does the number of entrepreneurs who have issues with resources. At the opposite end there are the entrepreneurs with high school/university education which helps them sole issues related to the lack of resources (the correlation is a negative one which will determine a decrease in the number of entrepreneurs who face the lack of resources when the percentage of entrepreneurs with high school and

university education increases).
The situation changes when dealing with client-related difficulties or difficulties related to the limited access to well-paid employees, the correlation coefficients being negative in the case of primary, secondary and vocational education, and positive in the case of high school and university education, which means that an increase in the percentage of entrepreneurs with primary, secondary and vocational level of education will determine a decrease in the percentage of entrepreneurs who face difficulties with clients and employees, while an increase in the percentage of entrepreneurs with high school/university education brings about a decrease in the percentage of entrepreneurs who face client and employee-related issues.

Table 2. Correlation coefficients for difficulties related to the supply

		Primary	Secondary	Vocational	High school/ University
Lack of resources	Correlation coeficient	.596**	.543*	.571*	-.593**
	Sig. (2-tailed)	.007	.016	.011	.007
Limited access to credit	Correlation coeficient	.064	-.021	-.169	.095
	Sig. (2-tailed)	.794	.932	.490	.699
Without customers or with clients who pay late	Correlation coeficient	-.724**	-.798**	-.789**	.849**
	Sig. (2-tailed)	.000	.000	.000	.000
Limited access to highly paid employees	Correlation coeficient	-.765**	-.743**	-.691**	.735**
	Sig. (2-tailed)	.000	.000	.001	.000
Lack of technology	Correlation coeficient	.015	.112	.265	-.209
	Sig. (2-tailed)	.953	.649	.274	.390
Lack of raw materials	Correlation coeficient	.200	.285	.252	-.257
	Sig. (2-tailed)	.412	.238	.298	.287

A possible explanation for this phenomenon is the fact that entrepreneurs with primary, secondary and vocational education, due to their experience, are more successful in communicating with the individuals involved in the business they carry out.
As expected, limited access to credits, the lack of technologies and raw materials are not correlated with the entrepreneur's level of education (not matter the entrepreneur's level, the significance threshold is higher than 0.05, which leads to the acceptance of the null hypothesis which states that there is no link between the two categories of variables).
Hypothesis 3. *There is a link between the entrepreneur's level of education and the demand-related difficulties.*
Table 3 presents the Spearman correlation coefficients which establish whether there are links between the entrepreneurs' education and the demand-related difficulties they face. We analyzed whether there is a link between the variables which describe these difficulties: too low market price, the company is not well-known and the lack of marketing

skills, on the one hand, and all the 4 levels of education on the other hand. After calculating the Spearman correlation coefficients we realized that there are strong links between the last 3 types of difficulties and all the education levels (the significance threshold for p is lower than 0.05). Moreover, all the three types of difficulties linked to demand are in a negative relation with the primary, secondary and vocational levels of education, and in a positive relation with the high school/university level.

Table 3. Correlation coefficients for difficulties related to the demand

		Primary	Secondary	Vocational	High school /University
Big competition	Correlation coeficient	-.465*	-.423	-.383	.398
	Sig. (2-tailed)	.045	.071	.105	.091
The market price is too low	Correlation coeficient	-.571*	-.670**	-.589**	.644**
	Sig. (2-tailed)	.011	.002	.008	.003
The company is not well enough known	Correlation coeficient	-.805**	-.808**	-.709**	.770**
	Sig. (2-tailed)	.000	.000	.001	.000
Inability in marketing	Correlation coeficient	-.844**	-.790**	-.658**	.753**
	Sig. (2-tailed)	.000	.000	.002	.000

These negative correlations prove that as the percentage of entrepreneurs with lower level of education increases, the percentage of entrepreneurs who face difficulties with the low market price, the fact that the company is not well-known and the lack of marketing skills decreases. Despite the fact that we expect positive relations, these phenomena can be explained through the limited degree of complexity the businesses managed by entrepreneurs with primary, secondary and vocational education actually have; those entrepreneurs who are interested in the market price, are willing to sell their products and services even if they do not reach economic efficiency.

On the other hand, the situation changes when the level of education is high school/university, as there are strong positive relations between these and the low market price, the company not being so well-known and the lack of marketing skills. As the level of education increases so does the probability that the entrepreneur face the above-mentioned difficulties because these entrepreneurs try to evaluate their products correctly, negotiate favourably with their business partners and find new ways to promote their company. As the entrepreneur with high school/university education realizes that he/she needs to do all these in order to be successful, the difficulties he/she needs to solve by constantly trying to find the right solutions do not cease to appear.

As regards high competition on the marketplace, there is a negative relation between it and the entrepreneurs' primary level of education (the value of p is lower than 0.05), which can be explained through the fact that this category of entrepreneurs does know their competitors and does not seem to care about them. Entrepreneurs with secondary , vocational and high school education do know their competitors, yet these do not represent a danger in the development of their entrepreneurial activity.

5. Conclusions

Education is extremely important for the social-economic evolution of a society because it

represents the manner in which social, human and professional relationships develop.
Only through education can one develop entrepreneurial qualities such as high tolerance for risk and independence; these being qualities which help the entrepreneur face the difficulties which may appear during the entrepreneurial process. These difficulties are related both to the demand and to the supply, and during time of economic crisis thy have the tendency to amplify and multiply. Despite the fact that a higher level of education helps entrepreneurs over obstacle more easily, between these and the demand-related difficulties (the market price is too low, the company is not well-known, the lack of marketing skills) there exists a powerful positive correlation. The explanation is provided by the capacity of education to generate new questions and desire for knowledge; thus the entrepreneur with a high level of education will permanently search to develop his/her business, meeting along the way numerous difficulties he/she needs to solve.
At the opposite side there are the entrepreneurs with low education level (primary, secondary and vocational) for whom the difficulties analyzed do play a role in their business, yet not such a significant one; moreover, they often do not even notice the real problems, thus being unable to improve their business. The only exception to this rule is represented by the lack o resources which is a major problem for entrepreneurs with a lower level of education (because without resources, whether human or material, they cannot perform their entrepreneurial activity, yet if the company is not well-known on the market this process continues) but a minor one for those with high school/university education (due to the fact that these can access information more easily, can negotiate, they often speak a foreign language which helps them externalize their business).
In order to be able to lead a business, whether it is at the beginning or not, entrepreneurs need to combine elements of both formal and informal education. Based on these arguments education must constitute a priority in the life of every individual, as well as in the political environment whose duty is to support and encourage this process through the political measures it promotes.

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DECREASING SCHOOL DROPOUT RATE AS A FACTOR OF ECONOMIC GROWTH AND SOCIAL EMPOWERMENT. THEORETICAL INSIGHTS

Alina Badulescu, Csaba Csintalan
University of Oradea, Faculty of Economic Sciences, Department of Economics and Doctoral School of Economics
University of Oradea, Faculty of Economic Sciences, Doctoral School of Economics
abadulescu@uoradea.ro
c_csintalan@yahoo.com

Abstract: *Economic development and social empowerment in Romania are unconcievable in the absence of a modern education system, which needs both economic and financial investments and social, political, cultural measures to increase the inclusion of young people in school system. In this particular context, given that Romania faces a high degree rate of school dropout, and moreover there are few chances that Romania reach its goals, we try in this paper to look inside the real situation. Indeed, school dropout present serious negative consequences both on individual level and for the whole society. Recognising this fact, next step is to investigate and reveal the determining factors for this situation, and we are particularly interested in the economic and systemic factors. Consequently, we present in this paper first a brief literature review on the fenomenon of school dropping out, including reviewing main studies related to factors, effects, causes etc. In the second part, starting from several statistical data provided by INS, EUROSTAT and UNICEF studies, we propose some theoretical models and policy reccomendations in order to decrease the school dropout rate and especially the early school dropout rate.*

Keywords: school dropout, early school dropout, education policy, Romania.

JEL Classification: H52, I22, I25.

1. Introduction

Investing in education means investing for future, and probably the most important investment both the individual and the state can make. From the economic point of view, any investment in education today will generate a return on investment tomorrow, as Becker (1994, p.78) stated: ”education and training are the most important investments in human capital’’. From the social point of view, the benefits of investment in education are even more visible: by increasing the knowledge and competencies of an individual, the status and social role of each individual will improve, and he or she acquires a certain reputation within the family, community and society. Indeed, educated people are a positive externality for the entire society, being associated with lower risks towards evil, crime level decreases and increasing interest in social harmony and development. As in ”Capitalism and Freedom”’, written in 1962, by Nobel laureate Milton Friedman, he describes some of the effects associated with education: ”A stable and democratic society can not exist without a minimum degree of literacy and knowledge of citizens and without the acceptance of a common set of values. Education can contribute to both”’. Therefore we believe that each of us is own laboratory of education, that requires throught life a continuous improvement to meet the socio-economic requirements. When we talk about economic growth and development of a country, we may first consider the labor force that is / may be part of it through various forms of education: continuous improvement, the chance to continue education, education of children with special educational needs etc.

The paper is organised as follows: in the first part we briefly review the literature on school dropout rate, in the seconf part we present several relevant figures, and in the final part we propose a reserach model regarding the mesures to be implemented in order to achieve the goals of reducing the school droput rate in Romania and enhance the community involvement in supporting educational system.

2. Literature review

School dropout is a serious issue not only on an individual level, but also for the educational system, family, community and even society as a whole.

Researches show that students who drop out of school have significantly lower chances of finding employment. Their lack of skills leads them to low paying jobs and no prospects for promotion, jobs typically avoided by other participants in the labor market. According to US reports, in 2000, more than half of all unemployed people had at least one dropout record, while the percentage of unemployment in the case of graduates was 4 times lower (approx. 15%) (Christle, et al., 2007). The income of employees with a dropout record was about 66% of those with completed studies (Campbell, 2003-2004), (Rumberger, 2011). The negative consequences of such decisions on individuals are aggravated by the fact that in recent decades, in most countries, the demand for qualified workforce has soared.

Students who drop out of school are more prone to medical conditions (mainly depression), are more likely to be drawn into illegal activities and, on the long run, become dependent on social assistance programs (Martin, et al., 2002), (Stanard, 2003).

On an economic and social level, dropout is associated with several negative phenomena, which tend to become chronic: reduced overall wellbeing, (potential) reduction of national income, unearned tax revenue, increased demand for (and, hence, spending on) social services, increased incidence of crime and antisocial behavior, reduced social and political participation, reduced mobility between generations, poorer communities, exposure to diseases or antisocial behaviors (Hayes, et al., 2002).

It is therefore not surprising that dropout is considered a national issue of great importance for the individuals, families, communities and society.

However, accurately determining the size and evolution of dropout is complicated, both within a state and in the case of regional comparisons or in the long run. The causes are diverse; it is worth pointing out the differences in educational policies, but also in methodology or data collection and analysis. Moreover there is no consensus on the definition of dropout.

Methodologies used in developed countries approach two major methods to assess dropout rates: reporting *event dropout rates* (i.e. the percentage of students who leave school in a given year) and *status dropout rates* (i.e. the percentage of young people of a certain age group who have left school within a certain range, ex. 4 years).

Most experts consider that officially reported values for both rates are likely to be underestimated. Actually, the figures would be much higher, due to reporting and methodology errors, or due to the uncertainty of some categories who are not taken into consideration (age, deprivation of liberty, insufficient data) (Hayes, et al., 2002).

Despite some differences in reporting, certain data and traits tend to be clear, not only due to their consistency but also due to a likely occurrence (within certain limits) in most countries, interested in studying and limiting this phenomenon. We refer here to the strong correlation between dropout and (vey) low-income families, within disadvantaged ethnic / racial groups (Dorn, 1996), students with disabilities, cognitive deficiencies or emotional disturbances (Bellis, 2003).

Risk factors associated with dropout occur over the course of schooling, and over the last decades, no significant changes in the presence or disappearance of certain factors became noticeable, regardless of country or educational system. The only significant changes occur rather in the prevalence of a factor or another within a risk group. These

risk factors originate from different areas: the individual, their family, community, school, personal relationships, and it is proven that the probability of dropping out of school increases as these risk factors accumulate (Woods, 1995), (Prevatt & Kelly, 2003), (Rumberger, 2011), (Rumberger & Rotermund, 2012).

In other words, no single risk factor can exactly predict the occurrence of dropout; but the predictions' accuracy increases with each identified risk factor (Bowers, et al., 2013), (Suh & Suh, 2007), (Lee & Burkam, 2003). Thus, identification ought to start early, and noticing low grades and their persistence over time seems to be the most accurate predictor of individual school dropout (Bowers, et al., 2013).

Risk factors have been described as belonging to two groups (Suh & Suh, 2007), (Freeman & Simonsen, 2015): status risk factors (i.e., parental education and employment, age, gender, native language, mobility, family structure, ability or disability) and alterable risk factors (i.e., academic failure, retention, attendance, misbehavior, early aggression).

Although it is difficult to establish a clear cause-and-effect relationship between any risk factor and dropout, the probability of dropout increases when several risk factors are present (Suh & Suh, 2007), (Christle, et al., 2007), (Freeman & Simonsen, 2015). Risk factors occurring within school (e.g., behavior and individual performance, pressure from the system or teachers) and outside school (community factors, involvement in antisocial behavior, deviant patterns, and group models) may affect the decision of a student to drop out of school (Rumberger & Rotermund, 2012).

Moreover, the impact of individual and familial risk factors on students may change as students mature. The decision to drop out of school is influenced by social, political and economic factors, it depends on the record of the individual's evolution, on the educational system, on accumulated experiences and real circumstances (Campbell, 2003-2004).

Researchers have identified four main groups of schoolchildren predisposed to school dropout: (A) disrupting school, (b) chronically struggling with academics, (c) bored with the process, or (d) quiet dropouts (Bowers, 2010), (Bowers & Sprott, 2012), (Freeman & Simonsen, 2015).

Other researchers argue that there are actually three subgroups: quiet, jaded, and involved (Bowers & Sprott, 2012). Among them, the *quiet* students provide the highest percentage of dropouts. This group consists of students with a weak academic performance, having a lower school attendance and little involvement in extracurricular activities

The second group, in order of abandon tendencies, consists of the *jaded*, exhausted students. They have the lowest academic performance, tend to dislike school, have a large number of absences and sanctions/penalties.

Finally, there are the students involved either in conflicts with the school, or to impose a certain status within the group with active behaviors. Without having a remarkable school performance, the have got a better attendance and are frequently engaged in a variety of extracurricular activities (Bowers & Sprott, 2012), (Christle, et al., 2007).

Of course, there are combinations of these typologies and the correlated action of these risk factors could complicate identifying and understanding the specificities of each group, thus increasing the difficulties of defining better national policies and programs, of guiding schools to more effective and accurate interventions (Janosz, et al., 2000), (Fortin, et al., 2006).

Several studies show that early dropout in high school years is not conjectural, it is influenced by several early-installment factors. Predisposition for dropout occurs in childhood, being based on personality traits and family influences. During school and high school certain factors increase their influence and are often complemented by more, such as stress, low school performance, lack of social perspectives, drug abuse, so dropout probability increases significantly (Garnier, et al., 1997).

It appears that a vast majority of researchers have focused on the characteristics, individual motivations and family context, rather than external factors such as the characteristics of schools or the local communities' influence (Campbell, 2003-2004),

(Dorn, 1996).
In the last decade, however, researchers have begun to also take into consideration risk factors related to schools (school policies, the concentration of poverty, size and attractiveness of the school, the school offer - courses and extra-curricular activities, relations between teachers and students) (Rumberger, 2011).
Although intensely invoked, the influence of experiences and interactions with, and within the school, or the influence of the educational system on dropout were much less takwn into account. Also influence the economic environment in the community or area can mitigate or exacerbate the risk of dropout.
Although there is little empirical research on the factors that may be associated with school dropout, several studies have reported that dropout rates seem to vary greatly depending on school factors. For example, early school failure or lack of school accomplishments can act as a starting point in a cycle that weakens the students' attachment to school, ultimately leading to dropout.
Alexander et al (2001) highlight that, beyond the risk factors and resources, schools play an important role, through current assessments (grades), scores and regular assessments, retention, special education services, actions and behaviors capable of stimulating the involvement of students etc. They concluded that dropout rates are closely related to educational experiences and to a long-term process of disengagement of the individual from school.
Research completed by Balfanz & Legters (2004) and Christle et al. (2007) emphasizes that the accumulation of problems in poor communities, complicated by the existence of few alternatives for the selection of quality schools (the so-called phenomenon of zonal concentration of worst performing schools, where graduation is rather infrequent) significantly increases the risk of dropout. Moreover, it is considered that, for many pupils, the attended school may be the most important factor in leading to dropout.
Research shows that the probability of giving up school increases for groups of school children who attend schools perceived as unfair or indifferent with students, with an atmosphere of indiscipline or with a high percentage of insolent, aggressive or (formally or informally) privileged students (Rumberger, 2011). In other words, schools are active and dynamic settings, that can stimulate, help or hinder students' success (Săveanu & Săveanu, 2012), and consequently may encourage behaviors that would eventually lead to dropping out of school (Christle, et al., 2007).

3. Some facts and figures

One of the international organisations involved in investigating and designing policies related to education from the perspective of children is UNICEF. Several studies were conducted by UNICEF on the topic of underinvestment in Romanian education and concluded on the consequences and importance of promoting education and preventing and reducing drop out rate. Indeed, increasing investment in education can enable young people with limited income or belonging to disadvantaged families or communities (e.g. rroma comunities) to participate in education and even earn a university degree.

> "Any extra year of schooling can represent a revenue growth of 8-9%, reduce the risk of becoming unemployed by 8%, and occurrence of serious health problems by 8.2%. Graduates of high degree education can earn by 25%-31% more than those who have completed just primary and secondary education. Income of people who graduate a university exceed with nearly 67% that of students who drop out of school after lower secondary education. Increase of proportion of college graduates from 13.6% to 19% by 2025 would increase GDP by about 3.6%. Even a slight increase in the number of secondary school graduates (from 58% to 59.7% by 2025) would result in an increase of 0.52% of GDP. If the investment in education gradually increase to 6% of GDP, economic growth could

reach a level of 2.7 - 2.95% in the period 2015 - 2025 instead of 2%, according to official figures" (UNICEF, 2014, p.2).

Statistics provided by Eurostat reveal that early school dropout in Romania is far above the average EU-27, recorded a 17.4% in 2012 compared with 12.8% EU-27. Moreover, the rate exceeds the EU reference level of 10%, remaining almost the same as in 2011, that is 17.5% (FEDR 2013).

The table bellow shows some figures concerning the early school dropout rate (ESDR) during 2008-2014.

Table 1. Evolution of ESDR - national indicator compared with EU level

Year	Early school dropout rate ESDR (%)	UE-27	Notes
2008	15.9 (+)	14.9%	-target under 10% for EU -target of 11,3% for Romania 2020
2009	16.6 (+)		
2010	16.3 (-)		
2011	17.5% (+)	12.8%	
2012	17.4% (-)		
2013	17.3% (-)		
2014	17.3% (=)		

Source: own ellaboration (Cs. Cs.) after INS, EUROSTAT

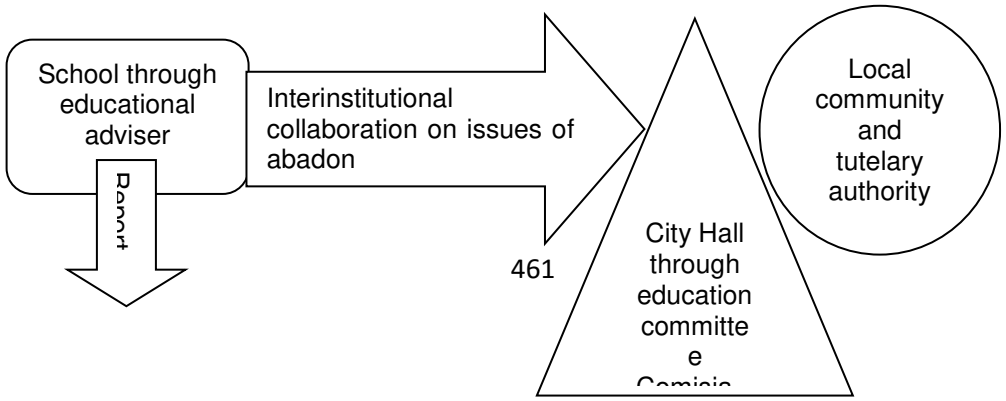
According to data in Table no.1, between 2008-2009 ESDR grew by 0.7%; for the period 2009-2011 (apart from 2010 when there was a slight decrease of ESDR) ESDR also increased and for 2011 it was 0.9% higher compared to 2009. From 2011, ESDR decreased annually by 0.1% by 2013.

4. A proposed model for addressing the high rate of school dropout in Romania

Consequently, if our target for Romania is 11.3% by 2020, if keeping this pace, it will be difficult to achieve this goal. To meet the objective of reaching 11.3% within 7 years (starting from the current ESDR of 17% for 2015) needs that all problematic issues in the education system must be urgently addressed. Moreover, it is necessary an effective collaboration with all institutions, mentoring, evaluation and control bodies, both locally and nationally, to include consulting with the involved actors and stakeholders. To meet the strategic objectives, we proposed as a theoretical approach to describe some possible applicable sollutions:

a) inter-institutional cooperation as a help factor and cooperation with schools

Here we might illustrate the decisive role of the main credit providers, especially in rural areas where school dropout is higher. Within City Hall there is social staff, people responsible for education, even among local councilors is formed the education committee. A support in this process of identification, monitoring and financial support of families with children whose participation in the educational process is interrupted or inexistent could play an important role.



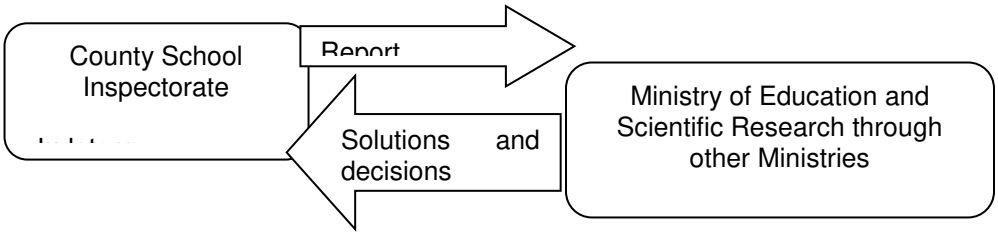


Figure 1. Communication-information circuit
Source: own ellaboration

As described in the above figure, each of the actors on the stage of relations with the education system, whether direct or indirect, must play a role to some extent on sustaining and monitoring the neediest social level of poor people. For children from this environment, some with SEN (special education needs), the help of each of us - individual or institution - is unquestionable. At one point, the intervention of a mayor in a village or commune, can mean much more than any amount allocated to motivate someone to attend school, or even re-enroll in courses. As personal opinion based on the managerial experience in rural educational system, one of the authors (Cs. Cs.) can mention that in several rural schools where he had classes, and with students with SEN, several dropouts etc., it would be difficult for a school principal to address the situation alone and without support from mayor and local council, due to lack of communication networks, motivation or because of families who either do not want to send their children to school (being involved in different jobs) or are overwhelmed by certain situations (where the child is the boss at home).

b) collaboration with local entrepreneurs on motivating families where children dropout school, by providing financial incentives by the entrepreneurs by deducting the amounts of taxes owed to the state, by supporting primary and secondary school sector. Given that investment in primary and secondary education must be a priority on schooling, on condition to be completed by evaluation of good results in school, which can then result in economic growth, the role of the local business environment can be beneficial both to individual and sector of local economic development which subsequently leads to national economic growth and development.

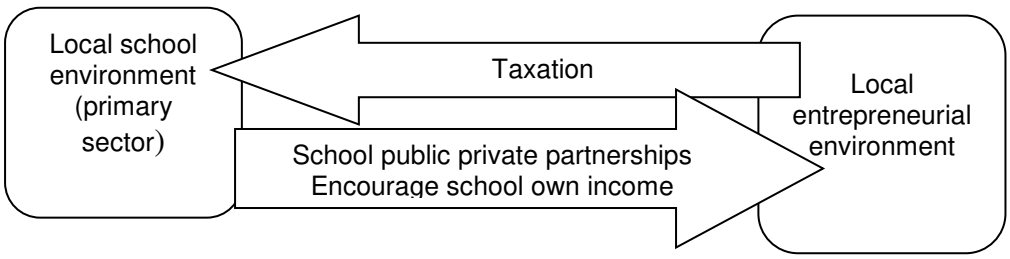


Figure 2. Cooperation between school and private environment
Source: own ellaboration

If a school does not have an adequate budget to ensure school upgrading, public - private partnerships would be the best solution. It is a possible, beneficial aspect for funding educational activities for children with SEN syndrome, a solution would be tax deduction to motivate teachers by local entrepreneurial environment or encourage children, students by

funding education, especially where further study is done by moving students from rural to urban area. Regardless of who or what funding sources exist or will be, these allocations will contribute to generating extra revenues for the state, even after completion of studies.
Another important aspect would be to encourage schools to generate their own income, either from rental of premises and land, even agricultural (rural) or by conducting classes, authorized tutoring, or any other aspect that could bring added income in schools, with the destination to spend only for equipment.

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ROMANIA: MANY ENTREPRENEURS BUT FEW INNOVATORS

Daniel Badulescu, Otilia Cadar
Department of Economics & Doctoral School of Economics, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
Doctoral School of Economics, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
dbadulescu@uoradea.ro
otiliacadar@yahoo.ro

Abstract: *Entrepreneurship is considered an essential element for the development and prosperity of contemporary economies. The already known traits: creating jobs, boosting growth, revenues to the state budget, are supplemented by vitality and adaptability, and not least, a capacity for innovation. Thus, innovation became one of the most important factors in the companies' activity. However, innovation doesn't only mean new products and services. It is closely related to the capacity of entrepreneurs and managers to apply new business models, embedding an organizational culture capable to identify how new ideas could be converted into value for business and society. Innovation supports the efforts of ambitious entrepreneurs to pursue their objectives and stimulate other potential entrepreneurs to enter into businesses. Innovation generates, directly and indirectly, positive effects not only within a company but also within the national economy, as a whole. Despite this empirical evidence, the link between entrepreneurship and innovation is difficult to describe, to introduce it in strong theoretical models, in order to substantiate viable political programs. First, only a relatively small part of entrepreneurs really innovate. Secondly, researchers reveal deep, but subtle, ties between the entrepreneurs' profile, availability for innovation and effects on states' competitiveness and prosperity. Finally, the number (or proportion) of entrepreneurs isn't the most relevant, but their availability to innovate, the type of innovation chosen and, especially, how entrepreneurial organizations stimulate innovative initiatives among their employees (intrapreneurship). From this point of view, Romania's situation is difficult and challenging. The importance and size of the sector, entrepreneurial motivations, or the share of early stage innovative entrepreneurs indicate an average position at a global or European Union (EU) level. However, Romania is a modest innovator, often ranked last in the EU for a several innovation indicators, and its innovation performance in 2014 is at a significantly lower level compared to 2007. The poorest relative performance has been registered for the Linkages & entrepreneurship indicator. Our research also performs a comparison between entrepreneurship and innovation indicators, for Romania and selected Central and Eastern European states, to better understand the gap regarding a reasonable performance in innovation.*

Keywords: innovation, entrepreneurship, competitiveness, EU, Romania

JEL classification: O31, M21, L26.

1. Introduction

To innovate is part of the human essence and tendency to think of new ways to improve one's life. Without innovation, the world as we know today would have looked a lot different. We are not only referring to the spectacular results of modern science and technology, but also to fundamental innovations that have radically changed the perspective on human life. Innovation is not a new phenomenon, but along the human history it rarely incurred the attention it enjoys in modern times. Furthermore, although its

role in applied sciences became obvious more than a century ago, the subject of innovation is relatively new in social science. In economics most researchers had focused on studying the „classic" factors, such as the accumulation of capital or labour, not on innovation. Gradually, starting with the research of Schumpeter (1934), (1942), Arrow (1962), Drucker (1985) or Baumol (1990) things changed, and innovation acquired the status of an individual field apart from other disciplines (Fagerberg, 2003). At the same time, innovation has been approached from different perspectives: sociological, psychological, technical, becoming a highly disputed and prolific interdisciplinary field.
To better understand innovation it is essential to distinguish between two terms which are sometimes used interchangeably, invention and innovation, yet should not be confused. Typically, the invention relates to the first appearance of a new idea for a new product or process, a creative recombination of existing ideas, but whose outcome is to be perceived as new, by all people involved. In cognitive terms, the invention relates to the possibility of discovering something, of creating through imagination. Instead, innovation appears as a marketable application, something to be put into practice as a new idea, the integration of an invention within the economic and social practice. In terms of economic science, innovation may mean departing from the emergence of a new idea to the launch of a new product, through market research, prototype development and early stages of production (Fagerberg, 2003). In other words, if the products resulting from an innovation are not traded (or tradable) the innovative idea has no economic value to the enterprise. In social terms, an innovation has to be really useful „to function" so it can be commercially exploited and transferred, while an invention can or cannot be applied in practice (Roberts, 1988), (Fagerberg, 2003).
Beyond the well-known terminology-creating something new, most definitions of innovation address different perspectives, but in a common tone, change and renewal for a better situation (Nicol, 2010). OECD defines the innovation by relating it to the technological development of products and services, meanwhile the European Union institutions use a broader definition. So, according to the European Commission's (1995) documents, innovation includes qualitative changes in workforce talent, working conditions, managerial and organizational jobs and involves a clear renewal and growth in product and service range.

2. Entrepreneurship and innovation

Innovation is not only limited to new products and services, it includes the companies' ability to apply and spread new models of operation and businesses, to stimulate an internal organizational culture able to identify new ideas that can be converted into value for companies and society. According to Audretsch (2005) innovation is one of the most important factors in the companies' activities, generating direct and indirect benefits within a state, by stimulating economic growth. Drucker (1998) considers that innovation is the centre of entrepreneurial activity. Innovation feeds the business initiators' effort to pursue their ambitions. Furthermore, innovation has feedback and motivational effects; successful entrepreneurial innovation stimulating other entrepreneurs to get into business and promote their ideas (Hatos, et al., 2015). Some of those ideas will become viable innovations and may bring prosperity to the initiator (De Cleyn & Braet, 2012), (Castaño, et al., 2016) or (Tonț & Tonţ, 2016).
According to the Global Entrepreneurship Monitor (GEM) and the World Economic Forum (WEF) (2015, p. 17) the innovative entrepreneur is the one introducing a new product or service which is new for the vast majority of consumers in a market because very few (or none) of the existing producers offer it. We note that this definition of the innovative entrepreneur disregards quantitative assessments (number of patents, processes or new technologies, R&D results); it is highly contextualized and relative. In other words, what is

new on one market may already be known on another market.
The value of this definition is based on the fact that it considers the role of the market, by referring to making the products and the services available to consumers. It takes into account both technological (vertical), and global (horizontal) development (Thiel & Masters, 2014), open economy and the local expansion of the entrepreneurs.
The relationship between entrepreneurship and innovation, although obvious, is not as straightforward. Thus, there are countries where entrepreneurship (measured by number of entrepreneurs, self-employed, firm birth rate, net business population growth, survival rate) is intense (Ahmad & Hoffman, 2007), but their contribution to innovation is low. In addition, there are countries which are well-situated in the innovation standing, yet do not have a very extensive entrepreneurial sector, which is however highly qualified and intensive, with a significant contribution to social prosperity. Furthermore, the business profile differs, depending on age, gender, education, country; complicating the search for a universally valid model of the relationship between entrepreneurship and innovation.
Due to this diversity of the entrepreneurial world, various organizations and researchers involved in studying the relationship between entrepreneurship/ intrapreneurship (on one hand) and innovation and economic competitiveness (on the other hand) argue that entrepreneurship should not be treated as a whole, homogeneously, it must be segmented in different categories. Based on these segmentations its relationship with innovation and its effect on the economic competitiveness in different countries could be better studied and understood. Moreover, expectations on entrepreneurial innovation also refer to solutions for overcoming difficult times, underdevelopment, crises and unemployment (Gündoğdu, 2012), (Acs, et al., 2012), (Noseleit, 2013), (Castaño, et al., 2016), “to survive in adverse economic conditions such as lack of adequate reforms for the development” (Rangone, 2016, p. 23), and even to foster economic recovery.
In the attempt to understand the relationship between innovation and the different stages and forms of entrepreneurship, GEM & WEF promote three dimensions of entrepreneurship as follows: a) Early-stage Entrepreneurial Activity i.e. the percentage of the population aged between 18 and 64 years, which includes emerging entrepreneurs and owner-managers of new functional businesses; b) Ambitious entrepreneurs, individuals involved in building an organization in order to meet their goals. The significant indicator of this ambition is the size of the organization expressed, mainly, by the number of staff that will be employed in the medium run and c) Innovative entrepreneurs, those entrepreneurs at early stage of business which are introducing a new product or service, unique in a market.
As shown above, for an economy, both the size of launching new businesses, but also their expansion, matters. From the standpoint of our research, we are interested, particularly, in the size of the creation and launching of new products on the market.
Although comprehensive, the segmentation, and especially the conditioning of the innovative aspect of thee business during its early stages, contains both an element of potentiality, but also a limitation. In other words, a high rate of an early-stage entrepreneurial activity does not lead necessarily to outstanding results in competitiveness and social welfare. On the other hand, only a small percentage of new firms, small and medium enterprises, really innovate. Moreover, the constraints faced by these new firms, the extremely high mortality rate of SMEs in the first 2 years of existence, often undermine the efforts to innovate of the new entrepreneurs. In fact, ”economies in which more entrepreneurs choose to be entrepreneurial for their employers, rather than create stand-alone entrepreneurial enterprises, tend to be more competitive and wealthier” (GEM & WEF, 2015, p. 7).
It can be an explanation why two economies may perform differently, although they both have a high proportion of innovative entrepreneurs. The economy in which entrepreneurs innovate technologically, vertically, has a better performance than the one in which a large part of these innovative entrepreneurs prefer to expand horizontally. By default, the greater

percentage of innovative entrepreneurs during the early stages of a business positively influences the competitiveness of an economy (GEM & WEF 2015, p. 17).
However, data sorting states by the proportion of innovating entrepreneurs in the early stage of business per total early stage entrepreneurs is not as suggestive.. This is a confirmation that only the percentage of innovative entrepreneurs among the total early stage entrepreneurs, does not say much about the connection between innovative entrepreneurs and the competitiveness (performances) of the economies they belong to. Moreover, we cannot find a correlation between the proportion of entrepreneurship activities and innovation. The best examples are Denmark and Germany, where the percentage of entrepreneurship activities it is relatively modest, but most of early stage entrepreneurs are highly innovative. The fact that countries with relatively similar proportion of innovative early-stage entrepreneurs have different levels of economic competitiveness, leads us to affirm that the innovative contribution of the entrepreneurs in countries less competitive concerns the horizontal expansion of the innovation of products and services. Conversely, in the countries with highly competitive economies stand entrepreneurs who bring absolute novelty innovations new-to-world products and services, namely a vertical expansion.
An additional argument is brought by the combination of early stage entrepreneurs with innovative employers. In a competitive economy, conditions for innovation are gradually created: people have access to better education, advanced knowledge, to social and financial capital, to legal protection of inventions. These countries create a climate within companies (large or small) encourage innovation from their employees (Nicolov & Badulescu, 2012). Thus, intrapreneurship is an alternative for "innovative employees to develop without having to risk their own assets or career prospects by setting up a new business" (GEM & WEF, 2015, p. 19).

3. Innovative entrepreneurs or innovative countries?

Is there a profile of innovative entrepreneurs, early stage, which distinguishes them from non - innovative entrepreneurs or even from ambitious entrepreneurs? Researches show that the only distinctive feature is given by the necessity vs opportunity typology. In other words, among the innovating entrepreneurs, we find more opportunity entrepreneurs in comparison with those of necessity. Instead, the ratio is reversed among ambitious entrepreneurs, who seem to be driven by needs rather than chances or opportunities.
In terms of gender or age, it is quite difficult to find obvious differences. However, in terms of education, there are really distinctive features. Globally, over three quarters of innovative entrepreneurs had a post-secondary degree or higher level of education, compared to no more than 55-60 % in the case of the non-innovative ones.
There is a link between the proportion of ambitious entrepreneurs and the innovators, but the argument is rather indirect. Thus, we find that there are countries with high rates of ambitious entrepreneurs, as well as of the innovators; as there are countries with high rates of innovative activities, but with a reduced pool of new and ambitious entrepreneurs. Germany is an example of a highly competitive country which has under average values in both *early stage innovation* and *ambitious entrepreneurs* (GEM & WEF 2015).
It is possible that the explanation relies on the fact that ambitious entrepreneurs in early stage are more likely to state that they have innovative products or services. In most factors-driven economies, a large proportion of ambitious entrepreneurs declared that they promote innovative products or services. Specifically, the share of ambitious entrepreneurs who are (self)-declared innovators in factors-driven economies is higher than in innovation-driven economies, but this self-declaration does not help to reclassify countries which belong to the factors-driven or efficiency-driven category, in innovation-driven economies.
A closer, country-level analysis of the relationship between ambitious and innovative entrepreneurs shows that things are more complex. Countries with high rates of innovation

(Germany, Switzerland, and Korea) have a sector of growth-oriented entrepreneurs lower than in most factors-driven countries, but most of these ambitious (growth-oriented) entrepreneurs are also innovative. Things are not evolving similarly not even in countries with high growth rates, with low competitiveness levels. Probably, the chance that opportunities could lead to the creation of new solutions is better capitalized in innovation-driven economies, and there is a greater connection between entrepreneurial innovation and ambitious entrepreneurship.

As a conclusion, there is a remarkable diversity of forms of entrepreneurship in these categories of economies – factors-driven, efficiency-driven and innovation-driven, in growth rates and type of associations. We found various cases where high levels of entrepreneurs in early stage have no chance to contribute to economy's growth, to innovation and prosperity, precisely because the country does not provide the necessary environment for ambitious and innovative businesses to develop. Conversely, many competitive countries have a relatively low sector of new entrepreneurs, but this is obviously focused on growth and innovation.

4. A short analysis on Romania's performance indicators related to Entrepreneurship and Innovation

According to GEM Report 2014 the profile of Romanian entrepreneurs includes all age groups between 18 and 64, the highest values situated between 25-34 years old and 35-44 years old (Sipos-Gug & Badulescu, 2013). In Table 3 of the Appendix the distribution of entrepreneurs by gender, age, level of education and income can be observed. Compared to other selected ECE countries (Croatia, Hungary, Lithuania and Poland) entrepreneurial efficiency rates for Romania (expressed as a percentage of population aged 18-64 years) are encouraging (Table 1).

Thus, Romania has the highest rates for *intentional entrepreneurs*, of 33% compared to 23% in Croatia and 16% in Hungary and for y*oung business entrepreneurs*: 6.20% in Romania compared to 4.80% as the EU average, 5.30% in Lithuania or only 2% in Croatia. Romania also has a satisfactory position for the TEA - *early stage entrepreneurs* with 11.30%, compared to 7.80% the EU average, or in case of new entrepreneurs - 5.30% compared to 4.80% the European average, but below the countries taken in the GEM analysis (Lithuania Croatia, Poland). Interestingly, Romania has a good positioning for *entrepreneurial employees* defined by GEM as people "who are actively involved in and have a leading role in at least one of the following phases: idea development for a new activity or preparation and implementation of a new activity" (Dézsi-Benyovszki, et al., 2014). In this case, the percentages are almost double compared to the countries taken in comparison, and well over the EU average.

Table 1: Entrepreneurial activity rates in efficiency-driven EU countries, 2014 (% of population aged between 18 to 64 years)

Entrepreneurial activity rates	EU average	RO	HR	HU	LT	PL
Nascent entrepreneurs	4.80	5.30	6.00	5.60	6.10	5.80
Young business entrepreneurs	3.20	6.20	2.00	3.90	5.30	3.60
Early stage entrepreneurs (TEA)	7.80	11.30	8.00	9.30	11.30	9.20
Established business owners (EB)	6.70	7.60	3.60	7.90	7.80	7.30
Discontinuation rate (business did not continue)	2.60	3.20	3.80	3.10	2.90	4.20

Legend: Ro-Romania, HR-Croatia, Hu-Hungary, LT-Lithuania, PL-Poland

Source: adapted from Dézsi-Benyovszki, A., Nagy, A., Szabó, T.P. (2014) *Entrepreneurship in Romania. Country Report 2014*, Global Entrepreneurship Monitor.

The report on innovation (Innovation Union Scoreboard) conducted annually by the European Union, provides a comparative analysis among EU Member States on research and innovation performances using the latest Eurostat statistics and other recognized international sources such as the OECD or the United Nations (European Commission, 2015). Innovation performance is measured using a composite indicator - Summary Innovation Index - totalling the performances of European countries through a comprehensive range of indicators, grouped into three main types of indicators - *Enablers*, *Firm activities* and *Outputs* and eight dimensions of innovation.

Enablers refer to the key drivers of external innovative performance (human resources, research excellence and funding/support). The *firm activities* indicator captures innovation efforts through three dimensions - *Firm investments*, *Linkages & entrepreneurship* and, *Intellectual assets*. Finally, *Outputs* captures the effects of the enterprise innovation activity, among these distinguishing *Innovators'* and *Economic effects*.

To illustrate some of these indicators, in Table 2 we analysed comparatively the values recorded among several countries in the EU. We selected the same group of countries used in analysing the efficiency of entrepreneurial activity rates based on GEM reports (Table 1). Although innovative performance is noted by Innovation Union Scoreboard in a wide range of indicators, we preferred that our analysis was narrowed to the *Firm activities* category, in which *linkages and entrepreneurship* has a special position.

In a comparative general analysis of the indicators of entrepreneurship activities' efficiency and of performance in innovation, we see that all selected countries have values close to the EU average (sometimes higher) in terms of entrepreneurship, but below the European average in terms of innovation. The investments indicator has values below the EU average in all 5 countries, with Romania and Lithuania recording the lowest values. Hungary has the highest level of investment, but at 75% of the EU average. Linkages & entrepreneurship values are higher in Croatia than in other countries and Intellectual assets are below the EU average in all 5 countries.

Table 2: Current performance related to Innovation, selected EU countries

Firm activities	**EU 28**	**RO**	**HR**	**HU**	**LT**	**PL**
1. Firm investments						
1.1. R&D expenditure in the business sector	1.29	0.12	0.41	0.98	0.24	0.38
1.2. Non R&D innovation expenditure	0.69	0.30	0.95	0.7	1.1	1.04
2.Linkages & entrepreneurship						
2.1.SME's innovating in-house	28.7	10.6	19.3	10.6	13.8	10.1
2.2.Innovative SME's collaborating with others	10.3	1.2	7.5	5.6	7.5	3.9
2.3.Public-private co-publications	50.3	6.6	30.00	26.8	7.2	4.7
3. Intellectual assets						
3.1.PCT patent applications	3.78	0.2	0.57	1.49	0.34	0.42
3.2.PCT patent applications in societal challenges	0.98	0.05	0.22	0.42	0.03	0.09
3.3.Community trademarks	5.83	1.85	1.24	2.42	4.13	3.61
3.4.Community designs	1.13	0.19	0.15	0.34	0.46	1.62

Legend: RO-Romania, HR-Croatia, HU-Hungary, LT-Lithuania, PL -Poland
Source: adapted from European Commission (2015) *Innovation Union Scoreboard*, pp. 82-83

Within the European Union, countries such as Belgium, the UK, Denmark, the Netherlands

and Sweden (Figure 1) are on top for the *Linkages & entrepreneurship* indicator. Innovation capacity in these countries is crucial for SMEs; they are combining in-house innovation activities with joint innovation activities with other enterprises or public sector organizations. Also, research systems are focused on meeting the requirements of the companies, this fact is underlined by the performances of the *Public- private co-publications* indicator.

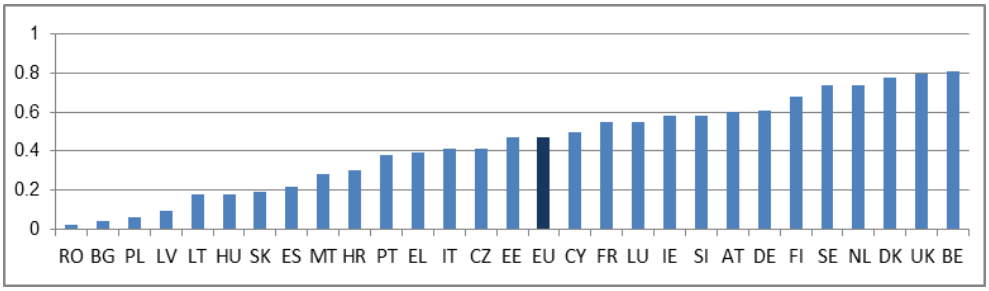


Figure 1: Performance in *Linkages & entrepreneurship* on the EU level
Source: adapted from European Commission Innovation Union Scoreboard (2015), p. 25

Limiting the analysis to Romania's case, we find that *R&D Expenditure* in the business sector are 10 (!) times lower than the EU average, and 2-4 times lower than the countries taken into the panel. Romania has extremely low results in *Linkages & entrepreneurship*: Romanian's SMEs are in-house innovating three times less than the EU average and at half of the performance of the studied countries. The situation is even worse in terms of innovative activities carried out in collaboration with third parties, or in terms of expansion of cooperation relations, where Romania's indicators are way below the European average. It is worrying that, in most indicators, the evolution of Romania is falling, while the EU average (and, to some extent, of the countries analysed) is increasing (European Commission, 2015).
Romania is the only country in the set that recorded a decrease of the *R&D Expenditure in the business sector* (-5.6%) compared to an EU average of + 1.9%. Moreover, countries such as Hungary and Poland experienced increases between 10 and 12%. Romania recorded net adverse developments in the last decade to *Linkages and Entrepreneurship*, particularly *Innovative SMEs collaborating with others* (it is worth mentioning that all the selected countries experienced a decrease of this indicator). The only positive developments for Romania, well above the EU average and sometimes upper than selected countries, were registered for several indicators of the subgroup *Intellectual assets*.
Overall, we can say that, within the EU, Romania is a modest innovator. Even if the performances in innovation rose until 2011, then this indicator has been declining, the level of 2014 having a significantly lower level compared to 2007. The relative performance decreased from 46% in 2007 to 37% in 2014. Romania recorded values below the European average for most indicators and the weakest relative performance (in terms of dimension) was recorded for the *linkage and entrepreneurship* indicator (European Commission, 2015).

5. Conclusions

Entrepreneurship has been considered an essential element of development, prosperity and adaptability of contemporary economies. Its vitality and resilience, verified during the recent economic crisis, adds to the already known attributes: creating jobs, boosting progress and economic growth, creating revenues to the state budget, an alternative to

large, bureaucratic and less competitive organizations, and, not the least, innovation capacity. Consequently, governments and policy makers, based on laborious studies and researches, are implementing several programs to increase the number of entrepreneurs, and, perhaps more importantly, to support viable businesses and the veritable mentality of entrepreneurship among active population.

The relationship between entrepreneurship and innovation is complex and difficult to refine in theoretical models with practical value. There are countries where entrepreneurship is intense, but which have mediocre innovation indicators, as there are countries, that are paramount in innovation, but has a relatively small business sector. Furthermore, two economies may perform differently, although both have a high proportion of innovative entrepreneurs. Researchers found that economies, in which entrepreneurs are technologically (vertically) innovating, bringing new-to-world products and services, perform better than those in which a large part of these innovative entrepreneurs prefer to expand horizontally.

The economies are, and remain, competitive, if they create conditions for innovation: better education, access to advanced knowledge systems, financial assistance or legal protection of inventions. These economies stimulate a climate within companies that encourages the involvement of employees in innovative activities, i.e. the intrapreneurship.

In this context, Romania's situation regarding the entrepreneurship - innovation - competitiveness relation presents obvious discrepancies. Compared to the EU average or other selected ECE countries (Croatia, Hungary, Lithuania and Poland) the rates of the entrepreneurial efficiency are encouraging. Romania also has a good performance in terms of entrepreneurial employees. However, Romania is a modest innovator, probably the weakest in the EU, to most indicators used by the official's reports methodologies. The performances in innovating have declined in the recent years, and the relative performance decreased from 46% in 2007 to 37% in 2014. Moreover, the linkage and entrepreneurship indicator for Romania registered the lowest relative performance. These figures show that whether the entrepreneurial performance is not a good predictor of entrepreneurial innovation and competitiveness, or the development of the entrepreneurship in these frameworks (otherwise admirable) has reached its maximum contribution to increasing innovation and competitiveness score. It is possible that other factors we only mentioned above matter the most: educational systems, access to advanced knowledge, promoting intrapreneurship, collaboration between companies and institutions, and, not least, more consistent (public and private) investments in R&D infrastructure. Our further researches will deepen the role of these factors in interpreting the complex relationship between entrepreneurship/intrapreneurship and innovation.

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Appendix 1

Table 3: Distribution of entrepreneurs by gender, age, education and household income in Romania, 2014 (%)

Variable		Potential entrepreneurs	Intentional entrepreneurs	Nascent entrepreneurs	Young business entrepreneurs	Early-stage entrepreneurs TEA	Established business owners EB
Gender	Male	68.67	54.9	72.65	67.89	70.59	66.37
	Female	31.33	45.41	27.35	32.11	29.41	33.63
Age category	18-24	18.16	22.84	18.54	19.87	19.08	4.78
	25-34	30.61	25.79	29.02	29.14	29.03	21.94
	35-44	28.65	24.75	30.68	29.00	29.71	26.84
	45-54	12.00	15.46	10.16	13.79	12.27	26.30
	55-64	10.99	11.16	11.61	8.2	9.91	20.14
Educational level	Some secondary degree	6.07	10.67	4.88	5.50	5.28	4.00
	Secondary degree	44.34	51.47	38.80	34.34	36.65	39.07
	Post-secondary degree	33.04	29.61	36.35	37.78	37.16	42.59
	Graduate experience	16.55	8.25	19.97	22.38	20.61	14.33
Household income	Lowest	39.07	21.07	23.89	11.50	17.61	12.05
	Middle	29.34	30.87	29.05	33.71	31.83	33.83
	Upper	31.59	48.06	47.06	54.80	50.56	54.12

Source: Dézsi-Benyovszki, A., Nagy, A., Szabó, T.P. (2014), *Entrepreneurship in Romania. Country Report 2014*, Global Entrepreneurship Monitor.

THE EFFECTS OF MARKETING CAPABILITIES ON FIRM'S PERFORMANCE

Luminita Stefania Bodea
Department of Marketing, Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, Romania
luminitastefania.bodea@gmail.com

Abstract: *This paper aims to develop a conceptual model used in the empiric testing of a firm's marketing capabilities and describe the effects of these capabilities over organizational performance. Previous research explains performance differences between firms through the resource-based view and the structure-conduct-performance paradigm. Criticism towards these two perspectives, emerging from absence of a low competitive level market, lack of an explanation towards the manner in which resources are developed and how these need to be exploited to generate a competitive advantage and the shortage of solutions in dynamic environments has determined the development of the marketing capabilities perspective. Because of these limits, many of the studies in the area of strategic marketing reported a misperception of managers towards marketing and thus the focus of managers only on the operational dimension of marketing. A firm's marketing capabilities represent a multidimensional construct, a combination of human assets, market and organizational assets. The present research uses results collected through the processing of 121 questionnaires completed by large Romanian companies, and tests the existence of marketing capabilities and their effects on organizational performance in these firms through simple linear regression. The constructs' measurement scales are determined to be reliable because the Alpha Cronbach value exceeds 0.6. Validity of the constructs was proven through the use of factor analysis. Thus, the paper confirms the existence of marketing capabilities on a firm's level and its positive effect on performance. One major contribution of the present study is that it offers an addendum to empirical data on the effects of marketing capabilities over organizational performance available in literature.*

Keywords: marketing capabilities, performance, market effectivness

JEL classification: M310; M100

1. Introduction

The main reason to study marketing capabilities lies in their potential to influence customer satisfaction, market effectiveness and current profitability (Battor, Zairi and Francis, 2008; Fahy et.al, 2000; Morgan, 2012; Morgan, Vorhies și Mason, 2009; Vorhies, Orr and Bush, 2011) of an organization. Other research shows the importance for a firm to own this type of capabilities, especially towards acquiring a sustainble competitive advantage. (Miller, Eisenstat and Foote, 2002; Vorhies andMorgan, 2005; Weerawardena, 2003). Following the evolution of customers` needs, the movement of competitive forces and technological dynamics helps a firm prevent the failure of successful products. A system to monitor and register environment dynamics is useful to identify the nature of these changes and prevent failure. Companies characterized by a rapid ascent have the capabilities to develop new products before their competitors, therefore have the capability for a more flexible reaction to environment changes. Recent studies (Morgan, 2012; Morgan, Vorhies and Mason, 2009; Vorhies, Orr and Bush, 2011) show that managers

consider marketing capabilities as a key contributing factor to firm performance differences. Other studies say that effects on firm performance are only seen in an emerging environment. Obtaining a potential competitive advantage through marketing capabilities depends mostly on managers' awareness of a need to change and type of change required. If a firms' need to change is limited, the opportunity to cover the costs required to develop marketing capabilities is also smaller (Keh et. al, 2007). Thus, employing marketing capabilities can be an essential factor for Romanian companies' performance. The cost to develop and use these will be experienced in their capacity to produce value. When a firm is required to change its structural capabilities, though rarely, as a consequence of the market or technological environment being stable, it's performance may be affected if it tries to significantly extend resources towards the acquisition of capabilities required for change. The present paper is structured as follows: a first part constituting a review of previous specialty literature on firm's marketing capabilities and their effects on firm performance, the second part, establishing the research hypothesis and methodology, and the final segment, which will present results attained through testing of the hypothesis and formulate conclusions, limitations, managerial implications and a future research direction.

2. Literature review

2.1. Marketing capabilities

The main question in strategic marketing literature pertains to the method used by firms to keep the competitive advantage. The concept of marketing capabilities was established through the theories on resource based view. Firms that adopted a "resource based strategy" invest in valuable technological goods, preserved in time through a firm stand on protecting intellectual property. Early research on resource based view advance the idea that a firm is an expanded set of resources (Wernerfelt,1984). Resource based view was never considered as essential as a result of the majority of these resources, such as technological abilities, being hard to measure and thus, bringing difficulties in quantifying their role in profit. Parallel research in the field of strategic management (Morgan, 2012; Morgan, Vorhies and Mason, 2009; Vorhies, Orr and Bush, 2011) proposes explaining the performance differences between firms through the use of the structure-conduct-performance paradigm. This paradigm quantifies firm performance differences by utilizing each firm's ability to find and exploit market imperfections to limit competitive rivalry and, thus, reduce price based tensions. Empirical results provided by studies committed to this perspective reaching a higher performance level (Battor, Zairi and Francis, 2008; Fahy et.al, 2000; Morgan, 2012; Morgan, Vorhies andMason, 2009; Vorhies, Orr ad Bush, 2011) are: investing in markets with a weaker competition and winning positioning advantages on these markets, advantages that can be obtained through creating and exploiting imperfections in these rivalry-limiting markets. In like manner to resource based view, this theory has its limits, such as it being applicable only to specific economical contexts. Because of the criticism brought to these perspectives, marketing capabilities has shown itself to be the main source of competitive advantage (Day, 1994). In the classification of marketing capabilities provided by Day (1994), two are recognized: market understanding capabilities and capabilities of establishing customer relationships. Hooley et al. (1998) proposes a hierarchical classification of marketing capabilities as such: strategic marketing capabilities (market segmentation capability, market positioning proficiency, etc.), interfunctional marketing capabilities (competence to develop new products, customer relationship management capabilities etc.) and operational marketing capabilities (capabilities meant to ensure implementation of the marketing

strategy). On the other hand, Vorhies (2005) has demonstrated the existence of capabilities pertaining to the marketing mix, planning capabilities and implementing the marketing strategies and programs and sales management capabilities. Research performed by Möller and Anttila (1987) describe four subdomains or dimensions of a firms' management capabilities: the managements' capability of identifying the competition's position and main competitive advantages; capability to analyze the strategies employed by the competitors; analyzation capabilities of the suppliers' and distributors' strategies and the capability to analyze the weaknesses and strengths of a company. Morgan et al. (2009) describes the concept of marketing capabilities around the following dimensions: creating strategies and implementing marketing programs, managing market information, marketing planning; to these he also adds the following: development of new products and/or services, management of the distribution channels, marketing communication, price policy and sales policy. This research is meant to offer important managerial implications. Firms must understand the manner in which these capabilities will provide a distinctive character through organizational processes which will therefore increase performance.

2.2. The effects of marketing capabilities on firm's performance

The effects of marketing capabilities on a firm's performance may also derive from inferences based on negative incidents in the market, (Bruni and Verona, 2009; Vorhies, Harker and Rao, 1999) failure that usually spawn from rapid change. This change doesn't only represent huge transition costs or inability to honor the client's needs, but also costs resulting from the absence of a secure market. Because of these events, a need to identify, adapt to and coordinate activities and goods appears, especially complementary goods or resources which cannot be purchased. The task of marketing capabilities is to identify and coordinate at an organizational level, as opposed to an industry level, although strategic alliances with different companies can be involved. To accomplish the necessary coordination, the managers require information about changes happening in the technological environment and information about the changes happening customers needs. This information is not always available, and if it is possible to acquire it, is usually incomplete or subjective. (Vorhies and Harker, 2000). Managers must also benefit from information gathering capabilities, from analysis capabilities, from strategy making and implementing capabilities resulting from exploiting these marketing capabilities. This type of situations is managed in differing ways, but with the help of marketing capabilities, rules can be elaborated pertaining to the approach a firm takes. The existence of marketing capabilities inside a firm presumes creating such rules and routinely applying them when change is detected. Coordination and allocation capabilities of resources proposed in theory by the marketing capabilities determine how the market is modelled and vice versa. Therefore, the organizations and the markets evolve together. Albeit the need to coordinate and manage goods and resources together with investment choices can be the main issues which the capabilities provides solutions to the organization. These capabilities alone cannot influence the market without the existence of an answer from the competition, the providers and the clients. The approach towards capability advances the principle that the requirement of new products and processes spawns from combining information management capabilities with the potential developed to implement marketing strategies and programs. The renewal process of the organizational and strategic enterprises is essential to the firm's long term performance (Combe și Greenly, 2003; Heinrichs și Lin, 2008). Companies must strike a balance between exploring new opportunities and resource exploitation and renewal. The essence of

capabilities is that competitive advantage (Vorhies and Morgan, 2005) only appears through developing, aligning and continual reconfiguration of goods or resources specific to each firm. The theory of capabilities distinguishes distinctive and difficult to copy resources developed by a company as a base for the defense of the competitive position. These resources, derived from an integrated combination of goods and capabilities, are cultivated over time and boost a firms' ability to adapt to change. Management's task is to determine the best way to exploit and improve these capabilities, although, over time, the challenge to develop such capabilities increases in difficulty (Day, 1994).To be able to cope with the changes imposed by the environmental factors, the firm needs to be able to monitor, analyse and understand them.

3. Hypothesis

The research performed on the concepts of firms' strategic and marketing capabilities links the two concepts through the contribution of marketing capabilities to the development of a concurential strategy founded on innovation. Advancement of the marketing capabilities is positively influenced by the intensity of the entrepreneurial spirit. Once generated, the marketing capabilities will increase the intensity of innovation at the firm level, thus, over time, developing a competitive advantage for a long period. (Weerawardena, 2003). The attention which the company attributes to customer needs trends, concurential forces and technology ensures an increase in performance. A monitoring system for the changes that happen in the environment is useful towards identifying further change and preventing failure. (Hooley et al., 1987). Because marketing capabilities differentiate between distinctive companies performance degrees, we expect the following hypothesis to be validated:

H1: Marketing capabilities positively influence firm's performance

Implementing client focused marketing capabilities (Vorhies, Orr and Bush, 2011), as well as the management's capability to analyze and understand the consumer needs, their affinity to formulating costumer interaction strategies, management's capacity to create interrelation structures between key customers and management's potential to build client dedicated strategies based on the afore mentioned capabilities influences a firm's performance level. Therefore, we believe that:

H2: Marketing capabilities have a positive influence towards customer satisfaction

Besides the environmental factors, the company is also influenced by external factors that impact daily activities. These enterprises (Miller, Eisenstat and Foote, 2002; Morgan, 2012; Morgan, Vorhies and Mason, 2009; Vorhies, Orr and Bush, 2011; Weerawardena, 2003) may be influenced by clients, competitors, supply chains or consultants, thus entailing the usage of strategy development capabilities and implementing of marketing programs capabilities, market information management capabilities, marketing palnning capabilities, channel management capabilities and marketing communication capabilities. All of the above helps to formulate the following hypothesis:

H3: Marketing capabilities positively influence a firm's market effectivness

The dimensions of an organization's marketing capabilities pertaining to its competitors (Combe și Greenly, 2003; Heinrichs and Lin, 2008) are: management's capability to identify the position, strategy and solution offered to the customer by the competitors and the main concurential advantages; management's capacity to create a comparative analysis of the strengths and weaknesses between said firm and its competitors; the possibility to analyze strategies employed by the competition towards their customers; management's capability to analyze the competitions' suplyers and channels. The existence of these factors is also an approach to increasing performance. As a consequence of these factors, we expect that:

H4: Marketing capabilities have a positive influence on the current profitability of the firm

4. Method

4.1 Sample and data gathering

The results of this study are collected through the use of a database composed of 1800 companies operating in Romania. All of these companies have a number of employees greater than 10 (are therefore medium and large firms) and operate in differnt fields. After the development of the data base, invitations have been e-mailed to top management of the 1800 companies to complete the online questionnaire. After two weeks from the sending of the first invitation, a reminder was sent through e-mail. Following this stage, the sample members were contacted through phone for an invitation to participate to the study. Finally a sample was created comprised of 121 companies.

4.2 Measures and measurement models

For the process of measurement during this study we have used previously recognized and accepted scales. To measure a firm's marketing capabilities and organizational performance we used the Vorhies and Morgan (2005) scale. The psychometric properties of the measuring scales are acceptable, α Cronbach exceeding the value of 0.6 for each of the constructs (Fornell and Larcker, 1981).

5. Results

The scales used for this paper have been shown to be trustworthy at an acceptable level, the alpha Cronbach value ranging from 0.760 to 0.840 for the dimensions of the marketing capabilities and 0.816 for firm performance

Table 1. Scale properties Cronbach's α at construct and dimension level

Construct and dimensions	Cronbach's α
Implementation capability	.778
Market information management capability	.808
Planning capability	.840
Product development capability	.823
Channel management capability	.802
Marketing communication capability	.779

Pricing capability	.769
Selling capability	.760
Firm performance	.816
Customer satisfaction	.802
Market effectiveness	.725
Current profitability	.686

For this research, we have tested four regression models towards validating the formulated hypotheses. The first model tests the direct effects of the implementation of marketing strategies and programs capabilities, managing market information capabilities, marketing planning capabilities, channel management capabilities, marketing communication capabilities, pricing capabilities and sales capabilities towards performance. The second model tests the direct effects of the dimensions of marketing capabilities over customer satisfaction.The third model tests the direct effects of marketing capabilities dimensions over a firm's market effectivness. The last model tests the direct effects of the dimensions of marketing capabilities on the current profitability of the company. Our results from testing these models are shown in table 2 and table 3.

Table 2. Results of testing the effect of all the dimensions of marketing capabilities on performance

Marketing capabilities	**Firm performance**	
	β	**p**
Implementation capability	.018	.839
Market information management capability	.129	.159
Planning capability	.113	.186
Product development capability	*.186*	*.013*
Channel management capability	*.262*	*.001*
Marketing communication capability	-.069	.458
Pricing capability	.101	.238
Selling capability	*.272*	*.002*

Testing the first model provides the following results: only the capability to develop new products, to manage distribution channels and manage sales has direct and significant effects (β=0.186, 0.262, 0.272; p=0.013, 0.001, and 0.002) on firm performance.

Table 3. Results of testing the effect of all the dimensions of marketing capabilities on customer satisfaction, market effectiveness and current profitability of the firm

Marketing capabilities	Customer satisfaction		Market effectiveness		Current profitability	
	β	p	β	p	β	p
Implementation capability	*.175*	*.057*	-.039	.723	-.084	.491
Market information management capability	.129	.166	.102	.361	.101	.416
Planning capability	.097	.261	.047	.650	.147	.204
Product development capability	.115	.130	.144	.114	*.220*	*.032*
Channel management capability	*.330*	*.000*	.146	.111	*.201*	*.049*

Marketing communication capability	.068	.470	-.071	.528	-.171	.178
Pricing capability	-.034	.697	.116	.266	.173	.137
Selling capability	.133	.124	*.400*	*.000*	.158	.172

Testing the other three models shows the following: only the market information management capability and channel management capability has a direct and significant effect (β=0.175, 0.330; p=0.057, 0.000) over customer satisfaction; only the sales management capabilities have a direct and significant effect (β=0.400; p=0.057, 0.000) on a firm's market effectivness; only the new product development capability and channel management capability have a direct and significant effect (β=0.220, 0.201; p=0.032, 0.049) on the current firm profitability. Among the three capabilities that show a strong influence on firm performance, only one influences financial performance. This means that improving the sales management capabilities will determine and increase the financial performance. With regards to the factors that determine the increase of customer satisfaction, we have detected the influence of a capability that does not manifest on general firm performance, namely the capability to implement strategies and marketing programs. A better knowledge of the market, of customers' needs and requirements, should contribute to a better response towards the organization with positive effects towards customer satisfaction.

6. Conclusions

Marketing capabilities contribute to monitoring client needs, concurential forces and the evolution of technology and, thus, prevents a firm's market decay. Although literature (Miller, Eisenstat andFoote, 2002; Morgan, 2012; Morgan, Vorhies and Mason, 2009; Vorhies, Orr and Bush, 2011; Weerawardena, 2003) presents the need to develop a capability to alert to market product changes and changes pertaining to clients and sees them useful, the results of the present study determine that only some of the marketing capabilities have an effect on firm performance. New product development capabilities, channel management capabilities and sales management capabilities represent the marketing capabilities having the biggest influence on organizational performance. The study shows a pragmatic character through the supply of empirical evidence, offering useful support to managers in decisions pertaining to the channeling of resources and abilities to developing marketing capabilities. This research, although offering important empirical proof, has several limitations. One such limitation is the small size of the sample. This determines a continuation of the process of data collection. Owning to this, it is impossible to provide and analysis on sub-samples based on specific domains of activity or size of the organization, although such an analysis could prove useful in obtaining information regarding dominant market practices in a specific field of activity. Another shortcoming resides in the investigation of only the direct effect and the interaction effect of marketing capabilities on performance, neglecting factors which might mediate these relationships. Further research could investigate such factors that connect marketing capabilities and organizational performance. To identify such factors that favor the more intense development of specific marketing capabilities is a requirement for future research into distinct fields of activity and types of organizations.

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CAN CSR INFLUENCE EMPLOYEES SATISFACTION?

Patrizia Gazzola[1], Piero Mella[2]
[1]Department of Economics, Insubria University, Via Montegeneroso, 71, Varese, Italy
[2]Department of Economics and Business, University of Pavia, Via San Felice, 5, Pavia, Italy
patrizia.gazzola@uninsubria.it
piero.mella@unipv.it

***Abstract**: The study shows how CSR for employees may represent a special opportunity to influence: employees' general impression of the company and expectations about how the organization treats its employees. Companies have very important role to affect change in their communities and the environment by adopting CSR initiatives. Though short-term benefits might be few, it is likely that the importance of CSR will increase in years to come as people become more interested in the social and environmental effects of companies There's a debate over whether CSR initiatives, that are socially responsible or environmentally friendly improves employees' perceptions of the company. When a company has CSR initiatives, employees are more proud of and committed to the organization. This is because the personal identities are partly tied up in the companies that person works for. If a company is saving the world, reflects positively on employees and makes them feel good about the work they do for the company. The role CSR plays in enhancing a company's reputation among its own employees, subsequently boosting their motivation and engagement, is perhaps underrated, which is particularly problematic for companies that are inconsistent in their approach to implementing CSR initiatives. Studies involving CSR have not fully explored how organizational social performance impacts individual employee behaviors nor examined the attributes of individuals comprising stakeholder groups such as employees. The objectives of this study are to analyze the implementation of CSR programs and its impact on employees. The main underlying proposition is that organization can influence its employee through his or her own ethical and responsible behavior. The work culture built upon this sense of organization's voluntary contribution toward a wide number of stakeholders could invite and encourage employee to adopt the same voluntary attitude and behavior to their own fellow employees. The role of CSR on employees is becoming more present in the business world, one of the reasons being that successful companies should attract and retain the best work force. By creating a good working environment and developing the internal CSR strategies, companies can stimulate productivity and satisfaction among employees. The research shows a model that clearly indicates that committing to CSR boosts the morale and commitment of workers in a positive way. This framework explains how employees' perceptions of CSR trigger attitudes and behavior in the workplace, which affect organizational, social and environmental performance.*

Keywords: CSR; employee; stakeholder; employees satisfaction

Jel code: M14

1. Introduction

Generally companies start to engage in CSR activities in order to respond to a demand of the external stakeholders. They also consider the positive effects of CSR on reputation (Gazzola, 2014a). Often they do not realize, right away, that their CSR activities have an

impact on current employees commitment (Turker, 2008) and on the attractiveness of an employer in the mind of prospective employees (Greening and Turban, 2000).
The key question is: are employees an asset or a cost? Costs need to be minimized and controlled. Assets are expected to produce a return over the long term and are worth investing in. During the eighties and early nineties, employees were very often seen simply as a cost. Now it appears the pendulum has started to swing the other way.
The employees have sufficient power, legitimacy, and urgency to become salient stakeholders to management (Mitchell, Agle and Wood, 1997), therefore they are considered to be a relevant group of stakeholders for each organization.
The role of CSR on employees is becoming more present in the business world, one of the reasons being that successful companies should attract, retain the best work force (Gazzola, 2014b). By creating a good working environment and developing the internal marketing strategies, companies can stimulate productivity and satisfaction among employees (Stancu, Grigore and Rosca, 2011). If employees are satisfied and attach the company, they will recommend to friends and family as a good employer (Bhattacharya, Korschun and Sen, 2008).
If the companies accept that employees are the greatest asset, they have to decide what are the priorities in human resource management and what tools are available to achieve the best results. With CSR the companies can address the efforts to enhance employee morale, motivation, commitment and performance (Tuffrey, 2003).

2. Methodology
This study is focused on the CSR and it's influence on employees. The authors describe and synthesize, with the use of one model, the dynamics and the evolution of employee motivation.
This study has two research objectives:
– To identify the motivations which lie behind the development of CSR initiatives for employees;
– To examine the impact of the CSR practices adopted by companies, on employee companies' engagement.
The paper is organized as follows: first it introduces the CSR concept and review previous research on CSR influence on employees. Then, it presents the role of the employees in the company. The third part presents the link between CSR and employees satisfaction. Finally, it discuss the potential of the role of CSR for future research and clarify its managerial implication.
It's a conceptual paper primarily based on theoretical considerations, theories, frameworks and models. The research design predominantly employs the qualitative methods for building a conceptual model. Modelling is an essential part of scientific activity. The conceptual model are used in the scientific paper with the aims to make some concepts easier to understand, define, visualize by referencing it to existing and usually commonly accepted knowledge. This kind of research aims to expand the interpretation beyond existing qualitative studies from the same discipline (Paterson et al., 2009).
The paper shows a construct in which each concept plays an integral role. According to Huberman and Miles (1994), a conceptual framework "lays out the key factors, constructs, or variables, and presumes relationships among them" (p. 440).
The model built in the paper allows the firm to value and appreciate the complex relationship between CSR and employees. Such appreciation may enable the firm to identify and exploit new opportunities (Carroll and Shabana, 2010). The approach used in this study focused on getting close of CSR programs and its impact on the expectations and involvement of employees.
The main contribution of this line of research is to explain the important relation between the CSR and employees engagement.

3. Literature review

In 1985 Tajfel and Turner presented a framework which explained individuals' need to classify oneself and others into social groups. They reveal that the relationship between CSR and employee engagement could be explained through the Social Identity Theory. According to this theory, individuals derive part of the identity from the group(s) to which they belong (Tajfel and Turner 1985).

In the research we use the definition of employees by Leana and Van Buren III (1999): "any individual actually employed by an organization or whose work directly affects and relates to core economic functions of the firm". Rupp, Ganapathi, Aguilera and Williams (2006) further defines employees as the "non-management workforce", as this group of individuals are less likely to have fully internalized the corporate culture and be defensive of it (compared to the top management), and more likely to evaluate and react to the organization's acts of CSR.

The relationships between companies and stakeholders and the conditions under which this relationship can evolve are studied by Collier and Esteban (2007). They stated that unless companies manage to gain employees' willingness to collaborate towards a social responsible business profile, they will be unable to achieve their goals.

According to Greenwood (2007) the companies to achieve their goals require the development and maintenance of stable relationships between the company and the employees via the routes of communication, identification, dialogue and exchange processes, or even a combination of them.

Donaldson and Preston (1995) and Freeman (1984) consider that CSR relates to employees, one of a corporation's main stakeholder groups, helps to motivate the employees themselves.

As Lindgreen and Swaen (2010) stated, when companies invest strong relationships with their stakeholders, both parties are more likely to work towards the achievement of common goals. The theory also proposes that a membership can describe employee behaviors, perceptions or even thoughts and feelings. An employee may feel attached to the organizational membership and experience organizational success or failure as part of their personal achievement.

Bryman and Bell, 2007 define the relationship between CSR and employee engagement like a set of techniques which takes people's experiences and their verbal expression seriously, while checking their value, meaningfulness and applicability. Hence, qualitative research focuses on individuals' perceptions regarding social phenomena.

According to Buckingham and Coffman (1999) and Gibbons (2006) companies increase relying on employee engagement as a means of competitive success.

Greenwood (2007) and Jamali (2008) underline the employee engagement imperative and they also recognize the strategic value of relationships with external stakeholders, such as local nonprofit community organizations, as a means of securing competitive success. CSR initiatives, cross-sector alliances in particular, may provide an innovate approach for supporting business success as they can be used to simultaneously address employee engagement challenges as well as address the collective voice of varied external stakeholders.

The stakeholder engagement between managerial action and communication is analyzed in Gazzola and Colombo (2013) where the dialogue and the communication with stakeholder become the key tool for strategic change and the opportunities for an economic development and growth that respects society (Gazzola and Colombo, 2014)

The question of whether CSR driven attitudes and behaviors can affect employees' organizational performance, and ultimately corporate financial performance (Gazzola and Mella, 2006), has never been investigated, either theoretically or empirically. Some

researchers are investigating the role of stakeholders' behavior as a mediating variable between CSR and financial performance (Barnett, 2007; Rowley and Berman, 2000; Wood and Jones, 1995), yet attention has mainly focused on consumers (Brown and Dacin, 1997; Luo and Bhattacharya, 2006; Schuler and Cording, 2006; Sen and Bhattacharya, 2001). Other researches show that employees who are satisfied with the organization's commitment to social and environmental responsibilities demonstrate more commitment, engagement and productivity In fact, when employees are positive about their employer's commitment to CSR, engagement across the company rises (Sirota Survey Intelligence, 2007; Murray 2008). An important contribution of this research is that it presents the strong relation between CSR and employees satisfaction that systematically explains how employees' attitudes and behavior affect this relationship.

4. Employees: Cost or Assets?

At the beginning of the spread of businesses — and still today in many newly formed businesses — employees was viewed as a factor for production and the acquisition and use of it as a source of expenses; therefore the companies they merely assign employees with precise functions and duties and were limited to investing to improve efficiency and productivity, while neglecting investment in experience, learning and expertise (Senge, 1980), generation of knowledge (Argyris, 1993; Nonaka, 1994), motivation and social welfare.

Now the situation is changing and employers that see their employees as an asset, as a very precious intellectual capital, tend to treat them well. Some treat them so well that these companies are recognized by their employees as best places to work and, in some cases, to live. In this change CSR has an important role.

CSR activities related to the core subjects labor practices can lead to an improvement in the quality of work of current employees. A more participative organizational governance, trainings and volunteerism programs create various learning opportunities for employees and induce a process of developing employees` competencies, skills and knowledge (Nurn and Tan, 2010, Exter, Cunha and Turner, 2011; European Commission, 2008).

The CSR activities improve in the commitment of employees and learning processes that raise the skill level and effectiveness of employees. CSR causes a stronger organizational commitment of employees, whereas organizational commitment is defined as "The relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Porter and Steers, 1982, p. 27). Along with the organizational commitment, the employees' motivation increases, employees are more likely to act in a responsible manner, show organizational citizenship behavior and altruistically contribute to the firm's activities, while employers can gain a higher level of trust towards their employees (Nurn and Tan, 2010; Balakrishnan, Sprinkle and Williamson, 2011).

The Ipsos Mori Loyalty Report (2008) has shown that 75% of employees who consider their organization to be paying enough attention to environmental protection and sustainable development exhibit high levels of commitment. The Global Workforce Study found that an organization's reputation for social responsibility ranks third among the top drivers for employee engagement (Towers, 2005). Employees' higher organizational commitment and learning opportunities help companies to retain their employees for prolonged periods of time. This is reflected in reduced employee turnover rates after implementing new labor practices and adhering to human rights (Smith, 2005).

At the same time, CSR makes a company more attractive as employer and therefore attracts a larger number of higher qualified applicants, even at equal pay. This increases the average skill level of employees. Thanks also to higher work effectiveness of employees, the overall operational effectiveness increases when CSR is implemented.

When employees perceive that the organization is supporting them, they believe the organization is being fair and therefore respond positively, for example, through increased

employees satisfaction and organizational commitment (Rhoades and Eisenberger, 2002). In another research, Colquitt and colleagues (2001) also found that perceived fairness in an organization is related to employees satisfaction. Eisenberger, Armeli, Rexwinkel, Lynch, and Rhoades (2001) found that when organizations supported employees, they felt obligation to reciprocate, and thus increased affective commitment. CSR could contribute to an employee's sense of meaningfulness and purpose at work as well which in turn influences employees satisfaction and organizational commitment. Besides improving current employees' satisfaction and creating organizational commitment, CSR helps to retain employees and contributes to attracting better applicants. (figure 1).

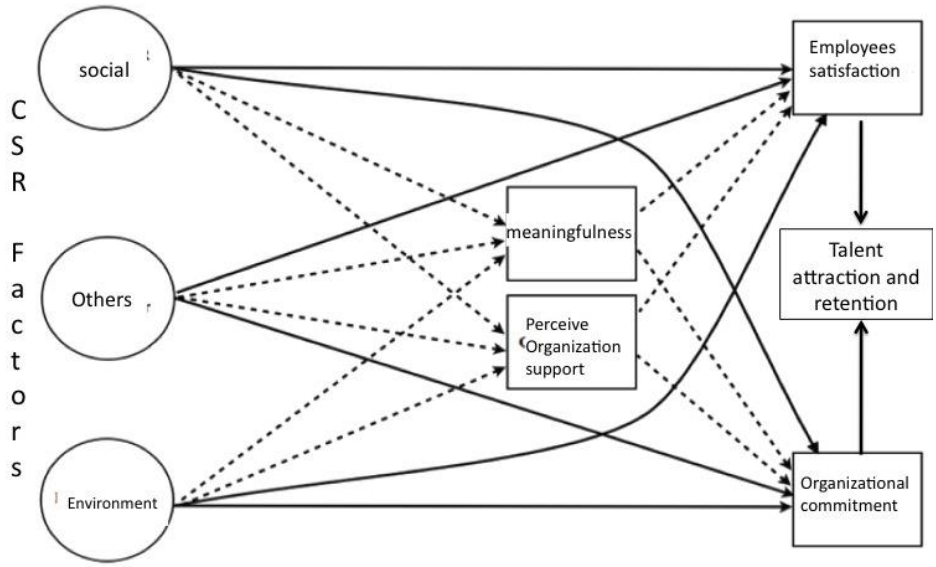


Figure 1: The link between CSR and positive employees influence
Source: Glavas and Kelley, 2014, with changes

More potential job applicants are aware of socially responsible companies as promising employers with good labor practices, human rights and environment performance (European Commission, 2008). Community development, as one of the CSR core subjects, contributes to improving the locally available talent pool and makes the location of the company more attractive to potential outside applicants.
These positive direct internal effects in turn result in fundamental cost savings (costs of recruitment, worker turnover, penalty payments for non-compliance labor laws, labor disputes, accidents, supervision). Thanks to a higher level of operational effectiveness, organizational commitment of employees and learning, the productivity of a company can be increased, errors reduced and quality improved, while adherence to environmental standards enhances product safety (Edele, 2012).
Reputation and publicity play a crucial role. Many applicants show a preference for working with a socially responsible company and are willing to receive lower compensation in order to work for an employer with high moral values. Therefore responsible organizations receive more applications while spending less on recruitment (Nurn and Tan, 2010; Smith, 2005).

5. Conclusion

If employees are satisfied with the work they are positive and positive employees outperform negative employees in terms of productivity, sales, energy levels, turnover rates and healthcare costs. According to Achor (2011) optimistic employees outperform their pessimistic counterparts and the same patterns emerge for businesses that have adopted the happiness principles. Great places to work are also companies that are extremely successful and creative. Companies who understand the importance of social responsibility in the outside world, are often industry leaders, they embrace it in the context of employee relations – i.e., creating work environments that maximize human potential and happiness.

Having the best employees can provide a competitive advantage, and thus, retention and attraction of top talent are important especially in situations where quality is the only differentiating factor between competitors (Vinerean, Cetina and Dumitrescu, 2013). Nurturing a strong corporate culture, which emphasizes CSR values and competencies, is required to achieve the synergistic benefits. The employees of an organization occupy a central place in developing such a culture, which underlines CSR values and competencies.

It also suggests Human Resource Management to take a leading role in encouraging CSR activities at all levels. The combined impact of CSR and human resource activities, which reinforce desirable behavior, can make a major contribution in creating long term success in organizations (Sharma, Sharma and Devi, 2009).

Future researches could extend the analysis considering the CSR towards employees, in order to find some samples; this, though, would affect the reliability of the application of the model.

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THE IMPACT OF THE ECONOMIC ENVIRONMENT ON ENTREPRENEURSHIP: EVIDENCE FROM EUROPEAN COUNTRIES

Angela Roman[1], Valentina Diana Rusu[2]
[1]Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iasi, Romania
[2]Department of Interdisciplinary Research – Human and Social, "Alexandru Ioan Cuza" University of Iasi, Romania
aboariu@uaic.ro
valentinadiana.ig@gmail.com

Abstract: *The significant importance of entrepreneurship for the economic development, job creation and innovation have increased the concerns of researchers and decision makers at different levels for the understanding and investigation of the factors that could have an impact on the level of entrepreneurial activity. Our study aims to empirically investigate the impact of some main macroeconomic and business environment factors on the level of the entrepreneurial activity in 18 EU member states in the period from 2002 - 2014. Our research is based on the data provided by the Global Entrepreneurship Monitor (GEM) and by the World Bank and uses panel data estimation techniques. We took into consideration, as dependent variable for an econometric model, three indicators that are used as proxy variables of the level of entrepreneurial activity, namely: Total Entrepreneurial Activity rate, Nascent entrepreneurship rate, and New business ownership rate. We investigated eleven macroeconomic and business environment indicators, as the explanatory variables of our models, that could influence the level of the entrepreneurial activity in European countries: GDP growth, GDP per capita, unemployment, inflation, domestic credit to private sector by banks, fear of failure, entrepreneurial intentions, perceived capabilities, cost of business start-up procedures and time required to start a business. The empirical results highlight the fact that a large part of the explicative variables are significantly affecting the entrepreneurial activity, in agreement with the results of other empirical studies. Thus, the total entrepreneurial activity is influenced by unemployment rate, total tax rate, entrepreneurial intentions, perceived capabilities, cost of business start-up procedures and domestic credit to private sector. The other two dependent variables register some differences, however, overall, our study reveals that the key determinants of the entrepreneurial activity in the European countries under investigation are represented by total tax rate, the abilities of individuals and their attitudes towards entrepreneurship, cost and time needed to establish a new business, and access to sources of financing for firms.*

Keywords: entrepreneurial activity; determinants; EU countries; econometric model

JEL classification: L26; M13; C33

1. Introduction

There is an international consensus on the major role of entrepreneurship for economic development, job creation and innovation. The importance of entrepreneurship and its impact on economic growth are highlighted in many theoretical and empirical studies. Moreover, the public authorities in a series of countries aim to promote the entrepreneurial activity in order to develop national economies. According to the literature in the field (Wennekers et al., 2005; Van Stel et al., 2007; Danakol et al., 2014), the entrepreneurial activity is influenced by many factors, the most important of which being the level of development of national economy, the institutional environment, as well as national cultural

specificities. Understanding and examining these factors, both at country level and at the level of groups of countries, has an essential role in identifying adequate measures in order to support and develop the entrepreneurial activity.
The economic recession and the significant increase in unemployment, in the context of the recent international crisis, have renewed the researchers' interest on the role of entrepreneurship and its determinant factors. In this context, our study aims to empirically evaluate and identify the key determinants of the level of entrepreneurial activity for 18 EU member states, using data for the period 2002-2014. In order to meet this objective, we have structured our study as follows: section 2 is a literature review; section 3 presents the data collected, the variables examined and the methodology used; section 4 highlights and discusses the main results of our empirical study, and the last section includes concluding remarks.

2. Literature review

The analysis of the literature highlights the existence of a significant number of studies that examine, both theoretically and practically, the factors that have an impact on entrepreneurship in different countries or groups of countries.
Grilo and Thurik (2004) discuss the determinants of entrepreneurship, which are represented by factors that influence both the demand for entrepreneurship as well as the supply of entrepreneurs. On the other hand, the authors empirically investigate on a sample of countries (also including 15 EU member states) the impact of certain explanatory variables (socio-demographic variables, as well as the perception and preference variables) on entrepreneurship.
Thurik et al. (2008) examine the relation between self-employment and unemployment rates for a panel of 23 OECD countries in the period between 1974-2002. The empirical results indicate the fact that such a relation is both positive and negative. Thus, the changes in unemployment rates have a positive impact on subsequent variations of self-employment rates. On the other hand, the changes in self-employment rates have a negative impact on subsequent unemployment rates, this effect being stronger than the one previously mentioned.
Using regression methods, Kim et al. (2010) realized an empirical analysis on the impact of public policy (finance, labour, and tax policy) on entrepreneurial activity in the 28 countries in the OECD (of which 17 EU member states). Some of their main findings regard the fact that the government expenditure on economic affairs and education have an important role in promoting entrepreneurship, and that an increase in the public expenditure for stimulating start-ups increases the level of entrepreneurial activity.
Bosma and Schutjens (2011) also conducted an empirical analysis on the national and regional conditions on entrepreneurial attitude and activity for 127 regions across 17 European countries, for the period 2001-2006. The results of the study indicate the importance of certain economic and institutional factors, but also of demographic characteristics of variations in regional entrepreneurial attitude and activity.
Albulescu and Tămăşilă (2014) investigated the influence of foreign direct investments (FDI) on the entrepreneurial activity in 16 European countries for the period 2005-2011. According to the results of their study, FDI do not have an impact on the overall entrepreneurial activity. However, the inwards FDI have a positive impact on opportunity-driven entrepreneurs, while outwards FDI have a positive impact on necessity-driven entrepreneurs.
A more recent study, which is of interest for the subject under investigation, is the one carried out by Sayed and Slimane (2014), who empirically analyse the economic and institutional determinants of the entrepreneurial activity in the case of 10 MENA and GCC countries, in the period 2004-2011. The results of their empirical analysis indicate the fact that the most important determinants of the entrepreneurial activity are represented by the

stage of economic development, population growth, employment, level of education, financial development, macroeconomic stability and technological development.
The literature review shows that there are few recent studies that have analysed the determinants of the level of entrepreneurial activity in EU member states. Thus, our study makes a significant contribution in the field by supplying empirical evidence on the key determinants of the entrepreneurial activity in 18 EU member states.

3. Data and methodology

The objective of our analysis is to test if the factors considered as independent variable, comprising of macroeconomic stability indicators, perceived abilities of individuals and the attitudes towards entrepreneurship, as well as opportunities of starting a firm, have an important impact on the entrepreneurial activity from the European countries.
The studies realized by Global Entrepreneurship Monitor (GEM) identify different ways of measuring entrepreneurial activity, of which we have considered three indicators that are used as proxy for the level of entrepreneurial activity, respectively: *Total Entrepreneurial Activity (TEA) rate, Nascent entrepreneurship rate (ner)*, and *New business ownership rate (nbor)*. Each of these indicators will be considered as a dependent variable for an econometric model. *TEA rate* represents the percentage of working age population who are either a nascent entrepreneur or owner-manager of a new business. *Nascent entrepreneurship rate* represents the percentage of 18-64 years population who are currently a nascent entrepreneur, while *new business ownership rate* represents the percentage of 18-64 years population who are currently owner-manager of a new business.
The entrepreneurship can be affected by a series of macroeconomic and business environment indicators, indicators that we have chosen as the explanatory variables of our models (see Table 1). The annual financial data for the explanatory variable and for the dependent variables are obtained from the GEM Key indicators (2015) and World Bank DataBank, for the period 2002-2014, for 18 European Union member countries (Belgium, Croatia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Portugal, Romania, Slovenia, Spain, Sweden, and United Kingdom). In selecting EU countries included in the sample we took into account the availability of data for the entire period. We used GEM data because the national-level indicators are harmonised, making it possible to make comparisons between countries regarding entrepreneurial activity.

Table 1: The explanatory variables of the model and the expected relationship

Explanatory variables (Abbreviation)	**Measurement**	**Expected sign**
GDP growth (gdp)	Annual percentage growth rate of GDP at market prices.	**+**
GDP per capita (gdpc)	Annual percentage growth rate of GDP per capita.	**+**
Unemployment (unempl)	The share of the labour force that is without work but available foe seeking employment (% of total labour force).	**-** / **+**
Inflation (infl)	Annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or change at specific intervals (yearly).	**-** / **+**
Total tax rate (tax)	**Taxes on income, profits and capital gains (%** of commercial profits**).**	**-**

Domestic credit to private sector by banks (**dcps**)	Financial resources provided to the private sector by banks (as % of GDP).	**+**
Fear of failure (fof)	Percentage of working age population with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business	**-**
Entrepreneurial intentions (eint)	Percentage of working age population who intend to start a business within three years	**+**
Perceived capabilities (capab)	Percentage of working age population who believe to have the required skills and knowledge to start a business	**+**
Cost of business start-up procedures (cost)	Cost to register a business as a percentage of gross national income (GNI) per capita	**-**
Time required to start a business (time)	The number of days needed to complete the procedures to legally operate a business.	**-**

Source: processed by the authors based on the specialized literature

The growth of *Gross Domestic Product (GDP)* and *Gross Domestic Product (GDP) per capita* are important macroeconomic variables influencing the entrepreneurial activity. The explanation is that an increase in income can lead to an increased demand for a wide range of goods and services that would stimulate entrepreneurial activity, especially new business start-up (Grilo and Thurik, 2004; Vidal-Suñé and Lopez-Panisello, 2013). So, in our study we expected a positive relationship between GDP growth and entrepreneurship.
The conditions on the market have an important influence on entrepreneurial activity, so *unemployment rates* may affect start-up rates, and implicitly the entrepreneurial activity. According to the literature (Grilo and Thurik, 2004**;** Thurik et al., 2008**;** Bosma and Schutjens, 2011**;** Vidal-Suñé and Lopez-Panisello, 2013**;** Sayed and Slimane, 2014), there is no consensus on the influence of unemployment on entrepreneurship. Thus, on the one hand, the high rate of unemployment in times of economic recession may have a negative impact on the level of entrepreneurship, through a dramatic fall in demand for goods and services that reduce business opportunities. On the other hand, unemployment can have a positive impact because it determines a bigger number of persons to choose to become entrepreneurs, by starting their own business.
Another important macroeconomic factor considered a determinant of entrepreneurial activity is the *inflation rate*, which also does not have a clear impact on entrepreneurship. Thus, according to some studies (Vidal-Suñé and Lopez-Panisello, 2013**;** Sayed and Slimane, 2014), if the inflation increases, it can be recorded an increase in business opportunities because a higher level of prices for products and services can lead to increased expectations of the earnings of entrepreneurs. On the other hand, inflation can have a negative impact because it increases costs for starting a business (Salman, 2014). Therefore, the relationship between inflation and entrepreneurship can be either negative or positive.
Total tax rate is another important factor affecting entrepreneurial activity. În accordance with other studies (Djankov et. al., 2010**;** Vidal-Suñé and Lopez-Panisello, 2013**;** Salman, 2014), high tax rates have a negative impact on entrepreneurship because are an obstacle for starting new business and lead to a decrease in business activity. Thus, we expect a negative relationship between tax rates and entrepreneurial activity.

Between the most important factors affecting the entrepreneurial process we find the *ease of access to finance.* Taking into account the fact that in the European countries the credits obtained from banks are the most important source of external financing of the enterprises, we consider as an independent variable the percent of domestic credit to private sector offered by banks. An increase of the share of domestic credit to private sector offered by banks may reflect and easier access of the firms to bank financing, which has a positive impact on entrepreneurship, by stimulating new business start-up and sustaining the development of firms activity (Aghion et al., 2007; Vidal-Suñé and Lopez-Panisello, 2013; Sayed and Slimane, 2014). Thus, we expect a positive sign of the relationship.
Entrepreneurship is determined also by the abilities of individuals and the attitudes towards entrepreneurship. The variable *perceived capabilities* measures the skills and knowledge that the people wanting to start a new business consider they have. So, for this variable, we expect a positive sign. In accordance with Albulescu and Tămăşilă (2014), the *fear of failure* negatively influences the option of entrepreneurs to start-up a new business, while the *entrepreneurial intentions* are positively correlated with the entrepreneurial activity in all cases, so we expect a positive sign.
The demand for entrepreneurship arises from the opportunities of starting a firm, including business environment characteristics, so for our study we want to test if *cost of business start-up procedures* (Bosma and Schutjens, 2011) and *time required to start a business* have a significant impact on entrepreneurship in European countries. Some studies (Aghion et al., 2007; Klapper et al., 2006; Klapper and Love, 2011) show that entry of the firms on the market is hampered by bureaucratic barriers such as: costs, procedures and time required to start a business and also by employment rigidity. For these variables we expect a negative influence on entrepreneurship.
In order to statistically analyze the data we first applied unit-root tests on every variable included in the panel data, to test if data is stationary and control for false relationships among variables. The null hypothesis is that all panels contain unit-root. This hypothesis was rejected in almost all the cases, for the cases that it was not rejected we tested also for the first or second difference. After that we have analyzed the descriptive statistic (see Table 2), the correlations between variables considered in the analysis and regression analysis using three different models – according to the dependent variables chosen (see Table 3). **To obtain the estimated coefficients of the regression models, calculations were made using EViews 7 computer package.**

4. Results and discussions

The descriptive statistics of the explanatory and dependent variables considered for our study (see Table 2) shows that the biggest standard deviation was observed for the domestic credit to private sector. This indicator has registered a medium level of 102%, for the EU countries included in the sample, and a significant disparity which indicates important differences between countries regarding their degree of financial development. Big changes were registered also for tax rate and time needed to start a new business. Also, the negative value for the minimum of GDP and GDP per capita, show that the European countries had a period of when their economic development was seriously affected. The most stable indicator was the level of inflation, which had the smallest standard deviation.

Table 2: The descriptive statistics of the influence factors

Variable	Min.	Max.	Mean	Std. deviation
tea	**1.88**	**14.11**	**6.2144**	**2.1887**
ner	**1.06**	**8.71**	**3.6581**	**1.3867**
nbor	**0.44**	**6.26**	**2.6654**	**1.1345**

gdp	**-14.35**	**11.90**	**0.8558**	**3.6315**
gdpc	**-12.92**	**12.93**	**0.6284**	**3.6664**
unempl	**2.80**	**27.20**	**9.1858**	**4.3890**
infl	**-4.48**	**15.40**	**2.3809**	**2.0887**
tax	**18.40**	**76.70**	**44.5734**	**13.4627**
dcps	**0.22**	**202.19**	**102.0249**	**44.3502**
fof	**15.12**	**61.29**	**36.6470**	**7.1432**
eint	**1.55**	**31.70**	**9.5119**	**5.0599**
capab	**14.58**	**60.67**	**42.6784**	**7.8704**
cost	**0.00**	**22.50**	**5.8435**	**6.3375**
time	**2.50**	**70.00**	**14.5988**	**13.1200**

Source: processed by the authors after E-views results

On the other hand, the descriptive statistics of the dependent variables show that TEA rates have the higher standard deviation, and the most stable indicator is new business ownership rate. TEA rate has resumed its upward trend, which was discontinued in 2009 and 2010 after the outburst of the financial crisis (see Figure 1). The same evolution was registered also for the nascent entrepreneurship rate and new business ownership rate.

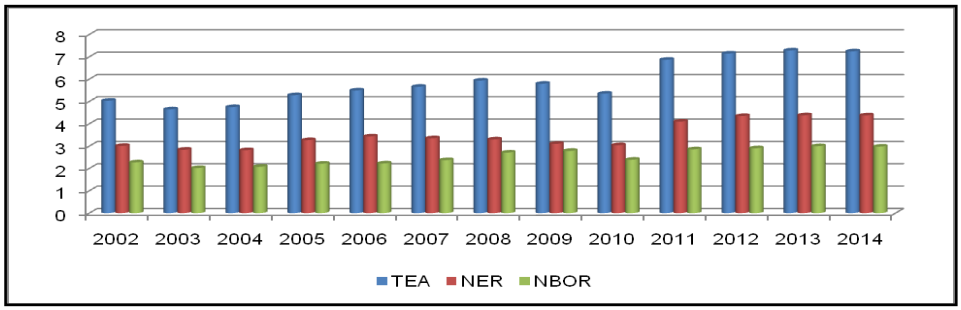


Figure 1: The evolution of indicators measuring entrepreneurship (in %)
Source: processed by the authors after GEM Key indicators (2015)

Before realizing the regression analysis, we have tested all the variables against autocorrelations. We have also taken into account the problem of multicollinearity. For our analysis we have considered the reference point for establishing a high correlation as being 0.80, according to Bryman and Cramer (2001). So, the results of the correlation test applied to our variables shows that there exists multicollinearity between some of the independent variables which may influence the results of our analysis. According to the considered reference point there exists multicollinearity between perceived capabilities and GDP, GDP/capita, tax rate, unemployment, inflation rate, entrepreneurial intentions, cost and time, and also between entrepreneurial intentions and GDP and GDP/capita, and between domestic credit to private sector, inflation rate, fear of failure and entrepreneurial intentions. So, in order to obtain accurate results in our analysis we have used separate models of regression, by eliminating the highly correlated variables.
Through the regression analysis we want to determine which of the considered indicators are between the main determinants for the entrepreneurial activity in the European countries. As we have mentioned, we use three models with three dependent variables: TEA rate, nascent entrepreneurship rate and new business ownership rate. The results of the regression model are presented in Table 3.
Based on the results of the static regression models and the statistically significant coefficients, we can conclude that total tax rate, unemployment rate, entrepreneurial

intentions, perceived capabilities, cost of business start-up procedures and domestic credit to private sector are the main determinants of total entrepreneurial activity. When we analyze the other two models we observe some differences, so the main determinants of nascent entrepreneurship rate are: total tax rate, unemployment rate, fear of failure, entrepreneurial intentions, perceived capabilities, the number of days needed to start a new business and domestic credit to private sector. The new business ownership rate is determined by total tax rate, entrepreneurial intentions, perceived capabilities and domestic credit to private sector.

Table 3: The results of the regression analysis

	tea		*ner*		*nbor*	
	Coef.	*Prob.*	*Coef.*	*Prob.*	*Coef.*	*Prob.*
gdp	-.305	.410	-.053	.778	-.184	.200
gdpc	.338	.397	.108	.584	.161	.280
unempl	.083***	.007	.092***	.000	-.009	.521
infl	.012	.896	0.020	.611	-.009	.564
tax	-.061***	.000	-.037***	.000	-.025***	.000
dcps	-.003*	.094	-.007***	.000	.004**	.018
fof	.029	.156	.021*	.096	.017	.994
eint	.254***	.000	.177***	.000	.079***	.000
capab	.118***	.000	.060***	.000	.060***	.000
cost	-.039**	.032	.006	.774	.009	.476
time	-.012	.157	-.015**	.014	.001	.797
Constant	7.418***	.000	5.451***	.000	3.406***	.000
F-test	5.20***	.000	28.64***	.000	6.77***	.000
R-squared	.4751		.5426		.2191	

***, ** and *** denotes** that coefficients are significantly at the 90%, 95% and 99% level.

Source: processed by the authors after E-views results

We observe that the coefficients for the total tax rate are negative for all the models considered, so the tax rate is an important obstacle to entrepreneurial activity. This result is in agreement with our expectations and also with the findings of Klapper et al., 2006; Djanko et al., 2010**;** Salman, 2014; Sayed and Slimane, 2014.

Unemployment rate is statistically significant only for two models, and has a positive coefficient. So, the unemployment rate has an important influence on total entrepreneurial activity and nascent entrepreneurship rate. This result is in line with our expectations and according to the empirical studies mentioned.

Domestic credit to private sector has a statistically significant influence for all the models, but with different signs. For new business ownership rate the coefficient is positive, fact that shows that an increase in the share of loans provided by banks could indicate an easier access to financing, which could stimulate the creation of new businesses, in accordance with our expectations and with the empirical studies mentioned. For nascent entrepreneurship and total entrepreneurship rate the sign is negative, contrary to our expectations. However, we consider that one possible explanation could be that, in cases of decreases in loans provided by banks, the entrepreneurs, especially those from sectors that are less dependent on bank financing, turn to other sources of funding.

The abilities of individuals and their attitudes towards entrepreneurship have an important influence on entrepreneurial activity, according to our results. So, for all the models entrepreneurial intentions and perceived capabilities have a positive relationship with entrepreneurial activity, if entrepreneurial intentions and perceived capabilities are rising then entrepreneurial activity on the market will improve. These results are in accordance with our expectations. Fear of failure appears to be statistically significant only for nascent

entrepreneurship rate, but has a positive sign, not in accordance with our expectations and results of other studies.
Cost of business start-up procedures has a negative statistically significant influence on total entrepreneurship activity, in accordance with our expectations and the results of Aghion et al., 2007; Klapper et al., 2006, Klapper and Love, 2011. Time required to start a business has a negative statistically significant influence only on nascent entrepreneurship rate, although we would expect to influence new business ownership rate.
The other considered variables, such as GDP, GDP/capital and inflation rate have not statistically significant coefficients for either one of the three considered models. The effects of the considered variables combined had a medium impact on total entrepreneurship rate and nascent entrepreneurship rate as shown by R-squared value of around 50%, but for new business ownership rate the value of R-squared is relatively low. These results show that are also other factors that may have an important influence on entrepreneurial activity and, especially, on the creation of new business on the market.

5. Conclusions

In our paper we have investigated eleven factors identified in the specialized literature that could influence the level of entrepreneurial activity in the 18 EU countries included in the analysis. The purpose of our study was to test the hypotheses and to offer evidence with respect to the impact of the considered indicators on total entrepreneurial activity, nascent entrepreneurship rate and new business ownership rate.
The empirical results of this research show that a part of the considered indicators are significantly affecting the entrepenreurial activity in the European Union countries, according to the results of other empirical studies. Thus, total entrepreneurial activity is influenced by unemployment rate, total tax rate, entrepreneurial intentions, perceived capabilities, cost of business start-up procedures and domestic credit to private sector. The other two dependent variables register some differences, so the nascent entrepreneurship rate is influenced by unemployment rate, total tax rate, fear of failure, entrepreneurial intentions, perceived capabilities, the number of days needed to start a new business and domestic credit to private sector, while new business ownership rate is determined by total tax rate, entrepreneurial intentions, perceived capabilities and domestic credit to private sector.
So, we can conclude that total tax rate, the abilities of individuals and their attitudes towards entrepreneurship, cost and time needed to establish e new business, and access to sources of financing for firms, are the most important factors affecting entrepreneurial activity in the 18 European Union countries analyzed.
The results of our study may be of interest for the policy makers, both at European and national level, in the context of the Europe 2020 Strategy, in order to adopt appropriate measures to promote and support entrepreneurship.
Given the importance of the approached subject, in future studies we aim at including in the analysis a bigger number of determining factors, the need for this procedure being observed when analyzing the values obtained for R-squared.

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DOS AND DON'TS FOR A SAFER WORKPLACE: A STUDY OF PAKISTANI PHARMACEUTICALS

Sehrish Abdul Karim
Gheorghe Asachi Technical University Iasi Romania
sehrishkar@gmail.com

Abstract: *Purpose of present study was to examine the impact of transformational leadership and safety knowledge on safety climate in pharmaceutical industry of Pakistan. The study also explored the mediating role of safety attitude on these particular relationships. The survey was conducted on employees working in different pharmaceuticals in Rawalpindi. Data was collected from 105 employees using adopted questionnaires consisting of measuring each variable on five point Likert scale. For data analysis statistical tools such as correlation and Regression were tested using SPSS 21.0. Results indicate that transformational leadership is significantly associated with safety climate while employee safety knowledge has no significant impact on safety climate, as safety climate is employees' perception about safety within their organizations so leaders have a major role in making employees' perception regarding safety and social exchange theory supported the whole phenomenon. There is relatively a low understanding of safety knowledge concept in Pakistani organizations and even if this concept is developed in the organizations and is well understood and practiced, the lack of required cultural transformation and support will be a major obstacle to its success in these organizations for years to come. This empirical study identified different factors which directly affect safety climate and proposed a mechanism which will further help different organizations, which are working with more labor, to reduce injury rate and to minimize their expenses caused by workplace accidents as unsafe attitudes along with less safety knowledge lead towards injuries and eventually high organizational costs. It will also help to understand the importance of leadership style in designing employee attitudes and perceptions about the organizations. Results further showed that safety attitude partially mediates the relationship between transformational leadership and safety climate. Results were supported with different reasons and future implications and limitations are also discussed.*

Key words: *Transformational leadership; Safety knowledge; Safety climate; Safety attitude; Social exchange; Social Cognitive theory*

JEL Classification: M50

Introduction

For all organizations employees' health and safety should be of primary concern over operational productivity (Aksorn & Hadicusumu, 2010). According to researchers, sustainability of every type of business is linked with the safety and health of its workers (Nelson, Heiberger & Lee, 2014). International Labor Organization (ILO) stated that every 15 seconds**,** a worker dies from a work-related accident or disease; an estimated 2.3 million people die every year from work-related accidents and diseases. ILO says more than 160 million people suffer from occupational and work-related diseases per year. In developing countries, where the unemployment rate is very high, the situation is more dangerous as workers do not care about their health, they do not report their supervisors about day to day injuries on workplace, and they bear them because they don't want to lose their jobs. Therefore it seems not easy to implement safety standards and procedure

according to the safety regulation in organizations working in developing countries, management concern is required to set organizational safety climate.

Safety climate is particular in nature (Cheyne et al, 1998) as it reflects employees' beliefs and perceptions about safety (Harvey et al, 2002) and involves meaningful working environment interpretations (Mearns et al, 2004). Zohar (1980) introduced safety climate for the very first time (Ford & Tetrick, 2008), which cannot be established without safety knowledge. Safety knowledge refers to exposure of losses, damages, hazards and accidents in terms of health (Kishimoto, 2013) which help to reduce the probability of fatalities (Dzugan, 2010). Employees with safety knowledge and safety compliance help organization to achieve safety related goals. Lewin, Lippitt, and White (1939) studied the impact of mangers on safety climate. According to safety researchers it is strongly argued that large number of occupational injuries is due to poor attitude of management towards safety. Transformational leaders pay special attention to safety through their actions and commitment and motivate their followers to adopt safety procedures to go beyond the individual interests (Ford & Tetrick, 2008) for betterment of the whole organization. Lee (1995) has indicated that safety attitudes are one of the basic components of safety climate (Cheyne et al, 1998). Pidgeon (1991) has identified three major determinants of safety climate: (1) norms and rules for hazards handling; (2) positive safety attitudes; and (3) reflexivity, and arises from a combination of different situational factors (Mearns et al, 1998)

Zohar argued that leadership actions influence employee perception regarding safety and these perceptions then result in safety climate of the organization and social exchange perspective help to understand these safety-related actions (Hofmann & Morgeson, 1999).Pakistan needs safety practices in its industries as in terms of human workforce Pakistan is 10th largest country in the world and because of inadequate safety conditions number of hazardous events happened in Pakistan. International Labor Organization also declared that safety conditions in Pakistani industries are inadequate. The purpose of present study is to direct the attention of authorities towards safety in Pakistan. This study will help to introduce different safety processes in organizations as it examines the impact of transformational leadership and employee safety knowledge on safety climate. This relationship will be more effective if the factor of employee safety attitude positively mediates the relationship between transformational leadership and safety knowledge-safety climate relationship.

Literature Review:

Safety Knowledge and Safety Climate

Safety in organizations can be defined as avoidance from accidental injury and is associated with the safety of employees and organizational stakeholders (Katz, Naven & Stern, 2005). People working in different domains can only protect themselves from different types of damages, accidents and failures if they have knowledge about safety (Klamen, Sanserino & Skolnik, 2013). In order to protect employees from different occupational disasters, management should develop different safety programs (Sivanathan & Barling, 2005) which will give employees knowledge about organizational safety and will help employees to perform in an effective way for betterment of the organization (Klamen et al, 2013). Knowledge (Albrecht, 1995), education, training (Reber and Wallin, 1984) and different organizational policies develop employees' perception and awareness about safety (Han, 2014). Variety of mechanisms is adopted to collect, share and exchange safety knowledge among employees (AL-Husan, AL-Hussan & J.Perkins, 2013). Organizational safety climate is actually a factor which helps to understand employee's awareness about safety (Katz et al, 2005). Literature showed that much work has been

done to reduce environmental pollution (Dietz, Pugh & Wiley, 2004), work related accident (Srivastava, Bartol & Locke, 2006). We are living in much cleaner world than was previously; it is because of awareness and knowledge about safety (Chowdhury & Endres, 2010).
H1: Safety knowledge is significantly associated with safety climate.

Transformational leadership and Safety Climate
The research on leadership in management sciences literature started way back with the seminal work of Galton (1869) who discussed about certain inbuilt characteristics that differentiate leaders from non-leaders and elucidate leader's effectiveness having these characteristics. But in late 1940s researchers began to criticize trait models (Jenkins, 1947). They argued that if trait theories are true, then no other person can become leader if he/she doesn't possess these traits inherently. During 1960s the importance of external/situational factors on effectiveness of leadership was recognized (Fiedler, 1967). In 1980s leadership research witnessed the revival of trait paradigm. Achievement motivation (McClelland, 1967) and charismatic leadership theory (House, 1977) were driving forces behind this revival, soon followed by transformational leadership theory (Burns, 1978) that has gained considerable importance in last two decades.
Transformational leadership boost up the morals and motivation of the followers, inspire them with their charisma, align their objectives with organizational objectives and give them greater ownership for their work (Bass, 1999). This definition of Bass explains the most positive aspects. Whether it is in the form of boosting their morals and motivation through recognizing their work and continuous appreciation or inspiring them to achieve beyond expected levels by setting high standards themselves i.e. inspirational motivation (Hobman, Jackson, Jimmieson & Martin, 2011). The situation of workplace safety in Pakistani organizations is nothing short of horrific and workers are pleading for a safer workplace. So a leadership style specifically targeted at improving safety situation is more than desirable in Pakistani organizations. Social cognitive theory introduced a model for understanding safety climates as the followers of transformational leadership perceive their leaders to be more concerned about the safety at workplace compared to the followers of other leadership (Trop & Grogaard, 2009). Social exchange theory also support this phenomenon, that if employees will feel that management and organization is concerned about their safety and wellbeing then in return they will also try to do good for organization (Kelloway et. al., 2012)and will prefer to follow their leaders' instructions. Transformational leadership intervenes in the safety situation much effectively and has an activist influence on safety climate and safety outcomes (Clarke, 2012). Therefore we postulate that:
H2: Transformational leadership is significantly associated with safety climate.

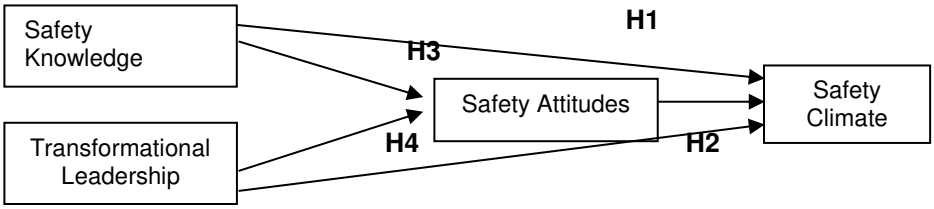
Mediating Role of Safety Attitudes
Attitude is a favorable or unfavorable evaluative reaction toward something or someone, exhibited in ones beliefs, feelings, or intended behavior **(**Cabrera, Fernaud, Sapena, & Casenave, 2010**)**. Safety attitude can be defined as the mental state about safety (Sherehiy & Karwowski, 2006). For people working in different organizations it is not enough having knowledge about safety (Linnehan, Mason & Konrad, 2002) but they should have positive attitudes towards safety (Hardesty & Westerman, 2009). Safety attitudes are basic component of safety climate (Czajka, 1990). Literature shows that there are three distinct components of attitude: cognitive, affective and behavioral. Cognitive related to beliefs, affective related to feelings and behavioral related to act in a certain way about something. So employees' attitude towards safety can be improved through employees' ideas about safety (Dietz, Robinson, Folger, Baron, & Schulz, 2003). Safety knowledge

helps employees to develop positive safety attitudes (Milliman, Czaplewski & Ferguson, 2001). Safety attitudes towards different organizational tasks will lead to safety climate of the organization as employee participation is considered as a key role in organizational outcome (Gandz, & Murray, 1980).The idea of organizational safety climate depends upon how organizational members integrate their perceptions and positive attitudes towards workplace events into perceptions of climate (Lasching, Finegan, Shamian & Wilk, 2002).

H3: Safety attitude significantly mediates the relationship between Safety Knowledge and Safety Climate.

H4: Safety attitude significantly mediates the relationship between Transformational leadership and Safety Climate.

Theoretical Framework:



Methodology:

The purpose of this research is to examine the impact of transformational leadership and safety knowledge on safety climate with mediating role of safety attitude. Data was collected using questionnaires from employees working in pharmaceutical industry in Rawalpindi. 140 questionnaires were distributed and 105 were returned, making the response rate approximately 75%. A 5-point Likert scale was used to assess the outcomes with anchors of 1 = Strongly Disagree, 2=Disagree, 3=neither Agree/nor Disagree, 4=Agree and 5 = Strongly Agree. The collected data was then analysed through SPSS. The exceptions were demographics (age, gender, qualification, income and experience) for which dichotomous and category scales were used.

Instrumentation:

Following instruments were adopted and used in this research:

Transformational leadership:

Transformational leadership was measured using questionnaire developed by Barling et al (2002). The scale consisted of six items. Some of the sample items are, “My leader expresses satisfaction when i perform my job safely”. “My leader suggests new ways of doing job more safely”.

Safety Knowledge:

Employee Performance was measured using a questionnaire developed by Vogus, Sutcliffe, and Weick (2010). Some of the questions were: “I know how to perform my job in a safe manner”. “I know how to use safety equipment and standard work procedures”.

Safety climate:

Safety climate was measured using the scale developed by Neal, Griffin, and Hart (2002). Some of the items are: “Management consider safety to be important. Management is concerned for the safety of the employees”.

Safety attitude:
Safety attitude was measured using questionnaire developed by Sherehiy & Karwowski, (2006). Some of the items are: "Management operates an open door policy on safety issues". "I pay attention to my personal safety on site."

Results:

Correlation analysis:
To examine the connection between independent, dependent and mediating variables the correlation analysis is used.

TABLE 1: Correlation Analysis

Correlation Table						
Predictors	**Mean**	**S.D.**	**1**	**2**	**3**	**4**
1.Transformational Leadership	3.28	0.68	1			
2.Safety Knowledge	3.21	0.54	0.04	1		
3.Safety Climate	3.30	0.63	0.72**	0.34	1	
4.Safety Attitude	3.39	0.80	0.45**	0.03*	0.60**	1

**. Correlation is significant at the 0.01 level (2-tailed). **p
*. Correlation is significant at the 0.05 level (2-tailed). *p
Table 1 indicates correlation between transformational leadership, safety knowledge, safety attitude, and safety climate. The mean for transformational leadership was 3.28 (S.D. = 0.68) and had a significant positive relationship with safety climate (0.72**, $p < 0.01$). Moreover the mean for safety climate was 3.30 (S.D. = 0.63) and for safety knowledge is 3.21. Safety attitude mean was 3.39 (S.D. = 0.80) and it is significantly correlated with transformational leadership (0.45**, $p < 0.01$) whereas there was no significant correlation between safety knowledge and safety climate (0.34, $p > 0.01$).

Regression Analysis:
Two types of regression analysis have been used in this research in order to test the hypotheses as shown in table 2 and 3. Simple regression analysis for outcomes to test the effect of independent variables on dependent variable is shown in table 2. Gender, age, education, marital status and tenure were entered as control variables in the first step and only value of their R square is reported.

TABLE 2: Regression analysis for Outcomes

	Safety Attitude			**Safety Climate**		
Predictors	**Beta**	**R^2**	**$\triangle R^2$**	**Beta**	**R^2**	**$\triangle R^2$**
Step1: Control Variables			0.09			0.34
Step 2:						

Safety Knowledge	.183	.037	.08	.16	.062	.003
Transformational Leadership	.481**	.023	.26*	.67**	.53	.50**
Safety Attitudes				.61**	.024	.068**

N=155, Control variables, Gender, Age, Qualification and Experience
* $P < .05$
** $P < .01$

Regression analysis shows that there is no significant relationship between safety knowledge and safety climate with value of p = 0.12 and t = 1.71 while β = 0.166 i.e. any variance in safety knowledge doesn't cause sufficient variance safety climate. As p should be less than 0.05 and t must be greater than 2 so first hypothesis is rejected that safety knowledge is significantly associated with safety climate.Further analysis shows that there exists significant relationship between transformational leadership and safety climate with p = 0.021* and t = 3.18 while β = 0.673** so second hypothesis is accepted that transformational leadership is significantly associated with safety climate. For third and fourth hypotheses Baron and Kenny (1986) method was used for testing the effect of mediation which requires accomplishment of three conditions for effective mediation. First condition requires significant relation between independent variable and mediator whereas second condition requires significant relation between mediator and dependent variable when independent variable is controlled. I found that no significant relationship exists between safety knowledge and safety attitude with p = 0.22 and t = 1.09 with β = 0.183 whereas the relation between transformational leadership and safety attitude is significant having p = 0.014* and t = 3.96 where β = 0.48**.So third hypothesis is rejected as results violated the first condition of mediation by Baron and Kenny (1986).

Moving onto the next step of mediation for fourth hypothesis I regressed safety climate on safety attitude controlling the effects of transformational leadership. In step 1, I enter the control variables for safety climate. In step 2, I entered transformational leadership and the results explained that there is a positive relationship between safety attitude and safety climate (β = .61**, p = 0.045, t = 2.12) thus completing the first three steps to run mediation. In order to check the third condition I have used mediated regression analysis whose table is given below:

Table 3: Mediated Regression Analysis

Safety Climate			
Predictors	**Beta**	**R^2**	**$\triangle R^2$**
Step1: Control Variables		0.03	
Step 2: Safety Attitudes	0.17**	.024	.068**
Step 3: Transformational Leadership	0.54	.083	.007

Control variables were Gender, Age, Qualification and Experience.
*p<.05
**p<.01

In the last step I tested if safety attitude mediates the relationship between transformational

leadership and safety climate. In step 1 I entered the control variables; the value of R^2 for safety climate was .03. In step 2 I controlled the effect of safety attitude, as shown in table. In step 3 I regress safety climate on transformational leadership and the results showed that although there was a considerable variance in the results but still the path from transformational leadership to safety climate showed significance results ($\beta = .54$, $p < .05$) which means there is only partial mediation and not full mediation according to the explanation of Barron and Kenny (1986).So fourth hypothesis was partially supported and there is partial mediation between transformational leadership and safety climate.

Discussion

The objective of this study was to investigate that whether safety situation in organizations can be improved by using transformational leadership and safety knowledge and whether safety attitude explains the path from transformational leadership and safety knowledge to safety climate. Overall there were mixed results, as one hypothesis was accepted, two were rejected while one was partially supported. First hypothesis proposed that safety knowledge is positively associated with safety climate. This hypothesis was not accepted. There may be many reasons for it. Firstly, in a developing country like Pakistan a significant number of organizations (over 72 percent of the respondents) do not have the required structure for implementing knowledge management initiatives. In the absence of such an enabling environment, organizations have to make greater efforts so that employees can rise above such socio-cultural influences which might impede the sharing and transfer of knowledge and experiences. Secondly, use of information technology infrastructure like decision support tools, enterprise portals, video conferences have a great potential in safety knowledge management but organizations are not yet fully aware of employing these facilitators. Finally, Individuals from high context culture become well informed about the facts associated with a matter before they make a decision. Information is sought and spread usually through discussion with friends, co-workers, relatives and rumors at times. On the contrary, those from low context cultures will prefer consulting a research before making a decision, and will emphasize on the use of reports, databases and other electronic forms of information. Based upon this definition, the Pakistani culture is a high context culture. The Indians, Japanese, and the Chinese also have a high context culture. On the contrary, most of the European and North American regions have a low context culture. Since high context cultures are more relationship oriented and have less explicit communication and formal information and knowledge.

Second hypothesis proposed that transformational leadership is significantly associated with safety climate. The results of regression analysis showed that transformational leadership does have a positive association with safety climate. Similar results have been reported in the literature as well. These results are not surprising as transformational leadership with the followers who are ready to embrace it automatically enhances the perception of employees about the safety climate in the organization. Also the core concept of safety climate is that they are formed on the basis of practical and visible actions taken by organization to improve the safety situation. So a leadership style like transformational leadership is kind of action which can be seen by the workforce which helps to form and improve their perception about the safety climate that is evident in the regression analysis results.

Third hypothesis of present study stated that safety attitude mediates the relationship between safety knowledge and safety climate. Contrary to our expectations safety attitude didn't mediate the relationship between safety knowledge and safety climate. There may be several reasons for this. The main obstacle in developing a safety attitude can be referred to unwillingness of people to develop safety attitude despite of having safety knowledge because more than 90% people are Muslims and they have a strong belief that

no accident can harm them or take their life until its written in their destiny and once something is written in destiny no precautionary measure can postpone it. Although people get training but they don't take it too seriously as in western countries. These factors form the root cause of non-implementation of safety knowledge in developing a safety attitude in Pakistani organizations. Secondly, attitude develops with continuous conscious attention to knowledge but in Pakistan people tend to avoid discussing safety knowledge because there is a culture of fear where employees feel they may no longer be required when they will share everything. In this case, it is important to establish a rewarding culture where trust among teams and business units is the highest. The employees should be rewarded for knowledge sharing, collaborative problem solving, and knowledge development.

Fourth hypothesis was partially accepted that safety attitude mediates relationship between transformational leadership and safety climate. Literature also supports this notion. Moreover, in collectivist societies like Pakistan power distance is very high (Hofstede, 1983) and due to this in Pakistani organizations accept or recognize this high power distance. They are used to not question the leadership style and follow whatever leadership style imposed on them. This hypothesis was not completely accepted, there may be several reasons. Firstly, In Pakistan people are not concerned about developing a safety attitude. There is high level of unemployment, inflation and poverty. People develop such attitude which may help them in doing their existing jobs for longer period of time because cost of switching job is too high for them. They don't consider safety attitude as essential one and prefer other variables over it.

Secondly, Literature suggests that safety attitudes towards different organizational tasks will lead to safety climate of the organization due to high level of employee participation (Gandz, & Murray, 1980) and autonomous work groups (Klein, Molloy & Brinsfield, 2012) but in many Pakistani public and private organizations employees are given structured tasks. Employee participation is not considered essential and people follow whatever guidelines are given to them by their leadership. This results in lack of development of safety attitude among employees.

Implications

Our study has numerous theoretical and practical implications. It adds to the safety literature as well as to the leadership literature. Also the sample was taken from pharmaceutical industry which is an important sector of economy of Pakistan. It adds to safety literature by explaining that in a developing country like Pakistan where the workforce is by and large illiterate so the role of transformational leadership is far more important because the workforce requires more guidance and continuous safety communication to ensure a safe workplace, unlike the workforce of western countries where the observations like near misses or safety events were considered more important.

The practical implications for Pakistani organizations are also of large importance. The fact that transformational leadership does have a great influence on safety outcomes can enable organizations to improve safety situation in their organizations without incurring a mammoth cost. The cost associated with training the leaders to be more safety concerned, is minimal and cost issue has been the most important in Pakistan because the organizations don't want to expand extra money to improve the safety situation. Thus by adopting transformational leadership the organizations in Pakistan can significantly improve the safety environment of organizations. Also the fact that private owners don't want to delegate much of the decision making power to lower level of hierarchy, so these results further strengthens the fact that without giving away much of their governing power they can still implement the transformational leadership and can fetch positive results and can improve the safety situation of organization.

Limitations

Although there have been some very important findings and the results are more generalizable, this study is not without some limitations. Some are as follow:

- Due to time constraints the sample size was not very large and larger sample size would have been more ideal to give more appropriate understanding of causal relationship.
- The cross-sectional nature of study makes it difficult to establish the mediation process, preferably the mediation effects is fully understood in a longitudinal study.
- Transformational leadership is only a part of complete leadership model of Bass (1985). Ideally to completely understand its effectiveness in ensuring safety; the full model of Bass's conceptualization should have been more preferable.
- Due to limited resources and time we could not collect data from other industries i.e. textile, chemical industry and construction industry etc.

Direction for future Research

- First and far most is the use of more comprehensive model of Bass (1985) and specifically the transactional leadership style, which is considered to be the best suited for Pakistan organizations.
- Second, how much these leadership models effect the overall organization climate and culture regarding safety which then in turns improves the safety situation in the organization or can develop a safety culture in the organization.
- Third, the procedural justice and trust in leadership can also be used as mediator in the leadership-safety outcomes relationship but in addition to that we also believe that distributive justice can also be treated as potential mediator in this relationship. As safety incentives which are considered to play an important role in improving safety behaviors, similarly in Pakistan where people always have financial problems because of low level of salaries, distributive justice can help to explain this relationship.
- The last issue which need to be dealt in future is use of culture as moderator because the results of our study has demonstrated some varied results from earlier studies which are conducted in the western countries, so future research must include culture as potential moderator to further clarify these relationships.

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CREATIVITY IS EVERYONE'S BUSINESS: HOW TO ENHANCE EMPLOYEE CREATIVITY IN TELECOMMUNICATION SECTOR

Sehrish Abdul Karim, Syed Umer Sarfraz
Gheorghe Asachi Technical University Iasi Romania; Capital University of Science & Technology Islamabad Pakistan
Capital University of Science & Technology Islamabad Pakistan
sehrishkar@gmail.com
omersarfraz0@gmail.com

Abstract: *With rapid cultural, demographical and economic changes in knowledge oriented economy, employee creativity has become a challenge for organizations, as this works as a core competence. We suggest that leaders with ethical commitment help to nourish creativity in employees. Using social learning theory, authors examined the influence of ethical leadership on employee creativity through the mediation of self-efficacy. This study also explored the moderating role of uncertainty avoidance between the relationship of ethical leadership and employee creativity. Data was collected from 180 employees along with their supervisors from four different telecommunication companies working in Pakistan. The questionnaire was adopted and tested on the criteria of five point Likert scale. Regression and Correlation tests were used to check hypothesis. Supervisors of these four companies evaluated the creativity of the selected staff member groups while the employees and staff members reported the perceptions about their supervisors in terms of ethical leadership. Results showed that ethical leadership was positively related to employee creativity and this relationship was mediated by self-efficacy and this mediation was partial. There was significant negative relationship between uncertainty avoidance and employee creativity, this is the main aspect of present study. According to the results uncertainty is negatively associated with the employee creativity it means high uncertainty results in low creativity of employees. This study was conducted in Pakistani context where uncertain attitude is very common in society so uncertainty avoidance affects creativity of the employee in Pakistani organizations. Our study offer practical implications for telecommunication companies in order to achieve competitive advantage by enhancing employee creativity, as employee creativity makes organization creative.*

Keywords: Ethical Leadership; Employee Creativity; Self-Efficacy; Uncertainty Avoidance; Social Learning Theory

JEL Classification: M12

Introduction

According to David Gergen, Director of Harvard's Center for Political Leadership, the metaphor for leaders and managers in this new challenging environment is not ''climbing ladders'' but ''riding waves'' (Coleman et al. 2012, p. 53). Effective leadership plays a vital role in employee creativity (Carmeli, Reiter-Palmon, & Gelbard, 2013). Different researchers have tested the effect of different types of leadership, like transformational leadership on creativity (Eisenbeib & Boerner, 2013). Trevino, Brown and Harrison (2005) recommended that the ethical leadership is a major source of enhancing attitudes and behaviours of employee. Avey, Palanski & Walumbwa (2011) identified that ethical leadership positively relates to task performance and it also positively related to pro social while negatively related to deviant behaviour. However, a study was conducted by Xinxin & Yidong (2012) is one of the few studies in which the impact of ethical leadership on employee creativity has been studied.

''Employee creativity refers to the promotion, generation, and execution of new and valuable ideas about products, services, or procedures'' (Zhou & Shin 2003). Carmeli et. al., (2013) described how leaders can promote employee creativity by giving job structure, resources, positive energy and enlightening high-quality relations that will boost employees to show creativity. Piccolo et. al., (2010) suggested that due to ethical leadership there will be an increase in task significance, which results to improved performance of an employee. Organizations having creative employees can have additional value and retain competitive advantages in the environment of a business (Amabile et. al., 2005). Authentic leaders encourage employees' creativity the reason for this is, employees highly increase Psychological Capital, thus being more creative (Rego, Sousa, Marques & Pina e cunha, 2012).

Many researchers defined the influence of ethical leadership on different outcomes as a process of social learning theory (Brown & Trevino, 2006). Bandura, (1977) stated ''Social learning theory posits that learning is a cognitive process that takes place in a social context and can occur purely through observation or direct instruction, even in the absence of motor reproduction or direct reinforcement''. Therefore, ethical leaders got the capability to have an impact on the self-efficacy of their employees with the help of their credibility and ethical standards (Avey, Wernsing & Palanski, 2012).Past Research also shows that creative self-efficacy act as an important mediator between a different individual, contextual factors and employee creative performance (Shin & Zhou, 2007). Paletz & Peng (2008) tested the association between culture and the two dimensions of creativity which is (novelty and usefulness). They manipulated the two dimensions to a new product by using different scenarios and they tested culture whether it moderates towards creativity and want to have a novel product, they also found that Chinese students give importance to innovation more than American students. Kim & Drolet (2003) describes the need for variety and uniqueness is not strong in the East Asian cultures as compare to western culture. The cultures which highlight the value of collectivism and conformity to social norms, uncertainty avoidance and high power distance do not try or express their unique and innovative ideas which are different than the normal routine (Harzing & Hofstede, 1996).

The studies on cultural values and creativity are comparatively limited and the observed findings are inconsistent as well, especially in Pakistani context, there is no such study in which the effect of culture is tested on the creativity of the employee. Our first contribution in this paper is to increase understanding of the complex relationship between ethical leadership and employee creativity through an examination of the role of mediator which is self-efficacy with the help of Social learning theory. Secondly we used uncertainty avoidance which is one of the cultural dimensions of Hofsted as a moderator to check the extent to which it affects employee creativity in the work place. ''Uncertainty avoidance is a state wherein outcomes and conditions are unknown or unpredictable. Some people are more comfortable with uncertainty than others, and the degree to which individuals participate in certain behaviours to stay in comfortable situations is called uncertainty avoidance'' (Hofsted, 1980). Thirdly this study was conducted in Pakistani context where uncertain attitude is very common in the society and uncertainty avoidance might affect a lot to employee creativity. We contribute to the ethical leadership literature by integrating social learning theory and including uncertainty avoidance as a moderator in the theoretical model. Organizations should have to develop a psychological training program to help employees to cope with the uncertain mind-set, and to become more effective and creative**.**

Literature Review

Ethical leadership and Employee creativity

Ethical leadership is defined as "The demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown, Trevina & Harrison, 2005 p. 120). Ethical leadership is critical and extremely important in giving the direction, that empowers to carry out the mission and vision of the organizations to get future goals (Kanungo & Mendonca, 1996). Organizations which contain a lot of strong ethical leaders are enable to hold number of followers answerable and use regulation and punishments accordingly (Kacmar et al, 2013). Brown et al., (2005) studied and found, the degree that leaders gives reward to a supportive behaviour and punish the bad behaviour, this act influence the followers to behave ethically or unethically. Ethical leaders who make unbiased decisions got the following characteristics, honesty, altruism, integrity, openness, trustworthiness, collective motivation and justice (Brown & Trevino, 2006).

Tu and Lu (2012) established that ethical leadership is positively associated to employee creativity through two mechanisms, first is cognition and the second is motivation. The result of that cognitive mechanism is that the followers give more attention towards work significance and create new ideas for the achievement of organizational goals. If ethical leaders show organizational commitment (De Hoogh & Den Hrtog, 2008), employees most probably feel psychologically safe and improvise with new ideas (Tu & Lu, 2012). Amabile, (1988 p. 125-126) defined ''creativity as the production of new and useful ideas concerning products, services, processes and procedures''. Moreover ethical leaders pay attention towards their employees and encourage them to openly express their view and concerns through two way open communication which results in greater trust (Brown et al., 2005). This open communication encourages the employee to produce new ideas so that to improve the work, procedures and processes (Tu & Lu, 2012). The motivational mechanism is linked to the respect that is given by the ethical leadership to the followers which enable them to gain work related knowledge and learn new skills (Zhu, May, & Avolio, 2004). Therefore, we proposed the following hypothesis.

Hypothesis 1: Ethical leadership will be positively related to employee creativity.

Mediating role of self-efficacy between ethical leadership and employee creativity

''Self-efficacy refers to an individual's belief in his or her capacity to execute behaviours necessary to produce specific performance attainments'' (Bandura, 1977). Bandura (1986) studied four techniques for the improvement of self-efficacy and these techniques are vicarious experience, enactive mastery, verbal persuasion and physiological arousal. Social learning theory individuals learn behaviour vicariously through verbal persuasion and direct modelling. Ethical leaders give encouragement and support to employees, the employees become more confident about their abilities and it helps to strengthen their motivational patterns (Walumbwa et al., 2011). Ethical leaders can also enhance followers self-efficacy through affective arousal and enactive mastery. Ethical leaders care employee more than outcomes. Such leaders help employees to focus on the processes in doing their work, which helps to reduce some of the anxiety and stress of the ultimate outcome of the employees which helps in enhancing one's self efficacy (Brown et al., 2005). This helps to increase the confidence of an individual to initiate the action, follow it and sustain as well (Stajkovic, 2006). Ethical leaders are very active in creating new ideas and become the role model (Tu & Lu, 2012). Through this role modelling followers enhance their knowledge by learning gaining new skills and ability to accomplish task (Walumbwa et al., 2011).

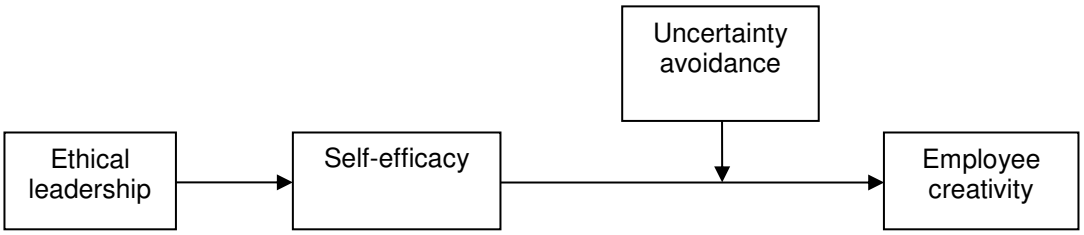
Many researchers supported the impact of self-efficacy on employee creativity in different organizational environments. Creative self-efficacy is basically the part of self-efficacy and it is the construct of it, which is defined as the belief that reflects ones self-confidence in his or her capabilities while performing an innovative task (Tierney & Farmer, 2011). People who have high creative self-efficacy can increase the motivation, course of action and cognitive resources needed to meet the demand. Therefore, they can perform specific tasks successfully and achieve organizational innovation goals in the face of obstacles (Baer, Oldham, Jacobsohn, & Hollingshead, 2008). The literature is supporting the positive relationship between ethical leadership, self-efficacy and employee creativity. If Ethical leadership increases self efficacy of the employees also increases which results in employee creativity, therefore we hypothesized:
Hypothesis 2: self-efficacy will mediate the relationship between ethical leadership and employee creativity.

Moderating role of uncertainty avoidance between ethical leadership and uncertainty avoidance

Uncertainty is defined as ‘‘the extent to which the members of a culture feel threatened by uncertain or unknown situation’’ (Hofstede, Hofstede & minkov 1997 p. 13). Hofstede (1980) compares low and high uncertainty avoidance in societies and uses the degree of uncertainty avoidance to differentiate between societal norms. High uncertainty avoidance results in high level of stress, inner push to remain busy and showing of emotion. And also acceptance of aggressive behaviour of self and others, less tolerance and acceptance of unclear situations, less acceptance of dissent and a strong need for consensus, clarity, and structure (Reimann, Lunemann & Chase, 2008). So it is difficult for a person to perform in a stress full situation and with that kind of situation it is even more difficult to be creative. Farr and Ford (1990) identify stress produces routine behavioural patterns and generally interfere with novel or creative responses. Other outcome of uncertainty avoidance also affects the creativity of an employee.

High uncertainty avoidance reflects a tight culture where norms are expressed very clearly explicitly and strict sanctions are forced on those who deviate from the norms. While low uncertainty avoidance reflects a lose culture where norms are expressed through a wide variety of alternatives and different channels, tolerating deviant behaviour and errors (Gelfand, Nishii, & Raver, 2006). Key outcomes associated with tightness include order and efficiency, routine, conformity, and stability, all supporting ideas which appropriately fit in with the norms. In contrast, key outcomes associated with looseness include acceptance of diversity, deviation from the rules and openness to change, which enhances exploration and novelty (Gelfand et. al, 2006). With the help of the literature it is clear that due to high uncertainty avoidance the level of stress in an individual increases, not only the stress but also the aggressive behaviour of an individual, Which has a negative effect on the creativity of an employee and employee can’t be able to think of innovatively. High uncertainty avoidance also reflects a tight culture, and because of the tight culture employee cannot perform task other than the defined norms. Another setback of the tight culture is that employee cannot think of ideas which are not fit in the norms. Based on the above discussion we proposed the following hypothesis:
Hypothesis 3: uncertainty avoidance moderates the relationship between ethical leadership and employee creativity so that it weakens the relationship.

The hypothesized relationships are shown in the Figure



Methodology

We obtained access to four telecommunication companies (Ufone, Zong, Mobilink and Warid) through personal contacts with the top management and human resource management to get access in the companies. These are service provider companies. We distributed printed questionnaire to supervisors and group of staff members they completed questionnaires and returned at spot. Respondents were assured that their provided information will remain confidential.

Supervisors evaluated creativity of the selected staff member groups. The employees or staff members reported their perceptions of their supervisor in terms of ethical leadership, as well as their own level of self-efficacy and uncertainty avoidance. We distributed 30 supervisor questionnaires and 150 staff questionnaires and all of the questionnaires were recovered because they were filled at spot. Respondents classified in four categories in context to gender, age, qualification and experience and in gender group 59.2% was male and 40.8% was female. After collecting the questionnaires, these questionnaires were punched into SPSS sheet for further correlation, regression analysis and also to determine the reliability of data.

Measures

Ethical leadership, self-efficacy, employee creativity and uncertainty avoidance were measured using a five point Likert scale from one to five, 1 (strongly disagree) to 5 (strongly agree).

Ethical leadership

We measured ethical leadership using 10 items which were developed by Brown et al. (2005). Sample items include ‘‘My leader makes fair and balanced decisions’’. Cronbach alpha of ethical leadership was .72.

Self-efficacy

We used Chen, Gully and Eden (2001) 8 items to measure self-efficacy, sample item include ‘‘I will able to achieve most of the goals that I have set for myself’’. Cronbach alpha was .74.

Employee creativity

Employee creativity was measured using Zhou and George (2001) 13 items of employee creativity were used. A sample item is ‘‘the employee suggest new ways to achieve goals or objectives’’. Cronbach alpha was .70.

Uncertainty avoidance

Uncertainty avoidance was measured using Jung and Kellaris (2004), 7 items of uncertainty avoidance were used. A sample item is ‘‘I tend to get anxious easily when I don’t know of an outcome’’. Cronbach alpha was .74.

Results

Table 1
Means, Standard Deviations and Correlations

Correlation Table						
Predictors	**Mean**	**S.D.**	**1**	**2**	**3**	**4**
1.Ethical leadership	3.78	0.55	1			
2.Self efficacy	3.82	0.67	0.497**	1		
3.Employee creativity	3.66	0.57	0.234**	0.372**	1	
4.Uncertainty avoidance	2.96	0.45	0.425**	0.208**	-0.154**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 1 presents correlation among the model variable. There was significant positive relationship between ethical leadership and self-efficacy (r=.49). There was significant positive relationship between ethical leadership and employee creativity (r=.37). There was significant negative relationship between uncertainty avoidance and employee creativity (r=.15).

Table 2: Results of Regression Analysis

	Self-Efficacy			**Employee creativity**		
Predictors	**Beta**	**R^2**	**$\triangle R^2$**	**Beta**	**R^2**	**$\triangle R^2$**
Step1: Control Variables		0.01			0.06	
Step 2:						
Ethical Leadership Self-efficacy	0.08**	0.01**	.02**	0.43**	0.12**	.06**
Step1 Control Variables					0.06	
Step 2 Self-efficacy			0.43**	.30**	.023**	

** p< .01 (two tailed); * p<.05 (two tailed).

According to Hypothesis 1 Ethical leadership will be positively related to employee creativity so Table 2 indicates that Ethical leadership is positively and significantly related

to employee creativity with β=0.43, so on the base of this strong support Hypothesis 1 is accepted. There is positive significant relationship between Ethical leadership and self-efficacy β=.08** and there is positive and significant relationship between self-efficacy and employee creativity β=.43**.

Table 3: Results of Mediated Regression Analysis

Employee Creativity			
Predictors	**Beta**	**R^2**	**$\triangle R^2$**
Step1: Control Variables		0.06	
Step 2: Self-efficacy	0.43**	0.30**	.25**
Step 3: Ethical Leadership	0.40**	.35**	.30**

**p<0.001 (two tailed); ** p< .01 (two tailed); * p<.05 (two tailed).

Table 3 shows that self-efficacy is partially mediate between the relationship of Ethical leadership and Employee creativity β=0.43**. The reason of partial mediation is that there is a positive significant relation between ethical leadership and employee creativity directly and also via self-efficacy. So because of this second hypothesis is accepted i.e. self-efficacy will mediate the relationship between ethical leadership and employee creativity

Table 4: Results of Moderated Regression Analysis

Employee Creativity			
Predictors	**Beta**	**R^2**	**$\triangle R^2$**
Step1: Control Variables		0.06	
Step 2: Self-efficacy Uncertainty Avoidance	0.87**	.78	.71**
Step 3: Self-efficacy x Uncertainty Avoidance	-0.20*	0.79	0.46

***p<0.001 (two tailed); ** p< .01 (two tailed); * p<.05 (two tailed).

Table 4 shows the result of the moderating test, so according to the table uncertainty avoidance moderates the negative relationship between ethical leadership and employee creativity in such a way that high uncertainty avoidance shall weaken the relationship. Because the value of β=-0.20*. So the third hypothesis is accepted which is uncertainty avoidance moderates the relationship between ethical leadership and employee creativity so that it weakens the relationship.

Discussion

In present study we discussed positive impact of ethical leadership on employee creativity. We found support for positive impacts of ethical leadership on employee creativity, which was mediated by self-efficacy. Uncertainty avoidance was used as a moderator for the first time along with the mediator self-efficacy. This paper also helps to expand the previous contribution about the relationship of ethical leadership and employee

creativity. Findings showed that ethical leadership can positively predict employee creativity. This relation is also supported by the previous researches that ethical leadership is an important antecedent of employee job performance (Mayer et al., 2009). Tu and Lu (2012) established that ethical leadership is positively associated to employee creativity. Findings also support that ethical leadership is significantly and positively related to employee creativity through cognitive and motivational mechanism. Results showed that due to ethical leadership employee self-efficacy also improves, as Walumbwa et al., (2011) identified in their study that Ethical leaders give encouragement and support to employees, the employees become more confident about their abilities and it helps to strengthen their motivational patterns. So in this study it is proven that self-efficacy is partially mediating the relationship between ethical leadership and employee creativity. According to the literature uncertainty avoidance has a negative effect on employee creativity which is proven by the results. Results showed that uncertainty avoidance is moderating between ethical leadership and employee creativity and it is weakening the relationship, existing literature is supporting this result and states that high uncertainty avoidance results in high level of stress in employees (Reimann, Lunemann & Chase, 2008) so this kind of situation leads to weaken the positive effects of ethical leadership on employee creativity.

Implications

The finding of this study has important implication for organizational managers. As self-efficacy is partially mediating the relationship between ethical leadership and employee creativity so managers should focus on their own leadership style and try to become ethical and try to increase self-efficacy in employees. Moreover leaders in organizations should design become a role model for employees according to a high moral standards. Another main finding of this study is that uncertainty avoidance is negatively related to employee creativity so the leaders of organization should organize learning and training programs (psychological) to reduce the uncertainty factor in the minds of employees.

Limitations

There are several limitations in this study. First the sample size was very small, large sample size may provide more accurate results. Secondly the data was self-reported; except from the creativity scale so common method bias may be a concern. Therefore the ideal scenario for the future research should be predictor from different sources. Thirdly, researchers could examine these relationships from a team perspective. Fourth for the future research, researchers could use different Hofsted cultural dimensions.

Conclusion

This study investigated that how the uncertainty avoidance as a moderator ethical leadership and employee creativity with the mediator of self-efficacy weakens the relationship. The findings of this study prove that uncertainty avoidance has a negative effect on employee creativity and results also prove the previous studies related to ethical leadership and employee creativity.

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SUB-SECTION: ECONOMIC STATISTICS AND MODELLING

OPTIMIZATION OF THE PRODUCTION STRUCTURE OF FIELD ENERGY CROPS

Margit Csipkés, Tímea Gál
University of Debrecen, Faculty of Sectoral Economics and Methodology, Department of Research Methodology and Statistics, Debrecen, Hungary
csipkes.margit@econ.unideb.hu; gal.timea@econ.unideb.hu

Abstact: *In our paper we have dealt with the biomass-based energy production during the agricultural production, since the sustainable energy management is one of the most actual issues. In our paper we have dealt with the biomass-based energy production during the agricultural production, since the sustainable energy management is one of the most actual issues. In our research we wanted to know how much renewable energy could be produced on a field of 1800 hectares with five plants (silage maize, Lucerne, wheat, maize, sunflower). Data of the energy content were collected from literature, all other data were collected from a company in the Northern Great Plain Region with 1800 hectares and the information from the Institute of Agricultural Engineering (IAE). Besides, we analysed how much income could be reached and for what the produced energy could be used, what demand it could meet by replacing fossil energy sources having high environmental pressure. Crop production technologies applied in the model were set up by the practical experiences of a real agricultural company. Working operations were set on a monthly basis with the assignment of prime mover – machinery relations. The material needs of the working operations were also set (fertilizers, pesticides, sowings, twines, silage foil) where it was needed. To answer our research question two model variants were elaborated. In the first model variant the five crops were competed by the maximum energy content, and in the second variant by the maximum gross margin. Production optimization was done for 1800 hectares. We supposed that 100% of the plant products are marketed (animal farms are not considered), and in the model only raw material production is done (further processing of plant products for energy purposes are not part of this analysis). Besides, we supposed that these five plants will be used as: by-products (wheat straw, maize stem, sunflower stem) and Lucerne hay by direct combustion; bioethanol from wheat and maize grain; biodiesel from sunflower grain; biogas from silage maize.*

Keywords: optimalization, *the biomass-based energy production; renewable energy,* linear programming

JEL Classification: N70; Q42; P18; P48

Material and methods

In this paper the optimization of the production structure for five field energy crops (silage maize, lucerne, wheat, maize, and sunflower) was done by linear programming.

In our research we wanted to know how much renewable energy could be produced on a field of 1800 hectares with five plants. Besides, we analysed how much income could be reached and for what the produced energy could be used, what demand it could meet by replacing fossil energy sources having high environmental pressure.
To answer our research question two model variants were elaborated. In the first model variant the five crops were competed by the maximum energy content, and in the second variant by the maximum gross margin.
We supposed that 100% of the plant products are marketed, and in the model only raw material production is done. Besides, we supposed that these five plants will be used as: 1. by-products (wheat straw, maize stem, sunflower stem) and Lucerne hay by direct combustion; 2. bioethanol from wheat and maize grain; 3. biodiesel from sunflower grain; 4. biogas from silage maize.
In the first model variant the objective function coefficient values were the energy yields of crops per one hectare, in the second model variant the values were the value of production, direct and variable cost from which contribution and gross margin were calculated.
For the calculations the average energy content of the crops, yields of the main and by-products, production technologies, the demand and cost of machine hours, marketing prices, the amount of subsidies, and the data for machine park were needed.

Results

Crop production technologies applied in the model were set up by the practical experiences of a real agricultural company. Working operations were set on a monthly basis with the assignment of prime mover – machinery relations. The material needs of the working operations were also set (fertilizers, pesticides, sowings, twines, silage foil) where it was needed.

Determination of the energy yields for crops applied in the model

Energetically the by-products (maize and sunflower stem, wheat straw) and Lucerne hay will be used by direct combustion. Bioethanol will be produced from the produced maize and wheat grain, biodiesel from sunflower grain, and biogas from silage maize.
For the estimation of energy yields we needed the planned average yields, the amount of by-products, the rate of derived products from the main products (bioethanol, biodiesel, biogas), and the energy content of by- and derived products.

Determination of the yields for by-products

For the calculation of the yields for by-products the following data were taken into account. From 1 ton of wheat grain we get 0,5 ton of straw, from 1 ton of maize grain we get 0,8 ton maize stem, while from 1 ton of sunflower grain we get 2 tons of sunflower stem. If we know these data and the average yield of the main products we can calculate the amount of by-products per hectare.
Average yields of the main products presented were calculated by the last 3 years data of the examined company. Thus, in the model the average yield of silage maize is 42 tons, Lucerne hay's is 7.3 tons, wheat's is 4.6 tons, maize's is 8.3 tons and the sunflower's is 3.1 tons. Specific yields per hectare of the three by-products

were calculated by the average yields and the rate of main and by-products, so the calculated yield of wheat straw, maize and sunflower stem is 2.3, 6.7 and 6.2 tons per hectare in order.

Calculation of the yields of bioethanol, biodiesel and biogas

Below you can see the estimation of yields of bioethanol, biodiesel and biogas from the grains of wheat, maize, sunflower and silage maize.

1 kg maize grain we can get 0.33-0.35 litre absolute alcohol (almost the strength of 100% alcohol) (0.34 litre on average), from 1 kg wheat grain 0.35-0.36 litre (0.355 litre on average). These quantities in litre were calculated to kg by the density data of 0.79 kg/dm^3, because the energy content of ethanol is given in quantity not in volume. Based on the given numbers from 1 kg maize grain we get 0.2866 kg, from 1 kg wheat grain we get 0.2805 kg absolute alcohol, so it means that 286.6 kg and 280.5 kg ethanol per tons.

Multiplying these data with the average yields of maize (8.3 tons) and wheat (4.6 tons), we got to know that the quantity of bioethanol per hectares is 2238.3 kg from maize ad 1299.4 kg from wheat.

We can conclude that based on the calculations we can produce 1.7 times more bioethanol from maize.

The amount of sunflower oil form 1 ton of sunflower grain is 430 litres, which means 395.6 kg derivable oil per tons. This number – similar to maize and wheat – was multiplied with the average yield of 3.1 tons and the result was that we could get 1226.4 kg oil yield per hectares.

Biogas yield of silage maize was determined by the calculations of *Kőrösi, 2008* for a possible biogas plant. In the planned virtual biogas plan 15 thousand tons of silage maize was fermented (beside other materials), which total biogas yield was 2457 thousand m^3 with 1277.6 thousand m^3 methane content. The rate of methane in the biogas from silage maize was 52%. (It is needed to present the methane content, because the other 48% is not combustible carbon dioxide.) So we determined the biogas yield of 1 ton silage maize, which is 163.8 m^3 with 85.17 m^3 methane content. This value was multiplied with the average yield of silage maize (42 tons), therefore we got that the quantity of biogas will be 6879.6 m^3 from silage maize.

Calculation of energy yields

In the previous chapters we estimated the specific yields of by-products and derived products. To determine the energy yields of the crops we need the calorific values of the products, which is presented in *Table 1*.

Table 11. Average energy content of some by-products

Name	Energy content (MJ/kg; MJ/m^{3*})	Name	Energy content (MJ/kg; MJ/m^{3*})
Bio ethanol	26.8	**Straw**	13.5
Biodiesel (sunflower)	39.8	**Lucerne hay**	14.4
Maize stem	13.0	**Biogas (from silage maize)**	17.4
Sunflower stem	11.5		

* MJ/m^3 is used only for biogas

Source: Chlepkó – Kőszegi, 2008; Barótfi, 1993; Kőrösi, 2008

The energy content of biogas from silage maize was calculated by us. The energy content of biogas changes depending on the methane content, since only the methane component can combust. The energy content of this gas is 9.28 kWh/m^3 which is 33.41 MJ/m^3 according to *Chlepkó-Kőszegi, 2008*. Since in the model the biogas has 52% methane content, the calorific value is 52% of 33.41 MJ/m^3, so it is 17.4 MJ/m^3.

Based on these date the energy yield per hectare was determined (*Table 2.*). Energy yields of the crops are calculated by the multiplication of the product yields in kg and the specific energy yields. So, the highest energy content has the maize (146.7 GJ/ha), which is followed by sunflower, silage maize and Lucerne (120.1 GJ/ha, 119.5 GJ/ha and 104.6 GJ/ha). Wheat has the lowest energy (66.1 GJ/ha) which is lower than half of the energy content of maize.

Table 2. Energy yields of crops per hectare

Name		Yield (kg/ha; m^3/ha*)	Energy content (MJ/kg; MJ/m^{3*})	Total energy yield (GJ/ha)	
Silage maize	**Biogas**	6 879.6	17.4	119.5	**119.5**
Lucerne	**Lucerne hay**	7 266.7	14.4	104.6	**104.6**
Wheat	**Bioethanol**	1 299.4	26.8	34.8	**66.1**
	Straw	2 316.7	13.5	31.3	
Maize	**Bioethanol**	2 238.3	26.8	60.0	**146.7**
	Maize stem	6 666.7	13.0	86.7	
Sun-flower	**Biodiesel**	1 226.4	39.8	48.8	**120.1**
	Sunflower stem	6 200.0	11.5	71.3	

* m^3/ha and MJ/m^3 are used only for biogas

Source: Own calculation

Calculations of the direct costs and gross margins of the applied crops in the model

Direct costs were divided into four expenditures: material costs, personnel costs, machinery costs (within this material, personal, amortization and other costs) and other costs.

The following costs were grouped into the expenditures: Material costs (costs of seed, fertilizer, pesticides, twine, silage folia); Personnel costs (the applied labour costs); Machinery costs (costs of machine and building); Material costs (costs of fuel, lubricants, costs of repair, energy costs of cleaning and drying); Personnel costs (salary and benefits for drivers and repairmen); Amortization (cost of amortization for prime movers, towed machinery and buildings); Other costs (other costs like taxes of machines, insurance, etc.); Other costs (insurance costs, rent of land, and other costs).
The material and other costs were calculated by the examined company considering the marketing costs, land rent and insurance costs.
Machinery costs were determined by the examined company's costs and the lease work costs for 2015 given by the Institute of Agricultural Engineering. These data are the costs for in-storing and out-storing, storage, cleaning, drying, and the other costs were taken into account by the data from IAE. The working operation costs of IAE contain the entrepreneurial profit as well, so this had to be reduced. In our calculations we used 30% profit rate, so 70% was used as cost price.
Machinery costs by expenditures were calculated backwards to make the calculations easier. From the cost of the company and IAE we could calculate the total machinery cost. Personnel costs and amortization rate were determined by the data of the examined company. Other costs were set to 10.1%. So the material cost was calculated by the difference of total machinery cost and these three costs. The rate of machinery service costs is the following (in the rate of total machinery cost): Material costs: 26.3%; Personnel costs: 21.0%; Amortization costs: 42.6%; Other costs: 10.1%.
Direct costs of silage maize is 285 587 HUF, of Lucerne is 155 226 HUF, 257 259 HUF for wheat, 302 089 HUF for maize and 214 913 HUF for sunflower. It can be seen that maize has the highest direct costs, which is followed by silage maize, wheat, sunflower and Lucerne. The reason for that is the higher cleaning and storage costs.
After determining the direct costs we calculated the contribution (gross margin).
Contribution is a category in accountancy (which is the gross result of sales). It can be calculated by the difference of production value and direct costs, which gives a margin for the overheads and the profit. It measures the income generating ability on the level of product not the company, since it does not take the overheads into consideration, but the direct costs appeared during production.
Gross margin is the difference of production value and variable costs. Gross margin measures how the changes in volume contribute to the income. It can be that we know a product's contribution, but the increase or decrease of this product will not increase or decrease the income of the company by the contribution of the product, but the value of gross margin, since in the calculations we reduced the variable costs and the overheads as well (which also occur when we do not produce anything). It is the reason why we optimize the gross margin of any activity and not the contribution – just like in the second model variant.
What we consider volume, fix and variable costs depends on the decision problem. At the optimization of the production structure we want to know which crop to plant on how many hectares to reach the maximum income.
In this decision problem we consider variable (relevant) cost every cost (material, other costs, machinery costs), which appears during the crop production. Among

these the cost of repairing and lubricants are digressively variable costs. These costs should be divided into reduced fix costs and reduced proportionally variable cost theoretically. Since we do not know the reacting rate of these costs, we supposed for the simplicity that these costs change proportionately.
The above not mentioned expenditures (land rent and other costs within other direct costs, personnel costs within machinery costs, amortization and other costs) are fix (not relevant) costs. Land rent agreements are contracted for years in advance, so these appear without production as well, the staff must also be paid, amortization and taxes of prime movers also have to be paid, etc.
Contribution and gross margin values were calculated by these principles for one hectare. Production value was counted by the revenue and the subsidies. Revenues were set by the last three years' data for yields and prices on average. Where the price was not k, the internal prices were used. The amount of subsidies is 70 880 HUF/ha for every crop.
The value for gross margin for silage maize is 294 591 HUF, for Lucerne it is 164 742 HUF, for wheat it is 185 067 HUF, for maize it is 326 244 HUF and for the sunflower it is 194 560 HUF.

The linear programming model

Production optimization of the five field crops was executed by two aspects. In the first model variant we were looking for the production structure where maximum energy yield could be reached, in the second model variant the maximum income.
In the two models the following constraints were applied: constraints for crop rotation, capacity constraints for prime movers' hours. We supposed that the financing of the operation is ensured, so financial constraints were not applied in the models.
Crop rotation constraints were determined by the biological needs of the crops. Maize can be produced in monoculture for long years, but after 4-5 years significant yield decline can be seen because of the pests and weeds. An upper limit of 900 hectares was introduced for the joint area of maize and silage maize. If both crops are planted on 900 hectares every year, it can be solved that they will be placed on the same field in 2 years. In case of wheat the general principle is that it should be planted maximum three years in a row (Szabó et al., 1992). Since the sunflower is one of the most susceptible plants to diseases, it cannot be planted on the same field within 5 years, or it can be even 6-7 years in serious cases (Antal, 1992). Therefore, the area of sunflower was constrained to one-fifth of the total area, 360 hectares. Lucerne is produced on the field for 4 years. Nevertheless, field constraint was set into the model. The reason for that is if Lucerne is planted to a big proportion of the total area, the machine park would remain unused which would make the production inflexible. Therefore, there was a 450-hectare constraint for lucerne.
As far as constraints for machine hours are concerned there were tractors with different performance (MTZ 82 /5 pcs/, New Holland TM 155 /4 pcs/ and Rába 250 /4 pcs/), one harvester (New Holland CX 6080), one straw-cutter (New Holland FX 40), and 3 Caterpillar TH 330 mechanical loaders.
Machinery demand in hours for each crop was determined according to the working operations monthly by prime movers, which was given by the company. We supposed that a given working operation is done by the same prime mover.

Upper limits of prime movers were set for 10 hours in a shift. So monthly the maximum number of machinery hours: *b= number of days/month * number of prime movers * 10*.
In the first model variant we were looking for the maximum energy yield where $119{,}5x1 + 104{,}6x2 + 66{,}1x3 + 146{,}7x4 + 120{,}1x5 \rightarrow max!$ In the second model variant the objective is the maximum gross margin where $294591{,}5x1 + 164742{,}4x2 + 185066{,}9x3 + 326243{,}9x4 + 195560{,}3x5 \rightarrow max!$

The first model variant
The calculated maximum energy yield of the model is 202 885.4 GJ which can be reached by 342 ha of silage maize, 450 ha hectares of lucerne, 388 ha wheat, 558 ha maize and 62 ha sunflower, and the total area of 1800 hectares is used. None of the five crops has shadow price, since all of them got into the production structure.
The shadow price of the activities shows that with how much the specific energy yield should be increased to get into the production structure without changing the objective function's value (202 885.4 GJ). Allowable increase and decrease show the value of fluctuation without changing the optimal production structure. It is presented in *Table 3*.

Table 3. Upper and lower limits of the objective function coefficients in the first model variant

Name	Solution (ha)	Upper limit (GJ/ha)	Objective function coefficient (GJ/ha)	Lower limit (GJ/ha)
Silage maize	342	203.48	119.5	92.64
Lucerne hay	450	∞	104.6	55.08
Wheat	388	92.96	66.1	- 17.88
Maize	558	173.51	146.7	130.43
Sunflower	62	136.34	120.1	93.25

Source: Own calculation
The upper limit of objective function coefficients is the sum of the objective function's value and the allowable increase, the lower limit is the difference of objective function's value and the allowable decrease. The analysis of these values are extremely important. The calculated energy yields are greatly affected by the average yields in the optimization. The average yields highly depend on the weather, which affect the energy yields as well. In fact, the wider interval the objective function coefficient can fluctuate, the safer the optimal production structure is. Shadow prices of the model's resources are summarized in *Table 4*.
Resources have shadow prices it they are fully used, so they are bottlenecks. In the model these resources are the following: New Holland TM 155 and New Holland CX 6080 harvester in October, the total area, silage maize and maize and the area of lucerne. In the cases of the prime movers the shadow price is 21 and 123.1 GJ, in the cases of areas they are 55.1; 20.1 and 49.6 GJ.

Table 4. Shadow prices of the resources in the first model variant

Name	Use	Shadow price (GJ)	Allowable increase	Allowable decrease
NH TM 155 X. (m. hour)	1 200	21.0	355.6	64.4
NH CX 6080 X. (m. hour)	310	123.1	116.4	19.7
Total area (ha)	1 800	55.1	9.7	275.1
Silage maize + Maize (ha)	900	20.1	50.0	240.4
Lucerne (ha)	450	49.6	118.1	9.7

Source: Own calculation

In *Table 5.* the above mentioned production structure with the maximum energy yield is presented.

Table 5. Combination of the maximum achievable energy yield

Name	Energy (GJ)	Distribution (%)
Bioethanol	46 983.3	23.16
Biodiesel	3 027.0	1.49
Biogas	40 872.7	20.15
By-product	112 002.5	55.20
TOTAL	**202 885.4**	**100.00**

Source: Own calculation

By-products and lucerne hay give the highest rate 55% (112 002.5 GJ) of the total energy (202 885.4 GJ). After that comes the bioethanol which can be used in transportation (46 983.3 GJ, 23%) then biogas for heating purposes with 40 872.7 GJ (20%). The smallest part has the biodiesel which can be produced from sunflower. It is 3 027.0 GJ (2%).

The calculated energy of 202 885.4 GJ can be realized with 440 858 thousand HUF gross margin. The distribution if it is shown in *Table 6*.

Table 6. The amount of gross margin at maximal energy yield

Name	Gross margin (thousand HUF)	Distribution (%)
Silage maize	100 755.0	22.85
Lucerne	74 134.1	16.82
Wheat	71 803.0	16.29
Maize	182 038.8	41.29
Sunflower	12 127.9	2.75
TOTAL	**440 858.8**	**100.00**

Source: Own calculation

In the production structure's gross margin giving the maximum energy yield the maize shares 182 038.8 thousand HUF (41.29%), which is followed by silage

maize (100 755.0 thousand HUF, 22.85%). The amount of gross margin of lucerne and wheat is almost the same: 74 134.1 thousand HUF (16.82%) and 71 803.0 thousand HUF (16.29%). The smallest share has the sunflower with 12 127.9 thousand HUF (2.75%).

The second model variant

The maximum gross margin of the model is 441 974.3 thousand HUF, which can be reached by 291 hectares of silage maize, 448 hectares of lucerne, 441 hectares of wheat, 609 hectares of maize and 11 ha sunflower, so the total area of 1800 ha is used. Similar to the first variant of the model, none of the crops has shadow price (*Table 7.*).

Bottlenecks of the model variant is the total area, the joint area of silage maize and maize, Rába 250 tractor in September, New Holland CX 6080 harvester in October (*Table 8.*). Increasing or decreasing the capacities of the resources by one unit modifies the maximum gross margin with the sum amount of shadow prices.

Table 7. Upper and lower limits of the objective function coefficients in the second model variant

Name	Solution (ha)	Upper limit (thousand HUF/ha)	Objective function coefficient (thousand HUF/ha)	Lower limit (thousand HUF/ha)
Silage maize	291	312.4	294.6	-∞
Lucerne	448	191.9	164.7	58.1
Wheat	441	∞	185.1	164.5
Maize	609	∞	326.2	308.5
Sunflower	11	213.3	195.6	-∞

Source: Own calculation

Table 8. Shadow prices of resources in the second model variant

Name	Use	Shadow price (thousand HUF)	Allowable increase	Allowable decrease
Total area (ha)	1800	142.4	2.3	8.8
Silage maize + Maize (ha)	900	130.7	11.1	348.9
Rába 250 IX. (hour)	1200	25.8	19.3	1.9
NH CX 6080 X. (hour)	310	63.3	145.5	19.6
MTZ 80 VII. (hour)	1550	11.2	17.5	74.2

Source: Own calculation

Maize gives the highest rate 44.95% (198 659 thousand HUF) of the maximum gross margin, which is followed by silage maize (85 747.3 thousand HUF; 19.40%). In cases of lucerne and wheat the amount of gross margin is 73 830.1 thousand

HUF (16.70%) and 81 572.6 thousand HUF (18.46%). The smallest share has the sunflower with 2 165.3 thousand HUF (0.49%).
The maximal gross margin of 441 974.3 thousand HUF can be realized by the energy yield of 201 445.9 GJ.
By-products and lucerne hay has the highest rate of 56.71% (114 243.3 GJ) of the total energy (201 445.9 GJ). After that comes the bioethanol which can be used in transportation (51 877.6 GJ, 25.75%) then biogas for heating purposes with 34 784.6 GJ (17.27%).
The smallest part has the biodiesel which can be produced from sunflower. It is 540.4 GJ (0.27%).

Conclusions

According to the suppositions considered in the production structure's optimization among the 5 crops the maize has highest energy yield with 146.8 GJ, which is followed by the sunflower's 120.1 GJ. The calculated energy yield of silage maize is 119.5 GJ, the lucerne's is 104.6 GJ. The wheat has the lowest energy yield (66.1 GJ/ha). Since the bioethanol is the product of two plants (maize and wheat), it was important to compare the bioethanol yields of these crops. Compared with the wheat, we can produce 1.7 times more bioethanol from maize. As the quantity of alcohol from both plants is almost the same, the difference comes from the average yields (8.3 t/ha from maize, 4.6 t/ha from wheat). In the first model variant the maximum energy yield is 202 885.4 GJ on 1800 ha which can be realized with 440 858.82 thousand HUF gross margin. Total energy yield of the second model variant is 201 445.9 GJ with 441 974.3 thousand HUF. It can be seen that there is not much difference between the two models: the absolute differences are 1 439.5 GJ and 1 115.48 thousand HUF. Based on the results, the question occurs for what this maximum 202 885.4 GJ energy yield can be used. Energy demand of a house of 100 m^2 with medium insulation is approximately 136 GJ (*Lakner, 2002*). So the energy of 112 002.5 GJ produced from by-products (maize, sunflower stem, wheat straw) and lucerne hay with direct combustion is enough for the energy demand of 823 above-mentioned houses. If we suppose that in these houses 4 people live, we can conclude that 112 002.5 GJ energy meets the energy demand of 3 292 people, which means a bigger village. The quantity of biogas from silage maize (40 872.7 GJ) would increase the number of houses by 300, so approximately by 1200 people. The energy content of gasoline is 35.15 MJ/litre. Total energy content from bioethanol in the model calculations is 46 983.3 GJ. This energy is equal with the energy content of 1 336 651 litres gasoline. If we count with a normal diesel car of 150 horsepower with an average consumption of 5l/100 km, this energy is enough to drive 26 733 thousand km. If we suppose that one car goes 15 thousand km a year, it can be concluded that 46 983.3 GJ energy meets the energy demand of 1782 cars with the previously mentioned parameters.
Total energy content of the biodiesel calculated by the model from sunflower is 3 027.0 GJ. It is equal with the energy of 86 115 litres gasoline. This energy can increase the number of kilometres by 1772.3 thousand kilometres and 118 cars at average use.

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A COMPARISON OF SELF-ASSESSMENT TENDENCIES OF FULL-TIME AND PART-TIME UNIVERSITY STUDENTS

András István Kun[1], Éva Katalin Kovács[2], József Boros[2]
[1] Department of Human Resource Management, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
[2] Ihrig Károly College for Advanced Studies, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
kun.andras.istvan@econ.unideb.hu
a7xvaeka@gmail.com
jozsef.boros94@gmail.com

Abstract: *Several studies in the existing literature of education research provide empirical evidences that low-achiever higher education students tend to predict and evaluate their own academic performance less accurately than those who perform better in their studies. Former papers have also supported that low-performers generally over-evaluate (both before and after examinations) while high-performers regularly underestimate their performance (or at least they are overestimating to a significantly lower extent). These findings highlight that less good skills and/or abilities are only a part of the low-achievers' handicap. Another serious problem is that they are unaware about these problems (this phenomenon is sometimes referred to as 'Dunning–Krueger effect'). More information on this tendency is useful for both educators and researchers of education, because helping students who are facing this double challenge needs a better understanding of the processes and factors in the background. One of the information still missing from the literature is the results of testing and comparing the self-assessment patterns of students with different background. As a contribution to this area of research we measure the self-assessment differences between full-time and part-time business students. After a brief introduction and a short review of the empirical literature the current paper tests the above mentioned hypotheses on two small samples of full-time (N = 64) and part-time (N = 63) business students from the same course, university and majors. All the students wrote the same test type (multiple choice). Our main results support that in the cases of both the full-time and the part-time students the low-achievers showed a significantly greater mean overestimation. This was true for the pre- and also for the post-examination self-assessment. At the same time, self-assessment accuracy (measured indirectly via the absolute value of the self-assessment error) connected positively to the students' test performance only in the case of part-time students. Moreover, performance and self-assessment accuracy showed a positive linear correlation in case of part-time, a negative linear correlation in the case of full-time students.*

Keywords: self-assessment; part-time students; Dunning–Kruger effect; higher education
JEL classification: I21; I23

1. Introduction

Earlier results in the literature (e.g. Boud and Falchikov, 1989; Dunning and Krueger, 1999, Sundström, 2005; Tejeiro et al., 2012; Karnilowicz, 2012; Kun, 2016) support the existence of the phenomenon that the difference between students' self- and tutors' assessment is not independent of the students' learning performance: high-achievers tend to assess their own performance better than low-achievers. Better performing students are less likely to overestimate themselves; and according to some, but not all of the empirical findings, they are generally more accurate in the estimation of their own performance. This phenomenon is a manifestation of the so called Dunning–Kruger effect. It is a cognitive bias in which the less able tend to over-assess their ability, while the more able tend to underestimate themselves (Dunning and Krueger, 1999).

Former studies about student self- versus tutor-assessment do not provide information about the possible differences in the Dunning–Krueger effect between student groups with different background, except the inspection of the effect school years (i.e. Fitzgerald, White and Gruppen, 2003; Baartman and Ruijs, 2011) or the impact of teaching the students how-to-assess their own performance (i.e. Ross, 2006). The novelty of our paper is that it provides insight into this area of investigation by comparing full-time and part-time-students' self-assessment patterns in the same course and institution. We have three research questions.

The first two questions investigate two aspects of effectiveness in self-assessment: 'direction' and 'accuracy' (Kun 2016a).

Question 1 aims the connection between the students' test performance and the direction of self-assessment errors (over- or underestimation); and is measured via the mean of the signed differences between the self-assessed and the tutor-assessed scores.

Q1: *Is there a significant difference between university students (full-time and part-time) who perform lower or higher on a test in the tendency of overestimating their test scores before and after the examination?*

The second one aims the connection between the students' test performance and the accuracy of self-assessment. The accuracy is measured via the absolute values of the estimation errors.

Q2: *Are the university students with higher test scores more accurate in the self-estimation of the test performance before and after the examinations compared to their fellow students with lower test scores?*

The main contribution of this paper to the empirical literature is finding answer to the third question, because most of the previous studies about student self-assessment in higher education were examined among full-time students.

Q3: *Is there any significant difference between full-time and part-time university students according to the previous research questions? If yes, what are the identifiable differences?*

The following section of our study provides a brief literature review. The Data and method section introduces the database and the research techniques. In the Results section a detailed explanation of the analysis can be found. Based on the outcomes, the Conclusion section describes the implications for the hypotheses and brings notice to the limitations of the findings.

2. A brief literature review

Quantitative empirical studies analysing the difference between student self-assessment and some kind of tutor- (or staff-) assessment are dated back at least to the 1960s. For detailed analysis of the early literature see Falchikov and Boud (1989) or Boud and Falchikov (1989). The research methods and even the compared assessment techniques vary widely, thus detailed comparison is mostly impossible, only general deductions can be made about some factors moderating the effectiveness of self-assessment. The most frequently investigated moderator factor is the gender (Edwards et al. 2003, Macdonald 2004, Boud and Falchikov 1989, Kruger and Dunning 1999, Lynn, Holzer, és O'Neill 2006, Basnet et al. 2012). However, there are many other possible moderators: assessment technique (multiple choice, true or false, oral examination, essay, etc.), culture, experience, area of study, and so on.

There is no consequent support in the literature behind a general tendency among students to overestimate. Neither was it find by Boud and Falchikov (1989) in their review article, nor the newer studies show agreement on it. Some of the supporting studies are Kruger and Dunning (1999), Basnet et al. (2012), Tejeiro et al. (2012), Kun (2016a); while Mehrdad, Bigdeli and Ebrahim (2012) or Kun (2016b) could not identify such general tendency.

The studies agree much more on the positive connection between self-assessment effectiveness and test achievement. Students with higher test scores or with better grades are usually more accurate in the estimation of their own result. Supporting studies are (among others): Boud and Falchikov (1989), Kruger and Dunning (1999), Sundström (2005), Karnilowicz (2012), or Tejeiro et al. (2012). Of course, there are exceptions, too, but the only study known to the authors that does not support the 'high-achievers tend to self-estimate more accurately' hypothesis is the one by Lynn, Holzer and O'Neill (2006). However, the definition of 'accurate estimation' shows a great diversity.

Another phenomenon supported by most of the literature (Boud és Falchikov 1989, Fitzgerald et al. 1997, Kruger és Dunning 1999, Hodges, Regehr, és Martin 2001, Lejk és Wyvill 2001, Edwards et al. 2003, Gramzow et al. 2003, Karnilowicz 2012, Kun 2016a,b) is that high-achievers tend to overestimate their performance less likely and/or with a lower frequency. Sometimes, they even underestimate themselves.

Investigations on the role of gender in self-assessment effectiveness mostly find no statistically significant relationship. However some of them, like Edwards et al. (2003) or Macdonald (2004), found that males tend to overestimate their own performance more than females. On the other hand, Kun (2016a) found just the opposite effect of sex, in a sample of Hungarian university students.

3. Data and Method

The data collection method closely follows the one used by Kun (2016). The data was collected from mid-term examinations among full-time students and from end-term examinations among part-time students. Every students who attended the examinations were asked to participate, and only a very few of them refused. Students were motivated to estimate more accurately via offering them a percentage (+5%) of their total test point to them if they had estimated accurately. The examined course was Research methodology in the Fall semester of 2015 at the University of Debrecen, Hungary, and the students were studying on one of three following master level majors: Management and Leadership, Accountancy, Logistics management. The tutor who created and evaluated the tests was the same in ever examination.

Only the data from the first examination-trial per student are involved (data about re-take examinations are closed out). The structure of the sample by major, sex and full- or part-time status is presented in Table 1.

Table 1: Sample structure

Status	**Sex**	**Major**			
		Management and Leadership	**Accountancy**	**Logistics management**	**Total**
Full-time	Male	8	5	12	25
	Female	14	15	10	39
Part-time	Male	4	6	10	20
	Female	21	12	10	43
Total		47	38	42	127

Source: primary data

When standardized values are used in the following sections, the standardization is done by the groups of students who wrote different tests. The tests contained 15 multiple choice items in the case of full-time students and 40 multiple choice questions in the case of part-time students. When the following analyses do not use standardized values, we employ ratio scores (actual score / maximum score) to even the range of the measurement scales.

In section 4.2. we compare the overestimation tendency and self-estimation accuracy of low-achievers to the same variables of high-achievers. To form these two groups of students, we calculate the terciles of the standardized test scores of the relevant student group (full-time, part-time or all students): the low-achievers are those whose test score is less than or equal to the first tercile, and the high-achievers are those whose test score is higher than or equal to the second tercile.

Based on Kun (2016) we separate the ‘accuracy’ of self-assessment and the ‘direction’ of the self-assessment errors from each other. Accuracy is defined as the absolute value of the difference between the student-assessed and the tutor-assessed test score, while direction is the signed (positive or negative) difference.

4. Results

4.1. Differences between the part-time and the full-time students

First, we present the descriptive data about the test scores (as a ratio of the maximum test scores), self-assessed scores, self-assessment errors, absolute values of the self-assessment errors and the changes in the previously mentioned self-assessment measures (post-test values minus pre-test values) of both the full-time and the part-time students (see Table 2). The table also contains the statistic of the independent samples t-test that compares the means of a given statistic between full- and part-time students.

We can draw the conclusions (based on Table 2) that there are more differences than similarities between full- and part-time students. Where they are not significantly different are the following variables:

- their signed self-estimation errors change (compared to the pre-test assessment) similarly;
- their self-assessment accuracy (i.e. the absolute value of their self-estimation errors) before the test is not significantly different;
- the absolute value of their self-estimation errors change (compared to the pre-test assessment) similarly.

Table 2: Descriptive data (actual score / maximum score ratio) of full-time and part-time students

Measure	Status	N	Mean	SD	t
Pre-exam self-assessment	full	64	0.574	0.119	-4.395***
	part	58	0.658	0.089	
Post-exam self-assessment	full	64	0.536	0.151	-4.231***
	part	61	0.641	0.123	
Tutor-assessment	full	64	0.643	0.137	5.921***
	part	63	0.519	0.096	
Pre-exam self-assessment error	full	64	-0.032	0.173	-5.931***
	part	58	0.133	0.130	
Post-exam self-assessment error	full	64	-0.070	0.134	-7.763***
	part	61	0.119	0.138	
Change (post-exam – pre-exam errors)	full	64	-0.038	0.135	-0.947
	part	56	-0.016	0.109	
Absolute value of pre-exam error	full	64	0.124	0.123	-1.342
	part	58	0.152	0.107	
Absolute value of post-exam error	full	64	0.111	0.101	-2.353**
	part	61	0.153	0.098	
Change (post-exam – pre-exam absolute value of errors)	full	64	-0.013	0.120	-0.766
	part	56	0.002	0.082	

Notes: N is the sample size, SD is the standard deviation, t is the statistic of the independent samples Student's t-test, * $p < 0.100$, ** $p < 0.050$, *** $p < 0.010$.
Source: primary data

4.2. Differences between low achievers and high achievers

In this section we compare the self-assessment measures of low- and high achiever students. Their groups are defined by their standardized test-scores: if it is lower than or equal to the first tercile (in the relevant group: full-time or part-time) they are considered to be low-achievers, and those with a standardized test score higher than or equal to the second tercile are considered to be high-achievers. In Table 3a we present the descriptive data and the independent samples t-statistics of high- and low-achievers within the full-time student group, while Table 3b contains the same data about part-time students.

Table 3a: Low-achiever vs. high achiever full-time students (standardised scores)

Measure	A	N	Mean	SD	t
Pre-exam self-assessment error	low	22	0,770	0,662	6,384***
	high	31	-0,588	0,887	
Post-exam self-assessment error	low	22	0,436	0,944	2,731***
	high	31	-0,291	0,963	
Change (post-exam – pre-exam errors)	low	22	-0,473	0,910	-3,407***
	high	31	0,403	0,931	
Absolute value of pre-exam error	low	22	-0,194	0,871	-1,367
	high	31	0,203	1,145	
Absolute value of post-exam error	low	22	-0,175	0,821	-1,165
	high	31	0,146	1,094	
Change (post-exam – pre-exam absolute value of errors)	low	22	0,122	1,108	0,901
	high	31	-0,132	0,939	

Notes: A is the achievement group, N is the sample size, SD is the standard deviation, t is the statistic of the independent samples Student's t-test, * $p < 0.100$, ** $p < 0.050$, *** $p < 0.010$.
Source: primary data

Table 3b: Low- vs. high achiever part-time students (standardised scores)

Measure	A	N	Mean	SD	t
Pre-exam self- assessment error	low	22	0,740	0,866	5,949***
	high	22	-0,639	0,657	
Post-exam self-assessment error	low	22	0,588	0,964	4,004***
	high	22	-0,466	0,769	
Change (post-exam – pre-exam errors)	low	20	-0,094	0,973	-0,953
	high	22	0,189	0,950	
Absolute value of pre-exam error	low	22	0,723	1,054	5,557***
	high	22	-0,678	0,538	
Absolute value of post-exam error	low	22	0,687	0,956	5,022***
	high	22	-0,545	0,641	
Change (post-exam – pre-exam absolute value of errors)	low	20	-0,067	1,029	-1,075
	high	22	0,227	0,729	

Notes: A is the achievement group, N is the sample size, SD is the standard deviation, t is the statistic of the independent samples Student's t-test, * $p < 0.100$, ** $p < 0.050$, *** $p < 0.010$.
Source: primary data

If one compares the results of Table 3a and 3b interesting differences can be revealed. In the groups of both full- and part-time students the low achievers tend to significantly overestimate their test scores both before and after the examinations, but the similarity stops here. While full-time students tend to modify the estimation of their performance after the examination their part-time fellows do not. At the same time, high achievers tend to be significantly more accurate in their estimations than low achievers only if we examine the part-time students. The full time students' self-estimation accuracy seems not to be connected to their test performance: the better performing students make errors of the same size as the worse performers, only the direction of the errors differs.

4.3. Correlations between test scores and self-assessment measures

Via linear correlation analysis we investigated the linear connections between the change (increase or decrease) of the (standardized) test score (the tutor's assessment) and nine different measures of the students' self-assessment. The results are presented in Table 4.

Table 4: Linear correlations between the standardized tutor assessment and various standardized measures of self-assessment

Measure		Student groups		
		Full-time	Part-time	Total
Pre-exam self-assessed score	ρ	0.188	-0.016	0.091
	N	64	58	122
Post-exam self-assessed score	ρ	0.503***	0.224*	0.361***
	N	64	61	125
Post-pre change of self- assessed score	ρ	0.410***	0.202	0.313***
	N	64	56	120
Pre-exam self-assessment error	ρ	-0.664***	-0.733***	-0.697***
	N	64	58	122
Post-exam self-assessment error	ρ	-0.390***	-0.495***	-0.441***
	N	64	61	125
Post-pre change of the error	ρ	0.410***	0.202	0.313***
	N	64	56	120
Absolute value of pre-exam self-assessment error	ρ	0.257**	-0.705***	-0.202**
	N	64	58	122
Absolute value of post-exam self-assessment error	ρ	0.213*	-0.542***	-0.160*
	N	64	61	125
Post-pre change of the absolute value of error	ρ	-0.124	0.199	0.027
	N	64	56	120

Notes: ρ is the Pearson correlation coefficient, N is the sample size, * $p < 0.100$, ** $p < 0.050$, *** $p < 0.010$.
Source: primary data

Table 4 reveals interesting differences between the full-time and the part-time students:

- full-time students show stronger and more significant correlation between real and after-examination self-assessed test scores;

- full-time students show a positive, weak-medium linear correlation between test performance and the difference between post- and pre-examination self-assessment, while no significant relationship can be identified in the case of part-time students;
- full-time students also show a positive, weak-medium linear correlation between test performance and the difference between post- and pre-examination self-estimation errors, while no significant relationship can be identified in the case of part-time students;
- full-time students seem to significantly predict their performance less accurately (the linear correlation is weak) if their tutor-assessed test results are better, while part-time students are significantly more accurate (strong linear correlation) if their test scores are higher;
- full-time students show no significant correlation between test scores and post-test self-estimation accuracy at the 5% significance level, while part-time students show a medium negative linear correlation between the absolute value of errors and the test scores.

5. Conclusions

Based on the results presented in the previous section we can answer our three research questions as follows.

Q1: Is there a significant difference between university students (full-time and part-time) who perform lower or higher on a test in the tendency of overestimating their test scores before and after the examination?

Yes, there is. This was supported with independent samples t-tests and also with linear correlation analysis within both examined student groups (full- and part-time).

Q2: Are the university students with higher test scores more accurate in the self-estimation of the test performance before and after the examinations compared to their fellow students with lower test scores?

In the case of full time students, we found no significant connection between test performance and self-estimation accuracy via independent t-tests; but the linear correlation analysis revealed a weak negative correlation between performance and accuracy. The part time students provided just the opposite results. In their case, better achieving students tend to estimate their own test scores (both before and after the test) significantly more accurately. This was supported both via t-test and linear correlation analysis.

Q3: Is there any significant difference between full-time and part-time university students according to the previous research questions? If yes, what are the identifiable differences?

The connection between the students' test performance and their self-assessment accuracy showed an interesting difference between the two types of students. High-achievers seem to be more accurate than low-achievers only if we examine part-time students. In the case of full-time students there is no such connection according to the results of the t-test; while there is only a week linear correlation that's direction is just the opposite than in the part-time students' case.

Evaluating or results one must take into consideration that we examined only a small sample of students from one university only, thus the generalizability of our findings is relatively weak.

This paper is a part of a series of studies investigating student self-assessment at the University of Debrecen (Boros et al., 2016; Kun, 2016a,b; Máté and Kiss, 2016; Máté et al., 2016; Szabolcsi, 2016). These studies are following the same methodology described by Kun (2016a), thus they measure both pre- and post-test self-assessment, and identify accuracy and overestimation tendency separately. A future research aim is to meta-analyse the data collected during the individual researches to reveal the possible differences among courses, majors, test techniques, or even student groups with different demographic background.

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DIFFERENCES BETWEEN MEAN-VARIANCE AND MEAN-CVAR PORTFOLIO OPTIMIZATION MODELS

Panna Miskolczi
University of Debrecen, Faculty of Economics and Business, Institute of Accounting and Finance, Debrecen, Hungary
miskolczipanna@gmail.com

Abstract: *Everybody heard already that one should not expect high returns without high risk, or one should not expect safety without low returns. The goal of portfolio theory is to find the balance between maximizing the return and minimizing the risk. To do so we have to first understand and measure the risk. Naturally a good risk measure has to satisfy several properties - in theory and in practise. Markowitz suggested to use the variance as a risk measure in portfolio theory. This led to the so called mean-variance model - for which Markowitz received the Nobel Prize in 1990. The model has been criticized because it is well suited for elliptical distributions but it may lead to incorrect conclusions in the case of non-elliptical distributions. Since then many risk measures have been introduced, of which the Value at Risk (VaR) is the most widely used in the recent years. Despite of the widespread use of the Value at Risk there are some fundamental problems with it. It does not satisfy the subadditivity property and it ignores the severity of losses in the far tail of the profit-and-loss (P&L) distribution. Moreover, its non-convexity makes VaR impossible to use in optimization problems. To come over these issues the Expected Shortfall (ES) as a coherent risk measure was developed. Expected Shortfall is also called Conditional Value at Risk (CVaR). Compared to Value at Risk, ES is more sensitive to the tail behaviour of the P&L distribution function. In the first part of the paper I state the definition of these three risk measures. In the second part I deal with my main question: What is happening if we replace the variance with the Expected Shortfall in the portfolio optimization process. Do we have different optimal portfolios as a solution? And thus, does the solution suggests to decide differently in the two cases? To answer to these questions I analyse seven Hungarian stock exchange companies. First I use the mean-variance portfolio optimization model, and then the mean-CVaR model. The results are shown in several charts and tables.*

Keywords: risk; Value at Risk; Expected Shortfall; Mean-Variance Portfolio Optimization; Mean-CVaR Portfolio Optimization

JEL classification: G11

1. How to measure risk?

In literature risk and risk measures have no unique definition and usage. However it is often useful to express risk with one number (Emmer, Kratz and Tasche, 2013). The historically most important risk measures in finance are the variance and the standard deviation and it goes back to Markowitz and the modern portfolio theory (Markowitz, 1952; 1968).
In the last years and also these days the most popular risk measure is the Value at Risk (VaR). Value at Risk answers the following question: What is the minimum

potential loss that a portfolio can suffer in the $100\alpha\%$ worst cases (in a given time horizon) (Acerbi and Tasche, 2002):

$$VaR_\alpha(X) = -inf\{x \in \mathbb{R}: F_X(x) \geq \alpha\},$$

where F_X is the profit distribution function of X and α $(0 < \alpha < 1)$ is the confidence level. In other words, VaR is the $100\alpha\%$ quantile of F_X. VaR is criticised because of several reasons. The most important are that VaR is not subadditive, which means that portfolio diversification may lead to an increase of risk, then that it does not measure losses exceeding VaR and its non-convexity makes VaR impossible to use in optimization problems (Szegö, 2002).

To solve these problems a coherent risk measure called Expected Shortfall (ES) was introduced:

$$ES_\alpha(X) = \frac{1}{\alpha}\int_0^\alpha VaR_u(X)du.$$

If F_X is continuous, the definition of expected shortfall is equivalent to $ES_\alpha(X) = E\big(X: X \geq VaR_\alpha(X)\big)$, hence alternative names like conditional Value at Risk (CVaR) and conditional tail expectation are in use in finance (Embrechts and Hofert, 2014). In this paper I use CVaR and ES as synonyms.

2. Mean-Variance vs. Mean-CVaR Portfolio Optimization

2.1. The data

I work with Hungarian daily stock data between 01.07.2005 and 29.06.2015. The data was downloaded from Budapest Stock Exchange homepage (www.bet.hu). I analyse the daily logarithmic returns of seven stocks, namely FHB, MOL, MTELEKOM, OTP, Pannenergy, Raba and Richter, in this ten years. To analyse the data and to answer to my questions I use the Rmetrics mathematical software (Würtz et al,, 2009). Note that I work with daily data and thus the results (returns, variance, VaR, ES, etc.) are stated on a daily basis.

2.2. Mean-Variance Portfolio Optimization

In the mean-variance (MV) model, return and risk are estimated by the sample mean and the sample variance of the asset returns. The goal is to minimize the risk for a given target return. I work with long-only portfolios only (short selling is not allowed) and therefore the weights are between zero and one after an appropriate normalization. We can see the results of the mean-variance portfolio optimization in Figure 1 and in Table 1.

In Figure 1 the hyperbola is the solution of the Markowitz model. The set inside the hyperbola called the feasible set, the upper border (black points) is the efficient frontier and the lower border is the minimum variance locus (grey points). The efficient frontier plot includes all single assets risk vs. return points (coloured circles), the tangency line (blue solid line), the tangency point for the risk-free rate (blue point), the equal weight portfolio (EWP) (grey square) and the global minimum risk portfolio (red point). The yellow solid line indicates the Sharpe ratio and the range of the Sharpe ratio is printed on the right hand side axis. We can see, that in the case we decide to invest just in one stock, positive return is reachable just with the Raba stock. The MTELEKOM has the lowest while the Richter stock has the highest risk.

First I calculated the EWP, which is a feasible portfolio with given equal weights.

The EWP has quite a small risk (variance=0.0161) but in this case the reachable return is negative (-0.03%). Moreover, one could reach a higher return with the same risk or the same return with a smaller risk. The global minimum risk portfolio is the efficient portfolio with the lowest possible risk and thereby the global minimum risk point separates the efficient frontier from the minimum variance locus. In my case the global minimum variance portfolio has a negative return (-0.02%).
The tangency portfolio is calculated by maximizing the Sharpe ratio for a given risk-free rate. The Sharpe ratio is the slope of the capital allocation line given by the ratio of the target return lowered by the risk-free rate and the portfolio risk. In the case of the Hungarian daily data the risk-free rate is 0.008%. The tangency point coincides with the Raba single asset, so one can reach the highest return (0.02%) with the Raba single asset portfolio. But on this return level the risk is quite high (variance=0.0213). The Sharpe ratio is between -0.00026 and 0.000206.

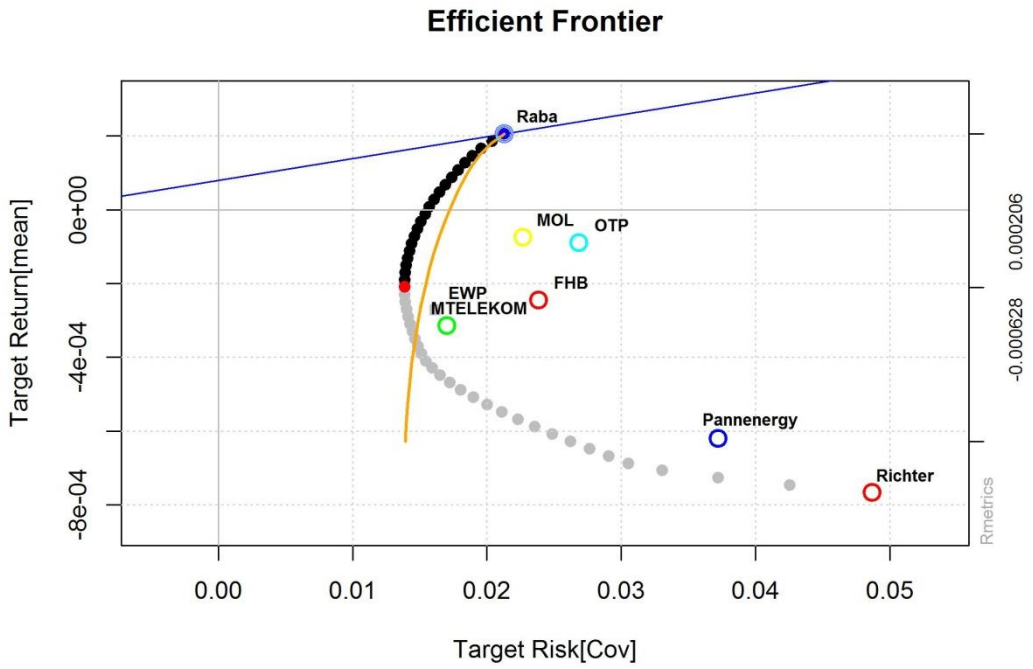


Figure 1: Efficient frontier: solution of the mean-variance portfolio optimization (alpha=0.05)
Source: own calculation, Rmetrics

Table 1: Result of the mean-variance portfolio optimization (alpha=0.05)

Portfolio	Return	Variance	VaR	ES
Equal Weight	-0.0003	0.0161	0.0211	0.0374
Minimal Risk (target return=0)	0.0000	0.0156	0.0231	0.0372
Minimal Risk (target return=0.0001)	0.0001	0.0177	0.0257	0.0413
Tangency	0.0002	0.0213	0.0282	0.0482
Global Minimum Risk	-0.0002	0.0139	0.0208	0.0343

Source: own calculation, Rmetrics

We can see the weights of four different portfolios in Figure 2. As I mentioned earlier, in the case of the tangency portfolio the optimal portfolio consists only of the Raba stock. If we invested only in the Raba stock we could reach a 0.02% return, having the following risks: variance=0.0213, VaR=0.0282 and ES=0.0482 (see Table 1). The minimum risk portfolio is an efficient portfolio with the lowest risk for a given target return. With my data a highest reachable return is 0.02% that is why as a first example I calculated the minimum risk portfolio with 0% target return. The optimal portfolio consists of four stocks (from the seven): Raba (51.8%), MTELEKOM (25%), MOL (16.7%) and FHB (6.5%). As a second example I calculated the minimum risk portfolio with 0.01% target return. The composition of the optimal portfolio is the same as in the previous case, but the weights are different: Raba (69.6%), MOL (21.3%), MTELEKOM (7.7%), and FHB (1.4%). The last plot shows the weights in the global minimum optimal portfolio. All the stocks excepting OTP are present: MTELEKOM (45.1%), Raba (23.3%), FHB (11.4%), Pannenergy (8.9%), MOL (8%) and Richter (3.4%).

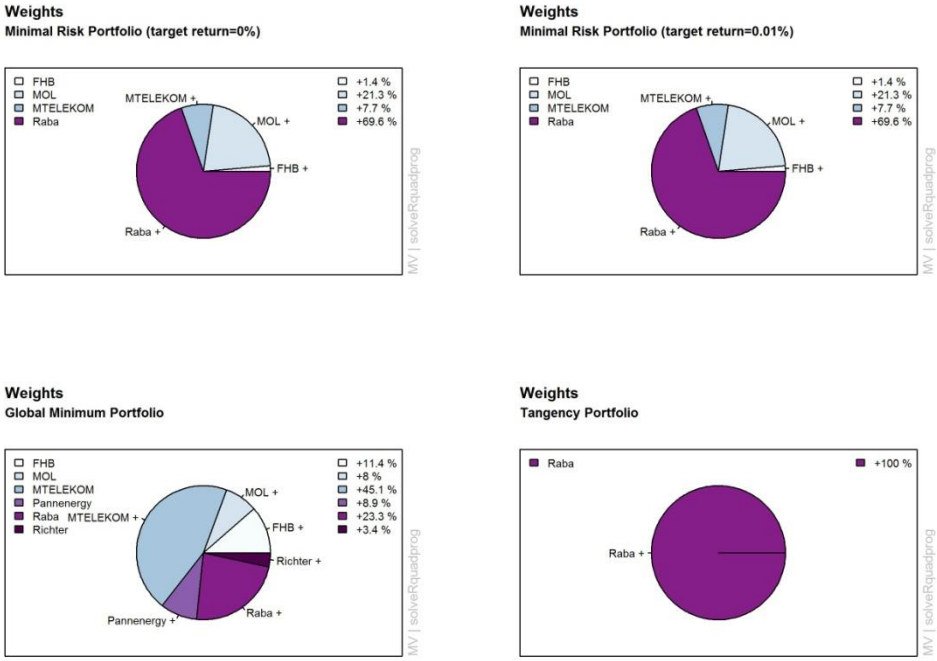


Figure 2: MV portfolio weights: minimal risk portfolio with 0% target return (left up), minimal risk portfolio with 0.01% target return (right up), global minimum portfolio (left down), tangency portfolio (right down), alpha=0.05
Source: own calculation, Rmetrics

2.3. Mean-CVaR Portfolio Optimization

In the mean-CVaR portfolio model the variance is replaced by the CVaR. In contrast to the mean-variance portfolio optimization, the set of assets are no longer restricted to have an elliptical distribution. The results are shown in Figure 3 and Table 2. I use the same notation as in the case of the mean-variance portfolio optimization.

Similarly to the result of the mean-variance optimization all single assets have negative returns except the Raba stock. Moreover Raba is the solution of the tangency portfolio optimization thus this single asset portfolio has the highest Sharpe ratio. With this stock one could reach the maximum 0.02% target return, having variance=0.0213, VaR=0.0282 and ES=0.0482 (see Table 2). The Sharpe ratio is between 0.000532 and 0.000206.

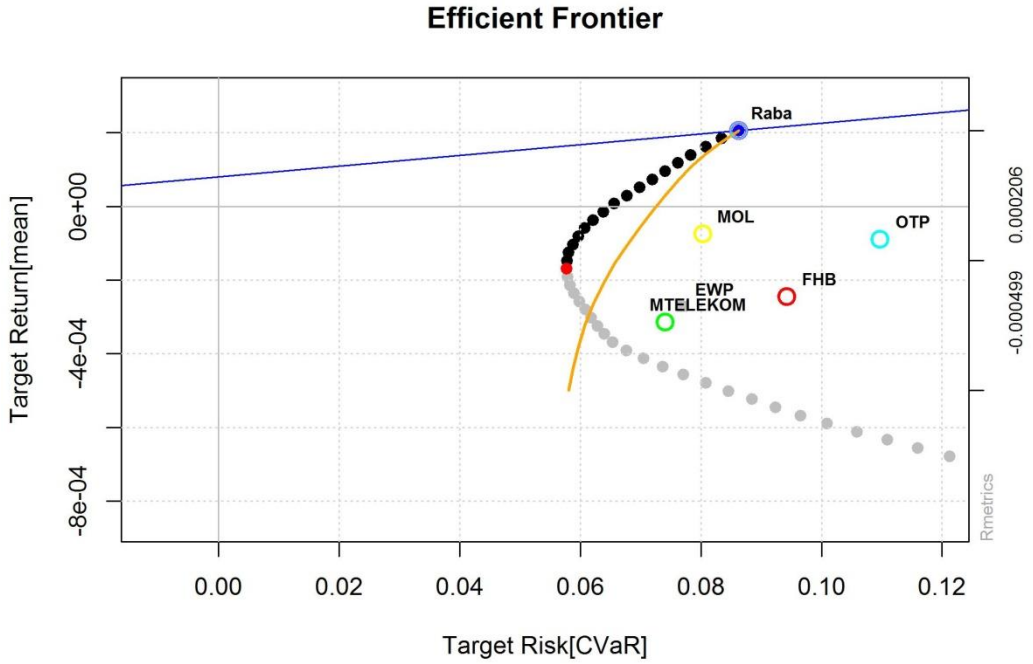


Figure 3: Efficient frontier: the solution of the mean-CVaR portfolio optimization (alpha=0.05)
Source: own calculation, Rmetrics

Table 2: Result of the mean-CVaR portfolio optimization (alpha=0.05)

Portfolio	Return	Variance	VaR	ES
Equal Weight	-0.0003	0.0161	0.0211	0.0374
Minimal Risk (target return=0)	0.0000	0.0156	0.0231	0.0372
Minimal Risk (target return=0.0001)	0.0001	0.0177	0.0256	0.0413
Tangency	0.0002	0.0213	0.0282	0.0482
Global Minimum Risk	-0.0002	0.0142	0.0203	0.0340

Source: own calculation, Rmetrics

I also calculated the mean-variance portfolio weights (see Figure 4). The optimal tangency portfolio is consists of only the Raba stock. The minimum risk portfolio with 0% target return consists of four stocks: Raba (51.8%), MTELEKOM (25.2%), MOL (16.8%) and FHB (6.2%). As a second example I calculated again the minimum risk portfolio with 0.01% target return. The composition of the optimal portfolio consist just three stocks: Raba (69.1%), MOL (22.7%) and MTELEKOM (8.2%). So with a little bit of higher expected return the FHB is not any more in the optimal portfolio. The last plot shows the weights in the global minimum optimal portfolio. All the stocks are in this portfolio except OTP: MTELEKOM (43.7%), Raba (21.1%), Pannenergy (15.8%), FHB (12.1%), MOL (6.8%) and Richter (0.5%).

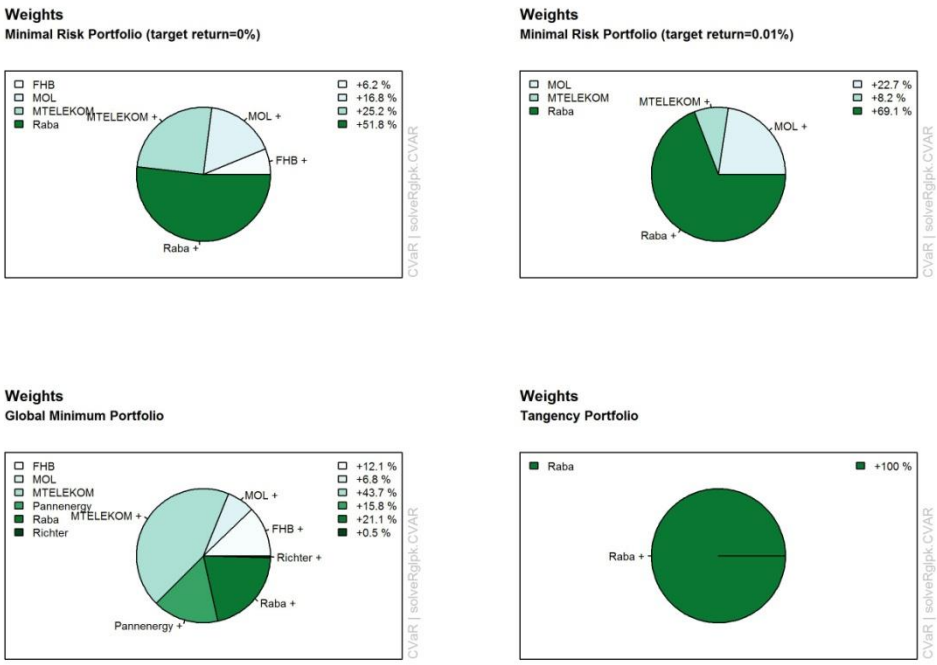


Figure 4: Mean-CVaR portfolio weights: minimal risk portfolio with 0% target return (left up), minimal risk portfolio with 0.01% target return (right up), global minimum portfolio (left down), tangency portfolio (right down), alpha=0.05
Source: own calculation, Rmetrics

3. Comparison and summary

I would like to answer to the question whether we would decide differently using variance or ES as a risk measure. Let us take a closer look of the weights on the efficient frontier in the case of the mean-variance and the mean-CVaR optimization in order to answer to this question. In the Figure 5 we can see the weights on the hyperbola curve. The first plot is the solution of the mean-variance portfolio optimization, the second and the third is the solution of the mean-CVaR portfolio optimization alpha=0.05 and 0.01 respectively. Note that the strong separation line marks the position between the minimum variance locus and the efficient frontier. Target returns are increasing from left to right, whereas target risks are increasing to the left and to right with respect to the separation line.
We can see, that the three plots in Figure 5 show different distributions. Note also that the OTP stock is almost never in the optimal portfolio (independently of the target return and/or the optimization method). For an investor it is more interesting to consider the weights where the target returns are positive.

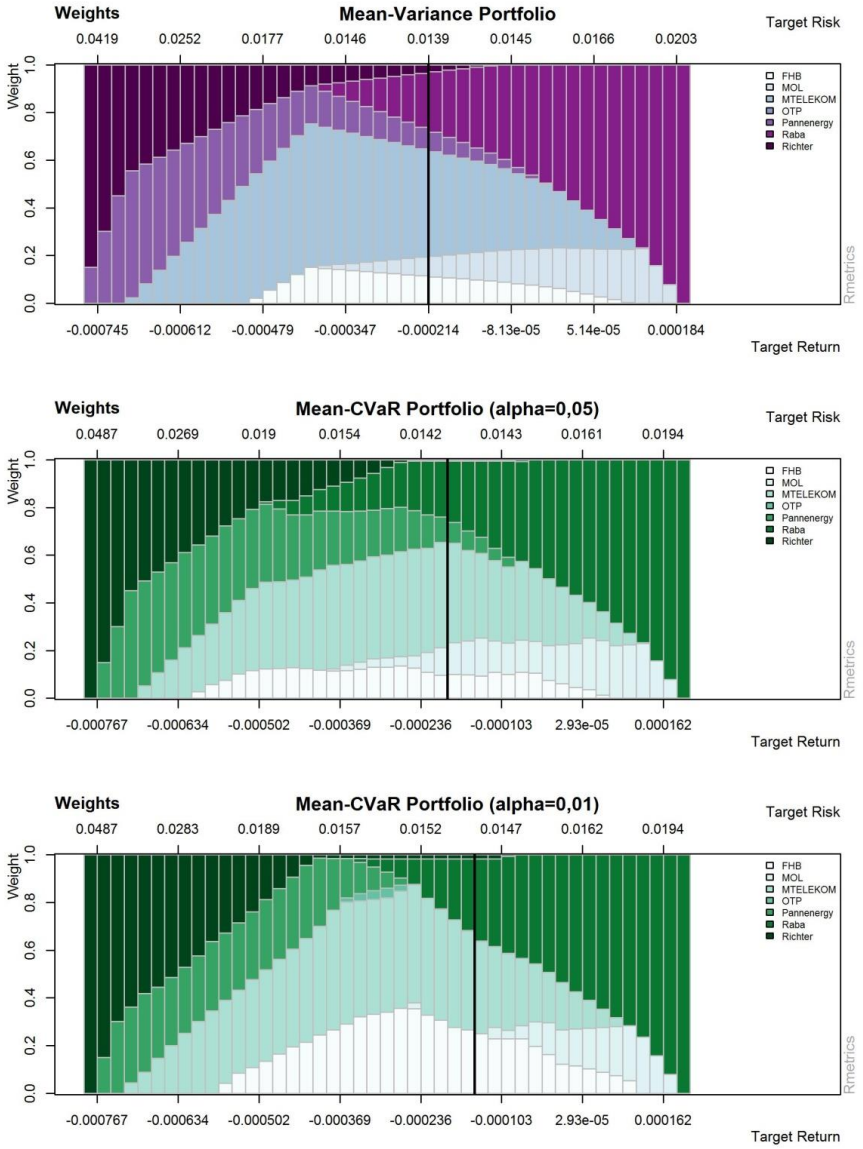


Figure 5: Weights in the stock portfolios
Source: own calculation, Rmetrics

If we fix the target return for example at 0.015% then there is no difference between the methods (see Figure 6 last column): the optimal portfolio consist of the Raba (80%) and the MOL (20%). Secondly we consider a 0.005% fixed target return (see Figure 6 first column). In this case the composition of the three optimal portfolio is the same (FHB, MOL, MTELEKOM, RABA), but the weights are different. This means, that we would conclude differently using one or the other risk measures. There is an even bigger difference for example in the case of the fixed

0.01% target return (Figure 6 middle column) because not only the weights but also the compositions of the portfolios are different. The mean-variance and the mean-CVaR portfolio optimization on the level of 1% suggest four stocks in the optimal portfolio (FHB, MOL, MTALAKOM, Raba) but again in a completely different proportion. The solution of the mean-CVaR portfolio optimization on the level of 5% consists of 'only' three stocks: MOL, MTELEKOM, Raba. This third example shows even clearer that we would make a different decision depending on the risk measure.

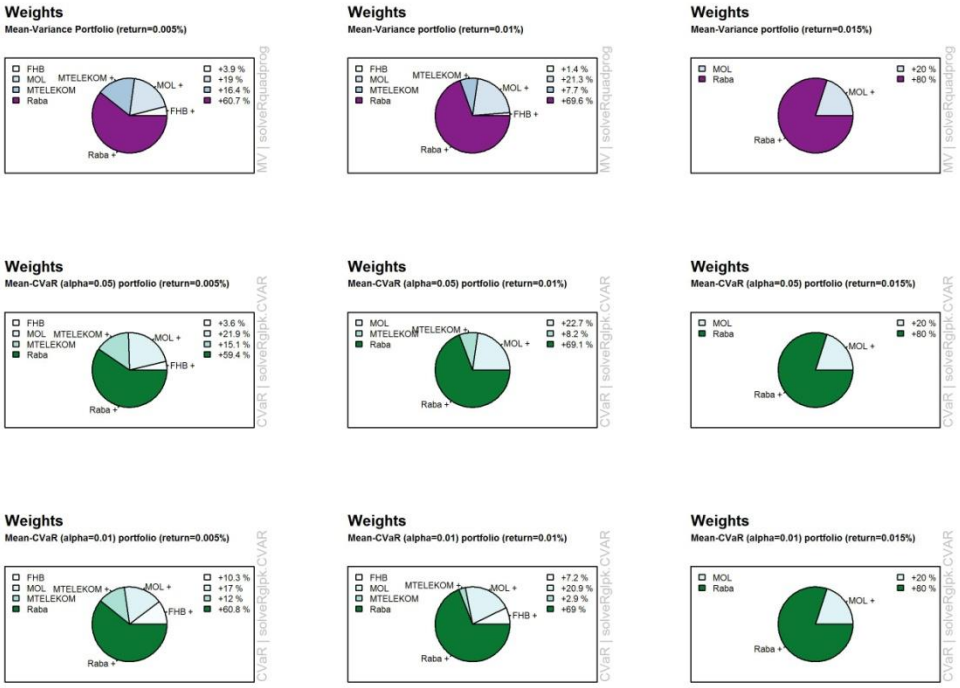


Figure 6: Weights with fixed target returns
Source: own calculation, Rmetrics

In this paper I analysed the difference between the mean-variance and the mean-CVaR portfolio optimization methods by using daily Hungarian stock data and I answered to the question whether we would decide differently concerning the composition of the portfolios in the two cases. The analysis shows clearly – see for example Figure 5 and Figure 6 - that the answer to this question is yes. The decision of an investor depends on the risk measure.

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SUB-SECTION: TOURISM

ANALYSIS OF SOCIAL VALIDATION BEHAVIOUR ON TRAVEL ONLINE REVIEWS WEBSITES

Olimpia Ban, Versavia Ancusa
Economics Department, Faculty of Economic Sciences, University of Oradea, Oradea, Romania
Politehnica University of Timisoara, Timisoara,Romania
oban@uoradea.ro
versavia.ancusa@upt.ro

Abstract: *Psychological word-of-mouth marketing substrate as well as online user-generated content presents the need for validation of opinions / actions of individuals as consumers .*
Satisfaction with a comment posted can be done by likes , a written positive answer or other forms , such as system the Gratitude – Appreciation Points, which represents the social correction of that value. The research base was the travel comments website Am Fost Acolo/ I Was There (amfostacolo.ro), which is a Romanian site where you can gather and where you can post holiday impressions, you can watch pictures, you can see and compare deals and can make bookings.
Our hypothesis formulated and confirmed are: on a large enough scale, spontaneous social aggregation selects the relevant informations for the group and social validation has a predictable behaviour in time.These results, in terms of generalization, have practical relevance for tourism managers.

Keywords: e-world-of-mouth, accomodation, modeling online evaluation, website, amfostacolo.ro

JEL classification: Z33, C52, M31

1. Introduction

Word-of-mouth communication on the Web 2.0 platforms are known in the specialty literature as the electronic word-of-mouth communication (eWOM). eWOM is a relative new form of communication that serves the information needs of consumers by providing information: recent, detailed, non-commercial and it has the potential to reach beyond the consumer's social circles (Yoo et al., 2011).
In all the phases of the holidays , the most trusted sources for consumers proved to be private sources . Personal sources are made up of friends, relatives and acquaintances who have used similar products. In the online environment, knowledge has expanded that limited sphere to knowledge from unkown people who utilize / are interested in the same products. On the other hand, those who do post an oppinion have a variety of reasons : to validate their own consumption , to prove a level of expertise as a form of gratitude / revenge against the bidder, to reduce cognitive dissonance post consumer, etc.
While traditional social relations require personal relationships to communicate, online social networks do not require this, enabling an impersonal communication

yet reliable, being much more credible than advertisements (Chung and Buhalis, 2008).
Researchers in the travel and tourism industry have found that online reviews affect hotel rooms sales (Ye et. al, 2009; Vermeulen and Seegers, 2009), and suggested that online reviews have higher levels of credibility than other sources of information (Dickinger, 2011).
One important area to consider is the perceived usefulness for comments, reflected in their positive / negative or non-assessment by other review readers . Validation messages is in relation to their positive or negative character (Hauser et al., 1993).
"The concept of negativity bias suggests that people give more importance to negative information than positive information and hence consumers should give more attention and importance to negative WOM than pozitive WOM" (Ghosh, Varshney, Venugopal, 2014).

In modeling a system to process such data there are several phases (Fisher et al., 2012), each with its challenges: the data acquiring phase (information sources selection), the data modeling phase (creating a suitable model and molding the data to it), the codding/debuging phase (dealing with large data sets creates computingdifficulties) and the review phase (requiring a strong communication and understanding between specialists from different fields).
The data modeling phase can be extremely challenging, especially if the data is not designed to be so processed. While the model itself can have strong academic and practical confirmations, fitting the data onto it can rise another problem set. Data might be corrupt, malicious,with an unexpected structure or with particular curration rules.

2. Research methodology

The objective of this research is to verify the degree of social validation of posts , taking into account the proposed evaluation system Amfostacolo.ro site .
Present issues that arise when modelling data that was not previously designed to be automatically analysed.
Hypothesis formulated are:

H1: Social validation has a predictable behaviour in time.

H2: On a large enough scale, spontaneous social aggregation selects the relevant information for the group.

The research base was the travel comments website Am FostAcolo/ I Was There (amfostacolo.ro), which is a Romanian site where you can gather and where you can post holiday impressions, you can watch pictures, you can see and compare deals and can make bookings (Ban et al., 2015; Ban and Bădulescu, 2015).
The website includes sites and accommodation facilities in over 60 destinations worldwide, with related evaluations and network moderators of the destination.
The amfostacolo.ro website uses several indicators to evaluate the satisfaction, catching also the evaluation part beyond the 5 quality features used, that is:

- 5 features which are subject to scores from 1 to 10;
- the degree of satisfaction in percentages, given by the average of
- characteristics;
- the recommendation made by a reviewer;

- the appreciation points of the usefulness of the comment, awarded by the site visitors.

According to MiniGuide guide of AmFostAcolo.ro (http://amfostacolo.ro/help9.php?id=38), the organization system designed and implemented by AmFostAcolo is based on two fundamental concepts:

1. Sharing information (impressions, advice, recommendations) into two distinct categories:
   - "accommodation" impressions - recommendations impressions about hotels, villas, guesthouses etc. and
   - "travel" impressions - contain useful information, advice, recommendations about places worth (or not worth!) visiting (restaurant, towns, museums, belvedere places, beaches, mountains, national or local parks etc.).
2. The second important criterion is the geographical organization. All the "records" relating to a specific geographical area are "gathered into a" mini-library" bearing the sticker corresponding to the name of that area. The destinations include regions and the regions include sections.

The program calculates, based on the scores and recommendations of each review, two very important synthetic indicators for each hotel / villa / lodge:

- the average of scores awarded;
- the average degree of recommendation.

If the reviewer makes does not award any mark to a criterion, this criterion will automatically receive ”-1” from the site administrators, and this criterion will be removed from average calculation.

Based on the above two indicators, the programme offers rankings of the most recommendable accommodation units, for each section, region or country.

The site uses the GAP system (Gratitude – Appreciation Points) (http://amfostacolo.ro/pma_explic.php).

Each information, text or photo uploaded on the site and in general every action useful to visitors brings a number of GAP. The management team evaluates the review and decides whether it is "accepted in the contest" (in this case it receives the GAP 1000 standard score, considered as "the vote of the site") or not. Each review admitted to the competition can get, in addition to the standard score, votes from the other users - APPRECIATIONS/ BONUSES [with values of +450/ +900 GAP].

The impressions that are not admitted to the competition can only receive symbolic votes worth of +1 GAP ("dislike") or -1 GAP ("dislike"). Furthermore, points are awarded for the number of votes received, for photographs, photograph comments, replies to the posts etc.

Data were gathered from the site on 04.30.2015 (posted at the time) andentered into an excel document, from where we selected the desired information as specified in the Table 1 (Ban et al., 2015).

Table 1: The characteristics of research population

Characteristics	**Absolute values**	**Relative values**
Total number of accommodation structures in Romania reviewed on the site	3755	100%
Number of reviewers for the structures in Romania by id/ by name:	9418/ 9417	100%
Total number of reviews for Romania	20883	100%
Number of reviews for locations in Romania	5683	27,21%
Number of accommodation reviews for Romania	15200	72,79%
Total number of reviews for hotels in Romania	5749	37,82%
Total number of reviews for pensions in Romania	5337	35,11%
Total number of reviews for villas and apartments in Romania	1329	8,75%
Total number of reviews for other accommodation structures in Romania	2785	18,32%
Age groups for reviewers for Romania		
<16 years old	32	0,34%
16-20	98	1,04%
20-30	2081	22,10%
30-40	4709	50,00%
40-50	1913	20,31%
50-60	441	4,68%
>60	88	0,93%
Type of travel of reviewers for Romania		
Single	182	1,93%
Childless couple	2973	31,57%
Families with children	5038	53,49%
Any	6	0,06%
Friends	1000	10,62%
Team-building	216	2,30%
Colleagues (there is this possibility in the file)	3	0,03%
Number of reviews according to the Gratitude-Appreciation Points awarded by the site administrators and by the other readers		
-700-0 (non-appreciation)	460	4,88%
1-2000	4926	52,30%
2000-3000	1257	13,35%
3001-4000	854	9,07%
4001-5000	786	8,35%
5001-10,000	864	9,17%
10,001-60,000	271	2,88%

(Ban et al., 2015)

3. Stages of research

In order to test the assumptions made, we started with the standardization of the corpus to be evaluated. Due to the large number of entries (15200 reviews) and to the stylistic variation of the inflows (8912 distinct users) there have been obvious difficulties in processing such as the use of diacritics or not, the use of colloquial expressions, the use of abbreviations, vocalizations and so on. Therefore, we have created a mini-corpus of words that we have removed: linking words (and, with, the etc.), pronouns (I, me, that etc.), all the conjugations of auxiliary verbs to have and to be, regionalisms (îs, mis, etc.), onomatopoeia / interjections (eeh, băi/yo, meh, etc), numerals (doi, doua, trei, etc /two, two, three, etc.), certain abbreviations (etc., and so on, pt/for) and misspellings (di, astia, abea, etc /di , guys, barely, etc). Some abbreviations have been replaced with literary forms of the words (eg "fff" with "very", "km" with "kilometers"). In total, the filtering corpus had over 480 distinct entries which amounted to 4,011,135 replacements on the body to be processed. In the end, this has allowed the standardization of the corpus to be evaluated.

When analyzing the comments, their perceived importance/ accuracy and/or relevance relative to a location is quantified using two variables: the GAP and the score. While the score should be the “real” value, the GAP represents the social correction of that value or social validation of the post.

In other words, the social network corresponding to the “amfostacolo” site acts as a validator. In this case, it might be argued that even the number of votes per post can be relevant as a validation measurement. While the number of votes expresses how many people found the post helpful, this particular variable does not present the post quality, in the way GAP does.

In order to compute OCS, as stated before, we considered the GAP as a “validator” for *score*.

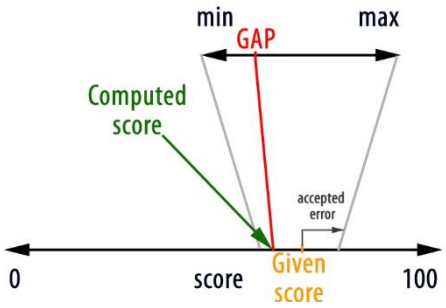


Figure 1: Scaling *score* according to *GAP*

One question that we must answer before proceeding is the size of the individual error. For this particular case, as there haven’t been reported any potential malicious postings, we considered a ±10% an adequate accepted error range.

A problem with this type of scaling is that the GAP is presumed to be linear. Reffering strictly to the GAP variable, the minimum, maximum and average value,

suggest the fact that its scale is not linear, however, the hystogram for that value shows it's not pure exponential either (Figure 2)

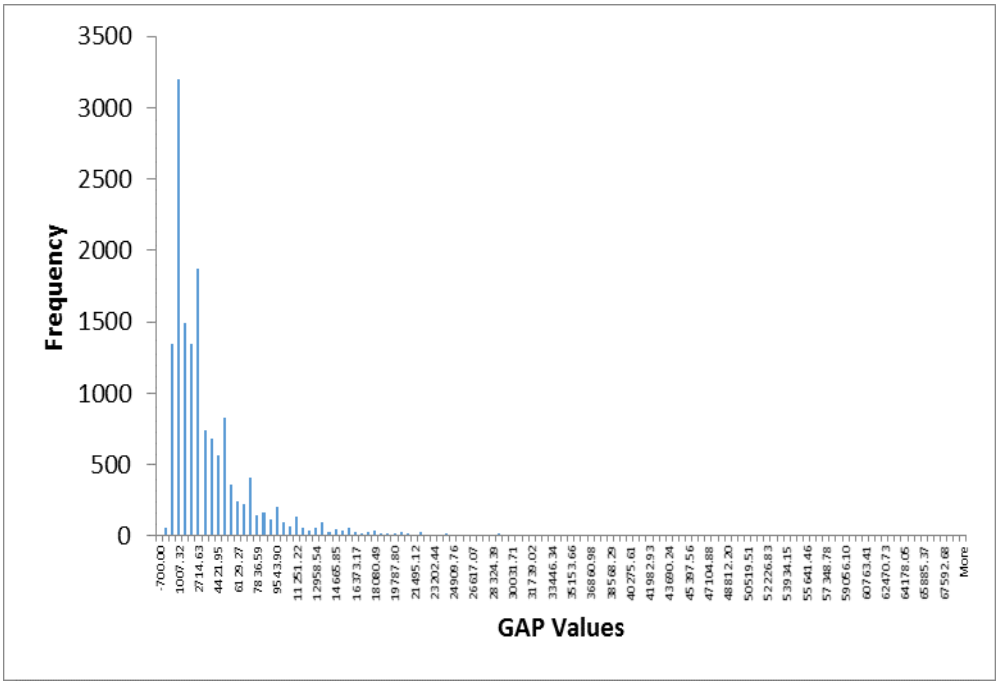


Figure 2: GAP hystogram

Regarding the matter strictly from a value-centric view-point, the positive and negative values of GAP have different variation forms: the negative is linear (Figure 3a) and the positive can be approximated with a power-law distribution (Figure 3b)

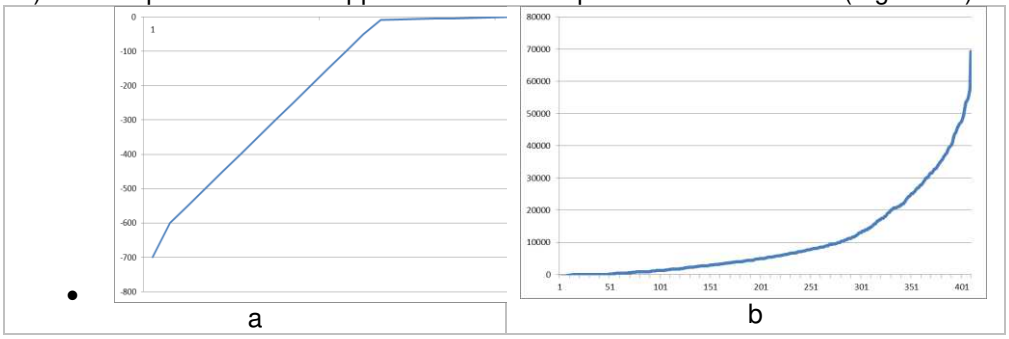


Figure 3: GAP range

If we want to use the GAP in order to scale the *score* that we must scale taking the GAP value variation form into account. In order to do that, the following steps were taken:

Step 1: Clean data

Due to the competiton model implemented by the site the ±1 symbolic scores lead to odd values, like 51 or -101 in the GAP column. In order to create a uniform value

set, these symbolic scores needed to be excluded, therefore we applied the following transformation. This gives us only 327 unique values for GAP, instead of 410 values that include the contaminatedones – it's a 20.24% reduction in the value set. However, from the histogram point-of-view the difference is minimal (see Figure 5, value series 1 and 2). The loss in GAP is felt only by the weakly appreciative GAP, the strongly appreciative GAP are not impacted. Through this we ensure that the most validated oppinions are put first, reflecting the social networks' viewpoint. If there are fake, malicious or simply misinformed posts it's more likely that they are weakly renforced and through this cleanup their influence will be further diminished in the overall subsequent analysis.

Step 2: Determine existing linear scale

For the newly computed GAP< ~1000, the scale is a very good approximation of a linear function, and even for GAP< ~4500 we can find a linear trendline with a R^2 fit ≥0.99 (Figure 4). However, for larger values we need to employ different methods.

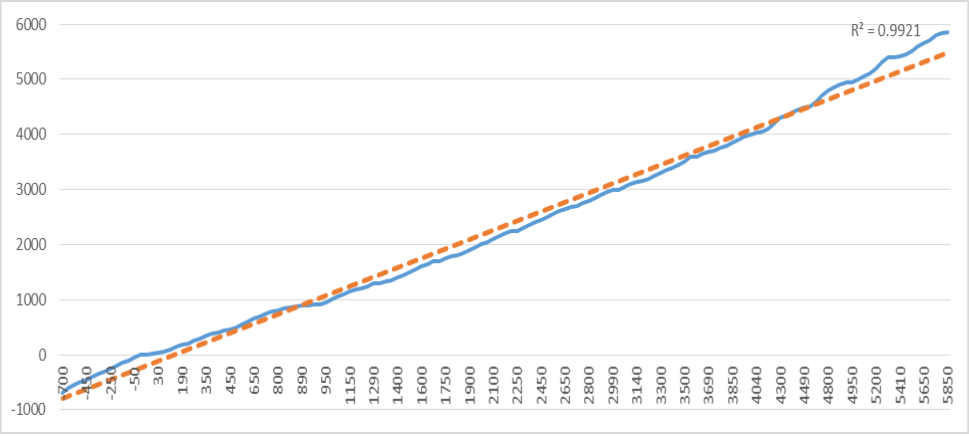


Figure 4: The quasi-linear part of GAP
The dashed line represents a linear trendline.

Step 3. Linearize the rest of the scale.

This was one of the most difficult parts, as there are few values and the scale is power-law. One purely mathematical method to solve this is to use a logarithmic value for GAP after a threshold. But, it is our oppinion that in order to model this part, we need to reverto the data intrinsec meaning: a validation of another's oppinion. So the question that arrises is: when is enough validation for an oppinion, i.e. : if 100 people agree that an oppinion is correct, does it matter that another 500 people agree with them? In order to answer this, we reffer to Table 2 and the fact that the average number of votes/post is 6, with the average GAP 3685. The simplest solution is to limit the maximum value at 4500, giving us a linear value scale and a limitative histogram with a number of 3423 positive oppinions (30%) limited at 4500 GAP. To further support this solution, it can be seen in Figure 5 that

there is a natural build-up in the histogram at values around 4500, the higher values frequencies being a less significant.

To summarize, in order to scale score with GAP, we currated the values, found the natural linear scale for GAP – partly due to the value variation and partly through limitation.
Using this linear GAP scale, OCS can be computed as shown in Figure 1, in order to be further used in various data analysis scenarios. The score itself is not really important in analyzing the social network's behaviour, more important is what the network members think and to what they react, which reflects in the GAP and votes variables.

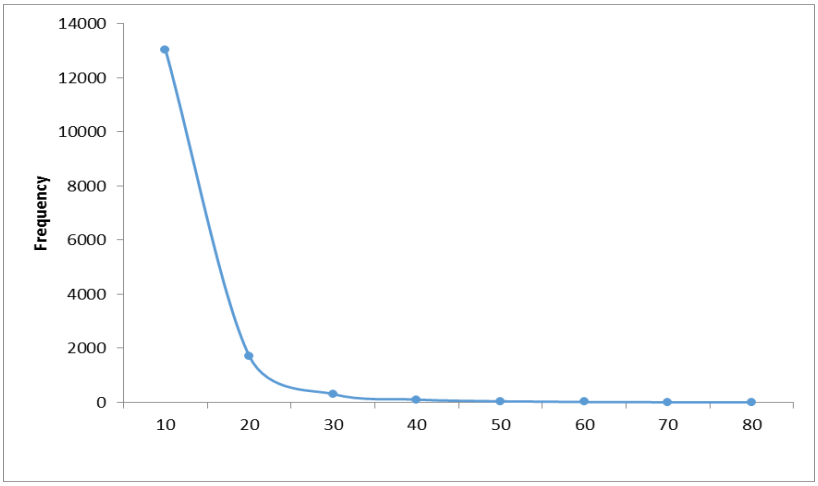


Figure 5: GAP histogram throughout the differrent transformation steps

Regarding the voter's behaviour the variables that express that are *GAP* and *votes* and they have a power-law distribution which is quite a clue (Figure 2,Figure 3b and Figure 6).In real social networks, one of the most used growth models is the Barabási-Albert which is based on the idea of preferential attachment (Barabasi, 2012). In this model, the network grows by adding new nodes that have the probability of attaching themselves to other nodes proportional to the number of links those nodes already have. The power-law degree distribution found in these types of networks is a consequence of this growth model.
In the case of the social network behind amfostacolo.ro, the aforementioned distributions of *GAP* and *score* are useful to validate that we are indeed working in a Barabási-Albert model, therefore hypothesis 1 "Social validation has a predictable behaviour in time" is true, as the validation obeys the growth laws of the model, the same as another network of this type.

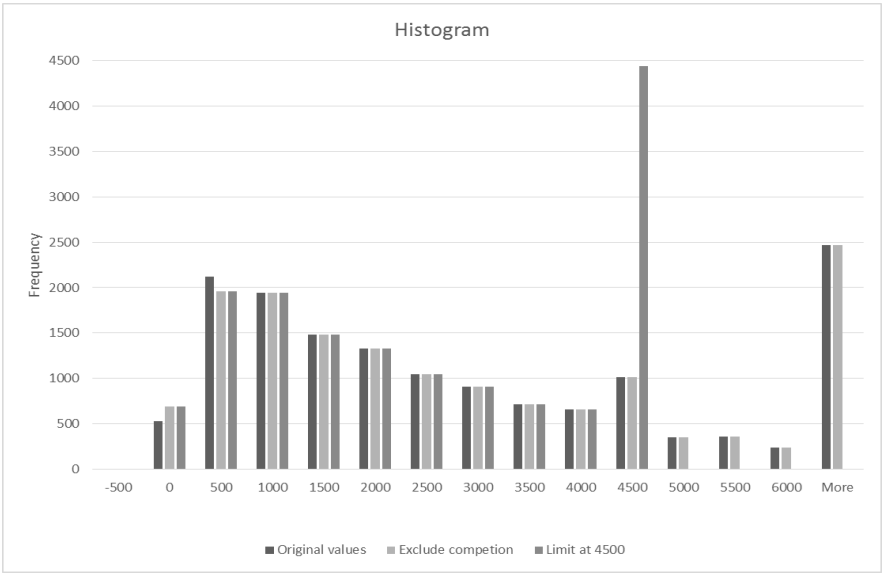


Figure 6: Number of votes (*votes* variable) histogram

The final hypothesis, H2: "On a large enough scale, spontaneous social aggregation selects the relevant information for the group" requires multifaceted understanding of the social network's behaviour that's reflected in the two social-influenced variables. Although there are many posts with few votes (13020 posts with ≤10 votes – 85.65% of the total) the remaining posts have an impressive number of votes and of GAPs. These are the socialy selected relevant informations (the ones that most people connect to) and this aggregation is especialy visible in large networks in which the underlining power-law distribution creates a dramatic difference (Albert-László Barabási, 2012). Otherwise formulated, people tend to vote and attribute trust to opinions that are already validated by many users and tend to abstain from voting on less-validated oppinions. In conclusion, for a majorly untempered, large review site, hypothesis 2 is true.

4.Conclusion

The use of online platforms for posting comments by current and potential tourism consumers is a widespread practice and with direct and measurable implications for hotel managers. The problem that has arisen is way of validation of reviews,, posted on virtual platform such Amfostacolo.ro.

In this paper, we suggest way to determine the conditions under which relevant information arises from the comments posted.

The conclusions of the current study, carried out on the Am fost acolo.ro site have showed that:

5.1 On a large enough scale, spontaneous social aggregation selects the relevant informations for the group for a majorly untempered, large review site;

5.2 In the case of the social network behind amfostacolo.ro, the aforementioned distributions of GAP and score are useful to validate that we are indeed working in a Barabási-Albert model, therefore hypothesis “Social validation has a predictable behaviour in time” is true, as the validation obeys the growth laws of the model, the same as another network of this type.

The limitations of the present research are related only to the testing of the analysis ways on only one travel site, which which prefigures also possible future research on other similar platforms.

Acknoledegments
We would like to express our gratitude for the support in this research to Mr. Cornel Bociort, amfostacolo.ro the site developer.

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A MODEL FOR MEASURING THE STUDENT BEHAVIOR IN WEB 2.0. CLASS. CASE STUDY OF TOURISM STUDENT SPECIALIZATION

Ramona Lacurezeanu[1], Liana Stanca[1], Alexandru Chis[2]
[1]BIS, FSEGA, UBB, Cluj-Napoca, Romania
[2]Marketing, FSEGA, UBB, Cluj-Napoca, Romania
ramona.lacurezeanu@econ.ubbcluj.ro
liana.stanca@econ.ubbcluj.ro
alexandru.chis@econ.ubbcluj.ro

Abstract: *The digitization as a general phenomenon is influencing even the students we meet nowadays, making their expectations grow regarding the experiences offered by the eLearning context. At the global level it is found that the student as consumer of pieces of different content, with different levels of involvement as well as with a different level of attention is hard to be pleased. It is difficult to follow their interests and from here stems the difficulty of measuring the students´ behavior. Our study will provide a model / tool for measuring the involvement of the student specializing in tourism within the courses by capturing levels of involvement in the course of learning and outlining their behaviour. We will compare the achieved results with the model of the student as it was imagined by the teacher when constructing the entire course. Our research will provide the specialized literature with conclusions on the impact of using collaborative environments in teaching and learning with implications and consequences on the improvement of digital skills.*

Keywords: education; learning; community; collaboration; Wikispaces; engagement

JEL classification: A23

1. Introduction

It is in the 21st century that technology continues to reinvent each aspect of our existence and the aspect of teaching and learning is especially reinvented by it. According to (Conole,Alevizou,2010), the main objective that education has is to develop new abilities in order to extend the capabilities of the ones who learn with the purpose of preparing the learners for a world that is under the influence of changes, while the acquisition of new knowledge is becoming a secondary objective. It was in this context that a reconsideration of the theories and models of learning was imposed, according to three major axes: associative (the learning is achieved by means of structured tasks, such as the behaviourist approach adapted with the aid of Web 2.0 associative resources), cognitive (learning through understanding and reflecting over one's own learning – metacognition), and situational (learning as a social practice, with constructivism and connectivity bearing the most importance,through developing the communities of practitioners. The study has the purpose of illustrating a model of teaching that was conceived and implemented so that it would adapt to the new trends in the educational domain, while also considering the particularities generated by the introduction of

the IT&C in the economic domain. The central idea lying at the basis of our entire concept is to offer students the possibility to learn and acquire the way in which they can continue to gather useful information and to learn througout their entire life by becoming aware of the fact that learning has a new dimension. The student or learner is presented with ways of acquiring new knowledge in the domain of tourism, while the secondary aim is for us to focus on developing new abilities and capabilities so that the learners would face the continuous changes from the domain in which they would eventually become experts, which in our case is tourism. ”However, it’s important to remember: integration of technology in bits and pieces doesn’t help. A deeper incorporation is required. Sure, experiments fail. Speed bumps slow down the pace. But what is important to make it work is to iterate. Iterate until you strike the right balance” (Sharma,2016). In this context, our article can be integrated in an area of higher levels of education that is caught up between distopia and utopia, where the only viable solution would be to use digital technology as the tools to improve the student and the means to prove experience and achievement. One of the primary reasons to use wikis is because they help our students reach Bloom’s higher order skills – things like creating and evaluating (Center of teaching). The article is structured in four parts or sections: the first is dedicated to a brief incursion in the specialised literature, followed by a presentation and outline of the purpose and methods of research that were used, a practical model to extract information within data; according to it, one can build a behaviour pattern of involvement in a course that is dedicated to learning about IT&C instruments that are used in assisting the decision-making process in tourism. The last section contains the conclusions, limits of research and the future subjects that would continue the present research.

2. Literature review of Wiki in Higher Education (HE)

In the following section, the authors discuss cases that demonstrated the emergence of wikis as important tools in higher education. The first apparition of the role played by wikis in academic education according to (Sutton,2012) dates back to the mid 1990s. Wiki started to gain popularity in the area of research dedicated to teaching foreign languages and to written communication mediated by the computer (CMC) (Pennington,2003). According to Ware and Warschauer (2006), wiki allows the initiation of asynchronous discussions that can be combined with the interactive aspect of written conversations which would allow the measuring of not only the students’ capacity to compose contexts but also their capacity to elaborate on specialized discourses. According to its nature, the wiki can be interpreted as an asynchronous instrument for communication that can withstand many composition principles regarding specialized texts. The idea sustained by (Purdy,2009), is that the wiki allows for the analysis of composition principles through evaluation, collaboration, continuous revising as well as forming and gathering common knowledge. In (Lundin,2008), it is demonstrated that the wikis ease the collaboration process by facilitating the interactions and developing the creative capacity of the student who wants to write. In (Godwin-Jones,2003), the wiki was utilized as a collaboration platform in the course rooms in the area of foreign languages. In (Mi,2012), one witnesses a reviewing and revival process of the studies related to wikis together with pedagogical implications and we have reached the conclusion that 4 big directions of research were most visible: the

collaborative writing process, writing product, perceptions of wiki-based collaborative writing, and effects of tasks. According to (Raman,Ryan & Olfman,2005) wikis are used in the context of advanced studies with the role of assisting knowledge management. According to (Ravid,Kalman&Rafaeli,2008), from the functional point of view, a wiki is meant to engage individuals in processes, to employ them, to regularly revisit pages in a collaborative way in order to add new information and to create links between pages. The conclusion of their study is that through a wiki we can develop an online manual regarding collaboration between students. The research of (Smith&Toland,2008; Robertson, 2008 and Ruth & Houghton, 2009) is added to these results, maintaining the idea that a wiki allows one to study the behavior of the student in the context of the academic learning and teaching process. Moreover, (Bruner,1990), completes the research by bringing solid arguments in favour of the idea according to which the wiki perfectly applies itself to the constructivist approach to learning, since the student is actively involved in creating knowledge, instead of absorbing it (Aiim,2016), (Lee,2010),(Sharma,2016), (Leung,KaiWahChu,2009). (Santosh Bhaskar,2013) focuses on the wiki analysis for the classtroom with the following scenario: creating a wikiclass with the purpose of creating an environment that is more encouraging towards communication, thus enhancing the students' capacity to collaborate and work together, transforming them into facilitators of communication. They are able to post their work on the platform and see the comments presented by their colleagues as feedback. Therefore, wiki allows students to teach others. The motivation of such an environment is the following: the teachers and professors use wiki to motivate students in order for the latter to get more involved in the learning and teaching process. In the works of (Santosh,Bhaskar,2013),(Sutton,2012), (UD,2008), (Leung,Kai WahChu,2009), we get to analyse the impact of the wiki in the academic environment: for example, it e*ncourages non technical users, as they* can create and publish content with ease; thus, it c*onnects multiple resources - w*iki is a combination of Web pages linked together; this way, educators can provide students with as many resources as they can. It helps them learn in a detailed way. in subsidiary, this research as well as the information provided in (Felea,Stanca,2014), we see the authors focusing on the idea that the wiki is that element which increases the students' participation levels within the learning and teaching process. According to (Taylor,2011), student engagement has primarily and historically focused upon increasing achievement, positive behaviors, and a sense of belonging in students so they might remain in the classroom and have successful results. (Robertson,2008) supports the idea that using the wiki in facilitating learning at one's workplace is in accordance with promoting awareness, offering participants the opportunity to assimilate technology as the support in gathering new specialised knowledge in their field of expertise. In (Bruen,2010) we find the assertion that wikis are web spaces which are adequate to pursuing academic activities that offer the opportunity to gather information, to discuss and analyse the issues both individually and as a group. However, in (Lee,2010) we support the idea that the wiki has a positive impact on developing the students' writing abilities through collaboration and involvement. The conclusion of the study is that the educator, be it a teacher or professor, must offer the learners guidance by providing suggestions and advice with a view to efficiently use the materials and tasks in equally efficient feedback. To these conclusions that are all in favour of introducing wikis in the learning process, we add the results of

the study carried out by (Talbot,2012), according to which utilising a wiki determines the improvement of the student's work, the development of their professional competences while at the same time contributing to the improvement of the quality feedback formulation. It was in this context that we considered it useful to extend the area of research regarding the use of the wiki in the teaching and learning process that is found in the economic domain. In the present study, we have opted for creating a wiki environment that has the role of dashboard, and the one of the educator as facilitator. In our vision, the paper will contribute to the extension of the area of knowledge of the wiki as instrument of measuring the degree of involvement manifested by the student in the courses of tourism. The study is trying to validate the results obtained by (Talbot,2012) as they were reported and interpreted in accordance with the particularities of econimic learning.

3. Statistical Study

We intend to determine the types of involvement behaviours (engagement) of the students in the economic domain, together with the sub-domain of tourism in the process of learning and teaching the subject of Systems of Assistance for Businesses in Tourism. The hypothesis we started from is that Romanian students have an irregular involvement behaviour (Felea,Stanca,2010). More exactly, they become involved only if they are constrained to do so through various methods employed by the educators. This behaviour in perfectly applied to the profile of the Romanian student as it was observed after the moment of changing the type of learning from the elite universitary one to the mass superior system of learning transition. We have carried out a study on 52 participants to a course / laboratory, where we used a series of IT&C instruments that were dedicated to assisting business decisions. The teaching and learning process was a combined one in which we employed the wiki we had created as well as face-to-face meetings. The theoretical support as well as the assignments were all uploaded on the wiki, followed by detailed examples ad explanations. The face-to-face meetings were aimed at explaining the theory as well as some practical aspects of the subject. In this respect, we used both classical and modern methods: short presentations, case studies and debates, powerpoint presentations created by students and professors, team work, etc. The advantage of such a system is that the educator has a general image of the student's overal behaviour througout the entire course, being able to offer personalized assistance. Furthermore, the educator can determine the students to increase their levels of participation through different motivational factors and techniques. In what follows, we shall present the image of the wiki used as dashboard over the entire period of the 14 weeks of study. The wiki contains 10 pages, allowing for the navigation in all the other pages. In what follows, we shall perform a brief incursion in our wiki in order to present its structure. Here is how we structured the aatcsfsega space: a guard page (Home), in which we presented the general information about the course, the themes we tackled , each in a separate page that comprised different materials and tutorials as well as bibliography, etc.), together with evaluation possibilities. This online learning platform started out in the university year of 2015-2016, with the intent of developing and sharing the use of resources that were created for the study of the subject entitled Informatic Systems of Assistance in Businesses for the students of the Faculty of Economic Sciences and Business Administaration in the Babes-

Bolyai University of Cluj, Romania. Finally, this has become a learning environment employed in assisting classes, laboratories and individual work based on the project. About wiki: Basic Notions, Wiki Tutorial, technical aspects, advice on how to learn online, organizing the course and demands, Course Content and material support for each unit course, themes: Seminars – Materials and Themes, Courses. Registering within the wiki was performed by means of an invitation sent via email that the student had to eventually confirm. The total number of subscribed students was of 51, and the user account consisted of a user name and a password. Moreover, each student had an email account at their disposal, with the possibility of completing their profile (Settings) with their real name and surname, also adding a photo.

3.1 Objectives

Implementing the wiki in the learning process destined to IT&C instruments of decision assistance in tourism has allowed us to check the degree of involvement manifested by the student in the learning process within 14 weeks. The involvement of the student from the educator's point of view represented the constant participation to courses both on the wiki and to the face-to-face meetings. The involvement of the student on the wiki was measured by means of the number of views and editings over the 4 months of course development. Within our analysis, we define the student's involvement as consisting of the following dimensions: the student is constantly involved in the activities all over the semester, behaving in a homogenous way and reacting to constraints. However, it would be ideal for them to become involved out of their own will, eventually. The educator has developed a wiki starting from the premise that a student would enter the surface of the wiki on an average of 3 times per week, with the purpose of doing his or her homework with the aid of the materials that are available in the wiki. In this respect, the wiki represents and fulfills the role of a dashboard and at the same time an environment of collaborative interaction in which the student can cooperate with other students and also with professors in order to successfully complete the given tasks. Here are our study hypotheses: I1. The students have no constant, homogenous involvement within the course. The alternative hypothesis: the students are involved throughout the entire duration of the semester; I2. The students do not have a homogenous behaviour throughout the semester. The alternative hypothesis is that they present homogenous behaviour throughout the semester; I3. The students do not get involved in the wiki activity without constraints represented by deadlines to hand in assignments. The alternative hypothesis: the students get involved in the wiki activity with the constraints represented by deadlines for handing in assignments. For the statistical study, we used SPSS 13.0 and the nonparametric tests Friedman, Kruskal-Wallis, and Marginal Homogeneity Tests. The decision to apply them was based on the results of the Kolmogorov-Smirnov test. We used the TwoStep method according to studies by (Bacher, Wenzig,Vogler,2004), (Gower,1971) and (Ichino,Yaguchi,1994) in order to determine the optimal number of clusters existing in a set of mixed data. The study was carried out on 52 students enrolled in the first year of study of the Master's Degree of Tourism from FSEGA, UBB Cluj-Napoca, out of which 76.9% are of the feminine sex and the rest of 23.1% are of the male sex. The real behaviour of the student within the wiki over the period of the 2015-2016 university year is illustrated by the results of the descriptive analysis which is described in what follows:

1. The average number of views in Oct. was of 7,83±4,264, 95%CI (6,64;9,01)
2. The average number of views in Nov. was of 42±71,743, 95%CI (22,03;61,97)
3. The average number of views in Dec. was of 58.54±91.26, 95%CI (33,13;83,95)
4. The average number of views in Jan. was of 152.46±117.89, 95%CI (119,62;185,31)
5. The average number of views in Feb. was of 26.44±39.116, 95%CI (15,55;37,33)
6. The average number of editings in Oct. is of 1,63±2,258, 95%CI (1,01;2,26)
7. The average number of editings in Nov. is of 1,65±2,009, 95%CI (1,09;2,21)
8. The average number of editings in Dec. is of 3,92±3,06, 95%CI (3,07;4,78)
9. The average number of editings in Jan. is of 4,88±2,777, 95%CI (4,11;5,66)
10. The average number of editings in Feb. is of 2,13±1,990, 95%CI (1,58;2,69)

The study continued by checking the hypothesis that the students have no constant involvement within the course. The alternative hypothesis is that students do get constantly involved in the course all throughout the semester. The first step consisted of applying the Kolmogorov-Smirnov test, according to which ($p=0.000<0.05$), data which were not normally distributed. In order for us to apply the statistical hypothesis we applied the Kurskal-Wallis test for independent and unequal samples. The result of the Kurskal-Wallis test for the view (Chi-Square=69.253,p-value=0.000)and for editings (Chi-Square=53.475,p-value=0.000) imposes the rejection of the null hypothesis and accepts the alternative one as valid. The conclusion we can draw is that the students have various degrees of involvement from one month to the other in course activity. In this context, we have proceeded with testing the following null hypothesis: the students do not have a homogenous behaviour during the semester and the alternative hypothesis is that they actually have it during the entire semester. The result of the Marginal Homogeneity Test imposes the rejection of the null hypothesis and accepting the alternative one becomes valid.

Table.Marginal Homogeneity Test

	View-edit Oct	View-edit Noiembri	View-edit dec	View-edi Ian
Mean MH Statistic	1295,500	1725,500	4167,500	882,000
Std. Deviation of MH Statistic	288,626	377,591	673,488	157,493
Std. MH Statistic	3,078	3,492	5,584	3,073
Asymp. Sig. (2-tailed)	,002	,000	,000	,002

Therefore, within the study we can conclude that the students have homogenous involvement behaviours, more exactly a student with intense activity within the first month of the course maintains his or her degree of involvement throughout the entire course, while the students with a low level of involvement during the first

month of the course will manifest a low level of involvement or a fluctuating one until the end. The study continued with checking the hypothesis stipulating that the students do not get involved in the activity of the wiki without constraints regarding the deadlines for submitting assessments; alternatively, the students do get involved in the wiki activity with constraints related to the deadlines for presenting assessment. In order to test this hypothesis we used the Friedman Test. In the case of the views, the result of the Friedman Test is that (Chi-Square=72,892 ,p=0.000), so the null hypothesis is rejected and the alternative one is accepted. The statistical analysis continued with the application of the Wilcoxon non-parametric test in order to check if there are significant differences between the number of views achieved by the students within the wiki. The results show significant differences between Oct-Dec (Z=-3.999,p-value=0.000); Oct-Jan (Z=-6.139,p-value=0.000); Oct-Feb (Z=-3.617,p-value=0.000); Nov-Jan (Z=-5.673,p-value=0.000); Dec-Jan (Z=-4.633,p-value=0.000); Dec-Feb (Z=-2.998,p-value=0.003); Jan-Feb (Z=-5.508,p-value=0.003). In the case of the edits of the Friedman Test result (Chi-Square=34.124 ,p=0.000), so the null hypothesis is rejected and the alternative one is accepted. The statistical analysis continued with the application of the Wilcoxon non-parametric test in order to verify if there are significant differences among the number of edits done by the students within the wiki. The results show significant differences between Nov edit – Oct edit (Z=-0.863,p-value=0.388); Dec edit – Oct edit (Z=-3.650,p-value=0.000); Jan edit – Oct edit (Z=-4.656,p-value=0.000); Feb edit–Oct edit(Z=-3.705,p-value=0.000); Dec edit – Nov edit (Z=-4.624,p-value=0.000); Jan edit – Nov edit (Z=-4.624,p-value=0.000); Feb edit – Dec edit(Z=-2.278,p-value=0.023); Feb edit – Dec edit(Z=-2.596,p-value=0.009); Feb edit –Jan edit(Z=-3.996,p-value=0.000). The conclusion to be drawn from this stage of the analysis is that the students get involved in the activity provided by the wiki as long as they are constrained to do so. In this context, we continued the analysis with the application of the TwoStep method in order to trace the number of clusters that exist within a sum of data of different types. The null hypothesis is this stage is the following: there are no differences among the groups of students generated by the levels of involvement in the learning and teaching process of IT&C in assisting the decision making process in the touristic domain. With the purpose of validating/ invalidating this hypothesis, we applied the cluster analysis on basis of the studied variables. The null hypothesis is rejected and the result demonstrated that the students are grouped in 2 clusters, according to the studied variables. These studies are characterised by the fact that the value of the inter-class inertia significantly surpasses the values of inertia within the same class. As a result, from the standpoint of the degree of interest for study, by direct involvement in the learning and teaching process of IT&C in assisting decision-making in tourism, we have observed that view($F = 116.129$; $p = 0,005$) and edits ($F = 64.677$; $p = 0,03$). The result of the cluster analysis (the k-means method) according to the studied variables demonstrates the fact that the students are grouped in 2 clusters according to the attributes under study, as follows: 1. The first cluster of students – 64% comprises the person with a low level of interest for IT&C decision assistance in tourism, while the number of persons with a high level of interest is very low. The participation and level of involvement in the theoretical and practical activities of the course is situated under the average of participation predicted by the educator as being necessary for assimilating knowledge that is provided by the course. The marks obtained by the

participants vary between extremes. From 10 to 7 and even some lower than 6.; 2. The second cluster of students - 36% includes the persons with a high level of interest in the IT&C decision making assistance in tourism. The participation and level of involvement in activities throughout the semester is high and is situated above the limit of participation settled by the educator as being necessary for assimilating the knowledge that is provided by the course. The marks obtained by the participants range between 8 and 10.

3.2 Discussion

The views, edits and posted commentaries during the 4 months were all taken into account per student, but also per item taken from the wiki page. Fir the I1 hypothesis we applied the Kurskal-Wallis "test for independent and unequal samples", and the result was that the students present varying degrees of involvement from one month to the other during course activity. For the I2 hypothesis we applied the Marginal Homogeneity Test and we discovered that the students present a homogenous pattern of behaviour during the first semester, while for hypothesis I3 the Wilcoxon non-parametric test was applied, proving the fact that the students become involved with the wiki activity only under constraint. We can affirm that after the analysis of the three hypotheses there are no differences between the reactions of the students as they are generated by the levels of involvement in the learning and teaching process of IT&C in the decision making process characteristic of the touristic domain. The null hypothesis was rejected and the result of the cluster analysis (the K-means method) according to the studied variables demonstrates the fact that the students are grouped in 2 clusters according to the attributes taken in the study. Taking the analysis further, we have come up with the following conclusions: 1. There is a low proportion of students who are constantly involved in theoretical and practical activities involved by the course and the knowledge assimilated in the course are the ones expected by the educator at the moment of implementing the wiki; 2. The results of the study support the idea that although the students are daily consumers of technology and different parts of content, they are not willing to become constantly involved in the assisted learning process of collaborative environments of teaching and learning; 3. The conclusion that can be drawn from the study is that the involvement of the young specialist in the development of a basic subject reported to the level of the year 2016 is maintained as being a mostly fluctuant one in terms of the level of attention and involvement, generating a student profile that is hard to please and difficult to observe. 4. The will and motivation of the students to learn by using all the methods of learning placed at their dispposal is low in the absence of an external stimulus. Therefore, the conclusions of the study performed by (Talbot,2012) are not totally validated by the results of the study. Our study proves that the use of the wiki in teaching and learning is usually positive, generating an improvement of the quality of the work performed by the student through assimilation and developing of the students' professional competences. Moreover, the study supports the results of (Lee,2010), according to which the teacher must guide the students by offering them suggestions and advice for the efficient use of materials and tasks.

4. Conclusion

Academic education is an actual subject not only in Romania, but also all over the world, being given a lot of consideration. The IT&C technologies influence education more and more in all of its levels (primary, secondary and tertiary) and in all its forms (formal, informal and non-formal education). The reconsideration of the theories and models of learning has taken place over three major axes: associative, cognitive and situational. The digital competences together with knowledge in one's field of expertise are the demands that the Z generation has to fulfill. By means of this study, we are trying to establish a need for implementing a wiki in the teaching-learning relationship at an academic level. We have determined the types of behaviour related to the involvement of the students in the economic domain and the touristic sub-domain in the process of teaching and learning by means of IT&C. The hypothesis we started from was that Romanian students have an involvement behaviour that is not constant, lacking consistency and being irregular. They only become involved when they are constrained to do so by their teachers or professors. (Stanca, Felea,2010). As other specialists in this domain, such as (Lee,2010), (Talbot,2012), (Reka Asztalos)(Felea,Stanca, 2014)(Popescu), we have come to the conclusion that the wiki can help students develop certain formative and informative valences and skills, with positive effects of their critical thinking and creativity. Furthermore, the wiki could improve their digital competences at both an individual and group level, with the students thus exercising their most important competence for creating content, learning by participating and discovering the online environment. The results of the study demonstrate that the collaborative learning environments cannot change the attitude of the student towards the teaching and learning process. A high percentage of students would only get involved in the learning and teaching process under constraint, which goes to show that the faculty and one's course of learning is usually chosen by other criteria than the ones related to the passion and interest for a certain domain. We have retained the fact that web 2.0 is more than a set of instruments and services, being the idea which presents a significant potential for learning" the reality of the content used by the user, the effects of numerous participation in network and the openness that university education implies towards easy access. Its applicability implies student involvement and interaction in learning, as well as assuming learning management by the student, (Felea,Stanca,2010), (Grosseck,Holotescu,2012), (Popescu,Cioiu,2011), (Apostu,2011). As a conclusion of all the aforementioned, "the results show that students are able to adapt the wiki technology for academic tasks, but that the task may impose constraints on the use of wikis, leading to some of the advantages of the technology being lost in this adaptation". (Elgort,2007). The limits of our research consist of the reduced number of students involved in the process as well as the reduced time period in which they were subjected to the analysis. On the other hand, at this stage it is unclear whether wikis can be used to promote student engagement or create student-driven course content suitable for assessment.(Cole,2009). In future works we should prove the existence a direct relationship between using the wiki in education and the results of the students; we should also find pedagogical structures of learning in order to promote collaborative behaviours among students as long as these patterns cannot be directly evaluated.

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FACTORS INFLUENCING THE ORIENTATION TOWARDS INNOVATION IN THE HOSPITALITY INDUSTRY – THE CASE OF ROMANIAN HOTELS

Andrea Nagy[1], Carmen Băbăiță[2]
[1] *East-European Center for Research in Economics and Business ECREB, Faculty of Economics and Business Administration, West University of Timișoara, Timișoara, Romania*
[2] *Management Department, Faculty of Economics and Business Administration, West University of Timișoara, Timișoara, Romania*
andrea.nagy@e-uvt.ro
carmen.babaita@e-uvt.ro

Abstract: *The aim of this paper is to analyse the factors that are influencing the management's orientation towards innovation in Romanian 3, 4 and 5 star hotels. In order to identify these factors, we reviewed the literature on the topics of innovation and orientation towards innovation (innovation orientation) and have identified several factors that influence innovation or the orientation towards innovation such as hotel category, hotel size, leadership style and manager-employee relationship. Based on these aspects, we formulated 4 main research hypotheses and 8 secondary hypotheses, because we considered the orientation towards innovation as a bi-dimensional variable and in each case all the factors taken into account could influence both its dimensions: the openness towards innovation and the employee involvement in the innovation process. A questionnaire was distributed to 127 hotels from all over the country (especially in the big cities) and the employees were asked to fill in their observations. The questionnaires were applied both online and by using interviewers. We received valid responses from 135 employees, working in 3 and 4-star hotels. Scale reliability analysis and factor analysis were used to analyze the data. To test the hypothesis, we used ANOVA and linear regression. We validated 3 out of 4 main research hypotheses and 6 out of 8 secondary hypotheses. Accordingly, amongst the factors that influence the management's orientation towards innovation we identified the manager-employee relationship, the leadership styles and the hotel size.*

Keywords: innovation; orientation towards innovation; hospitality industry; influence factors; Romania.

JEL classification: L83; M10; O30.

1. Brief introduction

The orientation towards innovation (or innovation orientation – as it can be found in the field literature), is a less studied topic and it is even less approached in the hospitality industry. However, in order to innovate, first of all, companies need to create the appropriate background that can help foster and develop innovation. In other words, they need to be oriented towards innovation.

In order to be innovative, the companies' management should be open to

innovation and should also involve employees in the innovation and decision-making processes. In this paper, our main objective is to identify the factors that influence the management's orientation towards innovation. To accomplish our goal, we begin with a brief literature review. We identify several definitions for the orientation towards innovation and also several characteristics of the concept. Orientation towards innovation is a multidimensional concept, regrouping specific elements or characteristics such as the intention of being technologically innovative, the existence of the entrepreneurial intention and the climate for innovation, the involvement of employees and so on. Afterwards, we identified the main factors that can influence the innovation activity or the orientation towards innovation in the hospitality industry (hotel size, chain structure, category, innovation costs, leadership styles etc.) and formulated our research hypotheses. The data were analyzed using the Statistical Package for the Social Sciences (SPSS). We performed reliability and factor analysis and after that tested the hypotheses using One-Way ANOVA and linear regression model.

2. Orientation towards innovation – definitions and characteristics

2.1. Defining orientation towards innovation

Unlike market or customer orientation, orientation towards innovation is not an intensively studied topic. According to Engelen *et al.* (2014), there are few studies regarding orientation towards innovation (or innovation orientation), while customer and market orientation topics are extensively researched.

Defining the orientation towards innovation is not an easy task, especially because of the different perspectives on this topic and their heterogeneity.

Siguaw, Simpsons and Enz (2006) consider that the orientation towards innovation integrates organizational strategies and actions regarding innovation that can enable specific processes and competencies. Therefore, after analyzing several definitions of innovation orientation, Siguaw, Simpsons and Enz (2006) conclude that it is a "learning philosophy in which firms have common standards and beliefs about learning and knowledge that pervade and guide all functional areas toward innovation".

Other authors view the orientation towards innovation as related to innovativeness (Hurley and Hult, 1998; Tajeddini, 2011) and the capacity to innovate (Hurley and Hult, 1998). In Hurley and Hult's opinion (1998), innovativeness reflects the "openness to new ideas as an aspect of a firm's culture", measuring "the organization's orientation toward innovation", while the capacity to innovate represents "the ability of the organization to implement or adopt new ideas, processes, or products successfully" (Hurley and Hult, 1998). Tajeddini (2011) agrees that innovativeness can be defined as "an organizational culture that encourages the introduction of new processes, products and ideas, and the creation of new products, services and technologies". Also, based on Hurley and Hult's idea (1998), Zheng Zhou *et al.* (2005) consider that orientation towards innovation "emphasizes openness to new ideas and adoption of these new ideas to adapt to the changing environment".

The orientation towards innovation can be viewed from two other different perspectives: from a dynamic point of view (focusing mainly on firm's actions), and from a numerical one (focusing especially on the number of innovations). The

dynamic perspective, according to Berthon, Hulbert and Pitt (1999), defines the orientation towards innovation by taking into consideration the firm's actions and efforts that are focusing on inventing and perfecting high-end products. On the other hand, the numerical perspective considers that orientation towards innovation is a function of the number of innovations, number of customers to whom these innovations are offered and the increase of their intensity (Homburg, Hoyer and Fassnacht, 2002).
Accordingly, we agree that the orientation towards innovation or innovation orientation can be defined as "the adoption, at organizational level, of the attitudes or strategies that constantly encourage the introduction of new products and services in order to increase competitiveness and performance, by using the organizations' material, human and financial resources" (Nagy, 2014).

2.2. Elements and characteristics of the orientation towards innovation

Given the heterogeneity of the definitions presented above, it can be noticed that orientation towards innovation is a multidimensional concept, regrouping specific elements or characteristics.
A first element of this concept was identified by Kundu and Katz (2003) in their study, and it is represented by the intention of being technologically innovative. Worren, Moore and Cardona (2002, in Siguaw, Simpson and Enz, 2006) consider that the orientation towards innovation consists in the existence of the entrepreneurial intention (reflected by the strategic intention of developing new products or entering new markets with existing products) and the climate for innovation (reflected by the encouragement of new ideas and the assimilation by the employees of a common mission).
At an organizational level, Amabile (1997) stated that the orientation towards innovation must come primarily from the company's top-management, but lower level management structures and employees can also help foster this vision. In her study, Amabile (1997) identified the following elements of orientation towards innovation: value placed on innovation and creativity, orientation towards risk, the existence of a sentiment of pride in the organization's members and enthusiasm about what they are capable of doing, as well as an offensive strategy for taking the lead. We consider that Amabile's approach manages to highlight an important aspect in the research on the orientation towards innovation, by analyzing, aside from the company's management, the role of the employees. In studies regarding the orientation towards innovation, the importance of human resources was also noticed by Atuahene-Gima and Ko (2001, in Siguaw, Simpson and Enz, 2006). Therefore, we consider that the involvement of employees is another element of the orientation towards innovation, but we emphasize that sometimes employees can also be a source of innovation or even its driver.
Analyzing the aspects presented above, we consider that the orientation towards innovation can be quantified by taking into account the following: the encouragement of new ideas, the building of an organizational climate that fosters innovation, the consolidation of the relationships between managers, employees, suppliers, etc., the orientation of organizational strategies towards innovation and the involvement of employees in the innovation process.
However, it is not enough to limit oneself only to these aspects, we also have to ask ourselves how we know that the management is oriented towards innovation.

Therefore, we consider that it is necessary to identify the aspects that characterize the orientation towards innovation. By analyzing several studies (Hurley and Hult, 1998; Zheng Zhou et al., 2005; Ripolles, Pérez and Dobón, 2010 and Grissemann, Plank and Brunner-Sperdin, 2013) we identified three main approaches of the orientation towards innovation: innovativeness (the organization's potential to have new ideas in order to develop new products), the management's implication in innovation (the way the organization's management approaches innovation) and employee involvement (that can be viewed from two different points of view: the employees' involvement in the decision-making process and the finding of new ideas that lead to new product and service development).
Other aspects that can influence the orientation towards innovation were identified and studied in the field literature. For example, Sarros, Cooper and Santora (2008), highlighted the importance of the climate for innovation as an indicator of the organization's capacity to become innovative. They analyzed it from two perspectives: as support for innovation (by measuring the degree of openness towards changes) and as resource supply measures (the degree to which resources like personnel or time are perceived in the organization as being appropriate).
Based on the aspects presented above, we agreed to assess the orientation towards innovation as a bi-dimensional concept, containing the openness towards innovation, that can be assimilated to the climate for innovation (the existence or creation of an environment that encourages innovation), and employee involvement in the innovation process and decision-making regarding innovation.

3. Factors influencing innovation activity in hospitality

Many studies have explored what influences innovation and several factors have been identified. Their influence can be either positive or negative; therefore there can be factors that foster or factors that hinder innovation. Also, these factors can be organized, according to their provenience, in internal and external factors. Most of the time, the factors influencing innovation are coming from inside the organization (internal factors), but there are as well factors coming from the organization's environment, namely external factors.
In hospitality, there are numerous studies regarding the factors that influence innovation. In their research, Sipe and Testa (2009), identified leadership behaviours, workgroup innovation climate, management tools/processes and strategy. Also, other authors analyzed the influence on innovation of firm's size (Galende and de la Fuente, 2003; Orfila-Sintes et al., 2005; Sundbo et al., 2007; Orfila-Sintes and Mattsson, 2009 and López-Fernández et al., 2011), of chain structure (Orfila-Sintes et al., 2005; Sundbo et al., 2007 and López-Fernández et al., 2011) or of the high cost of innovation (Green *et al.,* 2002; Camacho and Rodriguez, 2005; Coronado *et al.,* 2008 in López-Fernández et al., 2011). Another factor that influences innovation, in many authors' opinion, is the hotel's category (Orfila-Sintes et al., 2005; Garrau Vadell and Orfila-Sintes, 2008 and Grissemann, Plank and Brunner-Sperdin, 2013). In addition to these factors, several studies investigated the effect of leadership styles or the effect of the manager-employee relationship on innovation.
In Romania, there are few studies regarding innovation in hospitality and even less concerning the factors that influence innovation activity.

Based on the information presented above, we consider that investigating the factors influencing innovation or innovation related topics in the Romanian hospitality industry fosters the development of this research topic in our country and, moreover, allows us to find out what the factors influencing, in our case, the orientation towards innovation in hotels are.
First of all, we intend to analyze the influence of management/leadership styles on the orientation towards innovation. Leadership styles have been intensely studied, the majority of them being based on Lewin, Lippitt and White's (1939) typology, who identified the following three styles: autocratic, democratic and laissez-faire (in Zlate, 2004). In our study, we took into consideration the four styles of leadership analyzed in Băbăiță et al. (2010), namely autocratic, participative, consultative and permissive. Regarding the influence that leadership styles have on innovation, we consider that leadership style can be either a catalyst or an inhibitor of innovation. Its influence on innovation has been studied by several authors (Bossink, 2004; Dackert, Lööv, Mårtensson, 2004; de Jong, Den Hartog, 2007; Oke, Munshi, Walumbwa, 2008; Sarros, Cooper si Santora, 2008; Băbăiţă *et al.*, 2010; Sarros, Cooper and Santora, 2011; Sinar, Wellins, Pacione, 2011), being demonstrated the influence it has on innovation. However, in the studied literature it has not been identified whether leadership styles do influence the orientation towards innovation and its components. Accordingly, we propose the following research hypotheses:

H1: There is a significant relationship between leadership style and orientation towards innovation.
H1a: There is a significant relationship between leadership style and openness towards innovation.
H1b: There is a significant relationship between leadership style and employee involvement in the innovation process.

A second aspect taken into consideration in our analysis is represented by the manager-employee relationship. According to Gill (2008), a good manager-employee relationship in the hospitality industry is the key to success. Empirical studies that analyzed this relationship were undertaken by Băbăiță et al. (2010), and considered that the manager-employee relationship is defined by the following attributes: interaction and communications, rewards for one's merits, training, tolerance of mistakes and personal involvement. In our study, we analyzed these elements as parts of a construct that influences the orientation towards innovation and phrased the following hypotheses:

H2: The manager-employee relationship has a positive effect on the management's orientation towards innovation.
H2a: The manager-employee relationship has a positive effect on the openness towards innovation.
H2b: The manager-employee relationship has a positive effect on employee involvement in the innovation process.

A third element that influences the orientation towards innovation is the hotel's category. Its influence on innovation was highlighted in studies belonging to Orfila-Sintes et al. (2005) and Garau Vadell and Orfila-Sintes (2008). According to Orfila-Sintes et al. (2005), the most innovative hotels are the 3 and 4-5 star hotels, while

the innovative behavior of 1 and 2-star hotels is manifested in computer and hardware system fields, especially with radical innovation. Also, aspects regarding the category's influence on innovative behavior have been identified by Grissemann, Plank and Brunner-Sperdin (2013). They reached the conclusion that there are no significant differences between the innovative behavior of superiorly qualified hotels (4-5 stars) and the one's qualified at 1-3 stars. On what concerns the influence of category on orientation towards innovation, studies of this topic are in their early beginnings or not that intensified, and until nowadays there have not been identified empirical evidences supporting the existence of a positive or a negative relationship between these variables. However, we will try to analyze these relationships as follows:

H3: There is a significant relationship between hotel category and orientation towards innovation.
H3a: Hotel category has a significant effect on the openness towards innovation.
H3b: Hotel category has a significant effect on employee involvement in the innovation process.

The fourth element analyzed in our study as a factor that influences the orientation towards innovation is the firm's size. There are several aspects that can define the firm's size, such as the number of employees, number of beds, number of rooms, etc., all analyzed by other authors as well. In our study, we used Sundbo et al.'s (2007) approach and took into consideration the number of beds as an indicator reflecting the firm's size. The relationship between the firm's size and innovation activity in the hospitality industry was analyzed in several studies (Orfila-Sintes et al., 2005; Sundbo et al., 2007; Garau Vadell and Orfila-Sintes, 2008; Martinez-Ros and Orfila-Sintes, 2009; López-Fernandez et al., 2011 and Meneses and Teixeira, 2011), many findings suggesting that larger firms are more innovative since they have solid financial resources, qualified employees or other facilities, unlike small firms. In hospitality, such results have been obtained by Orfila-Sintes et al. (2005), Sundbo et al. (2007) and López-Fernandez et al. (2011). On what concerns the firm's size and orientation towards innovation, there have not been identified studies that emphasize this relationship. Hence, we intend to test the following research hypothesis:

H4: There is a significant relationship between hotel size and the orientation towards innovation.
H4a: There is a significant relationship between hotel size and the openness towards innovation.
H4b: There is a significant relationship between hotel size and employee involvement in the innovation process.

4. Methodology

In order to test our hypothesis, we applied a questionnaire to 3, 4 and 5 star hotel employees from the Romanian hospitality industry. To have a better regional distribution, we contacted by e-mail, phone or both, 127 hotels from all over the country. Only 36 of them responded to our call, all of them 3 and 4-star hotels, generating a 28,35% response rate. The questionnaires were applied both online

and by using interviewers. In total, we received 135 valid responses from Romanian hotel employees.
The data obtained were analyzed using SPSS (Statistical Package for the Social Sciences). The analysis consisted in testing the scales' reliability, factor analysis and testing the hypotheses. The scale reliability was tested for the orientation towards innovation and manager-employee relationship. The hypotheses were tested using One-Way ANOVA and linear regression, depending on the variables analyzed. Therefore, hypotheses 1 and 3 were tested using One-Way ANOVA, while hypotheses 2 and 4 were tested using linear regression.

5. Results

5.1. Respondents profile

The majority of the respondents (60,7 %) were females, while 39,3% of them were males. Among the 135 hotel employees, 48,9% were under 25 years, 42,2% were aged between 26-35 years, while the rest of the respondents (8,9%) were between 36 and more than 55 years. It can be noticed that the majority of employees are young, aspect that can contribute to fostering innovation, especially because young people are more likely to generate innovative ideas, accept or use new technologies or processes. Approximately 61% of hotel employees have a bachelor's degree. Almost 78% of the respondents have university studies, while almost 22% have finished high school or a vocational school. In theory, we can assume that by having many employees with university degrees (bachelor's, master's or PhD), hotels can increase their potential to innovate.

5.2. Reliability and factor analysis

The reliability analysis was undertaken for two constructs: the orientation towards innovation and the manager-employee relationship. We considered that a scale was reliable if the value of alpha-Cronbach's coefficient was higher than 0,7 (Nunnally, 1978 and DeVellis, 2003 in Pallant, 2011). For the same two constructs, we undertook a factor analysis, but only if two prerequisites were simultaneously accomplished: Bartlett's Test of Sphericity significance lower than 0,05 ($p<0,05$) and the value of Kaiser-Meyer-Olkin's measure higher than 0,5 ($KMO>0,5$). In the factor analysis we retained only factors that had an Eigenvalue greater than 1 and we used a factor loading cut-off of 0,5 in order to retain factors. After analyzing the data using the Principal Component Analysis, it was not necessary to exclude any items.
We analyzed the orientation towards innovation as a bi-dimensional concept, containing the openness towards innovation and employee involvement in the innovation process and innovation decision-making. The openness towards innovation was assessed using a 6 item Likert scale and its reliability analysis revealed a 0,876 level of alpha-Cronbach's coefficient, indicating that our scale's reliability is optimal. For the factor analysis we extracted one factor which explains 62,02% of the total variance, factor loading's ranging from 0,581 to 0,856. These values are higher than 0,5, therefore we did not exclude any item of our scale.
For the employee involvement in the innovation process and innovation decision-making we used a 7 item Likert scale and obtained a 0,906 value of alpha-Cronbach's coefficient. This value indicates that our scale's reliability is high, even excellent according to Kline, 1999 or George and Mallery, 2003. In this case, the

factor analysis revealed that one factor explains 64,43% of the total variance of all seven items, while factor loading ranged from 0,682 to 0,845. These values are higher than 0,5, therefore it was not necessary to exclude any item of our scale.
The alpha-Cronbach coefficient for the orientation towards innovation construct is 0,853, which means that our construct's scale has an optimal reliability. For the orientation towards innovation, we extracted one factor that explains 87,16% of the total variance of the two variables that form the construct and their factor loadings (0,934) indicate that it is not needed to exclude one of the items.
The manager-employee relationship was assessed using a 5 item scale for which the value of alpha-Cronbach coefficient was 0,792, indicating a good scale reliability (George and Malery, 2003; Kline, 1999). The factor analysis showed that one factor explains 56,22% of the total variance of the five items, while their factor loadings ranged from 0,640 to 0,830. All these values are greater than 0,5, therefore it is not necessary to exclude any item of our scale.

5.3. Hypotheses testing

In order to test our research hypotheses, we used One-Way ANOVA and linear regression. Regardless of the statistical test we used, we considered that a hypothesis is accepted if the significance level is less than 0,05 ($\alpha<0,05$). In the case of testing the hypotheses using linear regression to identify the intensity of the relationship between the dependent and independent variables, we took into account the values of the standardized coefficients (β). Beta's sign (+ or -) indicates the direction of the correlated variables: if $\beta > 0$ it means that the relationship is positive, if $\beta = 0$ there is no relationship and if $\beta < 0$, the relationship is negative. When testing the hypotheses with One-Way ANOVA, the value of F showed the variance of the dependent variable at the modification of the independent variable.
The first hypothesis (H1) was tested using One-Way ANOVA. The results show that the leadership style influences the orientation towards innovation, as well as its two dimensions: the openness towards innovation and the employee involvement in the innovation process (Table 1).

Table 1: Results for testing H1, H1a and H1b

		Sum of Squares	Df	Mean Squares	F	Sig.
Openness towards innovation	Between groups	47,245	3	15,748	23,780	0,000
	Within groups	86,755	131	,662		
Employee involvement in the innovation process	Between groups	46,112	3	15,371	22,911	0,000
	Within groups	87,888	131	,671		
Orientation towards innovation	Between groups	53,150	3	17,717	28,706	0,000
	Within groups	80,850	131	,617		

Source: author's own analysis

All three hypotheses analyzing the influence of leadership styles on the orientation towards innovation and its two dimensions are accepted, with a 0,000 significance level. From the four leadership styles analyzed, we identified that the participative style fosters orientation towards innovation in managers, while the autocratic style hinders the orientation towards innovation in hotels.
The second hypothesis analyzed the influence of the manager-employee relationship on the management's orientation towards innovation and both its dimensions. Hypothesis H2, H2a and H2b were tested with the linear regression. The results are presented in Table 2.

Table 2: Results for testing H2, H2a and H2b

Independent variable	Dependent variable	Standardized Coefficients β	t	Sig.
Manager-employee relationship	Management's orientation towards innovation	0,542	7,433	0,000
Manager-employee relationship	Openness towards innovation	0,448	5,782	0,000
Manager-employee relationship	Employee involvement in the innovation process	0,563	7,864	0,000

Source: author's own analysis

In this case as well, all three hypotheses are accepted ($\alpha < 0,05$). The value of the standardized coefficient for the management's orientation towards innovation ($\beta = 0,542$) suggests that between the analyzed variables there is a strong and positive relationship. Hence, the improvement of the manager-employee relationship also improves the management's orientation towards innovation. Strong and positive relationships have also been identified for both dimensions of the orientation towards innovation.
Our third research hypothesis analyzed the relationship between hotel's category and the orientation towards innovation. This relationship was analyzed using One-Way ANOVA, by testing all three hypotheses H3, H3a and H3b. The results we obtained are presented in Table 3.

Table 3: Results for testing H3, H3a and H3b

		Sum of Squares	Df	Mean Squares	F	Sig.
Openness towards innovation	Between groups	0,092	1	0,092	0,092	0,763
	Within groups	133,908	133	1,007		
Employee involvement in the innovation process	Between groups	0,078	1	0,078	0,078	0,781
	Within groups	133,922	133	1,007		

Orientation towards innovation	Between groups	0,098	1	0,098	0,097	0,756
	Within groups	133,902	133	1,007		

Source: author's own analysis

Although in the studied literature, several authors identified a significant or positive relationship between the hotel's category and innovation activity, all of our three hypotheses regarding the influence of the hotel's category on the management's orientation towards innovation are rejected ($\alpha > 0,05$).
Finally, our fourth hypothesis investigated the relationship between hotel size and the management's orientation towards innovation and it's both dimensions. This relationship was investigated using the linear regression and the results are presented in Table 4.

Table 4: Results for testing H4, H4a and H4b

Independent variable	Dependent variable	Standardized Coefficients β	t	Sig.
Hotel size	Management's orientation towards innovation	-0,248	-2,956	0,004
Hotel size	Openness towards innovation	-0,290	-3,488	0,001
Hotel size	Employee involvement in the innovation process	-0,174	-2,040	0,043

Source: author's own analysis

The hypotheses we analyzed above are accepted ($\alpha > 0,05$). The relationship between hotel size and the orientation towards innovation is significant, but negative (all standardized coefficients are negative). This means that an increase of the hotel's dimension would determine the decrease of the orientation towards innovation and both its dimensions. Based on these results, we can say that the management's orientation towards innovation is higher in small hotels and lower in bigger hotels. Also, our results are opposite to those of other authors that investigated related relationships.

6. Conclusions

Our objective in this paper was to identify the factors that influence the orientation towards innovation in 3, 4 and 5 star Romanian hotels. To accomplish our research goal, we identified four factors whose influence on the orientation towards innovation we analyzed. Firstly, we analyzed the relationship between leadership styles and the orientation towards innovation and concluded that between these two variables there is a significant and positive relationship and at the same time we have identified that the participative leadership style stimulates the management's orientation towards innovation. Secondly, we investigated the influence of manager-employee relationship on the orientation towards innovation. Between these variables we also identified a positive and significant relationship

and we concluded that the improvement of the manager-employee relationship also improves the management's orientation towards innovation. Thirdly, we studied the relationship between hotel category and the orientation towards innovation. The hypotheses regarding this relationship were not supported. The last hypotheses we analyzed investigated the influence of hotel size on the management's orientation towards innovation. In this case, we identified a significant and negative relationship, which means that the management's orientation towards innovation is higher in small hotels and lower in bigger hotels.

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SECTION: FINANCE, BANKING, ACCOUNTING AND AUDIT

SUB-SECTION: PUBLIC FINANCES

METHODS OF PERFORMANCE ANALYSIS IN BANKS

Ioan Bătrâncea, Lucian Găban, Ionuț Rus, Paul Minteuan

Faculty of Economics and Business Administration, Babes-Bolyai University, Cluj, Romania
i_batrancea@yahoo.com
luciangaban@yahoo.com
ioan.rus@yahoo.com
paul.minteuan@yahoo.com

Abstract. *Performance generally in the banking specifically highlight on the one hand the financial institution's ability to generate profit, and on the other hand shows the consequences of financial decisions taken by the bank's management. In our opinion bank decisions are based on the analysis of the effects of the bank's policy in the past period. Therefore the paper presents such an analysis that supports decision makers banking.*

Key words: ***Bank, Efficiency, Performance, Ratios***

JEL: *G21, G24*

1. Introduction

The performance of banks is highlighted in numerous papers of banking. The performance of banks is closely integrated elements of profit issue rating as an integral part of CAMEL rating models as well as in USA, PATROL in Italy, and PEARLS in USA, Orap in France, the UK RATE, and RAST in Holland. Therefore we believe that an analysis of bank performance can highlight strengths and weaknesses of a bank as a consequence of the credit institution's management.
The work we structured it on two levels: an analysis of vertical and horizontal revenues, expenses and loan portfolio and the exposure of banks on the one hand and analysis on the basis of rates of banking performance on the other.
Concrete ways analysis is based on annual financial reports of banks and a number of indicators on both volume and indicators presented in the form of financial ratios. Technical analysis is based on both static analysis and dynamic analysis and the results compared in the bank by a group of credit institutions in the interval of time between 2006 and 2011.

2. Literature review

In a recent paper examines whether individual banks did improve their performance through securitization and the results show that securitizing banks tend to be more profitable institutions, with higher credit risk exposure. On the

other hand the authors also find that securitizing banks tend to hold larger and less diversified loan portfolios, have less liquidity, and hold less capital. (Casu, Clare, Sarkisyan, 2013)

Others analysts consider that banking's success largely depends on public confidence and only a small part of the banking services customers understand the indicators and ratios which are used to assess bank's activities. Therefore, there is a need to analyze banks performance results in Lithuania. The paper presents a principal component analysis model applied on banks performance ratios in Lithuania. (Vidzbelyte, Jaseviciene, Bronius, 2013)

Using a panel of Chinese banks over the 1997–2004 periods, other analysts assess the effect of bank ownership on performance using a static, selection, and dynamic effects of (domestic) private, foreign and state ownership. They find that the "Big Four" state-owned commercial banks are less profitable, are less efficient, and have worse asset quality than other types of banks except the "policy" banks (static effect). (Lin, Zhang, 2009)

Based on panel of eleven transition countries 225 banks and 856 observations some authors use the efficiency measures along with return on assets to investigate the influence of ownership type and conclude that privatization by itself is not sufficient to increase bank efficiency as government-owned banks are not appreciably less efficient than domestic private banks. (Bonin, Hasan, Wachtel, 2005)

Another paper empirically examines how capital affects a bank's performance and how this effect varies across banking crises, market crises, and normal times that occurred in the US over the past quarter century and they got two main results: First, capital helps small banks to increase their probability of survival and market share at all times (during banking crises, market crises, and normal times); Second, capital enhances the performance of medium and large banks primarily during banking crises. (Berger, Bouwman, 2013)

In a recent research is analyze the impact of ownership concentration on MENA banks' performance over the period 2004-2011 includes 38 commercial banks belonging to ten countries of the MENA region. Based on an econometric method the researchers show that ownership concentration is significant in explaining performance differences between MENA banks and the bank performance depends on the identity of large shareholder. (Rim, Majdi, 2015)

In their paper some authors aim at examining the relationship between the relatively strong banking industries and the values of stakeholder systems. The authors compare international successful stock markets systems such as the US and the UK with successful stakeholder systems such as Japan, Germany, and most of continental Europe. (Behery, Eldomiaty, 1991)

Using a sample of 50 largest Chinese banks during the period of 2003–2010, other researchers explore a comprehensive set of board characteristics (size, composition and functioning of the board) and analyze their impacts on bank performance and bank asset quality in China and find that the number of board meetings and the proportion of independent directors have significantly positive impacts on both bank performance and asset quality while board size has a significantly negative impact on bank performance. (Liang, Xu, Jiraporn , 2013)

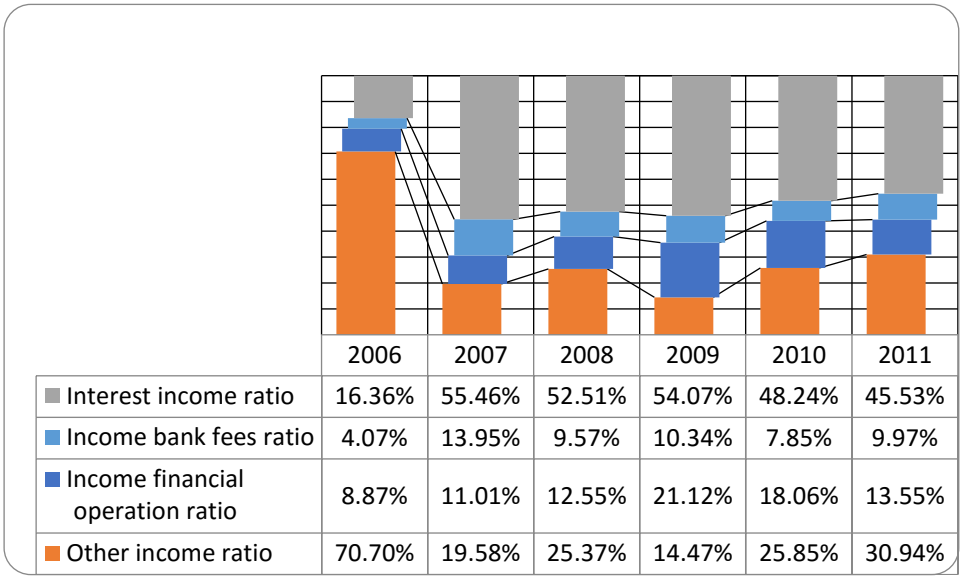
In another study other develop a measure of bank performance based on the Malmquist index approach based on existing financial ratios such as ROA and ROE. (Lee, Kim, 2013)

Credit is the business and recovery is the core issue of banks. Documentation of transactions is indispensible to effect complete and timely recovery of banks' credits. That is why in their study some authors focus on commercial banks (the term commercial bank includes the Islamic banks). (Niazi, Azim, Ahmed, 2012)
In Japan, some researchers construct and estimate a dynamic network Luenberger productivity indicator for Japanese banks during fiscal years 2006–2012. The network aspect to the model recognizes that banks produce deposits in the first stage of production using inputs such as labor, physical capital, and equity capital and then in the second stage use those deposits to generate a portfolio of loans and securities investments. (Fukuyama, Weber, Measuring 2015)
The financial crisis had important consequences in banking sector and that is why in another paper is show that a bank's stock return performance during the 1998 crisis predicts its stock return performance and probability of failure during the recent financial crisis. This effect is economically large. The authors' findings are consistent with persistence in a bank's risk culture and/or aspects of its business model that make its performance sensitive to crises. Banks that relied more on short-term funding, had more leverage, and grew more are more likely to be banks that performed poorly in both crises. (Fahlenbrach, Prilmeier, Stulz, 2012)
Analyzing the China banks evolution before the financial crises some authors investigate the effects of focus versus diversification on bank performance using data on Chinese banks during the 1996–2006 period and construct a new measure, economies of diversification, and compare the results to those of the more conventional focus indices, which are based on the sum of squares of shares in different products or regions. Diversification is captured in four dimensions: loans, deposits, assets, and geography. (Berger, Hasan, Zhou, 2010)
Finally in a recent study is examine the effect of corporate governance denoted by board size, duality, agency cost etc. on the performance of selected 24 GCC banks based on the criteria of total assets for the financial year 2012-13 and Tobin's Q and Return on Total Assets (ROTA) are adopted as a measurement of accounting and financial performance respectively. The results indicate that smaller boards are more capable for monitoring the management closely in GCC banking sector. (Naushad, Malik, 2015)

2. Method and results

A first dimension of performance analysis in banks refers to the structure of revenues, expenses and portfolio quality, vertical analysis of the profit and loss and is based on percentages in each income or expense, expressed as a figure percentage of total revenues, expenditure respectively.
In our study we take into account the annual reports during 2006 -2011 of the following banks: Unicredit Bank, Volksbank and BCR - Erste Bank.

First we analyzed the evolution of the income structure and found the following.



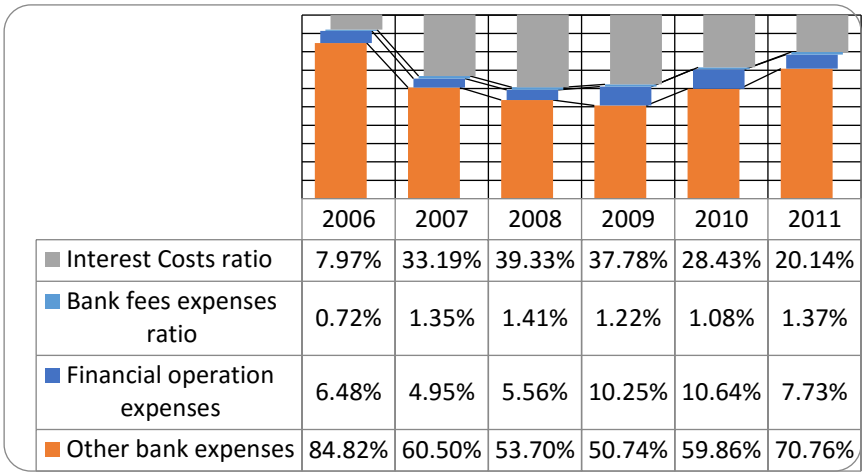
	2006	2007	2008	2009	2010	2011
Interest income ratio	16.36%	55.46%	52.51%	54.07%	48.24%	45.53%
Income bank fees ratio	4.07%	13.95%	9.57%	10.34%	7.85%	9.97%
Income financial operation ratio	8.87%	11.01%	12.55%	21.12%	18.06%	13.55%
Other income ratio	70.70%	19.58%	25.37%	14.47%	25.85%	30.94%

Figure 1 The evolution of income structure ratios
Source: Own calculus

This representation is observed the following:

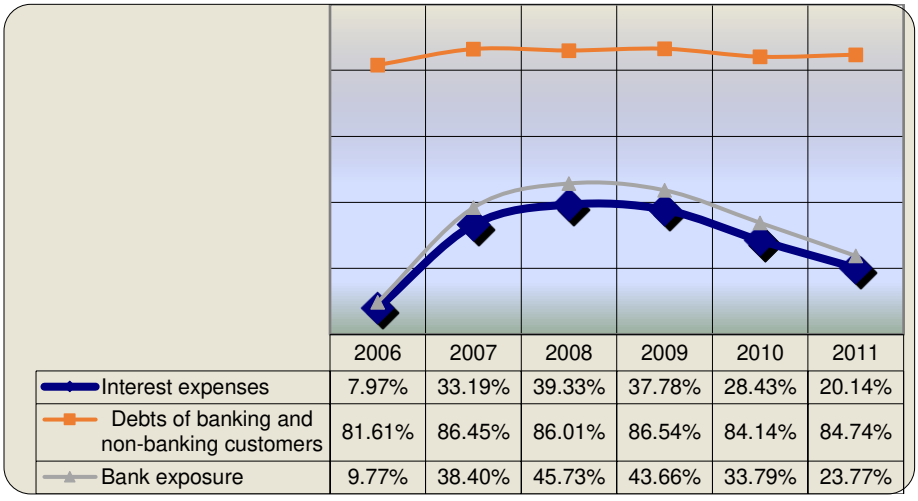
- an interest income fluctuated between first and second category share in total revenues during the period analyzed, with a clear upward trend;
- rate fee income has fluctuated but an increasing trend; rate income from financial operations followed an upward trend with a maximum weight of 21.14% in 2009;
- Other income rates had the largest share in total revenues in 2006 (70.70%), after which it decreased considerably, reaching a low of 14.47% in 2009.

Another dimension of performance that connects expense accounts relates to the structure of expenditure and highlights the bank's financial resource consumption to achieve revenues in the financial year.



	2006	2007	2008	2009	2010	2011
Interest Costs ratio	7.97%	33.19%	39.33%	37.78%	28.43%	20.14%
Bank fees expenses ratio	0.72%	1.35%	1.41%	1.22%	1.08%	1.37%
Financial operation expenses	6.48%	4.95%	5.56%	10.25%	10.64%	7.73%
Other bank expenses	84.82%	60.50%	53.70%	50.74%	59.86%	70.76%

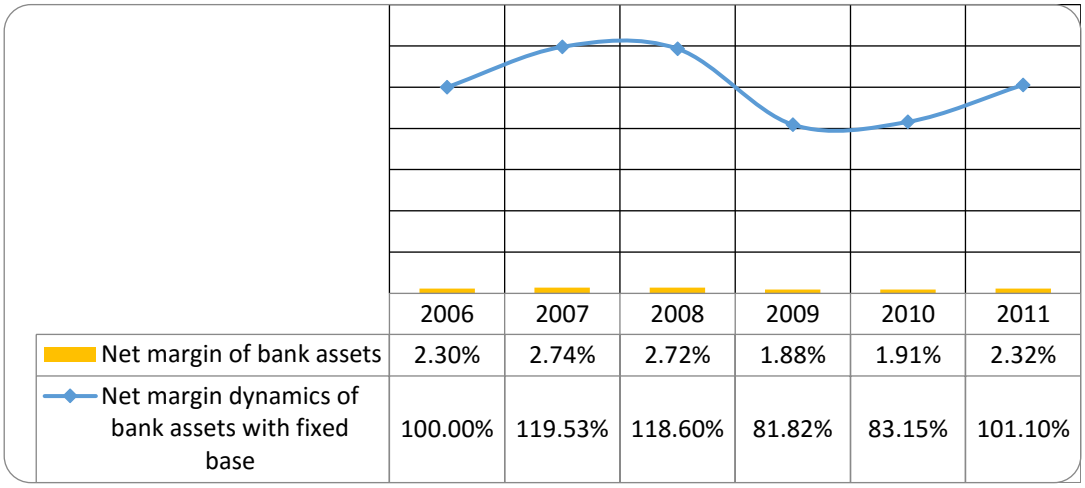
Figure 2 Evolution of structural spending rates banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
According to the chart above that: the share of expenses related to commissions and financial operations is rather low total cost hardly exceeds 10%; interest expense rate has a significant share in the total expenditures on average hovering at 30%; interest expense rate was the steepest dynamic evolution for the period.
Another dimension of analysis concerns the extent of exposure of the group of banks through an analysis of the correlation between the evolution of the share of interest expense and bank debt ratio to non-bank customers and banking.



	2006	2007	2008	2009	2010	2011
Interest expenses	7.97%	33.19%	39.33%	37.78%	28.43%	20.14%
Debts of banking and non-banking customers	81.61%	86.45%	86.01%	86.54%	84.14%	84.74%
Bank exposure	9.77%	38.40%	45.73%	43.66%	33.79%	23.77%

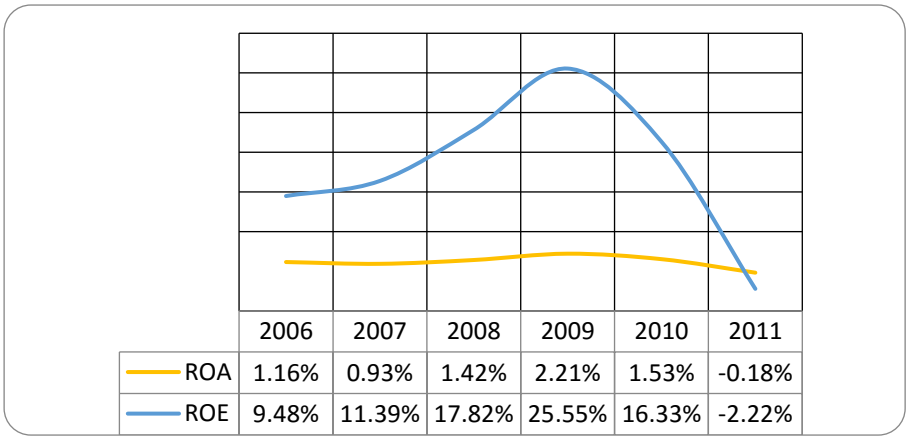
Figure 3 Evolution of the exposure of the banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
Analyzed the exposure of banks to non-bank customers and the bank followed a trend of accelerated growth during the financial crisis of 38.40% in 2007 and 45.73% in 2008, after which he lowered to 23 77% in 2011.

Analyzing bank performance cannot ignore the analysis of rates of profitability among which we considered net margin of bank assets (MV), return on bank assets (ROA), return on equity (ROE) and profit margin so as present below.



	2006	2007	2008	2009	2010	2011
Net margin of bank assets	2.30%	2.74%	2.72%	1.88%	1.91%	2.32%
Net margin dynamics of bank assets with fixed base	100.00%	119.53%	118.60%	81.82%	83.15%	101.10%

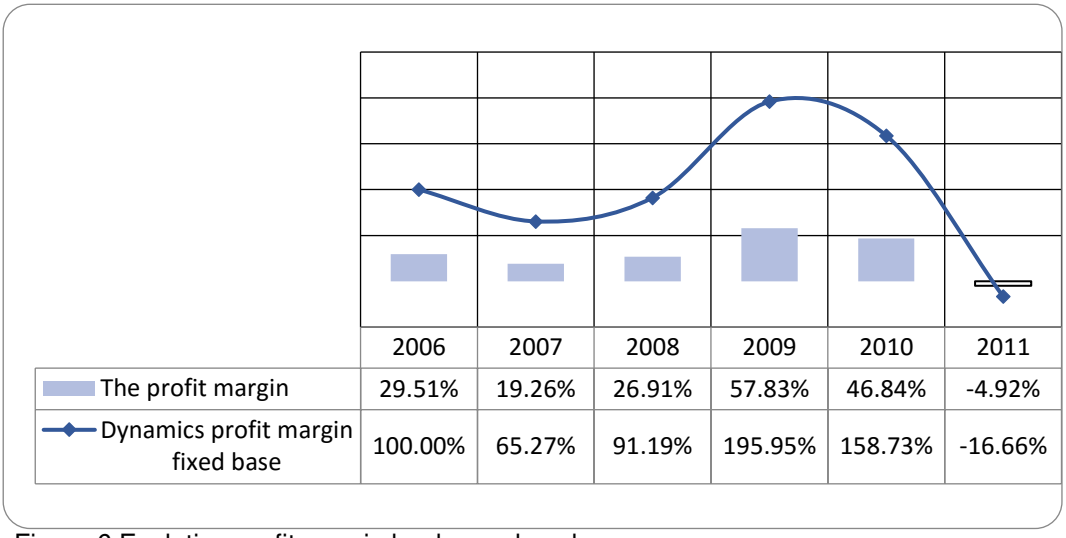
Figure 4 The evolution of net margin assets to banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
From the chart above we can see that the net asset values of the indicator margin bank recorded a random evolution, decreasing in 2009 amounted to 1.88% after posting a comeback performance in 2006, but has not reached maximum of 2007.



	2006	2007	2008	2009	2010	2011
ROA	1.16%	0.93%	1.42%	2.21%	1.53%	-0.18%
ROE	9.48%	11.39%	17.82%	25.55%	16.33%	-2.22%

Figure 5 Evolution of ROA and ROE banks analyzed
Source: Own calculations based on the profit and loss account of banks analyzed
The rate of return on assets for banks analyzed had a downward trend since 2009 (2.21%) when it peaked, increasing to 1.53% in 2010 and -0.18% in 2011.

The rate of return on equity for banks analyzed had as a downward trend since 2009 when it registered a value of 25.55%, falling to 16.33% in 2010 and -2.22% in 2011 .



	2006	2007	2008	2009	2010	2011
The profit margin	29.51%	19.26%	26.91%	57.83%	46.84%	-4.92%
Dynamics profit margin fixed base	100.00%	65.27%	91.19%	195.95%	158.73%	-16.66%

Figure 6 Evolution profit margin banks analyzed
Source: own calculations based on financial statements of banks analyzed
The chart above is noted that the profit margin indicator aiming recorded a strong downward trend from 29.51% in 2006 to -4.92% in 2011.

4. Conclusions

The analysis undertaken above is observed the following:
► State banking performance depends primarily on the quality of bank assets;
► Secondly we find that the return on equity has a strong impact on bank performance;
► While bank policies taken in respect of interest and fees are reflected in the bank's performance;
► Not least we find that the return on bank investments both deposits and equity decisively influence the performance of the bank;
► We finally found that too high a degree of exposure to non-bank debt and banking customer can affect performance of state banks.

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TOWARD A STRONGER FISCAL CONVERGENCE AND DISCIPLINE FOR EUROPE – HOW FAR ARE WE?

Florin-Alexandru Macsim[1], Florin Oprea [2]
[1]*PhD Student, Doctoral School of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iași, Iași, Romania*
[2]*Department of Finance, Money and Public Administration, Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iași, Iași, Romania*
florin.macsim1@yahoo.ro
foprea@uaic.ro

Abstract: *Economies frequently pursue policies that tend to lead to fiscal crises, usually sustained by deficits and high public debt levels. First, states borrow in order to sustain their economies, thus accumulating debt and deficits, then are submitted to fiscal rules as constraints and are obliged to adopt restrictive policies. This circle can be brought to an end through fiscal discipline, applicable common rules strengthening the fiscal convergence. Our goal was to quantify fiscal convergence for the EU and the Eurozone, by using a methodology that implies calculating an average score for the degree of fiscal convergence, and placing a specific group of countries or regions in one of the chosen classes. We used in our analysis a number of 12 quantitative and qualitative variables that covered key aspects of both fiscal discipline and fiscal convergence. Both the EU and the Economic and Monetary Union scored 1.6 points on our scale, placing them in class B regions, which present some degree of converge and discipline, but are still far from achieving full converge and high discipline levels as commitment to existence fiscal rules as constraints. So, as it would seem, although there are fiscal constraints implemented through signed treaties, EU's fiscal discipline is far from outstanding, even if good and applicable mechanisms are available for usage.*

Keywords: fiscal convergence; fiscal discipline; European Union; Economic and Monetary Union; quantification

JEL classification: E61; H62; H63

1. Introduction

Contemporary times are significantly marked by globalization and its effects on society, economies and financial and fiscal policies. We can easily compare globalization with convergence, as most of countries tend to resemble more and more which each other.

The key problem for us is that states tend to converge not only on positive aspects, but also on the negative ones. For example, states tend to borrow more money than their economies and economic predictions allow them to, promoting pro-cyclical fiscal policies, thus creating a bubble of debt that eventually blows and disrupters the economic cycle. Fiscal policies are becoming more and more

characterized by instability, using more discretionary measures instead of improving the automatic stabilizers, attracting non-confidence from investors and the general public, paving the path for crises as the Greek one. These negative effects can be easily overrun through fiscal discipline, by proposing a singular set of rules (mainly constraints) for governments to respect.
Nevertheless, some key steps were made in the EU through treaties such as the Maastricht Treaty, the Stability and Growth Pact, and the more recent Fiscal Compact (Treaty on Stability, Coordination and Governance in the Economic and Monetary Union). The existence of rules does not necessarily mean that they are respected without any deviation. In our point of view, it is not enough to have fiscal discipline only on paper, but also in the real world. The lack of a dedicated supranational institution with strict duties such as imposing a supervising compliance to rules makes new steps to full fiscal convergence become heavier.
Our objective for this paper is to quantify fiscal convergence as a step-by-step process, by introducing a specific set of variables related to fiscal convergence and fiscal discipline, in order to appreciate the current level of convergence from a macroeconomic standpoint for the EU and the Eurozone, although our methodology could be easily applied for other regions as well.
Our hypothesis is that the Euro area is more integrated and more disciplined than the EU, because of the lower level of heterogeneity and the existence of the monetary union.

2. Literature Review

Fiscal policy is one of the most vital mechanisms used by governments to pursue their goals, aiming to propel economies and bring stability on the long-run. The influence of policy-makers within an economy or more is expressly visible via their policy incentives (Branch and Adderley, 2009). In current times, this kind of incentives when designed need to overcome some conditions in order to become effective. One of this conditions, especially in the EU region, is to comply with the fiscal convergence criteria in order to maintain stability and sound public finances.
The interdependence between fiscal policies, and in particular public deficits in the EU was investigated by Giuliodori and Beetsma (2008). According to them, there are a number of potential reasons why fiscal policies could be independent, such as direct externalities, yardstick competition and tax competition. But, as the authors discovered, fiscal policies are more interdependent than independent, although the interdependence is rather asymmetrically disturbed: fiscal plans of larger countries affect the fiscal plans of smaller countries, but the reverse isn't valid.
Same authors distinguish two types of fiscal policy spillovers in order to clarify the concept of fiscal interdependence: economic spillovers of fiscal policies (as the interest rate in an integrated capital market – the EU – and the spillovers via international trade) (Giuliodori and Beetsma, 2005; Beetsma et al., 2006), and pure fiscal policy spillovers (through relevant macro-economic determinants of fiscal policy) (Case et al., 1993; Baicker, 2005).
In order to avoid spillovers as those described by mentioned authors, states will comply to a set of fiscal rules that act as constraints on fiscal policies and governments. Some of the authors (Warin, 2005; Wyplosz, 2006) have argued that despite all reasons for imposing fiscal rules for EMU without a centralized budget

(mainly a fiscal union), the so far stated fiscal rules have undermined economic growth in EU countries. Same authors state that EU rules reduced the margin of maneuver of member states in the face of symmetric shocks, not conducting to economic growth. But, it was never the purpose of fiscal rules to enhance economic growth, mainly because they are constraints with the sole purpose of enhancing fiscal discipline and the soundness of public finances. As so, as we've proven on another occasions (Macsim and Oprea, 2015a), fiscal rules do not always have a positive impact, mainly because they can lead to higher public debt levels for EU countries. The higher number of supervising institutions also had a negative impact on public debt levels, as more institutions mean less power and responsibility for each one of them. Also, stronger fiscal rules tend to conduct to an increase in government debt levels, while reducing the deficit levels (Macsim and Oprea, 2015b).

While most of the authors analyzed the impact of fiscal rules, as a key part of fiscal convergence and discipline, on public investments and growth (Gali and Perroti, 2003; Artis and Onorante, 2006), others studied the effects of fiscal rules on budgetary positions as a mean to reach long-term economic growth (Von Hagen, 2003; Fatás et al., 2003).

Nevertheless, as Castro (2011) states, there is a no consensus in the literature regarding the positive or negative influence of fiscal rules: some authors claim that fiscal rules as those traced in the SGP can have a negative impact on EU member states, others state the rules are absolutely necessarily in order promote fiscal discipline and consolidation in order to maintain stability on the European continent. Same author proved, by enhancing previous methodologies, that fiscal rules as those in the Maastricht Treaty and the SGP weren't harmful to GDP growth.

Although rules do not necessarily induce negative effects on GDP growth, states complied with them in only half of the years since they were introduced, as proved by Reuter (2015). Same author states that the introduction of a fiscal rule leads to a twice as strong reaction of the fiscal variable to high levels or non-compliance with the fiscal rule. Still, the existence of rules, although not always respected, makes policy-makers more conscious of the need to maintain sound public finances. Hiraga (2016) suggests that governments strengthen the fiscal stances if they hope to stabilize government debt levels. Also, as another disadvantage for high public debt levels, the process of reduction of reached levels requires fiscal adjustments that need to be maintained for a long period of time. The main compromise is to ensure a fair distribution of the economic consolidation effect, in order to avoid hard to manage tensions or distortions (Gherman and Ștefan, 2013).

The fact that countries do not always or completely comply with fiscal rules is the reason why we have introduced in our analysis variables as number of countries which have implemented an automatic correction and sanction mechanism and number of countries which benefit from the existence of an independent monitoring body. For example, Hiraga (2016) concludes a significant result: the stabilization rule is not a sufficient condition for the sustainability of the government debt. The lack of fiscal discipline reflects after all in bond yields (De Grauwe and Ji, 2013; Szarowská, 2014), that tend to increase when investors don't trust the so called discipline of governments.

In order to prevent future shocks on the fiscal battlefield, the convergence through fiscal discipline must continue. Also, as remarked by Kocenda, Kutan and Yigit

(2008), there is need to design further policies to improve fiscal performance. EU policy-makers may take into consideration the adoption of fiscal policy rules rather than counter-cyclical fiscal policies. Modern EU needs to step up its public finance management quality, by addressing the structure of taxation and public spending, as well as mechanism to maintain a high level of efficiency of government actions and fiscal rules (Ketners and Zvidriņa, 2008).

3. Data and Methodology

In order to cover most of the fiscal aspects and components of fiscal discipline as a mean to reach fiscal convergence, we used in our analyses a number of 12 variables that taken together indicate the degree of fiscal convergence from a discipline standpoint for a group of countries or regions. In this regard, we have taken into consideration aspects such as:

- fiscal policies: *V6* - Number of countries in which the growth rate of public expenditures < rate of growth of the GDP, *V4* – number of countries which have a public debt level ≤60% of the GDP, *V2* – number of countries which have a public deficit level ≤3%;
- fiscal constraints: *V1* - number of countries which have implemented at a national level a public budget balance rule (BBR), *V3* - number of countries which have implemented at a national level a public debt rule, *V5* - number of countries which have implemented at a national level a public expenditures rule, *V7* - number of countries which have implemented at a national level a public revenue rule, *V8* - number of countries which have an independent enforcement body for fiscal constraints as the BBR, *V9* - existence of sanctions for non-compliance regarding the BBR, *V10* - at least one independent monitoring body for the implementation of fiscal constrains as the BBR, *V11* - existence of an alert mechanism regarding the BBR, *V12* - existence of an automatic correction and sanction mechanism regarding the BBR).

Most of our data for the analyses was collected from Eurostat and the European Commission's website. By using specific information from the mentioned website and database we were able to analyze and provide results for all our elected variables for the year 2014.

As proposed method for quantifying the fiscal convergence process viewed from the fiscal discipline point of view, we used a similar methodology as Cigu and Oprea (2012). In this regard, we used for our analysis 12 quantitative and qualitative indicators that can be viewed as variables depending on a range of variation, reflecting the degree of fiscal convergence and the path to stronger fiscal discipline in the EU, the Eurozone and other parts of the world.

We gave each variable an importance factor, denoted by Wi (a share, subjective probability and their sum is equal to 1). As all our variables are significant, the literature emphasizing the importance of each one, we propose a similar importance for each one of them (0.05). The maximum score that can be achieved (giving that we chose 12 variables) is 2.4. Reaching a score above 2 means that a particular group of countries is highly disciplined from a fiscal standpoint, having introduced a set of fiscal rules that are implemented, supervised and respected.

Placing an indicator in a particular group variation is measured by a score denoted

by s, which takes values from 1 to 4. Level 1 corresponds to pour or reduced convergence on that particular variable, and Level 4 corresponds to almost or full convergence.
Fiscal convergence as fiscal discipline is measured by the average score (I_{FI}) based on the relation:
$I_{FI} = \sum_{i=0}^{n} Si * Wi$
where:

- I_{FI} = indicator of the degree of fiscal integration;
- Si = score obtained on each variable;
- Wi = coefficient of importance.

Indicator score for the degree of fiscal integration (I_{FI}) is analyzed using classes groups of fiscal integration. For $1 \leq I_{FI} \leq 2.4$, we established four classes to measure fiscal integration.

Table 1: Classes to measure fiscal discipline and convergence

Score	Classes groups of discipline and convergence
≤ 1,00	C
1.01 – 2.00	B
≥ 2	A

Source: Author's vision

where:

- Class A includes states or regions that are highly disciplined from the fiscal standpoint;
- Class B includes states or regions that are well enough disciplined, and should continue on the path of fiscal convergence;
- Class C includes states or regions that present a small degree of discipline, and are still far from the point being fully convergent and disciplined.

Variation of average score ($I_{FI} \geq 2$) specific to class A of fiscal discipline and convergence means that states or regions have implemented similar fiscal rules as constrains, accept an respect them, under the supervision of independent institutions by using specific mechanisms (alert mechanism, existence of sanctions for non-compliance and independent monitoring bodies).
Class B for measuring fiscal convergence as fiscal discipline includes a variation indicator $1.01 \leq I_{FI} \leq 2.00$. For this class, states or regions are enough integrated and disciplined, but have some deficiencies related to their fiscal arrangements or constraints. For example, regions in this class may lack independent institutions for supervision and implementation, or have implemented most of the rules but there isn't compliance.
Class C for measuring fiscal convergence includes a variation indicator ≤ 1.00. In this class, groups of regions or countries have some common fiscal rules, and are possibly at the beginning of the convergence process. Unfortunately, regions in this class present some issue regarding fiscal discipline, lack of fiscal rules and independent monitoring and sanction institutions and mechanisms.

Table 2: Method of determining the degree of fiscal convergence from the fiscal discipline standpoint

Variables	w_i	Score			
		s = 1	s = 2	s = 3	s = 4
(v1)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v2)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v3)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v4)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v5)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v6)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v7)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v8)	0.05		[25%;49%]	[50%;75%]	≥76%
(v9)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v10)	0.05	None	One institution which is independent	One institution independent/ one not independent	Two independent institutions
(v11)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%
(v12)	0.05	≤24%	[25%;49%]	[50%;75%]	≥76%

Source: Author's vision

4. Analysis and results

With our established method of determining the degree of fiscal convergence and discipline in mind, we will continue in properly analyzing the degree of convergence for two proposed regions: European Union and the European Economic and Monetary Union.

Table 3: Indicator of the degree of fiscal convergence and discipline for the European Union for 2014

Variable	Score	Wi	Points
(v1)	4	0.05	0.2
(v2)	3	0.05	0.15
(v3)	3	0.05	0.15
(v4)	2	0.05	0.1
(v5)	4	0.05	0.2
(v6)	3	0.05	0.15
(v7)	1	0.05	0.05
(v8)	2	0.05	0.1
(v9)	2	0.05	0.1
(v10)	4	0.05	0.2
(v11)	2	0.05	0.1
(v12)	2	0.05	0.1
Total			**1.6**

Source: Author's calculations

Table number 3 depicts or analysis for the European Union. As expected, due to some degree of heterogeneity and the recent crisis, the score obtained by the EU (1.6 points from a maximum of 2.4 points) for the year 2014 is not near 2 points or even above. So, the European Union is approximately 67% converged and disciplined from the fiscal point of view. Given the obtained score, we place the EU in Class B regions, which are enough integrated and disciplined, but lack some key aspects that need to be fully fulfilled.
While it scored high with variables such as the number of countries which have implemented at a national level a budget balance rule, and expenditure rule and the existence of an independent monitoring body regarding the implementation of the BBR, it scored low at complying with the rule that states that countries should not achieve a public debt level higher than 60% of the GDP. Also, EU countries lack independent enforcement bodies for fiscal constraints as the BBR, existence of sanctions for non-compliance regarding the same rule and lack of countries which have implemented at a national level a revenue rule.

Table 4: Indicator of the degree of fiscal convergence and discipline for the Eurozone for 2014

Variable	**Score**	**Wi**	**Points**
(v1)	4	0.05	0.2
(v2)	3	0.05	0.15
(v3)	3	0.05	0.15
(v4)	3	0.05	0.15
(v5)	3	0.05	0.15
(v6)	3	0.05	0.15
(v7)	1	0.05	0.05
(v8)	2	0.05	0.1
(v9)	2	0.05	0.1
(v10)	4	0.05	0.2
Variable	**Score**	**Wi**	**Points**
(v11)	2	0.05	0.1
(v12)	2	0.05	0.1
Total			**1.6**

Source: Author's calculations

Table Number 4 depicts our specific analysis for the Economic and Monetary Union. As the EU, the Eurozone obtained the same score, meaning 1.6 points from a maximum a 2.4 points. The only difference is that the Eurozone scored better (0.15 points) at the number of countries which have a public debt level lower than 60% of the GDP (between 50 and 75% of the countries), and lower at the number of countries which have implemented at a national level a public expenditure rule (0.15 points – the EU scored 0.2 points).
Unfortunately, our key hypothesis that the Eurozone is more converged and disciplined than the EU has not been confirmed. As the EU, the monetary union lacks independent enforcement bodies for fiscal rules as the BBR, existence of sanctions for non-compliance, alert and automatic correction mechanisms regarding the BBR. Also, the key constraints regarding fiscal discipline, a

maximum public deficit of 3% of the GDP and a maximum allowed level for public debt of 60% of the GDP, are not fully respected by all members, although the rules are adopted by all countries and were reaffirmed since the Maastricht Treaty on three occasions: Stability and Growth Pact in its initial form, Stability and Growth Pact reformed and the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (Fiscal Compact). As it would seem, the problem is not necessarily in rules, but more in the way that they apply and the way that countries manage their own responsibility in maintaining fiscal order and discipline.

5. Conclusions

Convergence and discipline are two of the most common words that come to economists and politicians minds when talking about the EU and EMU. Going further with the process of European integration means taking further steps on multiple plans: economic, social, financial, fiscal and monetary. On this occasion, we have focused our attention on the fiscal side of European integration, analyzing and quantifying the degree of fiscal converge for the related regions while taking into consideration mainly discipline aspects as fiscal rules, constrains and institutions.

Our methodology consisted in giving each of the 12 chosen variables an importance factor and score, and quantifying the score for each one in order to obtain a single key result that would indicate how far are the EU and EMU gone so far regarding fiscal discipline and convergence.

Both regions obtained a 1.6 points score from a maximum possible of 2.4 points, good but still far from what we have expected. For the year 2014, we can state that the two selected regions are only approximately 67% disciplined and fiscally converged. Top scores were obtained for the implementation at a national level of a budget balance rule, existence of an independent monitoring for the implementation of the rules, number of countries which have adopted and implemented at a national level expenditure and debt rules as fiscal constraints. Most of the points were lost for high public debt levels (more than the rule allows), lack of an independent enforcement body for the BBR (budget balance rule), existence of sanctions for non-compliance and the lack of existing alert and sanction mechanism.

Although rules exist and are implemented, mainly through treaties as we discussed in the article, the main problem is keeping the rules respected by policy-makers and sanction the ones who don't comply with the help of independent institutions and related mechanisms. The existence of rules doesn't necessarily imply that they are respected, as we've seen for the debt rule (most of the countries had in the year 2014 a public debt level higher than 60% of their GDP).

Nevertheless, if the EU and EMU want to achieve full discipline and convergence, in order to obtain the desired fiscal stability and soundness of public finances, not new arrangements are need, but more compliance to the existent structure of rules, a new way of rethinking the importance of fiscal alignment as a mean not to repeat the Greek experience and not to jeopardize the future of the United States of Europe as a dream that brought us till today as a union. As George Terborgh's (1981) stated, what is needed, obviously, is a fiscal philosophy that condemns the budgetary indiscipline we have been indulging, and that carries with it an operational standard to prevent its recurrence.

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TAXATION. ECONOMIC ISSUES AND APPROACHES

Ioan-Dan Morar
Faculty of Economics, University of Oradea, Romania
e-mail: morar_id@yahoo.com
Anca Mitu
Romanian Academy, Bucharest, Romania
e-mail: anca_mitu@yahoo.com

Summary: Public finances are influenced by the general policy of the state and in turn influence official policy of governments in operation.
Public finance performance is influenced at least the following variables, namely: a) the economic performance of the country's economy, expressed through macroeconomic indicators specific; b) the size or volume and capital structure underlying the economy of a country; c) the degree of cultural and civic involvement of the population of a country; d) design and reliability of budgetary policies of the government of the country concerned; e) reporting and the level of harmonization of monetary policy and financial restrictions imposed budgetary international monetary system; f) the level of regional integration and union, in our case in the European Union and g) economic policies and military influence regional and international.

Content:

Public finances are an important part of economic and social reality in which we live day by day, in terms of institutional, economic, social, political. From the standpoint of existence and functionality of modern and contemporary state, public finances, and functionality of their existence is eliminatory. In other words, no state money to public budgets do not work there. In terms of social public finances provide the state the tools necessary redistribution in society by different social groups, the various branches of activity in society by segments disadvantaged for various reasons and as you will know the entire scaffolding public office existing in all countries modern without which social peace can not be ensured.
From the economic point of view, the public sector is an important part of national economy, the public services which are an important source of demand at the macroeconomic level and the public economy sector, which is usually the most stable part of the economy in the country us, but in general the global economic level. From the point of view of political, public finances through the organization and structure of their reflect Polt official public, and on the other hand it provides the financial instruments necessary to promote official policies or those proposed by different social segments and not all turn into policy official.
Because of the importance of public finances, the importance accepted rule in the literature in this paper wants to highlight the importance of performance of public finances and especially the process of impozitatre or taxation, for the simple reason that the bulk of government revenue are income tax .

Public finance performance is influenced at least the following variables, namely: a) the economic performance of the country's economy, expressed through specific macroeconomic indicators; b) the size or volume and capital structure underpinning the economy of a country; c) the degree of cultural and civic

involvement of a country's population; d) the design and reliability of budgetary policies of the government of the country concerned; e) reporting and the harmonization of monetary policy and financial restrictions imposed by the international monetary system budget; f) regional integration and Union level, in our case, the European Union and g) the economic and military influence regionally and internationally.

By analyzing these variables in time, during the recent past and possibly lund into account projections for the future, taking account of the moments of the evolution of economic crises and having vederevfenomenul office in the center of which stands individual "social" with all of the contemporary we intend to highlight conditionings interrelations between these variables and shape the taxation position and importance in contemporary society.

a)Economic performance of the national economy.

The economic achievements of the national economy usually presents official documents related to a calendar year and usually in comparison to previous years and quantitative achievements of other countries. In our country, government, National Bank, other national shows regularly at the national level by publication of macroeconomic indicators.

One of the aggregated macroeconomic indicators gross domestic product, abbreviated GDP of a country, calculated usually for a period of one year.

GDP is a macroeconomic indicator that reflects the sum of the market value of all final goods and services for consumption produced in all branches of economy within a country within a year.

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The value of GDP last 10 years:

Anul	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
GDP - billion	710,23	669.50	639,3	596,7	557,3	522,6	501,1	514,7	496,7	416,0	344,6
GDP - billion	159	150,8	144,7	133,9	131,5	124,1	118,3	139,7	123,7	97,7	79,5

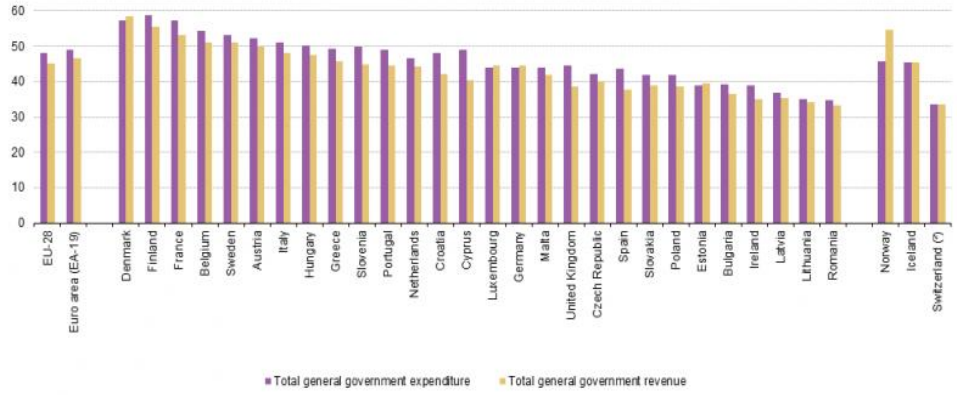
Source:Eurostat

The calculation of gross domestic product alleged to aggregate consumption expenditure of households, private non-profit organizations, investment spending, public spending of the state and also the trade balance, ie the difference between the value of exports and imports.

Briefly gross domestic product can be expressed as GDP = Consumption + Investment + (Export-Import)

Consumption has two components, namely, public consumption and private consumption.

GDP growth in our country so as is reflected in the table above is positive, but to make us a picture of reality in an international context, this volume indicator should be compared with the achievements of other countries. So, in the table below can be seen accomplishments EU member countries.



(*) Data extracted on 21.04.2015. Data ranked in descending order according to the average of total revenue and expenditure.
(*) 2013.
Source: Eurostat (online data code: gov_10a_main)

b) Volume and capital structure.

Capital underlying economy is the accumulation of a company, an idea tar over time, both in the form of fixed capital, as well as working capital, in other words it is the wealth of a country at a time. Both movable and immovable property of the state and its institutions, state-owned companies and those owned by individuals, private companies and nonprofit companies is evidenced in books and so called national accounts. Real estate properties and securities represent some of the tax base for local taxes due to local administrative authorities.

Structure is important in terms of national wealth capacitatatii to produce profit, to produce value newly created national income.

Component of its capital and earnings, national income, gross domestic product are mirror using state or national capital in the hands of private individuals and legal persons.

Capital Property fact that we made the emphasis was produced along time citizens of the country, in fact human capital. Human capital labor force of a country is the most important part of the capital of a country. The preparedness of the workforce is rezultatnta education and culture policies along time.

The degree of training of the workforce is a factoreliminatoriu for making coupling relationship to the economic union and it reflects the ability of a people to adapt to the demands of the international economy in the present and in the future.

A good level of training of the workforce can compensate for lack of material resources and other resources in the current context of Community harmonization and globalization.

Workforce capacity to adapt to different conditions and to realize labor productivity necessary for a global market, reflects the genetic level of individuals and the performance of the education system in the country concerned.

c) The involvement of cultural and civic population of a country;

The level of culture of a nation and by extension the population of a country is a different concept from the level of civilization of a nation or a population of a country or region. The civilization of a nation can be judged according to certain indicators of national consumer or average citizen is just an assessment,, in general, lifestyle and behavior of each individual is different depending on traditions, habits and family area and not finally ability existential understanding of each individual.

Quantitative indicators of consumption, such as value cosnitei daily structure, use of soap, detergent and toothpaste, water consumption, consumption of spices, service levels and structure, demand structure of services, the savings family and financial investments individuals and families and other indicators also reflect a certain level of civilization of a population.

The cultural level of a nation or an individual is harder to quantify, yet it is relevant to consider certain indicators such as level of education, population illiterate, the number of student omie inhabitants, the level of participation of population programs cultural offered by organizations in the field, the degree of computerization of cultural and scientific phenomenon.

d) The design and reliability of official budgetary policies.

Economic performance of a nation is influenced to a great extent and effectiveness of budgetary policies, namely budgetary resource allocation policies that reflect the government's official orientation towards the development of its public sector to private sector development or for major maintenance and modernixarea public services.

Public resources are eliminatory for simple reasoned that the state does not work and there is no budgetary resources, so at least important are fiscal policies and financing the deficit.

Public finance performance is given primarily on the degree of collection of receivables bugeare. This indicator shows how much of taxpayers' tax obligations are recorded and collected by the tax authority, namely;

$$Gic = \frac{Vfi}{Cb} \times 100;$$

where, Gic-The degree of collection of receivables budget;

Vfi- Tax revenues;

Cb-Nominal tax claims.

The degree of collection of tax receivables reflects not only the fiscal performance to track and collect taxes but tax policies.

Fiscal policies are marked by new theories of contemporary consumerist and current goals of governments to increase consumption at all costs, especially around election campaigns. Consumption, besides offering taxpayers a certain contentment is profitable and taxable base.

The degree of collection of receivables budget is influenced by the cultural model and taxpayers, this is the good that win or not over the centuries.

The transition to modern tax systems based on efficient procedure has been accepted to an extent different from country to country, we think and depending on the cultural level of the nation.

In fiscal strategy of our government budget for the years 2014-2016, the evolution of revenues and expenditures budget for 2016 estimates, evolved as follows:

%PIB

Indicator	2011	2012	2013	2014	2015	2016
Budgetary revenues	32,7	32,9	33,6	33,9	33,9	33,8
Budgetary expenditure	37,0	35,4	35,7	35,7	35,5	35,5
Deficit	-4,3	-2,5	-2,1	-2,0	-1,8	-1,8

e) The reporting and the harmonization of monetary policy and financial restrictions imposed by the international monetary system.

International financial flows is an important indicator in terms of effects it generates on national and international financial stability.

In the context of the current international monetary system based on floating rates, economies whose currency is quote depending on other currencies stronger and possibly more stable monetary policies imposed by the bank of issue would be marked by these restrictions on international flows. While the ins and outs of foreign currency in the country influence the national currency, monetary policy will aim at protecting its course to produce not issue bank losses and to not disrupt supply and demand in import.

f) Regional integration and Union level, in our case, in the European Union.

In the current context of EU integration, our country as other Member States receiving funding from grants guided by common policies of the Union.

For the period 2014-2020, estimates regarding the allocation of funds for Romania looks like this:

-mil euro-

European Fund	Period- 2014-2020
Structural and Cohesion Funds	21.826
European Agricultural Fund for Rural Development	7.123
European Fisheries Fund	230
European Agricultural Guarantee Fund	10.393
Total	39.572

Issues arising from European integration have been shown to be related to performance and the union negotiations with fundraising available on these branches.

g) The economic policies and military regional and international influence.

Public expenditure on the army are always absolutely necessary. State sovereignty is manifested in particular by the ability of defense against dangers from outside or within the country. The need to increase spending arming is evident

in the current geostrategic context and to pay our obligations taken as a NATO member country.

Military expenditures by size of economy and society influence and their structures.

Purchases of military equipment from abroad shall submit the budget to a certain effort, as well as acquisitions within the country, just as they finance part of the national economy and national returners in the economic cycle.

Our country has allocated for defense in 2015, 1.35% of GDP, and this year's military budget is estimated at 1.48% of GDP.

Conclusions.

These factors influencing the real economy, generates behavioral reactions from taxpayers in their capacity as taxpayers and especially as consumers or end-users be productive.

If we consider all these factors, the official budget policy reflect changes within them, following the adjustments to be made at public expense and at the expense taxes and public borrowing. As the latter are limited leeway can be accessed in tax revenue and therefore taxation is of great importance in the functioning of public structures.

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ANALYSIS OF COSTS AND BENEFITS OF INVESTMENTS IN WASTE MANAGEMENT SYSTEMS IN BULGARIA

Presiana Nenkova, Diyana Metalova
University of National and World Economy, Sofia, Bulgaria
pnenkova@unwe.bg
Diyana_metalova@yahoo.com

Abstract: *This paper represents a study employing Cost-Benefit Analisys for efficiency appraisal of a set of 19 projects for Regional Waste Management Systems (RWMS) construction, envisaged for funding under Priority axis 2: Improvement and development of waste treatment infrastructure within Operational Programme Environment 2007-2013 in Bulgaria. The member states are required to submit a Cost-Benefit Analysis to the Commission services for major projects to provide evidence that, in the framework of EU regional policy objectives, the project is both desirable from an economic point of view and needs the contribution of the Funds in order to be financially feasible. To draw the conclusion on potential impact on social welfare of the public investments undertaken in waste management ecological infrastructure costs and benefits are first identified and monetized. The aggregated model for assessing the impact of investments is based on information declared in those specific project proposals, and the data has then been processed to extract averages and aggregates needed for the purposes of analysis. Financial Analysis is employed to assess the need of co-financing by the European fund for regional development and to estimate the amount of the EU assistance. Economic Analysis is employed to determine whether the society would be better-off with the projects. According to the economic evaluation undertaken the projects' net present value is positive thus proving that investments in ecological infrastructure in Bulgaria generate net benefits for society as a whole.*

Keywords: Cost-Benefit Analisys; Regional Waste Management Systems**; financial gap**

JEL classification: D61; H23; H43; H54

1. Introduction

Urbanization, industrialisation and rising population numbers result in a continuous increase in the amount of waste components generated. The rapid growth in the quantity of generated waste increases its negative impact on the environment, making environmentally friendly waste treatment one of the most serious challenges for modern societies. At the same time, technological advancement in waste treatment provides new opportunities for using waste as an alternative source of raw materials and energy.

EU legislation poses a serious challenge for Bulgarian local authorities, with the introduction of the requirement to set up waste collection and treatment systems to cover the entire population. Bulgaria has 265 municipalities, and they generally do not have the capacity needed for developing waste treatment facilities compliant with the high EU standards. This calls for pooling together the efforts of several

municipalities to build and operate regional facilities at an affordable price, taking into account the income level of the population, as well as for sharing a regional landfill (WMA, art.23). The National Waste Management Activity Programme maps out 51 regions comprising various numbers of municipalities, ranging between 1 and 12 (NWMAP, 2009).
The EU cohesion policy makes financial support available to the member states so that they can bring their waste management activities into compliance with Community legislation. In Bulgaria, the Operational Programme Environment 2007-2013 (OPE 2007-2013) is an instrument for financing the completion of the national system of regional facilities (including landfills) which are designed to help reduce the overall amount of landfilled waste, and environmentally friendly waste recovery. Although waste disposal ranks lowest in the adopted waste management hierarchy and is one of the least favoured options, landfills are a key element in the future waste treatment infrastructure in Bulgaria, since a large portion of the existing waste dumps fall short of the requirements. The financial resources allocated to waste-related activities in the period 2007-2013 amounted to EUR 366 743 574 (MEW, OPE 2007-2013). Since these projects are not treated as major projects theire economic return has not been calculated before theire approval for financing. The purpose of our analysis is to assess the overall impact on the welfare of the population covered (about 40% of the overall population of Bulgaria), using the data from the 19 regional project proposals implemented as of 31 December 2015 under OPE 2007-2013 priority axis 2. (i.e. to produce a consolidated economic analysis).

2. Methodology of Study

In economic theory and practice, there is a variety of methods for assessing the efficiency of public investment projects but the one most widely used is the so-called Cost-Benefit Analysis (CBA). In the 1970s, UNIDO (Marglin, Dasgupta и Sen, 1972), OECD (Little и Mirrlees, 1974) and the World Bank (Skuire и Van der Tak, 1975) commissioned numerous studies on CBA applications. The purpose of CBA is to identify all possible effects and express them in financial terms. Assessment results are then added together to arrive at a conclusion as to whether the project at hand is an appropriate way to reach the set goal and whether it should be implemented. Article 40, point (e) of Regulation 1083/2006 requires that the member states submit to the European Commission a CBA for their major projects (exceed EUR 50 million), for the following two reasons:
1) To assess whether the project *is worth* co-financing, i.e. whether it has utility in respect to a certain goal from an economic viewpoint. Does the project contribute to reaching the goals of the EU regional policy? In order to check this, it is necessary to carry out an economic analysis. If the project's economic net present value (ENPV) is positive, then the society is better off with the project.
2) To assess whether the project *needs* co-financing and what should be the support amount. The fact that a project contributes positively to EU regional policy objectives does not necessarily mean that it has to be co-financed by the EU funds. Besides being desirable from an economic standpoint a project may also be financially profitable, in which case it should not be co-financed by the EU funds. To check whether a project needs co-financing requires a financial analysis. If the financial net present value (FNPV) without the financial contribution

from EU funds is negative then the project can be co-financed.
In the analysis, cash flows are generated under the so-called *incremental approach*, i.e. a comparison is made between the scenario 'With project' and the scenario 'Without project' (EC, 2008). Cash flows are reported in the year in which they occur, within a 30-year *reference period*. The life of landfilling cells is determined by their capacity and the amount of landfilled waste.
Discounting cash flows requires the application of a suitable *discount rate*. The European Commission recommended the application of 5% financial discount rate in real terms as an indicative target for public investment projects co-financed from EU funds in the programming period 2007-2013 (EC, 2008). In his paper at the Fifth Milan European Economy Workshop in October 2006, David Evans argues for a standard benchmark European discount rate of around 3%-4% based on social time preference (Evans, 2006).
The social discount rate in our study is 5,5% in real terms, as recommended by the European Commission for member states receiving support from the Cohesion Fund, Bulgaria being one of those member states.

3. Demand Analysis

Our demand analysis covers not only waste collection and landfilling services but also the demand for side products of waste (recycled materials and compost). The need for measures in the area of waste management is evaluated using a forecast about the amount of generated waste broken down by type and taking into account the demographic trends and economic development of the population. All projects assume a negative rate of demographic growth the average of which until 2030 is approximately minus 0.63% per year. Estimates of the expected waste amounts are calculated on the basis of present values indexed with the expected real GDP growth. The projects assume a real annual GDP growth of about 3.3%.
In 2011, the waste generation rate on the territory covered by the projects was 0.93 kg per person per day but it is expected to reach in 1.1 kg per person per day in 2030. Over the entire reference period, the expected amount of waste is 28 742 442 tonnes.

4. Results from Financial Analysis

The CAPEX (capital expenditure) index per tonne of waste is BGN 60.27.

Table 1. Dynamic Unit Cost

Operating costs of RWMS, BGN	1 129 688 136
Operating costs of RWMS (PV_{2012}), BGN	549 026 072
Waste in RWMS, tonne	23 007 409
OPEX (Operating costs), BGN/tonne	49,10
CAPEX (Investment costs), BGN/tonne	41,27
CAPEX (Re-investment costs), BGN/tonne	19
DUC (Dynamic unit cost), BGN/tonne	109,37

Source: Ministry of Environment and Water (MEW), own calculations

Estimates show that the waste disposal charge should be about BGN 68.1 per tonne.
Proceeds from charges paid by legal entities account for 38% of total revenues, while the waste they produce is only 10%. At the end of the period, their relative share declines to 31% but is still not sufficient to eliminate 'cross-subsidies' from business in favour of households.

Table 2. Financial return to investments, BGN

	Present Value
Investment costs	480 507 710,12
Investment costs excluding contingencies	458 884 863,16
Re-investment costs	221 230 944,85
Residual Value	10 551 612,49
Operating costs of RWMS	549 026 072,08
Operating revenues of RWMS	813 500 231,85
FNPV	-405 090 035,76
FIRR	-4,08%

Source: MEW, own calculations

FNPV is a negative value, and FIRR is lower than the discount rate used. This means that the revenue generated by the project is insufficient to cover its operating and investment costs. Because of that, it is necessary to support the investment partially with OPE funding. How much of that should to be financed through grant money is determined on the basis of the financial gap calculated separately for each project.
The amount of Community support is determined by reference to 'the financial gap' in the project, i.e. the percentage of discounted expenditure needed for the initial investment which is not covered by the discounted net revenue generated by the project. The financial gap for this pool of projects is 86.91%, which means that the remaining 13.09% of the investment costs can be covered by the net revenues from operations.
The total amount of investment costs for all the projects is BGN 512 552 848, of which BGN 438 547 985 is the grant amount, while the balance of BGN 74 004 863 is paid by the project beneficiaries.

5. Economic Analysis

The principles of economic assessment require that the resources invested in a project be evaluated at their opportunity cost, and that project outcomes be assessed by the willingness of users to pay for them. However, opportunity cost does not necessarily match the established financial cost. Similarly, 'willingness to pay' cannot, in all cases, be adequately reflected in the monitored market prices which may be distorted or non-existent (EC, 2006). Unlike financial analysis, economic analysis is carried out from the viewpoint of the society, and not solely from the viewpoint of the owner of the infrastructure facility.

In economic analysis, both the positive and the negative externalities are considered. Their monetary estimates are not financially relevant but are used as a measure of the change in public welfare.
The cash flows included in the financial analysis are used as a starting point for the economic analysis. When defining economic performance indicators, certain adjustments need to be made. To this end, conversion factors are applied to the cash inflows and cash outflows of the project.

5.1. Fiscal Corrections

Fiscal corrections are required for those market price elements which are not related to the opportunity costs of resources. Certain elements of the financial analysis are pure transfers from one group of economic entity to another, having no economic significance whatsoever for the welfare of society as a whole. For example, taxes included in the price of project resources are a cost item incurred by the project, yet they become a claw back to the population, in the form of public goods (EC, 2008). The opposite is true of subsidies as they reduce the prices of subsidised goods; however, a portion of the price is paid from the public budget, i.e. by the public. Since subsidised resources have a negligible share in total expenditure, they are not factored in the price adjustment.
These distortions are adjusted as follows:

- Input and output prices do not include VAT or any other indirect taxes.
- The prices of inputs include direct taxes.
- Social security contributions are deducted from labour costs.

On the basis of the considerations listed above, the investment costs in the projects under examination has been adjusted for the VAT amount. Operating costs and operating revenues are also net of VAT (19,78% of total investment costs or BGN 84 625 011). Both investment costs and operating costs have been adjusted for social security contributions with a 30% expense item.
At the same time, if certain specific indirect taxes or subsidies are designed to offset externalities (so-called *Pigouvian taxes/subsidies*), those need to be included in prices. For example, the excise duty charged on fuels is one such corrective tax through which marginal extraneous costs incurred by the public in the form of air pollution are reflected in fuel prices. Because of that, in the economic analysis, fuel costs have not been adjusted for the amount of the excise duty.

Table 3. Fiscal corrections, BGN

		Present Value
Investment costs		**477 537 444**
Investment costs excluding contingencies		**456 048 259**
	Fiscal corrections – indirect taxes (VAT)	*75 295 824*
	Fiscal corrections – social security contributions	*33 740 120*
	Total Fiscal corrections of investment costs	***109 035 944***

Investment costs after fiscal corrections	**346 959 258**
Re-investment costs	**209 166 774**
Fiscal corrections (social security contributions)	*18 825 010*
Re-investment costs after fiscal corrections	**190 341 764**
Operating costs	**515 596 220**
Fiscal corrections (social security contributions)	*77 339 433*
Operating costs after fiscal corrections	**438 256 787**
TOTAL Fiscal corrections	***205 200 387***

Source: MEW, own calculations

5.2. Conversion Factors

Market prices of public goods will reflect accurately the value of inputs only provided that they are traded on the domestic market, that the market is not distorted, and if the project is relatively small, so that it would not cause relative prices of resources to vary. In an open economy and imperfectly competitive markets, resource prices may be strongly distorted, which requires their revaluation to 'shadow prices' when assessing the project, in order to reflect more accurately the opportunity cost to the public (Brusarski, 2007). To this end, conversion factors are calculated, in order to convert market prices into shadow prices (WB, 2001). The values of certain key national parameters may be suggested by the government and not calculated for each project separately. Each member state develops its national CBA methodology designed to assess certain national parameters comprising certain key 'shadow prices' and conversion factors, in the context of the priorities set in the European cohesion policy. In 2010, as part of the JASPERS (Joint Assistance to Support Projects in European Regions) initiative, Guidelines for CBA of projects in Bulgaria were developed for 3 sector, with the support of experts – solid waste, water and transport.
The use of conversion factors requires grouping expenses into the following several categories: tradable goods; non-tradable goods; skilled labour; unskilled labour.

This exercise can easily be done for *tradable goods* as their world prices are as follows: CIF prices for imports and FOB prices for exports, respectively. No special adjustment is needed, since it is assumed that market prices reflect public opportunity costs. This group comprises most of the investment cost items incurred in the projects, since they are contracted by means of international public procurement tenders.
Goods and services *not tradable* on international markets include domestically produced items and reflect trade tariffs and barriers. This group comprises some construction works, electricity, water and other supplies. To those, a standard conversion factor (SCF) is applied when dealing with minor goods or goods for which no specific conversion factors exist. SCF is calculated using the import and export values from the table below.

Table 4. Standard Conversion Factor, 2012

Import (M)	BGN 47694,67 million
Export (X)	BGN 40665,22 million
Total value of duties on import (Tm)	BGN 7908,9 million
SCF=(M+X) / (M+X+Tm)	0,918

Sourse: Balance of Payments of the Republic of Bulgaria, 2012; Annual Report of Bulgarian Customs Agency, 2012; own calculations

Labour force can be the core input for certain investment projects. Wages must reflect society's assessment of working hours, i.e. the marginal public value of the unit productivity of labour. In real life, wages are often distorted. In such cases, monitored prices need to be adjusted by applying conversion factors to determine the 'shadow wage'. This is regionally specific due to the weak mobility of labour resources in comparison to the mobility of capital.

Rates for *skilled labour* do not need to be adjusted as they are assumed to reflect the opportunity cost of the time of those employed.

As regards labour costs for *unskilled labour*, it is necessary to determine a conversion factor for rates of pay, so as to make sure that they are adequate to the economic cost, considering the higher supply of unskilled labour in the conditions of unemployment, i.e. it is necessary to determine the so-called 'shadow wage rate factor' (SWRF). It is calculated using the following formula:

$$SWRF = (1-u)*(1-t)$$

Where: u – regional unemployment rate; t – rate of social security payments and relevant taxes

Total tax and social security burden for 2012 in Bulgaria is: 37% (0,303+0,1*(1-0,303))

$$SWRF = (1-0,123)*(1-0,37) = 0,877*0,63 = 0,5525$$

In 2009, economists from the University of Milan calculated SWRF for 4 groups of NUTS-2 regions in the EU. For countries in Eastern Europe, the SWRF is 0.62. (Del Bo, Florio, M. and Fiorio, C., 2009).

Since the factor is less than 1, the economic costs of unskilled labour will be lower than the financial costs. In the 'Without project' scenario, a portion of that labour force would have remained unemployed, thus lowering the opportunity costs of that resource. This adjustment, which results in lower economic cost of labour, improves the economic profitability of the projects.

Table 5. From market prices to shadow prices, BGN

	%	**CF**	**Present Value**
Investment costs after fiscal corrections			**347 480 914**
Tradable goods	*31%*	*1*	108 044 447
Non-tradable goods	*44%*	*0,918*	140 193 903

Skilled labour	*20%*	*1*	69 951 854
Unskilled labour	*5%*	*0,553*	8 617 584
Converted Investment Costs			**327 992 397**
Re-investment after fiscal corrections			**190 341 764**
Tradable goods	*30%*	*1*	57 102 529
Non-tradable goods	*40%*	*0,918*	69 893 496
Skilled labour	*10%*	*1*	19 034 176
Unskilled labour	*20%*	*0,553*	21 051 799
Converted re-investment costs			**167 082 001**
Operating costs after fiscal corrections			**438 256 787**
Tradable goods	20%	1	87 651 357
Non-tradable goods	30%	0,918	120 695 919
Skilled labour	15%	1	65 738 518
Unskilled labour	35%	0,553	84 824 601
Converted operating costs			**358 910 396**
TOTAL costs after corrections and conversions			**853 984 793**

Source: MEW, own calculations

5.3. Non-Market Impacts

The next step in the economic analysis is to include in the assessment the project effects that are important for society but have no market value. The most common approach is that of the 'willingness to pay'. It enables the assessment of a monetary value by revealing consumer preferences. To assess certain products for which the willingness-to-pay approach is not applicable, we can use the approach of long-term marginal costs, also called the 'willingness-to-accept' approach. The use of these two approaches precludes the application of conversion factors to the financial operating revenues from project operations.

Hence, in addition to the market effect from the sale of side products, the implementation of the projects under consideration will also bring about effects which do not have any market price. The analysis includes the following economic benefits:

- *Savings from resource costs*. On the one hand, the separated recovered materials and the side products obtained from processing waste (compost and energy) have a value if sold on the market. On the other hand, they reduce the amount of waste disposed in landfills, which leads to an extended economic life of the landfills. The first effect is reflected in the financial analysis as an actual cash flow while the second effect is reflected in the economic analysis as an intangible benefit with no market price.
- *Preventing the discharge of infiltrate into the soil and water*. The analysis uses an average standard value of EUR 1.52 per tonne of waste which is

not properly disposed of in a landfill equipped with a suitable system for infiltrate collection and treatment (EC, DG Environment, 2000).

- *Reducing greenhouse gas emissions*, in particular CH_4 and CO_2, which usually represent 64% and 34%, respectively, of the volume of gases released during the decomposition of waste. It is believed that those greenhouse gases contribute the most to global warming. In the Guidelines for CBA of projects in Bulgaria, the impact of one metric tonne of CO_2 is estimated at EUR 25 as of 2010 and goes up, in real terms, to EUR 45 in 2030.

The most important environmental effect of an improved management of household waste is the reduction of greenhouse gas emissions. In 2011, greenhouse gas emissions produced by waste management account for about 2,9% of the total GHG emissions in the EU, and in Bulgaria that percentage was 5,7%. In terms of greenhouse gas emissions per capita in the waste sector, Bulgaria ranks fourth in the EU. The composition of GHGs shows that methane, one of the six gases monitored under the Kyoto Protocol, has the prevailing share. Of these methane emissions, 30% are associated primarily with waste disposal operations. Greenhouse gas emissions in the 'Without Projects' scenario for the 30-year reference period total 22 720 576 tonnes, while the 'With Projects' scenario brings that cumulative amount down to 4 058 710 tonnes, i.e. almost 6 times less.
The assessment of economic benefits is shown in the table below:

Table 6. Economic benefits, BGN

Economic benefits	**Present Value**
Revenues from compost	14 997 031
Revenues from recycling materials	94 772 904
Savings from disposal costs	321 559 434
TOTAL Savings from resource costs	***431 329 370***
Preventing the discharge of infiltrate	**32 806 005**
Reducing greenhouse gas emissions	**567 021 012**
TOTAL ECONOMIC BENEFITS	**1 031 156 387**

Source: MEW, own calculations

The table below shows the calculation of indicator values.

Table 7. Economic return indicators, BGN

		Present Value
1	Converted investment costs	327 992 397
2	Converted re-investment costs	167 082 001
3	Converted operating costs	358 910 396
4	TOTAL costs after corrections and conversions	853 984 793
5	Residual value	9 231 919
6	*Economic benefits*	

7	*TOTAL Savings from resource costs*	*431 329 370*
8	*Preventing the discharge of infiltrate*	32 806 005
9	*Reducing greenhouse gas emissions*	567 021 012
10	TOTAL ECONOMIC BENEFITS	1 031 156 386,97
11	Net Cash Flow (10+5-4)	186 403 512,78
12	ENPV (10+5-4)	186 403512,78
13	EIRR	9,22%
14	Benefit/Cost Ratio ((10+5)/4)	1,21

Source: MEW, own calculations

Calculations demonstrate that after the relevant fiscal corrections and transformations in the financial costs, after measuring and costing non-market effects, ENPV is a positive value. That bears evidence that the society stands to gain from the implementation of the projects for developing integrated waste management systems. The net benefit is expected to amount to about BGN 186.4 million. IRR, the relative efficiency indicator, also confirms the positive impact, standing at 9.22%, with a 5.5% real discount rate. The B/C ratio shows that for each Bulgarian lev invested in cost, the public receives a benefit of BGN 1.21. All three indicators point to the same conclusion, namely, that the projects are efficient from society viewpoint.

6. In Conclusion

For the scores of small municipalities, building and maintaining the necessary infrastructure single-handedly is not just economically unprofitable, it is even an impossible task, considering the budgets available to them. At the same time, waste treatment must be done in an environmentally friendly way and in compliance with the EU directives. It is necessary to unite the efforts of several municipalities and build regional waste management systems.

The financial gap emerging from the aggregated financial analysis is 87%. This means that, in the Bulgarian waste sector, revenues cover operating costs and only a small portion of the proceeds is available for investing in capital improvements. That explains why it is a common practice to dispose of waste by discarding it on waste dumps. For a member state of the EU, that is inadmissible and runs counter to the adopted strategy of turning Europe into a recycling society minimising waste production. Significant financial resources have been allocated to this goal via OPE 2007-2013.

The economic analysis we performed produced evidence that allows us to conclude that investments in environmentally friendly infrastructure for improving the quality of waste management contribute to better public welfare. The main benefits for the public are the avoidance of harmful emissions and cost savings from the avoided waste disposal.

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SUB-SECTION: CORPORATE FINANCES

THE ADDED VALUE CREATED BY COMPANIES LISTED ON BUCHAREST STOCK EXCHANGE: TRENDS AND PERSPECTIVES

Iulia-Oana Ştefan (Belcic-Ştefan)
University of Craiova, Faculty of Economics and Business Administration, Department Finance, Banks and Economic Analysis, Craiova, Romania
iulia.oana.stefan@gmail.com

Abstract: *In light of their informational content, introduction to the financial theory and practice of financial indicators expressing the value creation has responded promptly to the economic environment's necessities to combat the classical instruments' deficiencies for measuring economic and financial performance based on profit, taking into account the risk associated with the business and the cost of capital invested by fund owners.*
The present study examines the added value created by companies listed on the Romanian capital market, through the evolution of five major indicators, namely economic value added, market value added, cash value added, cash flow return on investment and total shareholder return. The level of these indicators was determined for each year of the time frame 2009-2013 at the level of a sample composed of 36 companies listed on Bucharest Stock Exchange belonging to several sectors of activity of the most diverse. The selection process of the enterprises has considered the broadest possible representation of the directly productive sectors of the national economy, as well as fulfillment of minimum criteria relating to liquidity and the value of the shares included in free-float, to ensure that their market value is the most accurate one.
Analyzing the evolution of indicators expressing value creation there could be ascertained the inability of companies listed on the capital market in Romania to significantly enhance their shareholders' wealth during the five years analyzed, the presence of the financial crisis being felt to the full. The only indicator which recorded favourable values for a significant number of companies is the total shareholder return. This, however, is determined to a large extent by the favourable evolution of the average stock market return, especially in the first and in the last two years of analysis, the unfavourable evolution of market value added demonstrating, nevertheless, that the value increase attributed by the market is not enough to cover the amount of capital invested by fund holders.

Keywords: economic value added, market value added, total shareholder return, listed companies, Bucharest Stock Exchange

JEL classification: G32, G01

1.Introduction

Standard indicators for measuring performance, although highly valuable, present the disadvantage that they take no account of the cost of invested capital, especially the cost of equity, and as such, their exclusive use within the economic and financial analysis can lead to erroneous conclusions since there may be encountered enterprises that are performing well but do not create value, and, on

the contrary, are consuming the already existing one.
In the specialized literature and practice concerns for quantifying the newly created value of a enterprise are relatively recent. Thus, Colasse (1993:54) defines increasing the value of an entity as "the capacity of the company to increase its size" mentioning several criteria for measuring it: sales, production, added value, fixed assets or total assets.
Essential contributions on the subject were made by US financial consulting offices, by promoting new indicators for measuring financial performance. Thus, in 1991 the consulting office Stern Stewart proposes economic value added (EVA), market value added (MVA), Future Growth Value (FGV) and Current Operations Value (COV) as indicators highlighting the registered value increase.
In 2002, other two important consultancies, Boston Consulting Group and HOLT Value Associates (now CSFB Holt LLC following the acquisition the same year by Credit Suisse) introduce Cash Flow Return On Investment (CFROI) and Total Shareholder Return (TSR) as the main means of highlighting the value creation.
Another innovative indicator promoted by Applied Finance Group is the Economic Margin, created to determine whether the entity generated cash flow in addition to the cost of capital invested in its operations or not, fact equivalent to an erosion of the value of advanced capital.
In Romania, most authors have consented to the use of new indicators promoted by advisory offices in order to determine the added value created by the company. Thus, Petrescu (2008:281) believes that added value is "the main element in determining certain indicators of value creation with major significance in the activity of any entity listed or not on the capital market" and mentions a number of the indicators presented above as criteria for performance evaluation.

2.Methodology

In the present study is tracked the evolution of added value created by companies listed on the Romanian capital market. To this end, following the confrontation of multiple opinions of international specialty literature and practice with the national literature (McLaney, 2014, Halpern, Weston and Brigham, 1998, Siminica, 2010, Achim and Borlea, 2012, Dinca, 2001), were selected the following set of main value creation indicators:

- Economic Value Added is a modern instrument of performance measurement, highlighting the value surplus obtained by shareholders from profits resulting from carrying on current activities, after covering the costs of invested capital and profit tax. Is determined as the difference between net operating result (Rne) and the cost of invested capital (Cki)

$$EVA=Rne - Cki \quad (1)$$

The cost of invested capital is determined starting from the formula for calculating the rate of invested capital cost (Rcki) as follows:

$$Rcki=\frac{Cki}{Ki} \rightarrow Cki = Rcki * Ki \quad (2)$$

Invested capital consists of equity (Kpr) and borrowed capital, ie medium and long term loans or financial liabilities (Itml) and short-term financial debts (Dfts) .Thus, it results that the rate of invested capital cost will be determined depending on the cost of the two categories of capital that make up the entire invested capital: the

cost of equity and the cost of borrowed capital.
The financial theory has stated the model for calculating the weighted average cost of capital (CMPC) as follows:

$$CMPC(Rcki) = Rc * \frac{Kpr}{Ki} + Rd * \frac{Kimp}{Ki} * (1-ci) \quad (3)$$

and $Ki = Kpr + Kimp$ (4) $Kimp = Itml + Dfts$ (5)

where:Rc-rate of equity cost or the minimum profitability rate expected by shareholders;
Rd-rate of borrowed capital cost;
Kpr-equity;
Kimp- borrowed capital;
ci-profit tax(%);

In order to determine the rate of equity cost I used the CAPM approach (Capital Asset Pricing Model), which involves calculating the rate of equiy cost (Rc) starting from the profitability rate for a 0 risk or the riskfree rate of return (Rf) to which it is added the risk premium (Pr).

$$Rc = Rf + Pr \quad (6)$$

The riskfree rate of return (Rf) consists of the minimum gain obtained by shareholders if they invested their funds in risk-free investments (typically bonds) at the expense of investing in shares of various companies, which involve a certain degree of risk.
The risk premium (Pr) consists of the extra return required by shareholders to compensate the risk they are assuming by placing their capital in the respective shares, and is determined as follows:

$$Pr = \beta(Rm - Rf) \quad (7)$$

where: Rm- the average rate of return expected on the market for a share;
β - the risk index of the share in question;
(Rm-Rf) – the risk premium on the market;

- The Market Value Added reflects the extra value created by the company in view of the market, over the book value of the capital invested in its assets.

$$MVA = KB - Ki \quad (8)$$

where:KB - market capitalization; Ki - invested capital;

- Cash Flow Return on Investment is determined reporting the gross cash flow of the period (CFB) corrected with the volume of net depreciations (D) at the sum of gross investments (IB) or total assets (AT) as follows:

$$CFROI = \frac{CFB - D}{IB(AT)} * 100 \quad (9)$$

The gross cash flow of the period is determined in the following manner (Achim and Borlea, 2012:318):

$$CFB = RNE + Dob + D \quad (10) \qquad \text{and} \qquad D = Cap - Vp \quad (11)$$

where:RNE-net result of the financial exercise;
Dob- interests due and unpaid during the financial exercise;
D- the volume of net depreciations;
Cap- operating expenses related to depreciation, provisions and adjustments for depreciation and value loss that are taken from the debit balance of accounts from group 68;

Vp- Revenues from provisions and adjustments for depreciation and value loss, which are taken from the credit balance of accounts from group 78;

- Cash Value Added reflects the extra value corrected with unmonetary revenues and expenses obtained by the entity after covering the cost of invested capital (Cki).

$$CVA = CFB - D - Cki \tag{12}$$

- Total Shareholder Return expresses what percentage of the market price of the share at the beginning of the period (PPA_0) returns to the investor in the form of dividend per share (DPS) and value increase of the share, recorded at the end of the period ($\Delta PPA=PPA_1-PPA_0$):

$$TSR= \frac{\Delta PPA+DPS}{PPA_0} * 100 \tag{13}$$

In order to undertake the study I have analyzed 36 companies listed on Bucharest Stock Exchange, for a reference period of 5 years, ie from 2009 to 2013, the selection process of the enterprises considering the broadest possible representation of the directly productive sectors of the national economy, as well as fulfillment of minimum criteria relating to liquidity and the value of the shares included in free-float. Thus, the analysis includes companies from various areas of activity, such as: Mining and quarrying, (OMV Petrom, S.N.G.N Romgaz, Rompetrol Well Services, Dafora), Manufacturing (Vrancart, Rompetrol Rafinare, Antibiotice, Biofarm, Zentiva, Artego S.A Tg Jiu, Romcarbon S.A Buzau, Teraplast, Stirom S.A Bucuresti, Alro, TMK-Artrom, Electromagnetica S.A Bucureşti, Electroargeş S.A Curtea de Argeş, Retrasib S.A Sibiu, Mecanica Ceahlău, Altur, Compa, Aerostar, Turbomecanica), Electricity, gas, steam and air conditioning supply (Amonil, C.N.T.E.E Transelectrica, S.N. Nuclearelectrica S.A), Constructions (Impact Developer & Contractor, Condmag), Wholesale and retail trade (Alumil Rom Industry, Ropharma S.A Braşov), Transportation (Conpet, S.N.T.G.N Transgaz), Storage (Oil Terminal, Socep), Professional, scientific and technical activities (Electrica), Hotels and restaurants (Turism Felix S.A Băile Felix).

For the 36 companies were extracted data from the annual financial statements but also from other published sources as well as from the records of Bucharest Stock Exchange, from where there were taken also the stock quotations of securities.

3 Results

Once determined the rate of equity cost and the weighted average cost of capital, the study is initiated by analyzing the added value created by listed companies in various forms, as well as the earnings they generate to their shareholders.

Thus, using the computing relations presented in the methodology section, we determined for each year of the time frame 2009-2013 the level of the indicators expressing the value creation achieved by listed companies, the obtained values being presented in the following.

Table 1: The evolution of Economic Value Added

Company	EVA (RON)				
	2009	2010	2011	2012	2013
1. SNP	-7.772.379.353	703.132.209	8.308.225.131	-117.700.585	-1.473.613.365
2. SNG	-2.620.191.220	-69.979.986	1.803.806.137	-183.754.756	-316.460.681
3. PTR	-49.630.476	-2.001.706	34.559.498	-6.847.511	-9.077.896
4. DAFR	-102.765.212	-4.456.830	46.777.848	-28.733.948	-110.148.809
5. VNC	-24.740.004	-7.464.252	5.583.349	-7.929.814	-27.578.551
6. RRC	-898.218.196	-219.053.430	-299.737.701	-519.409.337	-662.869.284
7. ATB	-63.272.343	-3.297.847	37.484.349	-8.644.044	-2.284.855
8. BIO	-38.899.957	449.975	25.900.370	-8.239.856	-7.058.169
9. SCD	-140.306.210	18.138.270	61.147.130	-9.997.676	-7.521.185
10. ARTE	-26.233.410	-5.308.741	12.072.223	-311.724	-8.366.591
11. ROCE	-16.546.706	-11.957.577	-4.355.648	-8.057.928	-7.584.014
12. TRP	-91.764.806	-12.680.752	16.262.786	-33.756.511	-23.503.528
13. STIB	6.206.125	-1.509.407	-6.419.358	2.853.857	-7.514.783
14. ALR	-549.291.893	76.826.178	418.102.279	-144.627.260	-268.449.253
15. ART	-95.402.237	20.977.932	91.256.813	-1.171.443	-47.823.675
16. ELMA	-102.732.084	-4.609.298	64.423.480	-31.547.598	-42.651.042
17. ELGS	2.871.947	6.653.243	5.389.977	7.176.439	6.725.620
18. RTRA	-6.637.071	1.602.516	3.862.838	-5.844.721	-994.162
19. MECF	-11.280.524	1.007.494	6.015.998	3.652.186	-3.424.438
20. ALT	-34.744.079	-7.332.614	11.196.641	-11.170.519	-11.465.810
21. CMP	-101.852.791	-16.766.948	46.856.473	-20.010.941	-29.327.281
22. ARS	-20.534.020	2.353.774	18.802.696	-7.438.555	-8.224.238
23. TBM	-51.716.246	-14.714.236	-7.531.145	-17.865.777	-14.061.904
24. AMO	-28.136.372	-8.683.543	-15.266.445	-9.670.659	-9.574.577
25. TEL	-1.290.011.732	-280.220.365	497.142.223	-499.094.644	-479.862.230
26. SNN	-517.129.190	-488.693.963	-531.745.463	-501.819.570	-168.632.502
27. IMP	-325.666.654	-65.470.408	94.579.988	-160.098.237	-137.043.448
28. COMI	-53.443.364	-3.083.340	32.349.190	-44.578.949	-39.193.541
29. ALU	-2.212.240	-2.570.199	633.727	-3.247.551	-5.360.877
30. RPH	-9.585.832	1.719.746	12.404.042	-6.803.157	-6.595.807
31. COTE	-199.188.675	-24.016.074	78.567.953	-62.843.481	-88.511.466
32. TGN	-867.030.374	78.935.141	812.618.186	-267.791.244	-165.644.201
33. OIL	-79.871.591	-17.011.610	51.370.783	-64.486.926	-82.920.051
34. SOCP	-26.297.342	-4.786.276	9.557.952	-10.279.411	-9.084.598
35. EL	-1.726.459.933	-689.883.421	-254.797.467	-488.529.727	-420.495.261
36. TUFE	-43.219.282	-9.133.427	12.443.471	-15.493.334	-15.810.768

Source:author processing according to the data from the annual financial statements of companies

Analysing the evolution of economic value added we find that not many Romanian listed companies succeed to create value for their shareholders. Thus, in 2009, only 2 of the 36 analyzed companies recorded a positive economic value added, both belonging to the manufacturing industry, respectively Stirom and Electroargeş. For the other companies the effects of the economic and financial crisis are still visible as the cost of invested capital considerably exceeded the net current result. The already existent value was intensively eroded in some cases, such as Electrica, with more than 1.7 billion RON. The year 2010 brings with it a decrease in the average return on the stock market but also in the interest rate, so that the rate of the cost of capital invested by fund providers has reduced considerably, allowing more companies (11) to obtain positive economic value added. On the other hand, although the values of the indicator recorded in 2011 were largely positive, they are not relevant from an economic and financial point of view since, because of the negative market return this year, also the rate of equity cost recorded negative values, resulting in an artificial value creation. In 2012 it is observed a new unfavourable development for companies listed on BSE in terms of the economic value added created, only 3 of them (Stirom, Electroargeş and Mecanica Ceahlau) registering positive values. In fact, even though this year the interest rate registered yet another successive decrease, the financial leverage of companies is largely quite low, the rate of invested capital cost not being significantly influenced. The increase of the average return on the stock market was what determined the reduction in value added created by companies, which failed to achieve an operating result comparable to the cost of invested capital. The same phenomenon occurs also in 2013, this year only the company Electroargeş obtaining economic value added, although in slight decrease from the previous year.

Table 2: The evolution of Market Value Added

Company	MVA (RON)				
	2009	2010	2011	2012	2013
1. SNP	-2.351.167.332	-1.034.706.172	-6.831.486.906	-830.357.765	-947.008.396
2. SNG	*	*	*	*	3.886.756.856
3. PTR	7.420.864	-29.941.614	-49.385.290	-50.795.426	-27.684.080
4. DAFR	-184.354.791	-147.069.242	-203.813.558	-177.966.183	-28.998.875
5. VNC	-66.421.662	-90.342.037	-141.864.330	-142.398.410	-133.848.150
6. RRC	74.481.472	564.564.336	1.725.493.956	-751.762.625	-528.808.303
7. ATB	-36.118.510	-55.132.531	-152.587.574	-229.181.968	-48.816.402
8. BIO	84.179.437	78.892.901	57.529.679	64.010.848	155.076.483
9. SCD	4.008.067	78.092.380	113.723.075	71.452.428	174.393.508
10. ARTE	-102.177.967	-94.322.540	-103.555.426	-50.872.744	-32.209.518
11. ROCE	-137.336.611	-153.641.659	-167.847.604	-157.473.493	-150.287.509
12. TRP	-12.715.384	-87.677.908	-136.190.711	-117.706.782	-109.039.870
13. STIB	-227.720.479	-240.646.851	-258.190.906	-293.156.491	-340.872.679
14. ALR	-280.491.133	53.716.981	161.407.652	-416.395.599	-708.957.036
15. ART	-213.442.515	-192.387.378	-574.014.251	-533.389.043	-478.334.199

16. ELMA	-92.387.126	-31.051.321	-96.823.310	-120.027.385	-118.812.014
17. ELGS	-1.325.961	11.260.011	-7.941.372	-17.216.847	-18.977.427
18. RTRA	-22.548.174	-16.892.007	-22.589.866	-24.257.984	-28.130.817
19. MECF	-20.522.646	-22.412.884	-18.376.378	-15.625.114	-11.364.159
20. ALT	-90.999.589	-86.768.946	-118.085.121	-94.097.931	-91.452.083
21. CMP	-330.136.708	-292.614.703	-316.638.969	-270.375.198	-259.060.515
22. ARS	-5.941.241	37.323.579	9.748.402	33.900.071	46.793.347
23. TBM	-131.985.526	-114.558.771	-120.021.982	-97.726.361	-88.879.677
24. AMO	-69.549.111	-68.551.861	-47.420.108	-56.607.519	-60.507.013
25. TEL	-2.529.920.741	-2.250.473.185	-2.576.010.328	-3.092.396.051	-3.121.287.684
26. SNN	*	*	*	*	-7.989.940.987
27. IMP	-338.806.556	-347.156.319	-353.254.745	-373.368.288	-231.408.044
28. COMI	41.977.517	-20.038.194	-79.075.462	-82.544.508	-59.671.566
29. ALU	2.718.026	-17.796.036	-40.057.577	-43.772.470	-58.040.273
30. RPH	50.855.193	31.122.355	78.655.732	53.305.792	30.458.514
31. COTE	-285.636.078	-313.982.143	-263.970.676	-249.039.059	-262.013.384
32. TGN	-790.183.059	297.625.457	-1.104.505.966	-851.629.223	-1.309.709.021
33. OIL	-24.519.571	-64.510.562	-245.758.947	-310.038.827	-387.129.017
34. SOCP	-39.893.664	33.009.930	18.366.203	-27.544.200	-42.250.300
35. EL	*	*	*	*	*
36. TUFE	-97.442.306	-117.229.803	-109.401.305	-110.868.135	-105.033.870

Source:author processing according to the data from the annual financial statements of companies

Regarding the market value added, it should be noted that two of the analyzed companies, respectively, Romgaz and Nuclearelectrica were listed on the stock exchange starting with the year 2013, while for company Electrica listing is a fact since the year 2014, so that the market value added could be determined only to a small extent for these companies. That said, only three companies have managed to record positive market value added throughout the entire analyzed period, namely Biofarm, Zentiva and Ropharma.

Thus, we find that although they had created economic value only in 2010 (the level from 2011 being irrelevant), the market assigns an extra value also in the following years of analysis. The reverse situation is encountered for company Electroargeş, whose constant positive economic value added is validated by the market only in 2010. In this context, with the exception of other two companies that recorded partially favourable developments (Rompetrol Rafinare in the first 3 years of analysis and Aerostar since 2010), according to the market, most Romanian companies are not able to create added value in any year of the period under consideration.

Table 3: The evolution of Cah Value Added

Company	CVA (RON)				
	2009	2010	2011	2012	2013
1. SNP	-10.027.060.399	-2.392.241.294	1.520.268.304	-6.367.227.668	-7.283.148.621
2. SNG	*	*	-863.787.247	-1.622.458.881	-2.373.393.681
3. PTR	-68.537.058	-18.970.018	19.030.661	-30.053.549	-44.878.747
4. DAFR	-146.652.478	-50.653.556	7.568.512	-53.471.811	-70.008.792
5. VNC	-37.828.833	-19.280.699	-7.657.760	-32.702.345	-37.578.297
6. RRC	-758.318.119	-235.077.436	-261.697.789	-397.035.526	-731.327.372
7. ATB	-109.879.079	-59.406.370	-12.112.716	-63.564.197	-62.328.547
8. BIO	-53.188.617	-44.835.397	7.151.585	-25.361.609	-36.285.440
9. SCD	-147.331.759	66.282.230	-171.222.655	-58.466.994	-22.809.419
10. ARTE	-33.390.314	-14.466.571	1.348.894	-19.462.788	-18.473.631
11. ROCE	-22.123.332	-26.210.544	-7.860.938	-15.499.430	-19.783.328
12. TRP	-119.828.096	-32.858.205	7.024.730	-47.924.511	-45.822.808
13. STIB	-33.419.738	-39.458.853	-48.725.402	-38.320.212	-42.594.744
14. ALR	-397.845.904	-270.705.324	-41.316.366	-313.911.759	-471.524.977
15. ART	-121.344.214	-49.562.027	-21.960.087	-79.887.387	-128.525.736
16. ELMA	-107.739.369	-36.504.027	23.805.547	-46.515.481	-71.184.139
17. ELGS	-1.163.486	-92.249	-2.048.195	-8.545.730	-5.780.240
18. RTRA	-9.450.525	-3.359.613	-2.349.458	-5.958.623	-6.002.991
19. MECF	-7.256.384	-7.477.326	3.881.894	-2.279.235	-7.332.165
20. ALT	-41.278.152	-13.382.373	2.426.344	-18.975.619	-19.218.240
21. CMP	-134.435.398	-60.279.566	-13.206.577	-78.025.406	-81.865.044
22. ARS	-37.778.098	-11.109.911	-14.699.473	-32.248.612	-42.592.954
23. TBM	-57.977.527	-19.514.300	-446.682	-16.265.099	-17.652.872
24. AMO	-52.253.007	-13.791.474	5.914.618	-10.487.055	-12.533.374
25. TEL	-1.712.516.149	-648.949.542	181.045.300	-928.226.692	-735.177.027
26. SNN	-1.105.890.752	-1.056.159.816	-839.453.752	-772.547.663	-933.464.953
27. IMP	-390.139.490	-61.903.484	99.272.132	-120.843.094	-121.062.158
28. COMI	-62.601.880	-26.360.106	18.244.415	-44.200.488	-28.482.818
29. ALU	-14.783.708	-12.347.695	-3.620.118	1.246.855	-4.898.823
30. RPH	-16.529.157	-17.379.468	11.865.085	-44.366.454	23.418.482
31. COTE	-256.277.430	-74.798.709	30.854.414	-134.179.789	-104.641.516
32. TGN	-1.373.939.988	-387.872.827	359.458.731	-818.616.605	-699.606.380
33. OIL	-94.586.161	-34.161.090	34.372.601	-80.576.136	-95.273.325
34. SOCP	-25.600.705	-11.258.029	8.514.427	-50.293.169	-10.941.562
35. EL	*	-1.975.825.936	-974.238.467	-823.541.727	-982.044.261
36. TUFE	-58.810.363	-18.568.162	3.940.848	-25.667.839	-28.269.863

Source:author processing according to the data from the annual financial statements of companies

Cash Value Added could not be determined for company Romgaz in the first two years of analysis nor for company Electrica in 2009, due to the lack of availability of data on cash flows in these years. At the same time, the values of the indicator in 2011 can not be considered relevant for the same reasons as for economic value added. That said, it is observed that only two companies succeed each in one year to record an adjusted gross cash flow that surpasses the cost of capital invested in their assets (Zentiva in 2010 and Alumil in 2012). In this context, it is obvious the difficulty of Romanian enterprises to implement scripted profit, obtained by applying accruals, to effective cash flow.

Table 4: The evolution of Cah Flow Return On Investment

Company	CFROI				
	2009	2010	2011	2012	2013
1. SNP	-5,20%	-0,97%	-7,08%	-4,92%	-3,24%
2. SNG	*	*	0,33%	-2,64%	-9,59%
3. PTR	-7,29%	-5,08%	-2,65%	-2,97%	-6,17%
4. DAFR	-4,49%	-5,20%	-5,66%	-5,00%	-22,06%
5. VNC	-4,75%	-4,01%	-3,44%	-6,06%	-7,47%
6. RRC	-3,93%	-2,78%	-3,60%	-0,73%	-3,85%
7. ATB	-6,42%	-8,02%	-5,26%	-3,08%	-2,54%
8. BIO	-2,29%	-18,92%	-3,11%	-1,85%	-5,10%
9. SCD	-5,91%	25,14%	-58,88%	-6,02%	7,02%
10. ARTE	-0,32%	-2,93%	-2,40%	-2,65%	-1,46%
11. ROCE	1,44%	-4,75%	0,90%	-0,66%	-3,85%
12. TRP	-7,48%	-3,81%	-8,66%	-8,27%	-6,76%
13. STIB	-5,65%	-5,63%	-5,10%	-5,07%	-6,04%
14. ALR	9,16%	-3,98%	-5,98%	-4,81%	-12,11%
15. ART	-2,06%	-2,34%	-2,60%	-1,55%	-6,00%
16. ELMA	7,72%	-2,60%	-8,32%	-0,41%	-4,50%
17. ELGS	-1,36%	2,76%	0,31%	-8,78%	-2,97%
18. RTRA	-1,92%	-0,32%	-7,12%	-2,61%	-2,17%
19. MECF	-2,56%	-9,21%	11,06%	2,11%	-8,70%
20. ALT	-2,48%	-2,02%	-2,55%	-4,39%	-3,60%
21. CMP	-3,79%	-5,65%	-7,86%	-6,28%	-6,62%
22. ARS	-8,70%	-3,23%	-15,22%	-5,81%	-8,52%
23. TBM	-3,15%	-3,66%	-3,33%	-3,51%	-5,28%
24. AMO	-9,20%	-4,95%	-2,56%	-0,67%	-0,91%
25. TEL	-7,77%	-6,77%	-3,70%	-7,33%	-1,02%
26. SNN	-2,79%	-3,84%	-1,62%	-1,60%	-3,48%
27. IMP	-10,65%	-1,48%	-2,92%	-5,36%	-4,75%
28. COMI	5,69%	-6,26%	-7,52%	-13,08%	-5,08%
29. ALU	-5,30%	-9,83%	-1,80%	7,62%	1,22%
30. RPH	-0,51%	-3,02%	2,60%	-8,41%	11,35%

31. COTE	-6,65%	-3,30%	-4,80%	-8,28%	0,53%
32. TGN	-6,54%	-2,56%	-2,28%	-7,67%	-2,38%
33. OIL	-7,48%	-6,60%	-4,36%	-3,51%	-2,44%
34. SOCP	0,13%	-3,52%	3,97%	-36,33%	1,07%
35. EL	*	-15,74%	-9,06%	-1,44%	-2,93%
36. TUFE	-3,74%	-1,01%	-0,34%	-3,23%	-4,17%

Source:author processing according to the data from the annual financial statements of companies

Analyzing the cah flow return on investment, we find that there are not many the companies that register positive values regarding this indicator neither. This fact can, however, be considered normal, given that the companies selected to be part of this study are companies of considerable size, mostly industrial, holding significant fixed assets. In these circumstances, also the annual net depreciation of assets is situated at a high level, level difficult to surpass through the size of cash flow, so that their cah flow return on investment is, generally, a negative one. Only certain entities succeed sporadically to record positive values, worth mentioning being the maximum level reached by company Zentiva in 2010, respectively, 25.14%.

Table 5: The evolution of Total Shareholder Return

Company	TSR				
	2009	2010	2011	2012	2013
1. SNP	37,57%	41,65%	-4,18%	57,28%	16,94%
2. SNG	*	*	*	*	*
3. PTR	45,00%	-21,90%	-0,96%	25,94%	56,36%
4. DAFR	160,87%	21,47%	-50,77%	-45,41%	-9,91%
5. VNC	26,18%	10,45%	-9,46%	0,00%	3,13%
6. RRC	240,54%	-21,06%	-22,99%	-17,75%	35,87%
7. ATB	75,00%	-6,28%	-31,38%	5,84%	54,36%
8. BIO	157,69%	4,73%	-1,02%	14,83%	44,84%
9. SCD	152,77%	89,75%	-3,18%	-7,22%	47,35%
10. ARTE	-0,57%	65,64%	-13,40%	333,11%	21,85%
11. ROCE	-57,27%	-13,31%	-25,02%	-7,09%	-55,30%
12. TRP	55,00%	-32,26%	-52,31%	2,85%	-22,91%
13. STIB	-49,49%	-9,00%	18,68%	-16,67%	-6,45%
14. ALR	105,37%	33,91%	19,28%	-38,46%	-27,65%
15. ART	-11,33%	-10,00%	-16,91%	-0,82%	64,79%
16. ELMA	14,29%	-12,64%	-20,00%	-29,08%	17,26%
17. ELGS	-1,22%	154,29%	-66,29%	20,64%	65,41%
18. RTRA	-17,86%	82,61%	-54,76%	10,53%	-26,19%
19. MECF	-12,50%	-14,29%	27,78%	15,65%	11,81%
20. ALT	89,87%	35,00%	-16,05%	-13,24%	44,75%
21. CMP	205,26%	47,24%	-8,90%	41,39%	-6,18%

22. ARS	16,32%	81,51%	5,15%	54,24%	17,47%
23. TBM	23,74%	7,26%	-50,69%	-36,27%	-10,77%
24. AMO	33,81%	-23,66%	-4,23%	-51,47%	-22,73%
25. TEL	23,18%	44,19%	-4,39%	-24,75%	41,99%
26. SNN	*	*	*	*	*
27. IMP	2145,22%	-33,32%	-60,87%	-37,49%	373,04%
28. COMI	188,14%	-32,50%	-64,58%	-46,49%	-12,53%
29. ALU	223,19%	-32,56%	-28,97%	10,29%	45,51%
30. RPH	*	-48,57%	44,27%	-2,90%	-47,91%
31. COTE	26,25%	13,41%	23,57%	14,25%	33,92%
32. TGN	39,36%	96,67%	-9,60%	7,14%	-6,96%
33. OIL	50,38%	-6,67%	-17,01%	-10,64%	-29,06%
34. SOCP	-9,38%	155,17%	-6,89%	-37,88%	-16,56%
35. EL	*	*	*	*	*
36. TUFE	29,41%	-19,09%	-10,11%	-2,81%	9,97%

Source:author processing according to the data from the annual financial statements of companies

The total shareholder return provided by listed companies is strongly influenced by the stock quote movements of shares, since the number of companies that distributed dividends during the period 2009-2013 is relatively low. Thus, in 2009, when the BET index increased by 57.2%, most companies were positively impacted by the stock market advance, and, thus, the shareholders' return was a significant one. To be mentioned is the return value recorded by company Impact, of 2145.22%, moreover the maximum of the entire period under review, return achieved only from the increase in the market value of its shares. In 2010, amid increasing market return to a moderate pace, of 10.89%, decreased both the number of companies offering shareholders a positive return and its level. Further, the negative return of the stock market in 2011 had its say on the individual returns of the issuing companies, this year only 6 of them providing equity holders a positive return. In the next two years, 2012 and 2013, the prospects begin to improve amid the positive auspices of the capital market, more and more enterprises providing a satisfactory return to their shareholders.

4.Conclusions

In the economic theory and practice it is considered that in order to create value, a company must obtain a gain that ensures the coverage of its operating expenses and a sufficient remuneration for the capital invested in its activity. The invested capital includes two components, equity and borrowed capital, each entailing different costs. Borrowed capital is cheaper but can sometimes be difficult to procure as banks, as the main providers of loan resources, condition their granting upon the fulfillment of certain criteria which may prove restrictive for companies (such as the efficiency of the managerial act, positioning above a certain threshold of liquidity, solvency, profitability or cash flows, etc.). On the other hand, in order for current or potential investors to express interest in the company, the remuneration

of equity should be done at an attractive rate, above a risk-free investment.
The undertaken study reflects the inability of companies listed on the Romanian capital market to create added value for their shareholders. Thus, most of the analyzed indicators display unfavourable evolutions during the entire time frame under analysis, a sign that the impact of the global financial crisis was felt to the full in the activities of companies listed on BSE. The exception is given only by the total shareholder return, a series of the analyzed companies managing to record positive values of the indicator, especially in 2009, 2012 and 2013. This development is considerably driven by the significant positive stock market return during those years, being inconsistent with the evolution of the market value added of the companies surveyed. Thus, it can be stated that even though the market has assigned a certain value increase to the shares of companies listed on Bucharest Stock Exchange from one year to the next, the value of equity securities is not sufficient to cover the capital invested by shareholders and creditors in the current activities of the companies.

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VALUE CREATION AND DIFFERENT DIMENSIONS OF VALUE IN CORPORATE PRACTICE

Anita Kiss
Institute of Accounting and Finance, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
kiss.anita@econ.unideb.hu

Abstract: *The purpose of writing this article is to present the company's value creation process, on the basis of the work of authors relevant to the subject. This study introduces approaches to understanding the basic objectives of the company, including the concept of dual value creation. Following this, I outline different dimensions of value, and describe the relationship between consumer value and shareholder value. From the perspective of the study, a relevant category of value is shareholder value, and this is given a detailed characterization and classification. The article is organized as follows. First, the value creation process is reviewed on the basis of work by the most prominent authors in the theoretical literature. In the following section I describe the company's main goal and the different value dimensions. I then turn to the characterization and categorization of firm value. Finally, in the last section I formulate my conclusions, in accordance with the works of authors I have studied, that the source of the firm value is derived from its operations itself, i.e. from the company's activities.*

Keywords: value creation, value chain, shareholder value, firm valuation

JEL classification: G32

1. The Process of Value Creation

"The process of value creation is the procurement, management and use of resources with the purpose of creating value for the consumer." (Chikán and Demeter, 2006:3) This definition approaches the concept and process of creating value from the perspective of the literature on management, more specifically production management, marketing and the corporate management; in other words, it defines the firm as an organisation which creates value during its operation, and which has as the main goal of its operation the satisfaction of consumers' demands.

In the approach followed by the article, however, this must be achieved in such a way as to increase the shareholder value as well; i.e. that value must be created for the shareholders as well as for consumers. This understanding of value creation is also reflected – among other things - in Chikán's (2003) work on the dual value creation.

Wimmer (2004), in connection with the creation of value, examines how performance measurement tools can be used to serve value creation. She concludes that it is necessary to understand the value creation process itself, and to understand the cause-and-effect relationships which could form the basis of support for effective and efficient operational decisions.

The strategic management approach of Bartek-Lesi et al (2007:282-285) analyses the achievement of the company's basic goals and the realization of its mission. Two main tendencies are identified, one being the acquisition of competitive advantages, the other, the increase in the value of the company.

Porter (1998a), in his theory of the value chain, focuses on the creation of value. In his opinion all companies carry out their activities in order to create value. These activities can be divided into two large groups; primary and support activities. Primary activities are involved in the physical creation of the product and its sale and transfer to the buyer as well as after-sale assistance. Support activities support the primary activities and each other by providing purchased inputs, technology development, and human resources, and various firmwide functions. The generic value chain is seen in the Figure 1. (Porter, 1998a:36-43)

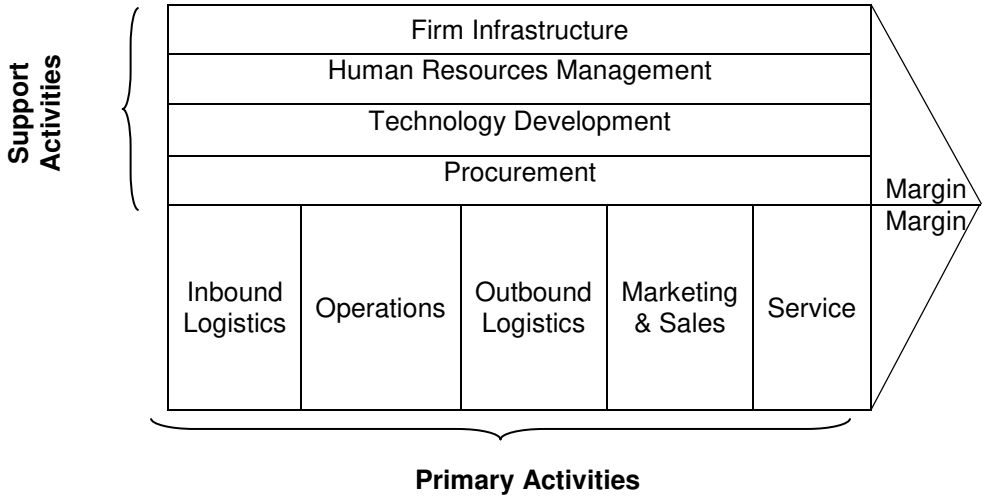


Figure 1. The Generic Value Chain
Source: Porter (1998a:37)

Individual actions alone can produce value, but the connection points between them are also important. Porter (1998a) points out that competitive advantage often derives from the relationship between activities, and not exclusively from the activities themselves. The value chain, as a chain of companies using analytical tools, can acquire the capacity to achieve competitive advantage through identifying and developing activities. In firm and corporate advisory circles the value chain is a concept which is very much appreciated.

Czakó wrote an excellent analysis (2003) of the concepts formulated by Porter, and their theoretical and practical problems. Among her critical remarks, the author highlights that in Porter's works, the different sectors of industry are not sharply demarcated, and these blurred boundaries can lead to misunderstandings. In

practice, there is not such a sharp boundary between the two general strategies for building competitive advantage as Porter emphasizes in his theoretical works. In addition, Porter does not take into account the organizational characteristics of the firm, its organizational structure and culture. Besides these criticisms, however, it can be said that Porter's concepts provide a framework for thinking which can be used to organize various pieces of information and uncover the logical links between them. Linking the creation of strategy to economic principles is the other merit of Porter's work, helping management science to develop into a more disciplined area of studies. (Czakó, 2003:8-9)

Copeland et al (1999:233-240) divided competitive advantages into three groups in terms of value creation. One source of competitive advantage lies in a combination of the price and characteristics of the product, which results in higher consumer value and which cannot be duplicated by other companies. These properties may be tangible or intangible. The second factor is the realization of cost advantages over the firm's competitors, while the last is an effective investment of capital. By identifying the sources of competitive advantage, and through the analysis related to this process, the company can judge its place in a given industry, and determine its own value-creating ability by comparing the return in the industry sector with its own return.

Productivity expresses the ratio of output to input. Productivity can be increased if more output per unit is achieved than input per unit, or when less input is required to achieve the unit output. If a company is able to achieve this in the long run, it produces value, which is also a source of competitive advantage. (Copeland et al., 1999)

It can therefore be concluded that the creation of value and competitive advantage are closely related; the company can retain its competitive edge if it can realize greater value in the market when compared to competing companies. The leading strategic trends of the 70s and 80s basically focused on obtaining and retaining competitive advantage.

According to Porter (1998b), competition in a given industry depends on five forces. These are: threat of *New Entrants*, the threat of *Substitutes*, the bargaining power of *Buyers*, the bargaining power of *Suppliers*, and competition between competitors in the industry, the *Industry* Rivalry. The combined strength of these factors determines the industry's profitability and its ultimate profit potential. Profit opportunities are not the same in all industries. At the time the strategy is determined, the strongest competitive factor plays the crucial role, in such a way as to ensure sustainable competitive advantage for the company.

Porter (1998b) believed there are three generic strategies: cost leadership strategy, differentiation strategy, and focus strategies. The given strategy can be effective if the competitive advantage gained survives for the longest possible period. This requires that the company's competitive advantage is built on basic skills that

cannot be duplicated by competitors.
The real source of competitive advantage is the management's ability to implement the corporate merger of technologies and expertise in its basic capabilities, i.e. it is the basic capabilities which will ensure the company's long-term competitive advantage.
On the one hand, the basic skills include coordinating the technological trends, the organization of work processes and value creation, all of which are of paramount importance in carrying out corporate activities. On the other hand, basic skills include communication and participation, which extend to all corporate functions and to different levels of the workforce. The value of the core capability increases with use, and must be nourished and protected.
To determine the core competence of the corporation, three criteria must be considered. The first is that the core competence should provide access to different markets. The second is that the core competence should contribute greatly to consumer value, and finally, that competitors can only copy the core competence with great difficulty. (Prahalad and Hamel, 1990:83-84)
Companies generally can remain at the forefront of their business on a global level with five or six core competences, and these competences take ten or twenty years to build. At the level of core competences the company aims to build a world leading role in the design and development of certain kinds of product properties.
Managers should focus on creating a strategical framework which extends to the whole enterprise, which may be a route plan for the future which defines the core competence and the technology which supports them. If the entire organization is familiar with the strategic framework, the resource allocation priority will become clear, and so will itself determine the company and its markets. Competitors cannot easily replicate this kind of strategic framework. In order for the company to realize a return in excess of the cost of capital, it must create and maintain competitive advantage. The core competence is an enterprise resource which the management can transfer at any time.
Prahalad and Hamel (1990) compared a diversified company to a tree where the root system is the core competences, the trunk the core products - which are the tangible embodiments of the core competences -, the smaller branches the business units, and the flowers and the fruits the end products.
Once a company creates value through value-creating processes, it is important to clarify the forms and dimensions of this value and the closely related dimensions.

2. The Dimensions of Value

As noted at the beginning of the study, just as with the concept of value creation, the concept of value also appears in several disciplines, with various aspects of value being placed at the center of the analysis. Therefore, I consider it necessary

to address the values dimension, where we must distinguish between consumer and owner value.

The dimension of consumer or, as Kotler and Keller (2006) put it, customer, value appears from the marketing side, that is, it is the consumer's subjective opinion of the extent to which the particular product or service meets his/her expectations, and satisfies his/her needs. (Chikán, 2005)

Porter (1998a: 8-9) also approaches the concept of value from the consumer side. In his view, value is what buyers are willing to pay for specific products or services, i.e. the firm will create value if it meets consumer needs.

Customer satisfaction and customer value can only represent value for the shareholders if the company's return is in excess of the cost of capital. Thus, owner and consumer value are closely related, which leads, through the dual dimension of the concept of value creation, to shareholder value. (Máté et al., 2016)

Chikán (2003) sees the creation of dual value as a condition for the successful operation of the firm. By creating dual value we create value for consumers and also for the owners of the company, so we simultaneously realize the criteria of satisfying demand and profitability, and the consumer and owner dimensions.

According to the concept of shareholder value, the primary objective of the company is to maximize shareholder returns in accordance with the law, which involves not short-term profit maximization, but long-term value maximization. Rappaport (1998) also notes that shareholder value cannot exist without consumer value.

According to Black and his co-authors (1999), in the value creation stage the company creates value for customers such that it also has a return in excess of the cost of capital. The resource allocation, financial management, risk management and other business decisions taken by managers all ensure the preservation of the value created. Finally, in the value realization stage, after investments, the owners realize gains based on the value of dividends and gain on exchange rate movements. These phases will accompany the value stream and ensure the relationship between customer value and shareholder value. (See the Figure 2.)

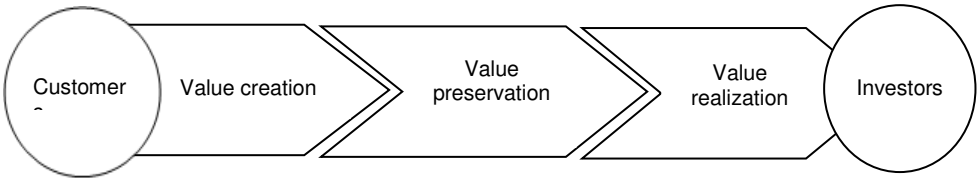


Figure 2. Relationship between the customers and the investors through the SHV model
Source: Black et al. (1999:101)

According to Black et al (1999), shareholder value is nothing other than the difference between the market value of corporate and the market value of debt. “A company will only be able to increase the value of shareholders’ equity if the return on equity exceeds the cost of equity.” (Black et al., 1999:37)
By analyzing consumer value and the shareholder dimension it can be established that although the various management disciplines represent different positions in relation to value, they are, however, in agreement that value is extremely important, and that an increase in owner value can be achieved through increasing consumer value.

3. The Value of the Firm

After the presentation of the values dimension, the article will concentrate on the relevant corporate values, and their conceptual bases and different categories.
“… value is like beauty: ...it manifests itself in the viewer…” (Pratt, 1992:12)
Company value does not always have the same meaning for all market actors. For the buyers of the company, the most important aspect is how cash flows can be realized after a future acquisition of the company, while the seller is interested in the present, current value of the company’s total assets. (Tóth and Herczeg, 2015)
Various economic situations can create an opportunity to determine the value of the company. Accordingly, the assessment can be carried out at specific times, in a specific transaction situation, and can also be carried out continuously, which usually serves to meet the demand of the company’s internal stakeholders. An ongoing evaluation can verify whether the company’s strategic goals are met, monitor the continuous evolution of shareholder value, and provide information necessary for taking a given decision. (Fenyves et al., 2015)
The value is substantially influenced by objective factors, but is also affected by subjective elements: the character of the evaluator, the economic environment, and the decision-making situations. Several value categories can be distinguished, depending on what the company aims to achieve.
Pratt (1992:11-17) differentiates six different value categories and concepts of value:

(1) Real market value, defined as the cash or equivalent instrument price at which the customer is willing to buy, and the seller to sell, the given property voluntarily when in possession of adequate information. The benchmark used in all official business in the USA, it shows the generally accepted legal measure of value.

(2) Investment value, intrinsic value, value based on fundamental variables, are terms which can be used interchangeably, and represent the sum of the present values of expected cash flows. The fact that the value so determined is equal to the real market value depends on what assumptions the operators have made in estimating future profitability, risk-

taking and the tax situation.

(3) Fair value, a common value standard, which is used on the basis of the experience of illegal assessments. If minority owners were forced to sell their stake below price, they have the right to value up their shares and receive fair value for them.

(4) Value under the going concern concept does not represent a rule of valuation, but simply indicates that the business is assumed to operate, so there is no risk that it will be suspended, or that anything will upset its operations.

(5) Liquidation value, the opposite of the value under the going concern concept. The net amount, or the net asset value, which may be realized if the company ceases its business.

(6) Book value, an accounting concept, not a valuation. It corresponds to the net value of assets in the balance sheet of the company.

According to Bélyácz (1995:10-11), among the various categories of value the market value and the *intrinsic* value it uses are relevant. Assuming an efficient market, these two values are equal; however, in only a few cases can the market be deemed effective, and the equality of the market value and the intrinsic value is only realized in the long run.

The market value and the intrinsic value of the company's capital can be measured in cases where the company is on the market, and the sale and purchase is made. The actual market value can occur only when the transaction is completed. In a case where the transaction does not occur, then the market value is no more than a reasonable estimate. Since the sale and purchase does not always occur, there is a need to continuously estimate the intrinsic value, what Bélyácz (1995:11) refers to as the deeper shelf of valuation. If the transaction occurs, then prior to its completion both the buyer and the seller carry out estimates to determine the intrinsic value of the asset or company. Market operators make their decision in the knowledge of the intrinsic value. Bélyácz (1995:15) distinguishes three rules in this regard:

(1) The purchase rule; when the market value of the asset is lower than the intrinsic value, then the device is considered to be undervalued, and it is worth purchasing it and then selling it when the market price rises.

(2) The sales rule, which means that the market price of the asset exceeds the estimated intrinsic value, in which case the asset is overvalued, and must be sold.

(3) The not-worth-trading rule, meaning that the market price of the asset and the intrinsic value are the same, and equilibrium is reached when the intrinsic value estimate was accurate, and profit cannot be gained through the transaction.

In relation to intrinsic value as the centre of motion of market value, Bélyácz (1995:14-16) presents a dynamic model in which both changes in supply and demand, and the risk of fluctuations affect the value of the given asset. This process requires constant evaluation, i.e. if any circumstances change, the evaluators must constantly review them.

Ulbert (1997:99-114) also supports the hypothesis that the intrinsic value of the company must be dealt with as the centre of motion of market value, i.e. the intrinsic value can best be determined if the effects which divert the market value from the intrinsic value are examined. According to his argument, corporate value determined by the values of assets and of yields has some relation to the market value, the intrinsic value is at the centre of motion of the market value, and cannot divert from it in the long-term. Since there are no algorithms that accurately determine intrinsic value, and explain the closeness of the relationship between the intrinsic market values, Ulbert (2011) logically proves the hypothesis is correct, and focuses on the factors that explain the differences between the intrinsic value and market value. These factors are divided into two groups: synergy effects and the goal hierarchy of the customer, as well as the international purchasers of firms.

The heterogeneity of the customer's goal system is emphasized by the representatives of the non-monetary school, according to whom monetary factors do not always dominate when a decision is made. A typical example of this is strategic acquisition, when the intrinsic values determined with the help of the asset based or the income based method only provide auxiliary information for decision-makers. In this case, elements of the goal hierarchy can include the strategy of expensive sales and cheap purchases, the acquisition of competitors, the liquidation of the company, currency manipulation on the stock market, increasing market share, as well as other targets (Ulbert, 1997:103). The synergy effect is also related to the customer's goal system, i.e. the factors which emerge after the firm has been purchased.

The international purchasers of the firm have special characteristics, due to the increase in risk. These risk elements include currency risk, political risk, and risks associated with environmental changes. (Ulbert, 1997:107)

In a subsequent study, Bélyácz (2011:13) concludes that a separation between market value and intrinsic value is unthinkable. Sustained and significant differences between the two values do not occur on a regular, but on an ad-hoc, basis; in the long term the market value always converges on the intrinsic value determined by the firm's fundamentals.

In their writings, Bélyácz and Kovács (2010) present a new approach to the relationship between intrinsic and market value. The authors identify a difference between the two values, the reason for which can be seen in the role fulfilled by the intangible assets of the firm. On the basis of these theoretical bases, the property elements which do not appear, or are not adequately presented in the balance sheet, can be attributed to surplus value, which is the source of corporate competitiveness, operations and financial performance. Juhász (2004) dealt with the issue in his doctoral thesis, in which the difference between the market value and the book value is explained; he comes to the conclusion that the differences are derived from the firm's off-balance sheet items.

4. Conclusions

This study has presented the value creation process and the basic purpose of the firm, on the basis of the works of relevant authors in the field. I have examined the concept of dual value creation, and the relationship between customer value and shareholder value. The article has also characterized and subdivided in detail the category of shareholder value, which is the relevant category of value from the point of view of this study. On the basis of the literature I have studied, and in accordance with their findings, I have come to the conclusion that the source of corporate value itself is derived from the operations of the company's activities, and the acquisition and maintenance of competitive advantage.

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EUROPEAN INTEGRATION AND CAPITAL MARKET EFFICIENCY IN CEE COUNTRIES

Nicușor Cărăușu
Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iași, Iași, Romania
nicusor@live.com

Abstract: *The European Integration process involves radical changes into the inner-workings of the financial system of a country. From higher volumes of foreign direct investments to the development of the banking system or capital markets the European Integration process can ultimately lead to a better allocation of resources across the entire economy. This paper examines if the European Union Integration process increased the capital market efficiency in Bulgaria, Czech Republic, Poland, Romania, Slovakia and Hungary. We use two distinct samples of data in order to test the weak form of market efficiency: an ex-ante EU sample made up from all the data available up until joining the European Union, and an ex-post EU sample made up from all the data from joining the European Union up until March 2016. We employ a wide array of statistical tools for testing market efficiency such as: autocorrelation test, runs test, unit root test, and four variance ratios tests, performed on the daily return of the most important stock indices in the selected markets. While our results indicate that neither of our analyzed markets follows strictly the random walk model in both ex-ante and ex-post samples, we find evidence that after joining the European Union market efficiency increased in certain countries. We find in the ex-ante sample that only the Slovakian capital market exhibited signs of efficiency according to the autocorrelation, runs and variance ratio tests. Meanwhile, in the ex-post samples we find partial market efficiency in Hungary, Slovakia, Poland, Czech Republic and Romania in the variance ratio tests, while the autocorrelation test provided additional evidence for Bulgaria and the runs test for Slovakia. This suggests, that joining the European Union was not the decisive factor in improving market efficiency in Central and Eastern European capital markets, despite the potential positive effect of joining the EU on information efficiency. Thus, we can still use historical data in order to predict future price movements in CEE capital markets.*

Keywords: European integration, market efficiency, weak form of efficiency

JEL classification: G11, G14, G15, F36.

1. Introduction

The Efficient Market Hypothesis (hereafter EMH) is one of the most controversial economic theories that shapes the modern financial theory. While a market is deemed efficient if it's prices reflect at any time all the available information, achieving a true informational efficient market limits the possibility of predicting future price movements, thus ensuring a better capital allocation and economic development.

Fama (1970) argues that if in the *weak-form* of efficient market the assets prices reflect all the available historical information, then in its *semi-strong* form of

efficiency the markets reflect all the available public information from historical data to earnings and current statements, while in its *strong-form* market efficiency implies that the prices reflect both private and public information limiting the effectiveness of insider information. Therefore, Nurunnabi (2012) argues that in an efficient capital market, the pricing mechanism is able to ensure that resources are channeled from savers only in highly efficient investments, which ultimately allows for a better capital allocation and economic development.

Despite the abundant numbers of economic studies regarding weak form of efficiency, a small number of studies investigate the influence of European Integration on capital market efficiency as indicated by Urquhart (2014). While many of the recent studies like (Borges, 2010; Smith, 2012; Urquhart, 2014) focus only on the influence of the European Integration process on developed economies, older studies such as (Smith, 2012) don't take into consideration further developments.

This study aims to provide additional insight into the implications of the European integration process on information efficiency of Central and Eastern European Countries (hereafter CEE).

In our opinion, studying the effect of European Integration process on the capital markets from CEE is important because the latter involves radical changes into the inner-workings of the financial system of a country. From the increase of foreign direct investments to the development of the banking system and capital markets, European Integration process can lead to a better capital allocation across the entire economy. In order to achieve our goal, we will use a wide array of instruments to test for market efficiency such as: autocorrelation test, runs test, unit root test, and four different variance ratios tests.

The rest of this paper is organized as follows: section 2 marks the literature review, section 3 presents the data, section 4 presents the methodology, while section 5 presents the empirical results and section 6 concludes.

2. Literature review

Nurunnabi (2012) argues that in an efficient market the valuation mechanism of assets prices is optimal, because investors are unable to predict future price movements. Therefore, in an efficient market resources are channeled only to beneficial investments improving capital allocation and economic development. By encouraging the development of the capital markets, the European Integration process can help increase the information efficiency, allowing for a better asset price fixing mechanism.

Due to the specifics weak-form of efficiency testing, pinpointing the exact moment when a shift in the efficiency of a market is hard to achieve. In a comprehensive review of the existing literature regarding efficiency Lim and Brooks (2011), argue that the majority of literature that studies the determinant factors that lead to an increase in market efficiency, prefer to split the data in two different samples in order to test the shift. Their study reveals that there are five distinct factor that can cause a shift in market efficiency: the implementation of a price limiting system, the financial crisis, changes in regulatory framework and technology advances.

Borges (2010) argues that European Integration process could also be a determining factor in increasing capital market efficiency for members of the EU. His study of the weak-form capital market efficiency of six important capital

markets in Europe: United Kingdom (UK), France, Germany, Spain, Greece and Portugal from January 1993 to December 2007, reveal a potential shift in efficiency after the Euro adoption. The results indicate that in the case of Portugal and Greece, despite rejecting the weak form of EHM for the whole period, when testing a sample from 2003 to 2007 both countries tend to approach weak-form of capital market efficiency. In the case of UK and France the EHM is rejected for all the samples while in the case of Germany and Spain EHM is accepted.
Moreover, Smith (2012) argues that capital market efficiency of European countries evolved at the beginning of the new millennia, under the influence of several factors like: European integration, market development and the influence of the recent financial crisis. His results indicate that between February 2000 and December 2009 the efficiency across countries varied significantly. While for the Turkish, UK, Hungary and Polish markets weak form of efficiency was attained for the whole period, during the financial crisis between 2007-2008 weak form of efficiency is lost for Croatian, Hungarian, Polish, Portuguese, Slovakian and UK markets. Meanwhile, the crisis didn't exert any influence on the efficiency of capital markets from: Greece, Latvia, Romania, Russia and Turkey.
In addition, the results of Urquhart (2014) indicate that the adoption of the Euro in western economies, was not a decisive factor in the behavior of stock returns in European markets, with beneficial results for Spain and Finland and detrimental for France while in the case of Netherlands and Italy the Euro had little effect.
In the case of CEE countries, previous studies like (Dragotă and Țilică, 2014; Cărăușu, 2015) have indicated that weak-form efficiency can be attained during certain periods of time, under certain conditions but the results could vary when changing testing instruments and/or sample period. Thus, in the case of CEE countries, when assessing the weak form of efficiency we need to use the term „partial efficiency" as suggested by Lim and Brooks (2011).
Based upon the theoretical and empirical results we derive our main hypothesis:
H_1: *The European Integration Process improves market efficiency in CEE countries*.

3. Data

The data used in our analysis is made up from the daily returns of the most important capital market indices from our analyzed countries as follows: SOFIX – Bulgaria, PX – Czech Republic, WIG – Poland, BET – Romania, SAX – Slovakia, and BUX – Hungary. In order to test if joining the EU had a direct influence on capital market efficiency in CEE countries we will use two distinct samples for each country. An *ex-ante joining the EU* sample made up from the first day of trade for each individual indices until the last day before joining the EU, namely 31 December 2003 for Czech Republic, Poland, Slovakia and Hungary and 31 December 2006 for Bulgaria and Romania. The second sample, an *ex-post joining the EU* consist from the first day a country became member of the EU up until 31 March 2016.
For testing the weak form of capital market efficiency will use log normal returns of the daily returns of indices calculated as in equation (1):

$$R_t = \ln\left(\frac{P_t}{P_{t-1}}\right) \quad (1)$$

Where: R_t – is the daily return, P_t and P_{t-1} – are the prices at the time t and t –

1.

Table 1: Descriptive statistics

Indices	BET	BUX	PX	SAX	SOFIX	WIG
Before Joining the EU						
N	1505	3243	2420	2059	1247	2722
Mean	0.00180	0.00069	0.00027	0.00000	0.00204	0.00111
Median	0.00108	0.00045	0.00000	0.00000	0.00120	0.00052
Max	0.14576	0.13615	0.15390	0.09573	0.08387	0.14783
Min	-0.11901	-0.18033	-0.07566	-0.11483	-0.08238	-0.11347
Std. Dev.	0.01535	0.01677	0.01447	0.01416	0.01353	0.02356
Skewness	0.47359	-0.83875	1.37735	-0.38189	0.25897	-0.02285
Kurtosis	13.2274	17.9518	17.0812	9.47796	10.0489	7.47642
Jarque-Bera	6615.65	30588.4	20758.4	3650.21	2595.65	2272.92
Prob.	0.00000	0.00000	0.00000	0.000000	0.00000	0.00000
After Joining the EU						
N	2284	3075	3070	2326	3021	3061
Mean	0.00044	0.00010	0.00027	0.00007	0.00020	0.00033
Median	-0.00002	0.00063	0.00062	0.00025	0.00000	0.00052
Max	0.07292	0.12364	0.06083	0.12846	0.11880	0.13176
Min	-0.11360	-0.16185	-0.08288	-0.11824	-0.14810	-0.12648
Std. Dev.	0.01301	0.01457	0.01251	0.01634	0.01169	0.01600
Skewness	-0.91588	-0.54436	-0.48876	-0.51215	-1.12048	-0.11166
Kurtosis	13.0316	17.8632	6.83012	12.2714	24.0293	9.70877
Jarque-Bera	9896.22	28456.9	1998.75	8432.54	56298.4	5746.70
Prob.	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Source: Author calculations

The descriptive statistics of our data depicted in table 1, indicate that on average each individual capital market exhibited growth both in the ex-ante and the ex-post samples. Because none of our samples is normally distributed according to the Jarque-Bera normality test, we need to take extra-caution when assessing certain tests of the weak form of efficiency.

4. Methodology

In order to test the weak form of market efficiency we will use several statistics test such as: autocorrelation test, runs test, unit root test, and four variance ratios test.

4.1. Autocorrelation test

The *autocorrelation test* reveals if there is any relationship between the current price of an asset and its previous price. When testing, the weak form of efficiency for a series Y and a lag k, we will test each individual lag ρ_k from equation (2) against the Ljung–Box Q test. In order to confirm weak form of efficiency, each individual autocorrelation indicator ρ_k, shouldn't be statistically significant for any

lag k, considering the average return $\bar{r}$, and the current return r_t, for each individual value in our entire series N.

$$\rho_k = \frac{\frac{\sum_{t=1}^{N-K}(r_t - \bar{r})(r_{t+k} - \bar{r})}{N-k}}{\sum_{t=1}^{N}\frac{(r_t - \bar{r})^2}{N}} \quad (2)$$

4.2. Run test

The *run test* is a non-parametric test, that tries to predict future price movement of an asset by following successive trading days that ended up in a rise or fall. In order to determine if a market is efficient we need to compute the Z function by comparing the random R with m simulated values, against the standard deviation of σ_m as in equation (3). If the Z function is positive and statistically significant then we accept weak form efficiency and reject the hypothesis otherwise.

$$Z = \frac{R - m \pm 0{,}5}{\sigma_m} \sim N(0,1) \quad (3)$$

4.3 Unit root

The *unit root test* is able to detect the weak form of efficiency, by comparing the price movement of an asset against a random walk process. In order to test, weak efficiency we use the Augumented Dickey Fuller test - ADF (Dickey and Fuller, 1981) with a constant and trend as in equation (4). In order to accept weak form of capital market efficiency when using the ADF test we need to reject the null Hypothesis that our series has a unit root.

$$\Delta y_t = \varphi y_{t-1} + \beta + \gamma t + \sum_{t=1}^{p} \delta_i \Delta y_{t-1} + \varepsilon_t \quad (4)$$

4.4. Variance ratios tests

Variance ratios tests are statistics tests specifically designed for testing the weak form of EHM. Because each individual variance test has specific characteristics and advantages we need to reject all tests in order to confirm weak form of EHM.

4.4.1 The Lo and Mackinley variance test

The Lo and Mackinley variance test (Lo and MacKinlay, 1988) compares the empirical $VR(q)$ value for each lag against the value of 1 as in equation (5). If the computed $z(q)$ it's not statistically significant, we accept the weak form of EHM, and reject it otherwise.

$$z(q) = \frac{VR(q) - 1}{\sqrt{v(q)}} \sim N(0,1) \quad (5)$$

4.4.2 The Chow Denning significance test

The Chow Denning significance test (CD) (Chow and Denning, 1993) compares the multiples test values $VR(q)$ to a studentized maximum modulus (SMM) distribution with m and T degrees of freedom as in equation (6). In addition, we will

use the bootstrap version of the CD_2 test proposed by (Kim, 2006) due to better treatment of small samples.

$$CD_1 = \sqrt{T}\max_{1 < j < m} \left|M_2\left(k_j\right)\right| \quad (6)$$

4.4.2 The Wright signs and ranks variance tests

The Wright signs and ranks variance tests suggested by (Wright, 2000) is more efficient in detecting weak efficiency under the assumption of heteroscedasticity for the sign-based test, while the rank-based test is more efficient in the presence of low-size distortion under heteroscedasticity. In addition we will use the (Kim and Shamsuddin, 2008) methodology of estimating a multiples test values as in equation (7) for the rank test $R_j(k)$ and equation (8) for the sign tests $S_j(k)$.

$$R_j(k) = \left(\frac{(Tk)^{-1}\sum_{t=l}^{T}\left(r_{jt} + \cdots + r_{jt-k+1}\right)^2}{T^{-1}\sum_{t=1}^{T} r_{jt}^2} - 1\right)\left(\frac{2(2k-1)(k-1)}{3kT}\right)^{-\frac{1}{2}} \quad (7)$$

$$S_j(k) = \left(\frac{(Tk)^{-1}\sum_{t=l}^{T}\left(s_{jt} + \cdots + s_{jt-k+1}\right)^2}{T^{-1}\sum_{t=1}^{T} s_{jt}^2} - 1\right)\left(\frac{2(2k-1)(k-1)}{3kT}\right)^{-1/2} \quad (8)$$

5. Empirical results

The autocorrelation test results depicted in table 2 reveal some intriguing results, regarding the ex-ante and ex-post EU samples.

Table 2: Autocorrelation results

	Before Joining the EU				After Joining the EU			
Lag	**1**	**2**	**5**	**10**	**1**	**2**	**5**	**10**
BG	0.102***	0.097***	-0.056***	-0.007***	0.136***	0.118***	0.104	0.077
	(12.96)	(24.68)	(30.56)	(38.35)	(42.09)	(73.98)	(111.9)	(146.7)
CZ	0.332***	0.214***	-0.009***	0.080***	0.058***	-0.077***	0.044***	0.018
	(267.1)	(378.3)	(448.3)	(465.4)	(10.47)	(28.66)	(41.75)	(45.80)
PL	0.293***	-0.001***	0.031***	0.017***	0.093***	-0.033***	0.002***	0.014***
	(234.4)	(234.4)	(247.1)	(260.8)	(26.39)	(29.74)	(30.26)	(33.66)
RO	0.114***	-0.019***	0.001***	-0.028***	0.091***	-0.025***	0.012***	0.042***
	(19.47)	(20.00)	(21.46)	(33.05)	(19.08)	(20.57)	(22.80)	(45.29)
SK	-0.024	-0.047*	0.010	0.014	-0.063***	0.033***	0.002***	0.032***
	(1.194)	(5.75)	(6.488)	(14.36)	(12.17)	(15.50)	(17.01)	(26.64)
HU	0.105***	0.041***	-0.009***	0.083***	0.059***	-0.063***	0.030***	0.011***
	(36.09)	(41.52)	(47.57)	(84.13)	(10.59)	(22.81)	(40.45)	(64.54)

Notes: First row is the coefficient, second row in the parenthesis the Q-Stat. ***, **, * denotes significant at 1%, 5% and 10%.

Source: Author calculations

Our results indicate that only the Slovakian capital market was efficient in the weak form for ex-ante sample. Meanwhile, when assessing the ex-post sample only Bulgaria has weak signs of efficiency for lags higher than 5. This implies than in Bulgaria current assets prices are linked to past values in the short run but differ in

holding period is larger than 5 days. For the rest of our samples we reject the weak form of efficiency because all of the Q-statistics coefficient are statistically significant at 1% level. This implies that the current assets prices in our analyzed countries is linked to historical data.
Our autocorrelation results indicate that joining the EU process didn't influence the market information efficiency but due high degree of sensitivity of autocorrelation tests in the absence of normality, further analysis is required. In this regard the results from the run test depicted in table 3 are more adequate due to better treatment of lack of normality and sample size.

Table no. 3: Run test results

	Before Joining the EU				After Joining the EU			
Test	**N>0**	**N<0**	**N-real**	**Z**	**N>0**	**N<0**	**N-real**	**Z**
BG	727	520	561	-2.699***	1141	1143	1059	-3.516***
				(0.007)				(0.000)
CZ	1219	1201	990	-8.985***	1615	1460	1522	-0.455***
				(0.000)				(0.649)
PL	1406	1316	1199	-6.199***	1581	1489	1543	0.303
				(0.000)				(0.762)
RO	829	676	664	-4.259***	1191	1135	1091	-3.002***
				(0.000)				(0.003)
SK	1096	963	1070	1.939*	1886	1135	1469	1.972**
				(0.053)				(0.049)
HU	1693	1550	1470	-5.256***	1558	1503	1519	-0.434***
				(0.000)				(0.664)

Notes: First row is the coefficient, second row in the parenthesis is the probability of the Z run test function score. N>0 is the number of days with increase. ***, **, * denotes significant at 1%, 5% and 10%.
Source: Author calculations

The run test indicates that only the Slovakian capital market was efficient in the weak form with a probability of 90% for the ex-ante sample and a 95% probability for the ex-post sample. In the case of Poland even if the value of the Z function is positive for the ex-post sample, it's not statistically significant, thus the evidence of efficiency is weak. On a general note, if we compare the ex-ante and ex-post samples for each individual country we can observe that in all countries except Bulgaria, the coefficients indicate an indirect improvement in market efficiency.
The results of the unit root tests for each country in both ex-ante and ex-post samples from table 4, indicate that price movement of assets doesn't follow a random walk, thus all capital markets are inefficient in the weak form. Even if the ADF test indicated that none of our analyzed markets is efficient in the weak form, we need to acknowledge that the ADF test is sensitive to the lack of normality which can invalidate the results in certain environments.

Table 4: Unit root test

	Before Joining the EU				After Joining the EU			
Test	**1%**	**5%**	**10%**	**ADF**	**1%**	**5%**	**10%**	**ADF**
BG	-3.965	-3.341	-3.128	-21.73***	-3.962	-3.411	-3.127	-19.29***

				(0.000)				(0.000)
CZ	-3.961	-3.411	-3.127	-34.82***	-3.961	-3.411	-3.127	-41.26***
				(0.000)				(0.000)
PL	-3.961	-3.411	-3.127	-34.19***	-3.961	-3.411	-3.127	-50.49***
				(0.000)				(0.000)
RO	-3.964	-3.412	-3.128	-34.54***	-3.961	-3.411	-3.127	-43.97***
				(0.000)				(0.000)
SK	-3.962	-3.411	-3.127	-46.51***	-3.961	-3.411	-3.127	-58.55***
				(0.000)				(0.000)
HU	-3.960	-3.411	-3.127	-51.19***	-3.961	-3.411	-3.127	-40.57***
				(0.000)				(0.000)

Notes: First row is the coefficient, second row in the parenthesis is probability of the ADF test. ***, **, * denotes significant at 1%, 5% and 10%.
Source: Author calculations

The Lo and Mackinley VR test results from table 5 indicate a potential progress between the ex-ante and ex-post samples. We can spot that in the ex-ante sample the Slovakian capital market is efficient in all the selected lags, while the capital markets from Bulgaria, Romania and Hungary are efficient for lags higher than 8 or 16. This implies that in the ex-ante samples from Bulgaria, Romania and Hungary current prices were correlated to past results in the short term, but followed a random walk model in the long run. Thus, we find partial evidence of efficiency.

Table 5: Lo and Mackinley VR test results

	Before Joining the EU				**After Joining the EU**			
Lag	**2**	**4**	**8**	**16**	**2**	**4**	**8**	**16**
BG	1.103**	1.240***	1.128**	1.215	1.136***	1.361***	1.660***	2.154***
	(2.119)	(2.774)	(2.122)	(1.110)	(2.690)	(3.781)	(4.518)	(5.724)
CZ	1.332***	1.786***	2.153***	2.256***	1.058	0.991	0.990	1.028
	(4.782)	(6.452)	(6.722)	(5.828)	(1.213)	(-0.90)	(-0.06)	(0.146)
PL	1.293***	1.449***	1.622***	1.846***	1.092***	1.112**	1.139*	1.183
	(7.312)	(6.143)	(5.575)	(5.384)	(3.931)	(2.478)	(1.866)	(1.627)
RO	1.114***	1.148**	1.179	1.314**	1.093**	1.104	1.115	1.254
	(2.659)	(1.962)	(1.642)	(2.061)	(2.374)	(1.350)	(0.962)	(1.486)
SK	0.976	0.923	0.927	1.024	0.936***	0.927*	0.919	1.033
	(-0.86)	(-1.47)	(-0.86)	(0.200)	(-3.00)	(-1.85)	(-1.35)	(0.364)
HU	1.106**	1.182**	1.213*	1.464***	1.058	1.008	1.020	1.021
	(2.395)	(2.378)	(1.933)	(3.026)	(1.639)	(0.138)	(0.217)	(0.152)

Notes: First row is the coefficient; second row is value of the Z-statistic for heteroscedasticity robust standard estimates. ***, **, * denotes significant at 1%, 5% and 10%.
Source: Author calculations

In the case of the ex-post samples we can observe an increase in the number of capital markets that exhibit weak efficiency. We find that Hungary and Czech Republic capital markets were efficient when considering all lags while Slovakian and Romanian markets efficient after the 4 and 2 lag. This could indicate an improvement in the market efficiency after joining the EU for CEE capital markets.

The joined significance variance ratio results from table 6 reveals some interesting results between the two periods. In the case of the ex-ante sample we find that only the Slovakian market efficient with the Chow-Denning joined significance test CD_1 and the Chow Denning bootstrap test CD_2, and partial evidence for the Joint sign JS_1 test. Meanwhile, when reassessing the ex-post samples, we find that several capital markets become efficient in the weak form under certain tests. Therefore, we find that Hungary is the most efficient capital market in our sample passing all four joints tests (CD_1, CD_2, Joint rank JR_1 and JS_1), while in the case of Czech Republic efficiency is attained according to the CD_2, JR_1 and JS_1 tests and Poland only JS_1, while for Romania only CD_2. This miss-matching results, can be attributed to the ability of the joined sign and rank test, to detect finer differences under the presence of heteroscedasticity. On a general note, we can see that after joining the EU an improved information efficiency in certain capital markets.

Table 6: Variance ratio join tests results

	Before Joining the EU				After Joining the EU			
Test	**CD_1**	**CD_2**	**JR_1**	**JS_1**	**CD_1**	**CD_2**	**JR_1**	**JS_1**
BG	4.534***	2.774***	-6.679***	6.935***	12.53***	5.724***	10.31***	6.640***
	(23.55)		(50.41)	(52.35)	(166.0)		(114.5)	(45.72)
CZ	20.67***	6.722***	11.38***	0.022***	3.255***	1.213	2.028	1.485
	(442.8)		(162.1)		(37.77)		(15.20)	(4.466)
PL	15.33***	7.312***	11.11***	5.520***	5.148***	3.931***	2.744**	1.119
	(255.0)		(143.2)	(33.08)	(29.55)		(12.25)	(2.679)
RO	4.441***	2.659***	5.378***	4.253***	3.914***	2.374*	4.461***	3.193***
	(25.59)		(31.98)	(22.50)	(25.04)		(26.44)	(18.81)
SK	1.865	1.472	2.368**	2.263*	10.97***	3.008**	4.596***	8.753***
	(9.298)		(22.07)	(17.18)	(125.0)		(36.99)	(124.3)
HU	6.039***	3.026***	4.246***	7.495***	1.692	1.639	1.692	0.632
	(85.79)		(35.80)	(70.86)	(9.005)		(9.005)	(6.469)

Notes: First row is the coefficient, second row in the parenthesis is Wald Chi-Square statistics. ***, **, * denotes significant at 1%, 5% and 10%.
Source: Author calculations

6. Conclusions

The aim of this paper was to examine if the European Union Integration process increased the capital market efficiency in Bulgaria, Czech Republic, Poland, Romania, Slovakia and Hungary. We employed a wide array of statistical tools for testing market efficiency such as autocorrelation test, runs test, unit root test, and four variance ratios tests, performed on the daily return of the most important stock indices in the selected markets.

While our results indicate that neither of our analyzed markets follows strictly the random walk model in both ex-ante and ex-post samples, we find evidence that after joining the European Union market efficiency increased in certain countries. We find in the ex-ante samples that only the Slovakian capital market exhibited signs of efficiency according to the autocorrelation, runs and variance ratio tests. Meanwhile, in the ex-post samples we find partial market efficiency in Hungary, Slovakia, Poland, Czech Republic and Romania in the variance ratio tests, while the autocorrelation reveals efficiency in Bulgaria and the runs test in Slovakia.

This suggests, that joining the European Union was not the decisive factor in improving market efficiency in Central and Eastern European capital markets, despite the potential positive effect of joining the EU on information efficiency. Thus, we can still use historical data for predicting future price movement.
Even if we observed a potential increase in market efficiency after joining the EU, European Integration process it's not the sole factor involved. The recent economic crisis or the changes in regulatory framework could also act can as an important factor in improving information efficiency. In addition, the use of additional testing tools of could yield different results, due to the inherent limits in testing EHM.

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PREMISES OF BEHAVIORAL FINANCE IN RATIONAL DECISION-MAKING

Laurențiu Droj
Finance-Accounting Department, Faculty of Economic Sciences,
University from Oradea, Romania
ldroj@yahoo.com
Elena – Ana Iancu (Nechita)
Alexandru Ioan Cuza" Police Academy of Bucharest
Faculty of Juridical and Administrative Sciences,
University of Agora from Oradea, Romania
anaelena2009@yahoo.com
Ioana Florina Popovici – Coita
Finance-Accounting Department, Faculty of Economic Sciences,
University from Oradea, Romania
popovici.florina@yahoo.com

Abstract
One cannot separate decision from psychology of human being. People see world by perception and this leads to various ways of understanding even the most concrete or certain things. Financial literature reflects the subjective nature of human being in making decisions by classifying decision-making process into being "rationally" oriented or the opposite, "irrational", according to individual's attitude towards risk – "appetite" or "aversion". Process of understanding risk associated with future financial returns implies attaching mental probabilities to it. This activity is always affected by human nature of agents that take financial decisions, therefore bearing risk. Psychological factors such as perception, framing effect, information asymmetry, irrationality, emotions are accompanying every financial decision. Paper intends to study the direct relationship between psychological traits of a human being playing the role of a decisional agent in financial context. Financial decisions are always accompanied by the notion of probability in defining what we call as "expected" returns that translate into risk associated with financial investments. Empirical analysis done on the financial market reflects that agents use their perception on risk of gaining or losing from a certain financial transaction to decide whether to invest or not. The notion of "expected utility" has been complementary used with the one of "prospect value" as financial literature evolved over time and researchers brought new insights into the mechanism of financial decision. This paper studies direct relationship between psychological traits of a human being according to classical and rational decision-making process in the light of the prospect theory and risk attitude regarding financial outcome of decisions. In this sense, an econometric model is tested on the international financial market in order to find out what kind of subjective factors lie hidden in an investor`s mind and test the degree of irrationality lies beneath a rational financial decision. The result is incorporated in a decisional model describing how agents use their perception on risk of gaining or losing from a certain financial transaction.

Keywords: irrationality, financial risk, decision, psychological factors
JEL Classification: G02, G11, G32

Introduction

Financial decisions are always accompanied by notion of probability in defining what we call as "expected" returns that translate into risk associated with investments on the capital market. This mathematical probability is seen as being objectively estimated (Markowitz, 1959; Sharpe, 1964; Kolmogorov & Fomin, 1970, Baele et al. 2014) or purely psychological (Allais, 1988). The notion of "expected utility" (Markowitz, 1959) has been complementary used with the one of "prospect value" (Kahneman & Tversky, 1974, 1979, 1991, 1992) as financial literature evolved over time and researchers brought new insights into the mechanism of financial decision. Probability is used as an objective mathematical formula (Markowitz, 1959; Sharpe, 1964) or as a psychological intuition depending on the context and nature of the decision (Allais, 1988). Authors like Kahneman & Tversky (1979, 1991) found that people place "weights" more than "percentages" to future events and founded "prospect theory" to describe the mechanism of decision – making involving monetary benefits. They also defined what we call as "marginal value" (Kahneman & Tversky, 1974, 1979; Kahneman et. al, 1991). In this sense, decision-making is seen differently from what we know from classical theory in terms of final values or „expected". Prospect theory sees that people compare various states of alternatives for finding the motivational „difference" that acts as a stimulus to act.

One cannot separate decision from the psychology of human being. People see world by perception and this leads to various ways of understanding even the most concrete or certain things. Also, financial literature reflects even the subjective nature of the human being in making decisions as being "irrational" by assuming risks in situations that would require acting more safe (Aumann 2004, Aumann & Serrano, 2008). Some authors explain this behavior as "gambling risk" (Markowitz, 1952, 1991; Stancu & Mitroi, 2007; Kahneman & Tversky, 1992; Bătrâncea 2009).

This paper intends to study the direct relationship between psychological traits of a human being playing the role of a decisional agent in financial field. The decision mechanism that lies under financial investments forces the agent to choose between gains and losses with an uncertain probability (Kahneman & Tversky, 1974; 1981, 2002). In this sense, we are considering an econometric model tested on the capital market in order to find out what kind of subjective factors lie hidden in an investor`s mind. The result is incorporated in a decisional model describing how agents use their perception on risk of gaining or losing from a certain financial transaction.

1. Premises of the econometric model

Risk measurement in this context makes use of data sources available on the capital market, namely the time series of the shares` prices traded. These in turn are modeled using an econometric methodology and the results show an objective picture of the risk associated with different decision alternatives in the financial market. The empirical results of the econometric model used for this purpose provides information about the factors that drive agents in their financial decisions.

The emergence of numerous models measuring risk and its associated cost of capital for companies listed on the stock market was driven by the motivation to find an optimal model to capture the fair value of it. This attempt isn`t over yet and

it represents the subject of numerous research papers. History mentions the founders of the cost of capital model - Sharpe and Lintner (1964) founding in 1965 the standard model that is still used to measure the cost of capital on the capital market (CAPM). But they are not the only ones who were concerned about this issue in such period Harry Markowitz (1952), Jensen (1978, 1981), Ross (1976), Merton (1982), Fama and French (2003), Estrada (2000) and others were concerned with finding the most suitable model to estimate the expected returns on the capital market. Sharpe (1964) launches the hypothesis of its model, similar to that held by Harry Markowitz (1952) on the evolution of capital yields as exclusively related to the value of the slope of the regression line passing closest to yield values analyzed (beta coefficient). Later, in 1991, Sharpe introduces the risk-free asset rate as compared to the level of returns on risky assets resulting from the difference between what they called "risk premium".

Markowitz H. (1952) regards financial decision as being divided in two stages, the first refers to the analysis of alternatives and second is the acting itself. First step is done based on experience and knowledge of each individual and second step is done based on expectations for future benefits. Main theories on financial decision are based on „perceived" expectations of future returns. Markowitz (1952) speaks about positive nature of „expected return" and about its variance as „undesirable". In this sense, investor will want to maximize expected return and minimize its variance, but not to the same extent. Risk is defined as the standard variation of "expected" returns. According to utility theory (Markowitz, 1952) people reject risk of all kind whereas in prospect theory (Kahneman & Tversky, 1974, 1979, 1991) risk has a positive nature in case of losses. Agents are seeking risk when they want to diminish their chances to lose money in transactions but when it comes to certain benefits people tend to avoid risk. In prospect theory, risk has a dual nature depending on the context. In this sense, Estrada (2000) defines „downside risk" as the negative side of the probability that price of securities in the portfolio might fall. Sharpe (1964, 1991) follows the agents' premises of utility preferences used by von Neumann & Morgernstern (1944) for the definition of expected utility. In Sharpe's (1991) opinion agents have various degrees of "risk tolerance" in facing financial decisions. In the same manner as Markowitz (1952), Sharpe (1964, 1991) views risk as having a „penalty effect" on the future financial results.

Several human factors like subjectivity, perception, heuristics, framing effect, irrational acting, emotions, social representations, accompany every financial decision (Kahneman & Tversky 1974, 1981, 2002, Kahnemann et al. 1991, Kirchler 2002; Kirchler 2007; Popovici 2010). These factors relate to formation of expectations regarding future return or „cost of capital" which in turn is affected by agents' appetite or aversion of risk, information asymmetry, greed or fear of losing a certain monetary benefit. Some others (Mayfield, 2004; Hearn, 2009; Donadelli & Prosperi, 2012; Lischewski & Voronkova, 2011) view instead of the cost of capital as the primary motivational mobile to financial transactions the „expected premium". This in turn comes to sustain the prospect theory (Kahneman & Tversky, 1974, 1979, 1991) stating the premise of „marginal utility" referring to the fact that people look for the „marginal value" in comparing various alternatives when it comes to decision.

2. Methodology and database

Type of data used in the testing econometric model refers to time-series with a weekly frequency. The analyzed period ranges from 03.01.2000 to 28.12.2015 in a sample spread over 52 time series. Data series were built on the closing price of shares included in the sample. The values used are weekly averages of daily closing prices. Statistical population was that of 50 companies listed on the US international market (listed on the stock exchange NYSE Equity and NASDAQ Equity) and whose data were provided by finance.yahoo.com database. The companies were selected on the criteria of having at least 174 observations per series, to provide sufficient data for a more precise analysis and to obtain statistically meaningful results.
There were included in the sample the weekly average values of closing prices of the S&P500 as a representative index for the overall market analyzed. The weekly rates of US Treasury Bills T-13 week were included in the sample as representative for the risk-free asset in the model. Both time series include observations for the period 03.01.2000 to 28.12.2015.

2.1. Objective of the empirical study

Financial time series analysis involves unpredictable aspects of capital market share price. These include notion of "noise" that makes it difficult to reveal some trends or patterns of evolutionary time series analysis. Aim of present econometric analysis is related to understanding the functioning of capital markets, price formation related to the investors' expectations. The stock market is one of the most volatile markets compared to the real estate or human resources.
Volatility of the financial market is given by the trading of intangible assets (rights) unlike material goods traded on other markets. On the financial market, period between two successive transactions is very short compared to other markets. It can sometimes be a few seconds, minutes or hours. Also, pricing in this market is influenced by purely subjective factors, such as investor expectations regarding future profit made and financial growth prospects of companies.

Objective of the empirical analysis consists in studying the decisional mechanism performed by agents in selecting various financial alternatives based on perceptions regarding „expected return" affected by risk for gains or losses.

To get the per share rate, the following formula (1) was used:

$$\mathrm{Ri} = \log\left(\frac{\mathrm{P_t}}{\mathrm{P_{t-1}}}\right)$$

where:

P_t , P_{t-1} - stock prices in the current period (t) and previous (t-1);
R_i – expected return on a company's share

The same formula described above was used for the calculation of yields for the S&P 500, in accordance with the following:

$$\mathrm{Rm} = \log\left(\frac{\mathrm{P_t}}{\mathrm{P_{t-1}}}\right)$$

where:

P_t , P_{t-1} - traded index values in the current period (t) and previous (t-1);
R_m – expected market return of the S & P 500

Based on the above transformations, time series were generated covering a period from 03.01.2000 to 28.12.2015. Treasury bills yields were used from the website finance.yahoo.com. Market risk premium is defined by the formula (2) below (Mayfield, 2004; Hearn, 2009; Donadelli & Prosperi, 2012; Lischewski & Voronkova, 2011):

$$\text{Expected market risk premium} = \text{Rm} - \text{Rf}$$

where:
R_{ft} - risk-free asset is the rate (in this case - T-Bills Treasury rate 13 week)
The term "expected" refers to the future potential gain that could be obtained from various transactions on the capital market. The term "expected" is used to express the degree of probability that may occur in future transactions. The unpredictability of capital markets can also lead to the occurrence of losses for investors. The concept used as "risk-free" means that the likelihood of getting a clear gain is 100%. This cancels risk. When the probability p% is less than 100% to get a sure win, it means that (100% -p%) there is a risk of losing. Future returns on the capital market are called “stochastic” or "random". This can take positive or negative value with a certain probability.

2.2. Estimation of the econometric model tested

The construction of the econometric model is based on the understanding of the concept of regression. Econometric regression models are used to establish a relation between two or more variables. This can be linear or non-linear. Most real phenomena evolution is nonlinear but financial literature uses deterministic models that can be predicted, studied and compared with each other to identify any correlation between them. The correlation between the two phenomena, that they evolve synchronously or asynchronously, and does not necessarily imply a causal link (Donadelli & Prosperi, 2012; Lischewski & Voronkova, 2011).
Empirical study reflects cost of capital estimated using the Sharpe (1964, 1991) model according to the formula (3):

$$\text{C}_{\text{ki}} = \text{R}_{\text{fT}} + (\text{R}_{\text{mT}} - \text{R}_{\text{fT}})\beta_{\text{iT}}$$

where:
C_{ki} - is the cost of capital estimated by the Sharpe model (1991)
i - is the company that owns the action
T –number of periods analyzed in the sample, t belogs to the discrete interval {2000-02, 2003-05, 2006-08, 2009-11, 2012-15}.
R_{mT} = expected market return calculated as the arithmetic mean of the values taken by the variable linear vector $R_{mt} = [R_{m1} , Y_{m2} , \ldots, Y_{mt}]$, t = 1, 2, …,n; that is related to the selected period T.
R_{fT} = risk-free asset yield calculated as the arithmetic mean of the values taken by the variable linear vector $R_{ft} = [R_{f1} , Y_{f2} , \ldots, Y_{ft}]$, t = 1, 2, …,n for the selected period T.
β_{iT} - beta value or risk measure

The concept of cost of capital is estimated ex - post on the basis of historical data, using linear regression method. The concept is seen in the financial literature as "expected" return to any investor who buys shares of companies listed on the stock exchange.
Empirical analysis captured various stages of the US economy and its impact on the global market. Period 2000 - 2002 captures a step of decrease in US capital market (see graph below) followed by one of growth for the years 2003 - 2005. These two periods preceding the economic crisis started in 2006 and continued until the end 2008. Market growth is slowed in 2006 and market returns followed a downward trend until 2008. The period 2006-08 is known in US history as the US financial crisis. Since 2009 the market followed an upward trend that continues to 2015. Periods 2009-11 and 2012-15 are in post-crisis and capture the recovery of the American capital market.

2.3. Estimation technique

In order to estimate the coefficients of regression equation, least squares method was used because it is applicable to a linear equation but not necessarily linear parameters and variables (Gujarati, 2004; Brooks, 2008). Assumptions of linearity in parameters refer to the fact that they are not altered by multiplication, division or lifting power. In case of violation of one of assumptions required for OLS coefficients to be BLUE, several specific tests may be applied to correct problems in data collected.
Firstly, heteroskedasticity disables OLS method to produce consistent estimators. Secondly, presence of autocorrelation of coefficients errors causes that results estimated by OLS to be no longer consistent. In order to eliminate these two problems of time series, the Newey-West procedure was used to estimate the regression parameters that actually produce standard errors 'HAC' already corrected for autocorrelation and heteroskedasticity.

3. Empirical results of the model

Following the equation regressions performed there were obtained empirical results referring to values taken by beta and alfa coefficient. Standard valuation model (Sharpe, 1964, 1991) reflects companies' own capital returns and their volatility compared with evolution of global capital market yields. The value of coefficient β reflects the risk and reflects degree of volatility of company's shares in relation to the global market. Results of t-statistic indicator show that values of beta coefficient indicate that it is statistically significant. Instead alpha coefficient is statistically insignificant in most cases[42].
Empirical results show that sectors such as ***financial*** and ***services*** show higher volatility than the overall market. Several reasons for this refer to the fact that businesses affected by financial crisis cut budgets for services offered by third parties. Companies in the financial sectors bear higher risk than other sectors because financial crisis was generated from the financial instruments used by this sector.

[42] results of the tests applied were not included in the paper but can be presented upon request;

Technology sector was more volatile than the market before the crisis started and became less volatile afterwards. ***Industrial goods sector and basic production*** have experienced on average higher volatility in the pre-crisis period and lower than the overall market in post-crisis. One reason for this phenomenon could be the fact that production sector suffered the most from the financial crisis due the slowing down on the real estate market.
Consumer goods, healthcare, utilities sectors showed on average lower volatility than the overall market with beta coefficient values generally below one. This result is supported by the fact that businesses may cut investment spending or services to third parties but cannot apply the same measure to food, clothing, healthcare, consumer goods or utilities which are needed for daily living.

3.1. Stock performance versus risk estimated according to the cost of capital model (Sharpe 1964, 1991)

Empirical results reveal that among the 50 US companies included in the sample, cost of capital shows negative values for several shares indicating a pessimistic perspective of the investors. On the other side, positive values indicate optimistic outlook on the expected returns of the shares. The mathematical explanation of the negative values showed by the cost of capital relies on the fact that the risk-free rate being larger than the market rate, investors believe their portfolios will be negatively affected, they would rather pay to get rid of the shares showing negative cost of capital.
A pattern of behavior encountered in 80% of the companies showing high cost of capital refers to the fact that the maximum values of the indicator were recorded in the pre-crisis and crisis periods showing that the investor sentiment on the growth prospects of their respective companies were optimistic until the summer of 2006 when the market began to fall dramatically unleashing the crisis.
In other cases, a pattern of behavior encountered in over 80% of the companies showing minimum values of cost of capital refers to the fact that the minimum values of the indicator were recorded during the crisis which shows that investor sentiment on the growth prospects of these companies have become pessimistic in 2006, during the crisis on the US stock market.
Alpha coefficient indicates how much a share expected return "exceeds" market yields, if its values are positive. The indicator shows how much the share returns are far lower from market yields if its values are negative. Alpha coefficient values[43] for shares with minimum cost of capital values were found showing negative values for more than 90% of cases, reflecting lower yields than the overall market
Although gross production fell between 2008-09 and started to rise towards 2010, industrial production sector showed increased volatility while other sectors showed decreasing volatility during economic recovery this in turn showing that investors started to gain trust in the capital market.
Sectors like **financial** and **basic materials** have shown negative values during the whole period analyzed due to the fact that these sectors were expected to bring losses to investors so they were eager to get rid of these shares reflecting a negative value of the “expected return indicator” (cost of capital). Other sectors showed positive values of the indicator “cost of capital” but decreasing towards one

[43] results are not presented in the paper but offered upon request

as the period approaches 2014 because investors expected lesser profit for lower risk as economy got out of recession and started recovering.

3.2. Building model financial decision under risk and gains / losses uncertain

The decision model is built from elements such as a subject and an object. In this case, the subject is an individual decision or agent who pursues a certain gain but can hold only according to the risk attached to it. Object of the decision refers to the monetary value of that gain or loss. Any decision bears risk. Subjects makers are primarily humans. There are categories of agents who are attracted to risk and others who reject risk.

Table 1. Categories of risk depending on the sector in beta coefficient

Sectors	Low risk/ Low volatility	Medium risk/ Medium volatility	High risk/ High volatility
Financial			x
Services			x
Industrial Goods		x	
Primary production		x	
Technology		x	
Consumer goods	x		
Health Care	x		
Utilities	x		

Source: author's econometric modeling

Decision model includes factor related to performance of companies listed on the stock exchange. Any agent or investor will have an “eye” on beta and alpha coefficients related to the stock returns of the companies they invested in or intend to invest. In the eyes of investors, a company’s stock market performance comes in the form of "expectations" regarding future profits they can get by investing in its shares. In the empirical study this is reflected in the form of cost of capital showing an optimistic view if the values are high or pessimistic if the values are low.

This paper sets out three categories of agents according to their attitude towards risk, "homo ludens" (Kirchler et al., 2007; Bătrâncea, 2009), "homo oeconomicus", "homo-switch social" (Popovici et al. 2010). Based on the empirical results, financial - decision model is described as followed:

"Homo Ludens" will be attracted to risk and will prefer to own shares in its portfolio in the category of high-risk or high volatility sectors such as financial, and services. High performance companies (high cost of capital) will be very attractive to this type of investor.

"Homo Oeconomicus" will present risk aversion and it will try to avoid it as much as possible by focusing on low-risk sectors such as consumer goods, utilities, healthcare. Lower risk companies will be attractive to “homo oeconomicus” because of its prudential nature.

"Homo Switch - social" will show a dual attitude to risk. It will ignore risk or avoid it in financial transactions following other type of objectives than financial. This type of agent will be attracted to the shares of companies in sectors that have a medium degree of volatility medium or medium risk, such as those in the technology sector, industrial goods and primary production.

Conclusions

Classical economic theory is centered on the rational agent oriented towards maximizing its utility from every financial transaction. Modern theories like game theory, behavioral finance, economic psychology, agent-based modeling speak about agent's behavior that is guided by emotions reflected into strategies followed in order to maximize benefits from transactions whether it is about monetary return, psychological satisfaction or social benefits (Popovici et al. 2010, Popovici, 2010).
A company listed on the stock exchange has an increased visibility to investors and they can "charge" or rather "encourage" any action or new project undertaken by a company. In this respect, any company manager will be attentive to the evolution of beta and alpha coefficients related stock returns because they are a "barometer" of investors' perspective on the companies' financial value and it can directly influence its stock' performance.
Each category of agents described in the decisional model presents a specific attitude towards risk. The first category "homo economicus" presents risk aversion when it comes to certain gains. This type of investor will put his "eggs" in sectors showing lower risk but lower gains. Investors like this will invest their savings into shares from the utilities, consumer or healthcare because these offer lower risk. The second category of subjects "Homo Ludens" will present appetite for risk when it comes to sure losses for two reasons, namely: the risk of losing consists as a motivation to fight risk thus being attracted to it. An incentive for this category of agents represents the "playing for fun" that drives them into taking additional risk. This type of investors will chose financial sector or services because of the high degree of risk born which could also translate into high gains which is also shown by the increasing optimism shown from expecting higher profits as time approaches 2014 for the shares held by this type of agent. Third class of agents, "homo-switch social" has a dual attitude towards risk assuming additional risk without financial motivation. However, this category of subjects may present risk aversion in financial situations without apparent reason but rather stimulated by other purposes, such as social, environmental or psychological. This type of agent will invest in technology, primary or basic goods sector because it offers a safer option and also brings advantages like innovation or seed capital companies.
The reality of everyday human decisions on capital market financing involves a degree of risk. Some investors are attracted to risk, others avoid risk and a third category has a dual attitude towards risk, meaning that in specific situations may be attracted to risk or reject it. Financial decision-making on the capital market depends on agents' risk attitude which will also influence companies' stock performance.

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DOES SIZE INFLUENCE FIRM PERFORMANCE? EVIDENCE FROM ROMANIAN LISTED COMPANIES

Sebastian Lazar
Department of Finance, Money and Public Administration
Faculty of Economics and Business Administration
University Alexandru Ioan Cuza of Iași, Romania
slazar@uaic.ro

Abstract: *The paper investigates if size has any influence on firm performance for all non-financial companies listed at Bucharest Stock Exchange over 12 years period. The proxies for firm size were total assets, sales and number of employees. Control variables were tangibles, leverage, labour intensity, sales growth and company value added. Using a fixed effects panel data estimation model in order to account for individual firm heterogeneity, the paper finds a negative effect of firm size on corporate performance, when size is expressed in total assets and sales and no effect at all when number of employees is used as a proxy for size. Also, tangibles, leverage and labour intensity display a negative sign, the only positive determinants being sales growth and company value added. The findings suggest that the asset mix Romanian listed is not performance driving oriented, but is under the influence of the large amount of real-estate assets which are not directly involved in producing goods (as oppose to machine and equipments) and therefore do not directly generate profits.*

Keywords: size, firm performance, determinants

JEL classification: L25.

1. Introduction

Size as determinant of firm performance has been an ongoing debate in the field of business and industrial economics. Larger firms are subjects to more scrutiny from investors, researchers and tax authorities alike and consequently empirical investigations related to their performance is a subject well covered in related literature. Moreover, larger companies are public companies in most of the cases and this adds up to the extended coverage of performance investigation. However, for a transition economy, the related literature is not so vast, mainly because of the short history of market based business conduct. In this setting, the paper investigates size as determinant of firm performance, taking into account the peculiarities of a transition economy.
The most notable feature of larger companies that affect their performance resides in economies of scale. According to conventional wisdom, economies of scale stems from the cost advantage that arises with increased output, therefore larger firms that are able to capitalize on economies of scale tend to be more profitable. Additionally, larger firms may benefit from their market power and lower interest

rates. Access to capital markets, especially for listed companies contributes further to increased profitability through lower cost of capital. Moreover, larger firms tend to impose entry barriers to competitors and start-ups, therefore conserving their privileges and market positions, which also acts in favour of increased profitability. However, for a former communist country, these rationales may not apply for several reasons. First, for such countries, larger companies are former communist state owned enterprises which are not well suited to play according to the market economy rules. This kind of companies may be large in terms of total assets, but their size has little to do with economies of scale, but with huge industrial platforms or acres of land which do not generate profits. Second, former or actual state owned companies do not have a sound market based corporate, but are still tributary to political connections and labour unions, which may negatively affects performance. Third, due to the short history of stock exchange in Romania, public companies have still to learn from the benefits of being listed, therefore the argument of lower capital cost is not so strong, especially if higher interest rates common for transition countries are taken into account.

In this setting, looking upon size as determinant of firm performance brings new insights, which are valid for a former communist country and hence may contradict the results of previous research done mostly on developed countries. This is the main contribution of this research.

The rest of the paper is organized as follows: section 2 presents a short literature review, section 3 develops the hypotheses, section 4 describes the data, section 5 presents the results, while section 6 concludes.

1. Literature review

The literature on firm size and its effects on profitability is vast and originated in the US in the '70s. Hall and Weiss (1967), Scherer (1973) documented a positive relationship between firm size and firm profitability, mainly because of economies of scale. Sheperd (1972) found a negative relationship which he attributed to X-inefficiency. i.e. failure to keep costs under control when competition is not strong. Amato and Wilder (1985) found a small and negative effect. More recently, Lee (2009) found a positive effect for US public companies and a nonlinear relation which suggest the profitability decreases once the firm size grows too much.

With respect to other countries of the world, the research is not so vast and generally investigates firm size along with other firm-specific characteristics as determinants of profitability. The results are mixed since size is found to have a positive effect on firm performance (Yazdanfar, 2013; Asimakopoulos et al, 2009), Maçãs Nunes et al (2009), Lee (2009), a negative effect (Goddard et al, 2005) or no effect at all (Glancey, 1998; Crespo and Clark, 2012).

With regard to dependent variable, in most of the cases firm performance is measured as a financial ratio, namely return on assets (ROA) such as in Hansen and Wernerfeld (1989), Glancey (1998), Goddard et al (2005), Zeli and Mariani (2009), Asimakopoulos et al (2009), Maçãs Nunes et al (2009), Crespo and Clark (2012), Yazdanfar (2013). Alternative measures are share value (Makhija, 2003), profit-cost margin (McDonald, 1999) or net income plus advertising expenses to

assets ratio (Lee, 2009).
With regard to Romania, the literature on firm performance is rather small. Pantea et al (2014) found a positive effect for firm size, while Mihai & Mihai (2012) found no effect at all for Romanian mining and quarrying companies. Gavrea and Stegerean (2012) focusing on a corporate governance approach found that firm size measured as log of sales has a positive impact on firm performance.
The present paper goes beyond the approaches undertaken so far, by extending both the companies' coverage and the determinants investigated, whitin the framework of resource based view of the firm.

3. Research design and hypotheses

The dependent variable
The firm performance is measured using return on assets (ROA) computed as net income to total assets ratio.

The independent variables
The independent variable of interest is firm size. In most of the previous research firm size is proxied by logarithm of total assets. The expected sign is ambiguous since there two opposing views concerning the effect of firm size on profitability. According to the first one, larger firms are able to make use of economies of scale, have better access to capital markets (Titman and Wessels, 1988) and poses a greater ability to put barriers to new comers (Maçãs Nunes et al, 2009). The second view claims that due to larger size, companies displays large diversification, less competition which triggers the so-called X-inneficiency (Sheperd, 1972). Moreover, for the case of former communist countries, large companies stand in many cases for former or actual state owned enterprises that do not perform efficiently due to political connections or to strong labour unions.
The firm-specific control variables are: leverage, tangibles, growth and labour intensity. The decision to include labour intensity is justified by large accepted opinion in Romanian that labour costs negatively affects firm performance mainly because of high social security contributions borne by employers. Another reason consists in the hypothesised soft labour policies of Romanian listed companies.
With respect to leverage, the expected sign is negative given higher interest rates for company loans, while for tangibles the expected sign is also negative mainly because of the fact that most of the Romanian listed companies are former socialist enterprises with high levels of fixed assets and poor performance. In many cases, tangibles consist mainly in buildings and plots of land, which were subject to frequent revaluations without any consequences for profitability, since these tangibles are not directly involved in producing goods for sale (as oppose to machines and equipments). Labour intensity (personnel expenses to turnover ratio) is expected to have a negative impact, mainly due to the fact that Romanian companies generally avoid making radical adjustments to their personnel policy. This often means overstaffing, which together with relative high social contributions rates borne by employers negatively affects firm performance. Company growth (percentage sales growth) was also investigated as a determinant of firm performance. Growth is seen in general as having a positive impact, mainly due to the additional income that company generates. Therefore, I expect a positive sign. Finally, value added is expected to have a positive sign since the value that a

company adds to its inputs is what drives the performance up and down.

A synthesis of independent variables and their expected sign is provided in Table 1.

Table 1. Independent variables and their expected sign

Firm size (SIZE)	Logarithm of: total assets/sales/employees	+/-
Leverage (LEV)	Total debt to total assets ratio	-
Tangibles (TANG)	Tangible assets to total assets ratio	-
Labour intensity (LAB)	Personnel expenses to turnover ratio	-
Company growth (GROWTH)	Sales growth in percentage	+
Value added (VA)	Value added to turnover ratio	+

In this framework, the multivariate model is:

$ROA_{it} = \alpha_0 + \beta_1 * SIZE_{it} + \beta_2 * LEV_{it} + \beta_3 * TANG_{it} + \beta_4 * LAB_{it} + \beta_5 * GROWTH_{it} + \beta_6 * VA_{it} + \varepsilon_{it}$, where *i* denoted the firm and *t* the year,

All variables are computed using relevant data collected from companies financial reports. Usual checking did not reveal any concerns with regard to multicollinearity between explanatory variables.

4. Data and methodology

The dataset used in this paper contains detailed information from balance sheet and income statement. It follows closely the BACH data scheme (see Appendix) and covers all non-financial Bucharest Stock Exchange listed companies for twelve years period (2000 – 2011), thus having 668 complete company-years observations. I did not cover years following 2011, because the implementation of International Financial Reporting Standards (IFRS) from 2012 makes company reports data less comparable. Nevertheless, the time spanning and company coverage is large enough for valuable insights.

I used unconsolidated data in order to better capture the specific company relevant data and to provide a longer period of comparable data. The sources of data were financial reports of listed companies available on the Internet sites, both of the companies and of the Bucharest Stock Exchange and National Security Commission. Since I use percentage sales growth from previous years, 60 firm-years go away, thus the final sample having 608 firm-years observations.

Descriptive statistics for dependent and independent variables are reported in Table 2.

Table 2. Descriptive statistics for dependent and independent variables

stats	N	mean	sd	min	p50	max
ROA	608	2.44	11.06	-116.65	2.66	82.10
SIZE (Assets)	608	731	2,990	8.03	96.70	33,800
SIZE (Sales)	608	511	1,790	4.07	70.40	16,800
SIZE (Employees)	608	1,851.86	6,193.6	14	724.50	78,170

TANG	608	50.80	20.19	0	50.02	96.75
LEV	608	39.39	25.61	0.51	36.23	158.08
GROWTH	608	0.16	0.41	-0.91	0.12	3.51
LAB	608	21.04	12.65	0.11	19.93	76.91
VA	608	31.02	26.19	-262.17	31.88	177.64

Assets and sales are in millions RON.

The mean for ROA is 2.44, while the median is rather close at 2.66. The majority of firms display positive ROA which suggest that listed companies are in general profitable. In terms of size, assets are much more than sales. The mean for assets (731) is 43% higher than the mean for sales (511), while the minimum and the maximum value are almost double (8.03 vs. 4.07 and 33,800 vs. 16,800 respectively). The average value of employees is 1851.86, while the median is 724.50. The tangibles represent in average half of total assets, and again the mean and the median are very close (50.8 and 50.02 respectively). The zero value for tangibles is for one IT seller company at the beginning of the period. Average leverage is around 40 percent, slightly lower than the average corporate indebtedness for Euro area non-financial companies of 43% in the first quarter of 2011(ECB, 2012). Annual average percentage sales growth is 0.16 which is quite a low figure. The mean for labour intensity is approximately 21%, while the median is around 20%. Corporate value added also displays similar values for the mean and median (around 31%).

5. Results

I used panel data fixed effect model in order to account for company heterogeneity through firm-specific intercepts that capture the effects of unobserved or unmeasurable firm characteristics that are relatively constant over time but vary over firms. By including firm-specific intercepts, I was able to control variables such ownership structure, managers team, earnings management, corporate culture, which are likely to be correlated with explanatory variables. An advantage of the fixed effects model is that is less prone to endogeneity and omitted variable bias. A shortcoming of the fixed effect model is that the results, being conditional on the sample, cannot be extrapolated. But, since data covers all non-financial companies traded at Bucharest Stock Exchange, this remains only a marginal problem (when inferring the results beyond public companies).

Table 4 summarizes the results of fixed effects regression: (1) depicts the results for size expressed as logarithm of total assets, (2) presents the results for size computed as logarithm of sales, while (3) displays the results for number of employees (in logs) as proxy for size.

Table 2. Regression results

	M1	M2	M3
SIZE	-2.307*** (0.746)	-1.852* (1.016)	1.190 (1.041)
TANG	-0.125** (0.0475)	-0.145*** (0.0415)	-0.152*** (0.0393)
LEV	-0.178***	-0.172***	-0.174***

	(0.0283)	(0.0291)	(0.0283)
GROWTH	1.717**	2.500***	2.347***
	(0.693)	(0.886)	(0.871)
LAB	-0.473***	-0.500***	-0.445***
	(0.0712)	(0.0788)	(0.0743)
VA	0.263***	0.271***	0.260***
	(0.0343)	(0.0308)	(0.0333)
Constant	60.35***	52.28**	10.17
	(13.44)	(20.43)	(7.819)
Observations	608	608	608
R^2	0.617	0.606	0.602

Clustered robust standard errors at firm level in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
(1) Size as logarithm of total assets
(2) Size as logarithm of sales
(3) Size as logarithm of number of employees
ROA = return on assets (net income to total assets ratio)
TANG = capital intensity (tangible assets to total assets ratio)
LEV = leverage (total debt to total assets ratio)
SIZE = company size (natural logarithm of total assets)
GROWTH = sales growth (annual sales growth in percentage)
LAB = labour intensity (personnel expenses to turnover ratio)
VA = value added (corporate value added to turnover ratio)

Size negatively affects firm performance, when it is expressed in log of assets and respectively log of sales, although the effect is more statistical significant for the former. There is no effect when size is proxied by number of employees. This finding acts in favour of the stated hypothesis that Romanian listed companies posses a significant amount of non-productive assets such as lands and buildings which, moreover, are subject to frequent revaluations. Although the sign is preserved when size is expressed as log of sales, the statistical significance is lower.
Tangibles negatively affect firm performance. One percentage point increase in tangibles triggers 0.121 pp reduction in ROA. This suggests that Romanian companies do not make use of their tangibles in a profitable manner and support the finding on size proxied by log of assets. Leverage displays a significant negative effect on firm performance. One p.p. increase in debt ratio determines 0.08 decrease in profitability. This suggests that servicing the debt reduces the ability of companies to invest in profitable, especially when taken into account high company interest loan. Labour intensity also plays a negative role with regard to firm profitability. The coefficient is negative and statistical significant in all model specifications. This suggests that Romanian companies were not able to efficiently use their labour force, mainly because of strong labour unions. The only control variables with a positive effect on profitability are growth and company value added.

6. Conclusions

The paper investigates the relationship between size and firm performance Romanian non-financial companies listed at Bucharest Stock Exchange over twelve years period (2000 – 2011). While the main focus was on size, the control variables used also reveals important findings.

The results show that size is negatively related to firm performance, especially when it is expressed as log of total assets, the common proxy for size used in related literature. This finding suggest that Romanian listed companies are not able to capitalize on economies of scale which are typically related to size or to take advantage from entry barriers to competitors, which are also related to large capital stocks. This point out to the fact that, in most cases, size is determined by the large amount of real-estate assets which are not directly involved in producing goods (as oppose to machine and equipments) and therefore do not directly generate profits. When size is expressed as log of sales, the results are not so statistically significant ($p<0.1$), although the sign is retained. There is no effect, when size is proxied as log of employees.

The results on size as log of assets are further supported by the results on tangibility, which account for more than half of total assets. The asset mix of Romanian listed companies is not value performance oriented. Leverage negatively affects firm performance mainly due to high interest rates common for a transition country. Labour intensity also displays a negative effect, mainly because of the strong labour unions and of the political connections. As expected, sales growth had a positive impact on firm performance, as well as value added that companies created. Romanian listed companies are able to create value in spite of their ineffective personnel policy and asset mix.

The results are valid only for listed companies and cannot be extrapolated to private held companies, since they have different investment and financing choices and certainly, different reporting requirements.

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MEASURING FINANCIAL LITERACY: A CASE STUDY OF SELF-ASSESSMENT AMONG UNDERGRADUATE STUDENTS IN HUNGARY

Domician Máté, Zsuzsanna Kiss, Viktor László Takács, Vivien Molnár
University of Debrecen, Faculty of Economics, Debrecen, Hungary
domcian.mate@econ.unideb.hu

Abstract: *This paper analyses the educational self-assessment of Hungarian undergraduate business economics students, focusing primarily on the concept of financial literacy as students predict and evaluate their own performance in written examinations relative to their externally assessed achievement. The main purpose of this study is to explore whether high-achieving students are more accurate in their self-assessment when predicting and evaluating their financial knowledge.*
In the pre- and post-examination predictions the higher achieving students actually seem to predict and evaluate their examination results more accurately than their lower-achieving fellows. Although we found no substantial differences in self-estimation by gender, females seemed to less likely to overestimate their financial knowledge after taking exams. Our conclusion also allows policy makers to identify potential needs in relation to specific features of financial literacy and provides evidence about which groups of people are in need of supplementary support, not only in higher education but in other contexts as well.
Keywords: self-assessment; overestimation; human capital; higher education; financial literacy
JEL classification: E52, G02, G38

1. Introduction

From time to time the great economic crises shed light on the negative consequences of making decisions without adequate financial knowledge. Financial literacy is especially critical nowadays for promoting desired financial behaviours, such as reaching a verdict on deliberated decisions which result in prudent saving and budgeting, or on the use of bank loans (IBRD, 2009). The OECD (2005) defines financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime. Thus, financial education is the process by which people improve their understanding of financial products, services etc. to become more aware of risk and return, so they are empowered to make informed choices, to avoid undesirable consequences, or to recognize where to apply for help, and take other measures to improve their present and long-term financial well-being (PACFL, 2008). Greater financial literacy, together with financial education, can reduce the likelihood that customers at any income level will not purchase products or services that they do not need or that are not in their personal interest. Consequently, financially competent consumers are more likely to save their money, compare financial products and services, and discuss daily financial routines with their family.
Messy and Atkinson (2012) also highlighted that most people have fairly straightforward financial knowledge; they also indicated that certain respondents are often over-confident in several countries. In this case, they give incorrect answers rather than admitting that they cannot distinguish an appropriate response. Researches in behavioural finance has also suggested that many

households do not in fact save their earnings optimally, nor realize that their investment decisions may lead to unacceptable living standards (Yoong et al. 2009). Moreover, an inaccurate self-assessment of creditworthiness also has supplementary negative consequences. Zorn et al. (2008) also demonstrated that inaccurate self-assessment of financial risks can lead to a higher annual percentage rate on a mortgage.

Our motivation to write this paper comes from the fact that in higher education a large proportion of students seem to be prone to irrationally evaluate their own (financial) knowledge (see Macdonald. 2004). However, there is still no existing consensus on whether students' self-assessment ability is obviously learnable (e.g. Zimmerman and Schunk 2001; Ross 2006 etc.) or not during higher education, and White et al. (2003) pointed out that specific student groups are exposed to the phenomenon of inaccurate self-assessment. Therefore, our study focuses on the measurement of business students' financial knowledge to predict and evaluate their own performance in written examinations relative to their externally assessed achievement.

However, there is no agreement in the literature in respect of the relationship between students' measured performance and the accuracy of their self-assessment. Kruger and Dunning (1999), Karnilowicz (2012) and Kun (2015) etc. concluded that higher achieving students are more accurate in their self-assessment than low achievers, but O'Neill et al. (2006) has rejected this phenomenon. Unfortunately, the notion of accuracy in several studies is still confusingly determined by referring to measurement by self-assessment. In this paper, accuracy is defined as the results of the absolute difference between the student-estimate and the ultimate tutor-estimate exam scores and is used to describe the student's self-estimation ability independently of its direction (over and underestimation). Messy and Atkinson (2012) also indicated that there is a positive relationship between education and financial literacy. More highly educated individuals are more likely to exhibit positive behaviours and attitudes as well as show advanced levels of financial knowledge.

Based on the findings of the literature reviewed above, and assuming that (H1) higher achieving students assess their examination results more accurately (measured by the absolute value of the self- and tutor-assessment differences) than their lower achieving fellows, the current study forms four additional sub-hypotheses:

H11: Higher achieving students predict their examination results more accurately (measured by the absolute value of the pre-examination assessment results) than their lower achieving colleagues.

H12: Higher achieving students evaluate their examination results more accurately than their lower achieving colleagues.

H13: Higher achieving students overestimate their own pre-examination performance less than their lower achieving colleagues.

H14: Higher achieving students overestimate their own post-examination performance less than their lower achieving colleagues.

The purpose of this study is to explore the idea that high-achieving students are more accurate in self-assessing their financial knowledge. Our research represents an analysis of written examinations taken at the University of Debrecen focusing on business economics students' self-assessment as regards their

financial knowledge. We have also paid particular attention to variations in gender. In the following sections, we first present the data available and the methods applied. Finally, we attempt to draw a number of brief conclusions from the results of our research, which will hopefully clarify empirical and policy debates on the contributions higher education makes to financial literacy.

2. Sample and methods

Our estimations are based on a sample of 142 bachelor (43 men and 99 women) BA students from the Faculty of Economics and Business at the University of Debrecen, Hungary. At the time of the examination 50 students were studying on the International Business Economics, 30 on the Tourism and Business and 72 on the Trade and Marketing majors. Their compulsory Finance course provided the basic concepts of financial management i.e. how people and firms think about the behaviour of financial markets, and also helped them understand financial statements and decisions.

The examination was carried out on a specific date and at the same time. Moreover, two different test versions (identified as A and B) were also chosen, taken by 73 and 69 students. Consequently, eliminating infrequent effects deriving from the differences among the test versions and majors, these factors are always considered as dummy variables during our analyses. All test versions had the same structure, with 10 true or false (T/F), and 20 multiple-choice (MC) questions (one or more correct answers from four choices). Each correct response was worth one point. Before the students started their examination they were asked to predict their total T/F and MC scores. To motivate them to predict more accurately, they were offered a higher percentage in a later test as a bonus if they could estimate well; specifically, 10 per cent for a perfect hit for both questions, and 5 percent if the approximation was within a ±1 point range. After the tests had been completed, they were also requested to make their final estimation of the same test scores so as to correct their former prediction if they desired. Moreover, students were informed that only their second estimation was involved in the final valuation process to determine bonus points. In this way, the pre- and post-examination assessments made it possible to research how students are able to reconsider their financial knowledge after the test.

In order to exemplify the robustness check of our estimations we measured self-assessment regarding financial knowledge using various methodologies. In this paper, besides some descriptive statistics, (linear and binary logistic) regression models are frequently analysed to highlight distinctions among our evaluations.

3. Results

Figure 1 and 2 show that only the higher-achieving students (whose final test performance was higher than 50% and whose final grade was more than 2) can achieve additional (5% and 10%) test bonuses after the pre- and post-evaluation.

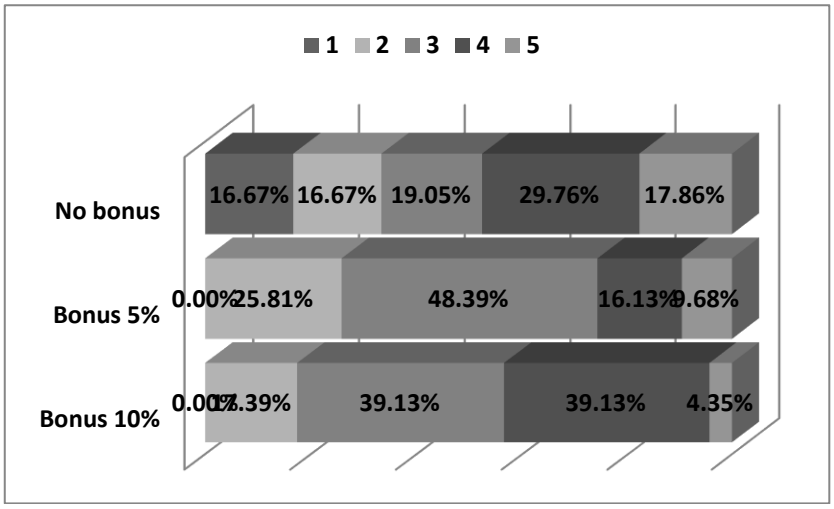


Figure 1. Frequencies of pre-estimated test scores by final grades and bonuses
Source: based on own calculations.

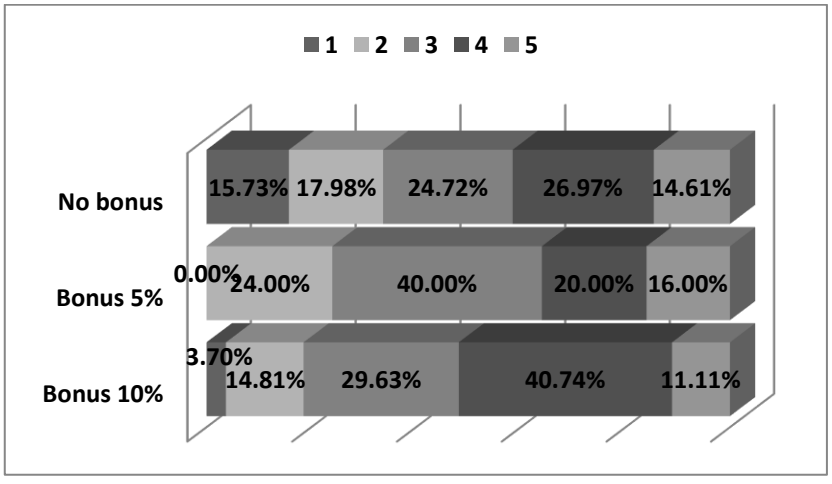


Figure 2. Frequencies of post-estimated test scores by final grades and bonuses
Source: based on own calculations.
Note: 1 – less than 50%, 2 – 50-59%, 3 – 60-69%, 4 – 70-79%, 5 – more than 80%

According to our hypotheses regression models should be tested, where the first dependent variable is the accuracy of the students' pre- and post-estimations. The variables of ADIFTTPRE and ADIFTTPOST measured by the absolute difference value of the student-estimated test scores and the tutor-assigned test scores. If the students are overestimated their total test scores before and after the exam OETTPRE and OETTTPOST dummies are also used.
The FINALSC substituted the tutor-assigned test score as an independent variable among others. In our regression models the dummies of SEX, MAJOR1, MAJOR2 and MAJOR3 are selected to maximise the 'goodness of fit' (R^2, as the percentage

of the response variable variation that is explained by a linear regression model). Consequently, the pre- and post-accuracy of self-assessment are estimated independently in two models.
The first (Model 1) contains all the available independent variables and the other (Model 2) is restricted to those that are significant at least at the 10% p-level. Moreover, there are additional coefficients that are not included in our restricted models to evaluate self-assessment features of financial knowledge. Hence, the validity of our conclusions is limited by the bias caused by the exclusion of certain of these variables.

Table 1: Results of the linear regression models for the pre- and post-examination of self-assessment

Independent variables	**ADIFTTPRE**		**ADIFTTPOST**	
Dependent variables	**Model 1**	**Model 2**	**Model 1**	**Model 2**
CONSTANT	**11.037**	**11.045**	**5.305**	**6.39**
	(3.645)* **	**(3.640)*** **	**(1.959)***	**(6.284)*** **
FINALSC	**-0.127**	**-0.127**	**-0.138**	**-0.171**
	(-2.022) **	**(-2.026)** **	**(-2.462)** **	**(-3.367)*** **
SEX	0.598		0.544	
	(1.212)		(1.234)	
MAJOR1	**-5.805**	**-5.445**	0.411	
	(-2.161) **	**(-2.038)** **	(0.171)	
MAJOR2	**-6.197**	**-5.747**	-0.459	
	(-2.231) **	**(-2.155)** **	(-0.191)	
MAJOR3	**-5.388**	**-4.908**	0.073	
	(-1.971)*	**(-1.811)***	(0.849)	
R^2	0.095	0.085	0.104	0.075
Adjusted R^2	0.062	0.059	0.071	0.068
Durbin Watson	1.908	1.898	1.986	1.903

Source: based on own calculations.
Note: Heteroscedasticity robust t-statistics are in parentheses. Letters in the upper index refer to significance: ***: significance at 1 per cent, **: 5 per cent, *: 10 per cent. P-values without an index mean that the coefficient is not significant even at the 10 per cent level

Statistics of the regression models are shown in Table 1 for the pre- and post-test estimations. In Model 1 and Model 2 we found a significant linear connection between the accuracy of students' prediction and the tutor's assessment. Essentially, the effect of tutor-assigned final scores on the absolute value of the differences of self and tutor assessment does not seems to be large, but in both

models the student results correlated negatively with accuracy. Consequently, we can accept the H11 and H12 hypotheses; the higher achieving students seem to be able to predict and evaluate their examination results more accurately than their lower achieving fellows. Thus, in these models, gender (SEX) has no significant effect on accuracy and the dummy dependent variables of the majors still have a significant negative relationship with accuracy.

Essentially, the additional (H13) and (H14) sub-hypotheses, which focus directly on self-estimation regarding the extent of estimation errors, are not independent of their positive sign. In this case, we are also assuming that higher achieving students tend to overestimate their examination results. Hence, the difference between the students' evaluated and the tutor-assigned score is positive. However, in order to identify the relationship between the students' achievement and the accuracy with which they overestimate their own performance, ceteris paribus, a binary logistic regression method might be an appropriate tool for our financial analysis.

Table 2: Results of the binary logistic regression models for the pre- and post-examination of self-assessment

Independent variables	**OETTPRE**		**OETTPOST**	
Dependent variables	Model 1	Model 2	Model 1	Model 2
CONSTANT	-19.281	-0.233	-12.961	**0.656**
	(0.000)	(1.366)	(0.000)	**(3.691)**
FINALSC	**-1.822**	**-1.422**	**-1.343**	**-1.082**
	(30.094)* **	**(28.575)*** **	**(23.554)*** **	**(21.809)*** **
SEX	0.261		**-1.251**	**-0.941**
	(0.316)		**(7.713)*** **	**(5.188)** **
MAJOR1	18.058		20.063	
	(0.000)		(0.000)	
MAJOR2	19.835		21.315	
	(0.000)		(0.000)	
MAJOR3	18.801		20.409	
	(0.000)		(0.000)	
Cox and Shell R^2	0.334	0.267	0.256	0.212
Nagelkerke R^2	0.447	0.357	0.341	0.282
R^2 change	0.284	0.224	0.213	0.173
Omnibus χ^2test	57.251***	43.809***	41.931***	33.546***
HL χ^2test	4.188	3,002	3,693	7.161

Source: based on own calculations.

Note: Heteroscedasticity robust Wald-statistics are in parentheses. Letters in the upper index refer to significance: ***: significance at 1 per cent, **: 5 per cent, *: 10 per cent. *P*-values without an index mean that the coefficient is not significant even at the 10 per cent level. HL: Hosmer and Lemeshow χ^2 test.

In all observed models (see Table 2), the dependent variable indicates the likely hood of students' over-assessment. Those cases where the students evaluate their own performances accurately are estimated without an error and left out of the sample. The proportion of variance explained by the predictors (measured by Cox and Shell's, Nagelkerke's pseudo R^2 and R^2 change) of the binary logistic regression models are relatively high – indeed high enough to agree with our results. Consequently, we can accept the H13 and H14 hypotheses, as well. However, for every one-unit increase in the tutor-assigned test scores (so, for every additional point, and holding all other independent variables constant), we expect a 1.422 and a 1.082 decrease in the logs of pre- and post-examined self-assessment differences. Thus, in the post assessments, there is a lower correlation between the higher-achieving students' self-assessment and their final score. Meanwhile, there is no significant relationship between gender and the pre-estimated over self-assessment. Nevertheless, in Model 2 of the post-estimation we found that the female students' probability of overestimation is (EXP(-0.941)=-0.381) significantly lower than males.

4. Conclusions

Making adequate financial decisions is especially critical for today's globalized financial markets. These challenges primarily focus on ensuring better financial education to expand access to products and services for consumers. Not surprisingly, governments are currently interested in searching for effective methodologies to improve the level of financial literacy and initiating many processes to create or lead national strategies for financial education to provide learning opportunities among their future supporters.

In this study the first objective was to analyse how students can estimate their examination results regarding their financial knowledge. In our models the higher achieving students seemed to predict and evaluate their examination results more accurately and tend to overestimate their examination results more than their lower achieving fellows. Consequently, enhancing financial education for better financial literacy is one effective policy response for both sexes to empower consumers in financial markets. Generally, our results highlighted that policy-makers should concentrate on reducing 'skill-gaps' by motivating low-skilled workers to learn more and improve their financial knowledge.

In our opinion, more efforts are still needed to strengthen consumer protection and to develop and enforce financial knowledge. We also agree with Zia and Xu (2012), who revealed that improving the effectiveness of financial literacy programs will require better integration of new valuable insights from both behavioural economics and social research.

Our further research can open the door to investigating financial literacy by additional socio-demographic groups. Moreover, we expect to implement further analysis in the coming year to explore and expand the extent to which other determinants may explain the assessment of financial knowledge at international level.

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DEVELOPMENT OF REAL OPTION THEORY IN THE LAST 20 YEARS

Andrea Rózsa
University of Debrecen, Faculty of Economics, Institute of Accounting and Finance, Debrecen, Hungary rozsa.andrea@econ.unideb.hu

Abstract:
The main goal of this study is to offer an overview on the real option theory in the past two decades. The beginnings of real option researches go back to the 1980s, with their first applications deployed in the natural resource extraction industries. A further important milestone of development came in 1996, when upon Lenos Trigeorgis' initiative a series of annual real option conferences was launched. This year witnesses the staging of the 20th conference, and therefore it can be taken as a worthy occasion for having an overview on the main literary guidelines of the theory with emphasis on the key outcomes. The first part of my study details the most important results of real option financial valuation. The second part sheds light on the potential relationship of strategic management and real options in the light of literary researches. The third section focuses on the real option results of strategic decision-making. The interpretation of the real option procedure as an organizational process gives way to linking the results of strategic management to those of financial management by creating an integrated organizational decision-making model. This statement will be backed by the results pertaining to the real option organizational models.

Keywords: real option, investment valuation, strategic decision-making, organisational development

JEL classification: G31, L21

1. Introduction and research question

In recent decades, the business environment has undergone considerable transformation, and consequently the traditional models of investment valuation and the theoretical approaches to corporate strategy-making have also been altered. In investment valuation theory, the real option approach and valuation emerged after the financial option analogy. This approach has become especially important in relation to staged projects that are hard or even impossible to evaluate with conventional methods of discounted cash flow, still carry strategic benefits. Value-adding strategic investments are also closely associated with the most recent theories of corporate strategy. This line of thinking is represented by the theory of dynamic capabilities, as well as knowledge-based approaches of strategic and corporate theory, which regards the valuation of strategic investments and the management of in-process changes as a source of corporate knowledge and organizational potentials. Consequently, for integrated corporate management, the challenge of the day is how managerial decision-making procedures embracing financial, production and strategic processes can be made even more efficient with the application of the real options methodology.

It was Stewart Myers to first conceive the option-based idea of assessing future opportunities that are inherent in projects. In 1977, he was studying the potentials of using option-pricing in the field of real-estate property investments, where he

understood extra value added by flexibility as deferred learning (Csapi, 2013a). In 1984, Myers also pointed out that conventional valuation methods based on discounted cash flow are not able to handle projects encompassing both production and strategic options, and therefore proposed option pricing is to be used for valuation purposes. This basic principle formed the foundations of real option researches and their corporate applications. The theoretical and practical scientific results of the first decade were summed up in a dedicated handbook by Trigeorgis (1996). A further important milestone of development came in 1996, when upon Lenos Trigeorgis' initiative a series of annual real option conferences was launched. This year witnesses the staging of the 20th conference, and therefore it can be taken as a worthy occasion for having an overview on the main literary guidelines of the theory with emphasis on the key outcomes.

The first important financial consequence of the emergence of real option thinking and methodology was the introduction of the strategic NPV rule and the identification of the types of real options. The strategic NPV expresses two value components: the conventional net present value of direct cash flows and flexibility in production, as well as the option value of strategic interrelations (Trigeorgis, 1996). Initially, it seemed that strategic NPV model would create grounds for the consideration of the value of interrelations among projects and production flexibility, and additionally strategic effects. However, the study of long-term strategic criteria and the outcomes of the scientific development of strategic management made it obvious that the option component of strategic NPV was not sufficient and adequate for the examination of the strategic components of value-adding investments. This recognition directed scientific attention to integrated strategic decision-making.

The above statement is also confirmed by the surveys of Triantis and Borison (2001) with large company managers from 7 industries. According to scholars, the real options techniques and processes applied in practice can be categorized in three groups (Csapi, 2013a):

- real options thinking (qualitative analysis of decision-making problems, interpretation of alternatives),
- real option analytic tools (application of option pricing models in project valuation),
- real option organizational process (management tool for the identification and exploitation of strategic options belonging to the field of real options).

The significance of real option organizational processes are underlined by research and development (R&D), pharmaceutical and advanced manufacturing technology projects that feature sequential structures and special option characteristics. In these cases, the real options logic is applied as an analytic and communication tool encompassing the entire organization. The results of the line of thinking emphasizing the real option organizational valuation processes additionally led to the modernization of the strategic net present value. It was Smit and Trigeorgis (2004) to first propose the use of the expanded strategic NPV. The point of this model improvement was that to the earlier strategic NPV formula the authors added strategic option values that also integrated certain results from game theory.

In the meantime, the real option approach gained broader interpretation as such a form of investment into physical assets, human resources and organizational capabilities that improved the ability to respond to future events (Kogut and

Kulatilaka, 2001). The potential correlations of capabilities, real options and resource allocation processes were studied by Maritan and Alessandri (2007), while a compilation of studies by Tong and Reuer (2007) focused on the general, multicriteria applicability of real options in strategic management.

In view of Driouchi and Bennett's findings (2012, p 43), the relationship between strategic management and real options can be summed up as follows: „Resources and strategic investments can be viewed as real options, while governance modes and strategic positioning decisions contain real option chains. The advantage of management view is that it pays more attention to learning, managerial competences and endogenous uncertainty. Strategic option decisions are generally applied in the fields of various forms of market entrance, managerial styles and innovative investments. Therefore, corporate performance is a function of the structure and sequential design of these types of decisions." The broader interpretation of real options and the most recent results of strategic management researches further confirm the development of the real option approach in connection with integrated, organizational processes. Driouchi and Bennett's analysis (2012) looking at more than 200 professional publications assessed and systematized the directions of real option decision-making, applications in strategic and international production processes, as well as empirical assessments (Table 1).

Table 1. Main directions in real option studies

Real option decision-making	Strategy and international production	Empirical applications
- Real option valuation	- Shared or proprietary options	- Real option characteristics of investments
- Real options logic	- Strategic growth options	- Effects of real options on performance
- Real options as capabilities	- Production (flexibility) options	- Real option corporate practices

Source: Driouchi-Bennett (2012), p 56.

In the further parts of the study, I have summed up the most important results of real option financial valuation, analyzed the potential correlations between strategic management and real options in the light of literary researches, and finally evaluated the real option results of strategic decision-making.

2. Development of financial investment valuation using real option approach

Starting out from Myers' thought, the theoretical and corporate experts were aspiring to reveal various types of real options, and identify the most usable option models for the evaluation of the individual real option cases. At the present, the associated literature knows a broad range of real option types (Trigeorgis, 1996; Amram and Kulatilaka, 1999; Smit and Trigeorgis, 2004; Rózsa, 2008; Bélyácz, 2011; Csapi, 2013b). The most common categorizations are:

- naturally occurring real options (deferment option, option to abandon, growth, staged and compound options) and real options that can be incorporated with extra costs (modification and flexibility options),
- product options, timing options and execution options (Kylaheiko et al., 2002),

- learning options (Yeo and Qiu, 2003),
- real options along the temporal dimension (deferment, abandonment) and size-related dimension (growth, change, expansion, compound, as well as exploration, outsourcing and rainbow options) (Csapi, 2014),
- flexibility (simple, usually timing options connected with specific projects, without strategic values) and strategic (generally growth and compound options belonging to multiple projects, carrying considerable strategic values and leading to new value-creating projects (Van Aarle, 2013).

Table 2 shows the most general real options categories, as well as the associated industries and most important publications.

Table 2. Summary of the types of real options

Option category	Contents	Fields of application	Publications
Option to defer	There is an option to acquire a valuable land or resource. The company monitors the market events, obtains additional information by resolving uncertainties that it integrates into decision-making.	Natural resource extraction industries, real estate developments, agricultural industries, paper products	Tourinho (1979); Titman (1985); McDonald and Siegel (1986); Paddock et al. (1988); Ingersoll and Ross (1992); Anderson (2000)
Option to abandon	When market conditions take an unfavourable turn, the company can terminate its operations, sell the project, and realize the residual value.	Capital intensive industries, financial services, new product introductions in uncertain markets	Myers and Majd (1990); Berger et al. (1996); McGrath (1999); McGrath and Nerkar (2004)
Time-to-build option, staged investment sequential option	There is an option to abandon the project while it is in progress in case the new information is deemed as unfavourable. The commencement of the individual phases is conditioned on the success of the previous phase. It can be interpreted as a serious of successive options.	All the R&D intensive sectors, especially the pharmaceutical industry; capital-intensive projects calling for long-term development (e.g. large-volume construction works, power plants); startup of risky enterprises	Majd and Pindyck (1987); Carr (1988); Trigeorgis (1993); Kemna (1993); Perlitz et al. (1999); Loch and Bode-Greuel (2001); Lint and Pennings (2001); MacDougall and Pike (2003)
G*rowth options*	An earlier investment is regarded as the precondition of another project. The success of the initial investment can open up new, future investment options for the company.	Infrastructure-based or strategic industries: especially high-tech, R&D, where there are complex product generations; strategic acquisitions; multinational activities; organizational capabilities	Myers (1977); Kester (1984); Trigeorgis (1988); Pindyck (1988); Brealey and Myers (1991); Kester (1993); Borissiouk and Peli (2001); Tong and Reuer (2006); Brouthers and Dikova (2010)
O*ption to alter*	Under favourable market conditions, the company can extend the lifecycle of the project, increase the size of series production or accelerate resource utilization. On the other hand, in unfavourable situations, the company may cut back production, or even suspend production temporarily in justified cases.	Natural resource extraction industries (e.g. mining); design of equipment and construction in cyclic industries; fashion products; consumer goods; commercial properties	McDonald and Siegel (1985); Brennan and Schwartz (1985); Trigeorgis and Mason (1987); Pindyck (1988); De Neufville (2003); Chung et al (2010)

Flexibility option, option to switch, , input and output	Under conditions of production flexibility, in case there are changes in the prices or demand, the management of the company can change the output structure, product structure (production flexibility) or make the same products with the use of different types of inputs (process flexibility).	*Output changes*: In the case of products that are sold in small volumes, or attract fluctuating demand (electronics; toys; automobile parts) *Input changes*: electric power; agricultural crops; chemicals; raw materials requiring mechanical processing, pending opportunities	Margrabe (1978); Kensinger (1987); Kulatilaka (1988); Kulatilaka and Trigeorgis (1994); Lieblein and Miller (2003); Mol et al (2005)
Compound option	Options or option chains associated with other options. Because of the mutual dependencies, the values of multiple options are different from the amounts of the individual values of the same options.	Most of the real projects in the above-mentioned industries.	Brennan and Schwartz (1985); Trigeorgis (1993); Kulatilaka (1994); Schwartz and Trigeorgis (2001); Triantis and Borison (2001); Jiang et al (2009)

Source: ed. by me based on Trigeorgis (1996), pp 2–3., as well as Driouchi and Bennett (2012).

According to Trigeorgis (1996) four closed-form solutions can be used in real option analysis: Black and Scholes (1973), Margrabe (1978), Geske (1979) and Carr (1988). It was in 1973 when Black and Scholes (B-S) worked out the first closed-form solution for the valuation of financial options and warrants. Most of the option pricing techniques used nowadays are some variation of the B-S solution and procedure. The Black-Scholes solution is used in the valuation of deferment, abandonment and growth options. The option to replace a risk-carrying asset that did not pay dividends for another asset was evaluated by Margrabe in 1978. The only difference between the B-S and Margrabe solutions is the handling of the exercise price. In the former model, the exercise price is deterministic (it is defined in advance), whereas in Margrabe's solution it is handled as a stochastic variable. The Margrabe solution is similarly used in the valuation of deferment, abandonment and growth options. Beyond the deterministic exercise price, Geske's name is associated with the solution connected with the valuation of compound options. Geske's model is applied in sequential (staged) investment decisions. Investments of this kind are often found in the case of R&D and technological decisions (Perlitz et al., 1999). In 1988, Carr defined his solution for compound options with the application of stochastic exercise prices. Carr's solution can be detected in applications that are similar to the ones in the Geske model.
Haahtela (2012) summarizes the various real option valuation approaches. As an alternative of closed-form solutions, he analyzes simulation-based methods (Copeland and Antikarov, 2001). Another alternative is presented by the lattice and tree-based methods. Haahtela (2010) demonstrated one example of an enhanced lattice approach for real option valuation recombining trinomial lattice with changing volatility. Finally, he emphasized the applicability of the most novel fuzzy pay-off methods (Collan et al., 2009 in Haahtela, 2012).

3. Development of strategic management and potential real option relations

In corporate strategy and the study of organizational decisions, the real option paradigm offers an especially remarkable framework for decision-making under uncertainties (Sanchez, 2003, Driouchi and Bennett, 2012). According to Kogut and Kulatilaka (2001), real options as investments into capabilities promote organizational learning, create values, and sustain the competitive edge. Barnett (2008) claimed that real option decision-making is the ability of managers to recognize, maintain, support and exploit real option opportunities in their own specific business environments.
When companies enter a new development lifecycle, knowledge becomes a fundamental competence, whereas learning serves as the source of advantage in competition (Miller, 2002). According to Bräutigam et al. (2003), the real option theory is suitable for reconciling development phases with inherent endogenous and exogenous uncertainty factors. McGrath et al. (2004) regards real options as the driving force behind choice and heterogeneity, and argues that real option reasoning is a valuable contribution to the existing learning, decision-making and organizational theories.
Smit and Trigeorgis (2004) summarize the key results concerning external and internal views of the firm and approaches to strategy (Table 3).

Table 3. Most important views of the firm and corporate strategy

Types/Scientific area	Publications	Main concern
External		
competitive advantage	Porter (1980)	structural conditions and competitor positioning
strategic conflict	Shapiro (1989) Brandenburger and Nalebuff (1995)	strategic interactions
Internal		
resource-based view	Rumelt (1984), Wernerfelt (1984), Teece (1980, 1982	asset accumulation
dynamic capabilities	Prahalad and Hamel (1990) Hayes and Wheelwright (1984) Teece, Pisano, Shuen (1997)	asset accumulation, replicability
Linkage		
real options and games	Smit and Ankum (1993) Kulatilaka and Perotti (1998) Bowman and Hurry (1993), McGrath (1997)	adjusting decisions in dynamic and competitive environment

Source: Smit and Trigeorgis (2004), pp 39.

In view of the important strategic implications, it can be assumed that in spite of its numerous advantages strategic NPV is not suitable for the coordination of strategic and financial principles, which aims at the creation of strategic flexibility (Rózsa, 2008). In the strategic NPV model, the above-detailed long-term strategic criteria cannot be integrated. On the other hand, it has been evidenced that they are just as essential parts of strategic investment decision-making as the mathematically more manageable future cash flows, estimable discount rates, as well as simple and compound options that can be assessed with the use of financial option models. This set of issues has also directed the attention of scholars to to strategic decision-making.

4. Analysis of strategic decision-making concerning real options

Several models have been proposed to tackle the problem. These models place emphasis on the completion of strategic decision-making with the real options theory.

Amram and Kulatilaka's (1999) model considers the identification of the sources of uncertainties and decision-making alternatives as a principal organizational responsibility where efficient implementation necessitates strategic and financial real option communication. It is followed by the selection of valuation parameters, and then the execution of the option valuation models. Based on the results and the obtained critical strategic values, a strategic decision-making space can be drawn up that enables continuous control and the redesigning of processes.

Similarly, Smit and Trigeorgis (2004) recognized the demand for complexity – the necessity to forge relations between financial and strategic planning – and first they tried to improve the decision-making process by expanding the strategic NPV. The essence of their proposal is expressed in the following equation.

expanded strategic NPV = passive NPV + option premium + strategic option value

The point of the theoretic model improvement was that to the earlier form of financial valuation the authors added strategic option values that also integrated certain results from game theory. The complex model they recommended is

demonstrated in Table 4.

Table 4. Effect of strategic planning on the market value of the company

Market value (Expanded NPV)	Value controls	Strategic planning	Valuation methodology
STRATEGIC VALUE	Strategic POSITION	Competition strategy	Game theory
FLEXIBILITY VALUE	Adaptive capabilities	Strategic planning	Real option valuation
NET PRESENT VALUE	Competitive advantages	Project planning	Discounted cash flow

Source: Smit and Trigeorgis (2004), pp 4–5.

In my opinion, the Smit and Trigeorgis model, while it gives very detailed description of strategic issues, fails to abandon the fundamental assumption concerning the priority of financial decisions.

The situation is similar to those researches and results focusing on real option organizational processes that relate to the formation of real option valuation processes. From among them, the most notable results have been published by Amram and Kulatilaka (1999), as well as Copeland and Antikarov (2001). The primary objectives of the both models are to facilitate the analysis of practical cases, as well as simplify the performance and application of real option calculations.

My earlier studies (Rózsa, 2008, 2015) call this view a reverse approach, and suggested that it should not be the option approach regarded as the primary aspect in which we try to embed strategic factors, but on the other way round: we are rather to consider the recognition, valuation of options, the application of the option approach itself as a corporate capability, factor serving as the foundation of knowledge. To this end, I have developed the so-called strategic real option model (Table 5).

Table 5. The suggested strategic real model

STRATEGY	REAL OPTION	VALUATION	FEEDBACK
competitive advantage	real option types	model selection	organizational tasks
knowledge and innovation	uncertainty	option evaluation	operating problems
continuous development	matrix-based approach	strategic decision-making space	changing environment
dynamic capabilities	options for exercise	conditions of exercise	new information

Source: Rózsa (2015)

On the basis of my model development in Rózsa (2008, 2015) I stated that: “In the process of decision-making and implementation, strategic, real option, valuation and feedback analyses have to be performed in all the phases of decision-making. I have defined the fundamental questions relating to the four elements of the extended model as follows:

- What a role does the project under review have in acquiring competitive advantage, or by what strategic characteristics does it support the sustenance of competitive advantage?
- What sources of uncertainties are anticipated to occur? What real option types is it worth concentrating on? Which are the most important ones?
- What is the value of the real options that are also financially assessable? What should be the next decision?
- What organizational tasks have to be executed in the given phases of the

project, what responses can be given to the operating problems occurring, what environmental and information changes need to be taken into consideration, and how do they affect the commencement of the next phase? "

The opportunities for creating strategic framework systems have also been analyzed by Csapi (2013), and by referencing German sources she has proposed the following strategic approach (Table 6).

Table 6. Flowchart for strategic real option management

STRATEGIC ANALYSIS	FORMATION AND SELECTION OF THE STRATEGY	APPLICATION OF THE STRATEGY
Identification of real options	**Valuation of real options**	**Real option management**
Capturing real options	Selection of valuation methods	Governance of real options
Examination of the option analogy	Determination of the valuation parameters	Adjustment of structures and systems
Prioritization of real options	Implementation of valuation	Provision of information, training, motivation to employees

Source: Csapi (2013)a, p 84.

It can be claimed that this latter two models are in close correlation with the most recent researches. Driouchi and Bennett (2012) give a detailed analysis on the role of real options in strategic decision-making, and summarize the results of the most recent studies in the light of the real option debate.

Table 7. Practical application of real options

Real option trends	Strategic decision-making	
	Case studies	**Managerial assessments**
OPTIMIST	Lint and Pennings (1998) Lint and Pennings (2001) Borissiouk and Peli (2001) Miller and Park (2004) Raynor and Leroux (2004)	Triantis and Borison (2001)
REALIST	Kemna (1993) De Neufville (2003) MacDougall and Pike (2003) Alessandri et al. (2004) Krychowski et al. (2010)	Busby and Pitts (1997) Howell and Jagle (1997) Graham and Harvey (2001) Miller and Shapira (2004) Verbeeten (2006)
PESSIMIST	Philippe (2005)	Ryan and Ryan (2002)

Source: Driouchi and Bennett (2012), p 55.

5. Conclusions

The main conclusion of the theoretical development of real options theory in the past 20 years is that by today the system of real option tools has become an indispensable element of corporate strategic decision-making. The strategic NPV method and its expanded version are broadly known, and successful practical applications also exist, especially in pharmaceutical, R&D, advanced

manufacturing technologies and electronic field of investments. At the same time, coordination of strategic, production and financial aspects calls for integrated model development. There have been attempts in the associated literature to satisfy this theoretical demand, but a further direction of research is embodied in its practical testing. The potential effects of the real option approach on organizational processes are subject to further research.

As opposed to the mainstream trend of studies, my suggestion is that preference should be given to the reverse approach, i.e. that it should not be the option approach regarded as the primary aspect in which we try to embed strategic factors, but on the other way round: we are rather to consider the recognition, valuation of options, the application of the option approach itself as a corporate capability, factor serving as the foundation of knowledge.

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THE IMPACT OF TAXATION ON FIRM'S PERFORMANCE: EMPIRICAL EVIDENCE ON THE CASE OF CEE COUNTRIES

Valentina Diana Rusu, Carmen Toderaşcu
Department of Interdisciplinary Research – Human and Social, Alexandru Ioan Cuza University, Iasi, Romania
Faculty of Economics and Business Administration, Alexandru Ioan Cuza University, Iasi, Romania
valentinadiana.ig@gmail.com
carmentoderascu@gmail.com

Abstract: *The performance of the firms is affected by many factors, according to the studies realized in this area. But, of all this factors of influence in this paper we want to focus on a major problem mentioned by all the firms: taxation, and to test its impact on business performance. To see if taxation affects the performance of the firms, we used the data collected for seven Central and Eastern European countries (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland and Romania) for estimating three regression models, according to the size of the firms analyzed. For measuring the performance of the firms we consider the growth of their value added. And for measuring taxation we use a series of indicators: total tax rate, tax payments, time needed to prepare and pay taxes, profit tax, other taxes paid by firms, labor tax, taxes on income, profits, and capital gains and taxes on goods and services. We also consider as a control variable the real economic growth rate. After applying multiple linear regressions on panel data, our results show that real economic growth rate, profit tax and taxes on goods and services are the main determinants of value added growth of the firm from CEE countries, and implicitly of the firm's performance. When we extend the analysis according to the size of the firm, we obtain almost similar results; the only difference came from the fact that profit tax does not significantly influence the performance of the large firms. The combined effect of the variables considered statistically significant had a medium impact on the performance of the firms for all the firms and large firms, as shown by R-squared value. These results show that are also other factors which have a higher impact on the performance of the firms, so in future research we intent to analyse also other variables that define taxation and also to extent the sample, by including more countries.*

Keywords: taxation, performance, value added, regression

JEL classification: H22, H71

1. Introduction

Taxation affects many aspects of daily life, and is an area that suffers continuous changes. Its influence can be felt weaker or stronger by individuals but there is a unanimous opinion that the activity of the firm is really influenced by taxation policy from the country where they operate. The business environment responds to tax changes continuously. Business stability and performance is related to fiscal stability and our research aims to test the power of these connections.

According to Modigliani and Miller (1963) changes in tax law that lowers tax rates

should increase firm value. Consequently, Downs and Hendershott (1987) showed that changes to the tax legislation of 1986 tax reform had increased the value of companies from 10% to 13%. Also, Derashid and Zhang (2003) found a negative relationship between the profit tax and the financial performance of the company, thus when the effective tax rate is higher, the performance of the firm decreases. Schwellnus and Jens (2008) examined the effects of corporate income taxes on the profitability and investment of firms in European OECD member countries over the time period of 1996-2004. Their results show a negative effect of corporate income taxes on the profitability of the firms, so, if there is an increase in the corporate tax rate the profitability of the firm decreases.
Rohaya, et al. (2010) conducted a study on corporate income taxes and showed also an association between income tax and profitability of corporate institutions. Their conclusion was that corporate income tax affects negatively the profitability of corporate institutions but has a positive relationship with the firm size and age of companies. De Mooij et.al, (2001) found the same results, a negative relationship between corporate taxation and financial performance. Duranton et al. (2011) estimate the impact of business property taxation on firm's performance and find a reverse causality between firm decisions and many aspects of the tax system itself. Gatsi et al. (2013) focused their study on exploring the relationship between corporate tax and financial performance. The study has found that, there is a significant negative relation between corporate income tax and financial performance.
So, through this paper we intend to test if the taxation regime from seven CEE countries (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland and Romania) has a significant impact on the performance of the firms from these countries. In order to achieve the proposed objective we have structures our paper as follows: after a brief review of the specialized literature on the field we realize an empirical analysis of the impact of taxation, measured by a series of indicators, on the performance of the firms. In order to determine this impact we use linear regression model. After discussing the obtained results our study ends with conclusions.

2. Empirical analysis of the impact of taxation on firm's performance

Most of the firms from the European Union consider taxation matters to be the most burdensome policy area that affects them. Large enterprises can usually use some tax experts for advice on how to optimize their net profits, but SMEs have many difficulties regarding tax matters.
The problem of taxation for CEE firms can be observed if we take into account the business environment constraints declared by the entrepreneurs in CEE countries. Thus, after being presented with a list of 15 business environment obstacles, business owners and top managers in the firms from CEE were asked to choose the biggest obstacle to their business. The results for the region were obtained by calculating the average of the responses for each of the seven CEE countries, and are presented in figure 1.

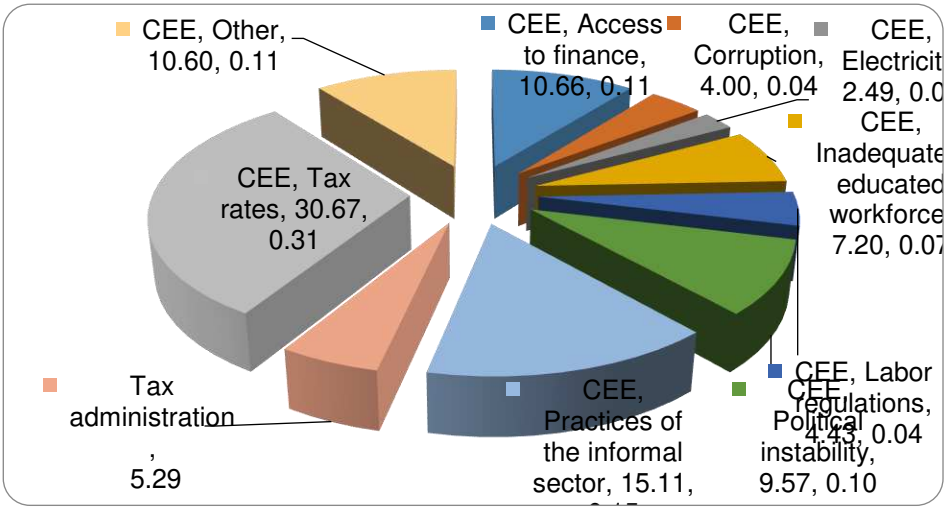


Figure 1 – Top 10 business environment constraints for CEE countries, 2013
Source: data processed by the authors after www.enterprisesurvey.org

From figure 1 we observe that the top 5 business environment constraints in CEE region are: tax rates (31% of the firms mentioned this as a problem), practices of the informal sector (15%), access to finance (12%), practices of informal sector (15%) and access to finance (11%). Other problems mentioned are political instability, inadequately educated workforce and tax administration. So, if we combine the problems regarding taxation we observe that this is the biggest obstacle mentioned by the firms from CEE countries, being mentioned by more than one third of the firms as their biggest environment constraint.

In the analysis realized above we have observed that tax rates and tax administration are considered by the firms as being major obstacles in their activity, so, starting from this, the objective of our analysis is to test if the taxation regimes from the CEE countries considered have an important impact on the performance of the firms.

In order to study if taxation determines the performance of firms in the CEE countries, we have considered as main indicator measuring the SMEs performance the growth of value added obtained by this firms. The data for the growth of value added of the firms are obtained from the SME Performance Review, 2015.

The taxation can be measured by a series of indicators that we have chosen as the explanatory variables of our model. The annual financial data for the explanatory variable are taken from World Bank DataBank, for the period 2009-2014, for 7 CEE countries (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland and Romania). We present above the explanatory variables and their explanations.

- *Real economic growth* (in %) – calculated as annual growth of Gross Domestic Product.
- *Total tax rate* (as % of commercial profits) – represents the amount of taxes and mandatory contributions payable by the firms after accounting for allowable deductions and exemptions.
- *Tax payments by businesses* (number) – represents the total number of taxes paid by firms, including electronic filing.

- *Time to prepare and pay taxes* (hours/year) – represents the time, in hours per year, needed to prepare, file, and pay three major types of taxes: the corporate income tax, the value added or sales tax, and labor taxes, including payroll taxes and social security contributions.
- *Profit tax* (as % of commercial profits) - is the amount of taxes on profits paid by the firms.
- *Other taxes* (as % of revenue) - include employer payroll or labor taxes, taxes on property, and taxes not allocable to other categories, such as penalties for late payment or non-payment of taxes.
- *Labor tax and contributions* (as % of commercial profits) - represent the amount of taxes and mandatory contributions on labor paid by the firms.
- *Taxes on income, profits, and capital gains* (as % of revenues) - are levied on the actual or presumptive net income of individuals, on the profits of corporations and enterprises, and on capital gains, whether realized or not, on land, securities, and other assets.
- *Taxes on goods and services* (as % of revenue) - include general sales and turnover or value added taxes, selective excises on goods, selective taxes on services, taxes on the use of goods or property, taxes on extraction and production of minerals, and profits of fiscal monopolies.

The hypotheses of our empirical research are:

H_1: *there is a significant relationship between taxation and the performance of the firms from CEE countries.*

H_2: there is e negative relationship between taxation and the performance of the firms.

For testing these hypotheses we realize a statistical analysis. In order to statistically analyze the data we first applied unit-root tests on every variable included in the panel data, to test if data is stationary and control for spurious relationships among variables. The null hypothesis is that all panels contain unit-root. This hypothesis was rejected in all the cases. After that we have analyzed the descriptive statistic of the variables (Table 2 and Table 3), the correlations between variables considered in the analysis and regression analysis (Table 4). **To obtain the estimated coefficients of the regression models, calculations were made using EViews 7 computer package.**

3. Results and discussions

The descriptive statistics of the taxation factors (see Table 2) shows that the biggest standard deviation was observed for the time needed to prepare and pay taxes, fact that shows that this variable register big variations from one country to another, for example in Estonia, in 2014, there were needed only 81 hours to prepare and pay taxes, while in Bulgaria were needed 424 hours for this procedures. Also, the big value of standard deviation shows that there were registered important changes over time, all the analyzed countries registering a reduction of the number of hours needed to pay taxes in 2014 compared to 2009, as a result of the reforms adopted by the policy makers. Big differences are registered also for the number of tax payments, if in Latvia are made only 7 payments, in Poland the number of payments is almost three times higher (19). In some countries are registered also

important changes over time, for example, in Romania there is registered an important decrease of the number of payments from 113 in 2009 to only 14 in 2014, in Poland we also observe a halving of the number of tax payments. The most stable indicator describing taxation was the percent of other taxes payable by business.

Table 2: The descriptive statistics of the influence factors

Variable	Min.	Max.	Mean	Std. deviation
gdp	**1.26**	**3.54**	**2.5525**	**1.1623**
tax	**40.10**	**49.30**	**43.8750**	**3.8767**
paym	**11.00**	**39.00**	**20.25**	**12.9967**
time	**175**	**288**	**235.0000**	**55.9702**
profittax	**6.10**	**13.10**	**10.4250**	**3.0456**
othertax	**0.03**	**2.41**	**1.0523**	**1.0247**
incometax	**14.19**	**25.14**	**19.9057**	**4.4820**
goodstax	**49.28**	**58.46**	**53.5707**	**3.9287**

Source: processed by the authors after E-views results

On the other hand when we analyse the dependent variable we observe the ascendant trend of the value added obtained by the firms from CEE countries starting with 2010. An important decrease was in 2009 compared to 2008, after the outburst of the recent crisis, and also a slightly decrease in 2012, and 2015, but followed in the next year by a resume of the ascending trend.

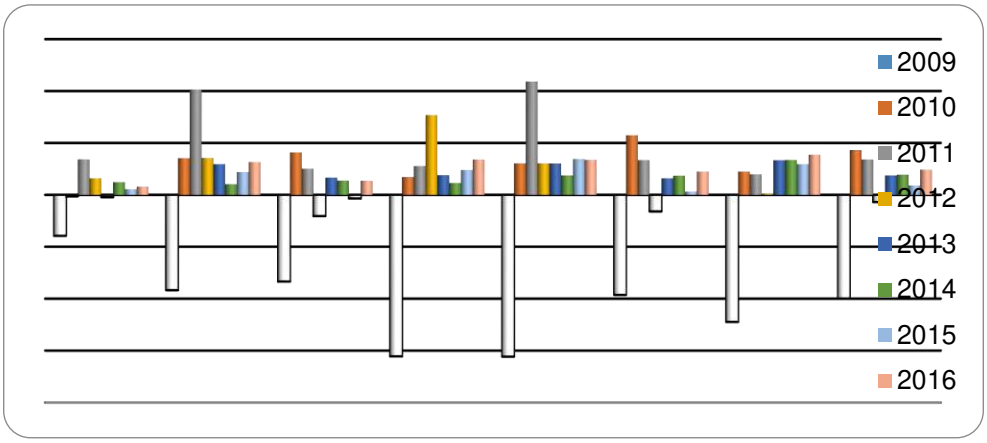


Figure 2: The evolution of value added of the firms (in %), by country and total, for the period 2009-2016
Source: processed by the authors after data from SME Performance Review, 2015.

From figure 2 we also observe the differences that appear between the countries in the region. There are countries were the variations from one year to another are relatively small (Bulgaria, Hungary and Romania), but also countries with big variations (Estonia, Latvia, Lithuania).

Before realizing the regression analysis, we have tested all the variables against autocorrelations. We have also taken into account the problem of multicollinearity. The results of the correlation test applied to our variables shows that does not exist multicollinearity between the independent variables.
Through the regression analysis we want to determine which of the considered indicators representing taxation are between the main determinants of the performance of the firms from the CEE countries. In order to do so, we use the model with the dependent variable the growth of value added. The results of the regression model are presented in Table 3.

Table 3: Estimation results of simple firm's value added growth model

	All firms	**All SMEs**	**Large firms**
Explanatory variable	*Dependent variable: value added growth from 2008 to 2014*		
gdp	1.479***	2.009***	1.437***
tax	0.057	0.076	0.004
paym	-0.070	-0.093	-0.046
time	-0.012	-0.016	-0.006
profittax	-0.453*	-0.640**	-0.145
othertax	2.281	2.313	2.002
incometax	0.056	-0.012	0.101
goodstax	-0.885***	-0.930***	-0.753***
R-squared	0.3131	0.7351	0.5549

*** and *** denotes** that coefficients are significantly at the 90% and 99% level.
Source: processed by the authors after E-views results

Based on the results of the static regression model applied and the statistically significant coefficients, we can conclude that real economic growth, profit tax and taxes on goods and services are the main determinants of value added growth of the firm, and implicitly of the firm's performance from the CEE countries.
The real economic growth has a stimulating effect on the performance of the firms, an increase of 10% of the economy would induce an increase of 14% of the value added obtained by the firms. The coefficient is statistically significant at 1% level.
The profit tax calculated as a percent of the commercial profits of the firm affects negatively the performance of the firms, determining a decrease of the value added obtained. The relationship is statistically significant at 10% level. Although, the effect is small, an increase of 1% in the level of profit taxes induces a decrease of only 0.45% of the value added of the firms. This result is in accordance with our expectations.
The level of taxes on goods and services calculated as a percent of the revenues of the firms has a negative effect on the value added of the firms, the relationship being statistically significant at 1% level. Although, the effect is also small, an increase of 1% of the taxes on goods and services would induce a decrease of only 0.88% of the value added of the firms.
According to our results, the other factors expressing taxation considered in the analysis do not have a statistically significant impact on the value added of the firms.
When analyzing the impact of taxation on the value added of the firms according to

the firm's size, we obtain similar results. The real economic growth has a stimulating effect on both the performance of the large firms and of SMEs. The coefficients are statistically significant at 1% level.
The level of taxes on goods and services, calculated as a percent of the revenues of the firms, has a negative effect on both the value added of the large firms and SMEs. The value of the coefficients shows that an increase of 1% of the taxes on goods and services would induce a decrease of 0.93% of the value added of the SMEs, and a decrease of 0.75% of the value added of the large firms. The profit tax affects negatively the performance of both SMEs and large firms, but the coefficient is statistically significant only for SMEs.
So, our hypothesis is confirmed, and we can say that there is a significant relationship between taxation and firm's performance.
When analyzing the results we have to take into account that the analysis was realized only on 7 countries from CEE, maybe if we would made an analysis on a bigger number of countries, for example all the European Union member countries (this would be the topic for our future research) we would have obtained different results.
The combined effect of the variables considered statistically significant had a small impact on the performance of all the firms, as shown by R-squared value of 31%. The obtained results show that we have to consider also other factors which have an impact on the performance of the firms, then taxation. For the SMEs the model has a bigger value of R-squared, but for large firms there is just a medium value.
Our results are in accordance with the results obtained by other studies from the specialized literature.

4. Conclusions

In our paper we analyse the impact of taxation on the performance of the firms from the Central and Eastern European countries. The purpose of our study was to test the hypotheses and to offer evidence with respect to the impact of the considered indicators expressing taxation on the growth of the value added of the firms. We considered as determining factors the GDP, total tax rate, tax payments, time needed to prepare and pay taxes, profit tax, other taxes paid by firms, labor tax, taxes on income, profits, and capital gains and taxes on goods and services.
The empirical results of this research show that a part of the considered indicators are significantly affecting the value added of the firms from CEE countries, according to their firm's size. More precisely, the value added growth for all the firms is influenced by real economic growth rate, profit tax and taxes on goods and services. The factors affecting the value added of the firms according to their size register some differences, so, the value added of SMEs is influenced by real economic growth rate, profit tax and taxes on goods and services, while the value added of large firms is influenced only by the real economic growth rate and taxes on goods and services.
Starting from this results, we can conclude that taxation, expressed especially by the value of profit tax and also by the value of taxes on goods and services has a statistically significant impact on the value added of the firms; an increase of taxation determining a decrease of the value added of the firms, and implicitly of their performance.
In future research we aim at including in the analysis other determining factors expressing taxation and also at extending the sample on all the European Union

member countries. The need for this procedure is observed when analyzing the values obtained for R-squared.

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CREATING CAPITAL MARKETS UNION - OPPORTUNITIES AND LIMITATIONS

Sabău-Popa Claudia Diana, Boloș Marcel Ioan, Bradea Ioana Alexandra

University of Oradea, Faculty of Economic Sciences, Department of Finance-Accounting, Oradea, Romania
dianasabaupopa@yahoo.ro, marcel_bolos@yahoo.com

Bucharest Academy of Economic Studies, Faculty of Economic Cybernetics, Statistics and Informatics, Department of Economic Informatics and Cybernetics, alexbradea1304@yahoo.com

Abstract**:** *Union of European Capital Markets is a recent initiative of the European Commission, issued the credit crunch from EU. This paper aims to discuss the advantages and disadvantages of this Union, estimated to be achieved by 2019. At the same time, we intend to analyze the opportunities and limits of achieving this union, its impact on European integration and the Member States, on the expansion possibilities of funding SMEs, on sustainable economic development. In our opinion, the project to union capital markets from the European Union is commendable, following completion of more and more domestic companies could obtain financing from international capital markets.*

Keywords*: capital markets union, European Union, medium – sized enterprises, securitization, finance access*
JEL classification*: F36, G15, G20*

I. Introduction:

The Capital Markets European Union is the latest policy initiative of the European Commission in the financial domain, launched in September 2015. Unlike the monetary union plan, the capital markets union has benefited from broad support, including from Great Britain. The idea of creating the Capital Markets European Union is not new, it arose from a report entitled "The Development of a European Capital Market", drawn up in 1966 by the experts of the Commission of European Economic Community. In this report, the authors has shown the conditions of effective use of economic policy instruments on an integrated European financial market, the benefits of developing a European capital market, how to achieve an integrated capital market and how to remove the existing obstacles.

In the fifty years since then, capital markets in Europe have developed in all respects, although the pace of this development was neither constant nor uniform. There were periods of significant changes in the regulation of financial markets, especially in the Financial Services Action Plan, periods of inactivity.

The global financial crisis followed by the sovereign debt crisis in the euro area had significant negative effects on the financial system in the European Union, the most important being the fragmentation of the banking system and the

decreasing of the cross-border loaning in the European Union. (Delcea, Bradea, Scarlat, 2013)

The Capital Markets European Union and the Banking Union complete the financial reforms in recent years, aimed at strengthening and supervision of the financial sector. (Delcea, Bradea, et.al., 2013)

Capital Markets European Union has, according to the European Commission, seven main objectives:

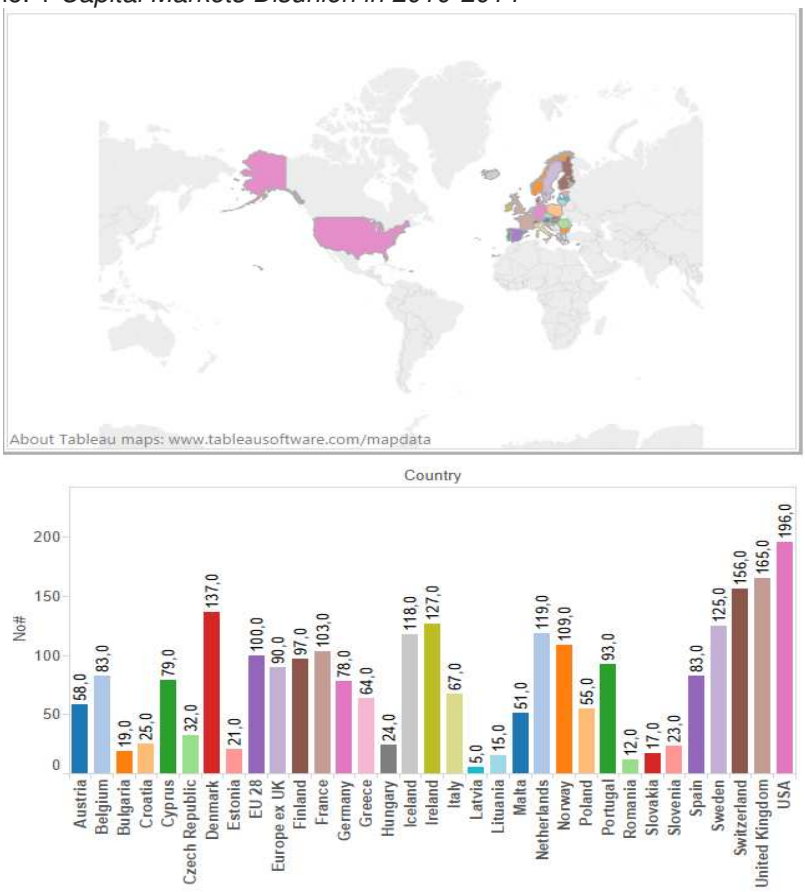
1. The financing of innovation, start-ups and non-listed companies;
2. An easier access to finance through the stock market;
3. To facilitate the companies' access to finance on the capital markets, especially for SMEs;
4. Promoting the long-term investments, especially those in infrastructure;
5. Stimulating the individual and institutional investments in order to strengthen the European capital markets and expand the supply of funds;
6. Mobilizing the banks' ability to support the European economy by issuing bonds;
7. Facilitating the cross-border investments and promoting the financial stability by eliminating remaining barriers of a European capital markets union.

Traditionally, the SMEs in the European Union have opted for bank financing. But, it was confirmed statistically that SMEs are vulnerable to the economic downturns and credit supply restrictions. The index calculated by the European Commission to reflect the level of access to bank loans and the problems encountered by SMEs when seeking for bank loans, recorded a lower level than the European Union average in the case of ten EU countries, like Denmark, Spain, Romania, Hungary and Greece.

The capital market financing has recorded low values in the European Union (69% for listed shares and 171% for debt securities, averaged over 2010-2014), compared to bank loaning, that has a weight of over 200% of GDP in same period. In contrast, in USA, the option of financing is clearly heading towards capital markets, with 126% for listed shares and less than 200% for debt securities. (W. Wright and L. Bax, 2015).

As can be observed in Figure no. 1, after size, the European equity markets are just over half of the USA. Britain's capital market is almost twice as developed as the rest of Europe; the same thing can be said also about Denmark, Sweden and the Netherlands, as they have mature capital markets. Germany, Italy, Spain, Belgium and Greece have underdeveloped capital markets. Many countries in Central and Eastern Europe have emerging capital markets.

Figure no. 1 *Capital Markets Disunion in 2010-2014*



Source: Processed data from http://newfinancial.eu/wp-content/uploads/2016/04/The-potential-impact-of-Brexit-on-European-capital-markets-New-Financial-Apr-2016.pdf

A capital markets union would bring substantial benefits to the entire European Union, as financial markets will become deeper and more competitive integrated with a more efficient allocation of capital within the European Union and will contribute significantly to economic growth. But these benefits will be realized only if the entry barriers are eliminated in the European financial markets.

II. Literature review:

This capital markets union in EU is a highly debated issue in the literature. Some criticize this plan; others praise the initiative of the European Commission, arguing that this will accelerate the sustainable development of the European Union.

In his research, Pierre Schammo (2015) presents the concept of the common capital market and its incidence on the accessibility to finance the SMEs. The author proposes a pan-European financing platform and a mandatory informational referral system in the European Union to connect EU SMEs with capital providers, including commercial banks.

Christopher P. Buttigieg (2015) analyzed in a critical manner the past and present mechanisms for regulation and supervision of capital markets and, most importantly, proposed a theoretical framework for future supervision of European capital markets, based on the economic aspects of federalism that shares the surveillance between national and European authorities.

Wolf-Georg Ringe (2015) shows in his work both the merits and the drawbacks of this plan for European capital markets union. The author believes that this ambitious political project is an attempt to repair the relationship between the European Union and Great Britain, believing explicit that this project will help strengthen the companies' access to capital at the expense of traditional bank financing in Europe. But most important is the political message, because, according to the author, this union of capital markets is a commitment to the European Union's single market, especially with Britain in it.

William Wright and Laurence Bax (2015) measured in their study, the degree of development of European capital markets, showing that it, on average in the European Union is less than half the level of development of capital markets in the US. In their study, the authors identify countries with emerging capital markets (most countries that joined the EU after 2004) and underdeveloped capital markets, indicating the potential benefits of the capital markets union for their individual economies.

In the paper „Principles for the European Capital Markets Union - Strengthening capital markets to foster growth" (2015), the authors proposed the following principles in order to meet the European capital markets union: regaining the investor's confidence, improving the non-banking financing, promoting financial stability, increasing transparency for the stock market, removing the legislative, territorial, regulation and supervision barriers.

Stefanova and Stoev (2015) summarize the actual European Union's financial regulations and the ones that may be introduced for a full integration of European capital markets. At the same time, their work evaluates the measures proposed by the European Commission to finalize the pan-European capital market.

Brühl, Volker et al. (2015) analyzes the project of unification of European capital markets, showing that it is likely to strengthen the institutional architecture of economic and monetary union and to integrate European financial markets. The authors propose several ways to achieve the unification, through instruments that take into account the asymmetry of information and capital market imperfections, such as: harmonization of legislation debt restructuring in the European Union, the use of risk capital for financing innovation or start-ups, harmonization of financial accounting and financial reporting standards for SMEs, strengthening the private pension funds to deal equally the shares, bonds or government securities investments.

III. Opportunities brought by the Capital Markets Union

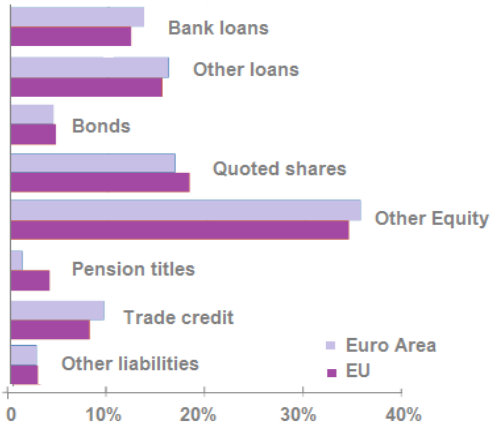
According to the Treaty of Rome, the capital must flow freely within the EU and thus the capital markets must be fully integrated to be able to generate growth. The integration of capital markets is essential for sustainable development of the European economy. This is because, due to competition, the financing cost will decrease for soliciting companies and the received interest for bank deposits will increase. All the Member States of the European Union benefit from EU capital markets, by achieving higher returns by local companies, a wider range of financial instruments and investors.

By removing territorial and legislative barriers, the European capital markets union could have a positive impact by reducing the development disparities existing within the EU capital markets. However, European capital markets union could help unlock billions of Euros to provide long-term funds required for investment companies (Wright and Bax, 2015).

Thus, through this capital markets union in the European Union would facilitate the access for companies, especially SMEs, to finance, to the detriment of the traditional bank funding. The companies can be financed through the capital market by issuing equity or debt instruments. (Bradea, 2014)

If a company chooses to finance by issuing a series of new shares, then there is an increase of its equity, number of shareholders, which will have to pay annual dividends, or to capitalize the profit, as it will decide the general meeting of shareholders. If a company chooses issuing corporate bonds for financing at the expense of bank credit, it will determine unilaterally the conditions of the loan or the interest rate value, that will be payed quarterly or every six months, with no guarantee or warranty. In general, the larger indebted companies can successfully issue corporate bonds on the capital market, while the small companies, the start-ups have more chance of success in bank loans financing.

Figure no. 2 *Sources of financing used by non-financial companies*



Source: Processed data from European Financial Stability and Integration Review, 2016.

In the Euro Area the non-financial companies are financed primarily through the unlisted shares issue. The financing through issuing bonds, bank loans and other loans represent approximately 17% each of total funding sources. In contrast, non-financial companies use different funding sources in the European Union. Within the old Member States prevail the financing through the issuance of quoted shares. In the new member states, the financing by listed shares represent less than 5% of total funding sources. The non-financial companies funding represents, usually no more than 50% of their liabilities. Financing by issuing corporate bonds is seldom used in the EU, with a few exceptions, among which Austria and the UK, where corporate bond financing has a share of about 10% in financial liabilities (European Commission, 2016).

An European capital markets union could encourage the cross-border financial activity of financial intermediaries, especially for countries that have been affected by the sovereign debt crisis. By removing territorial and legislative barriers the European capital markets union could have a positive impact on reducing disparities in development of capital markets existing in the European Union. If in emerging markets, in Central and Eastern Europe, where it is felt an acute need for infrastructure investment, is expected after capital markets union large flows of capital and foreign direct investment which will generate growth in GDP /capita. In conclusion, all EU countries will benefit from EU capital markets; it offers new opportunities for all stakeholders. But the generated benefits depend heavily on the thoroughness of the implementation of this action plan at national level.

IV. Limitation of the Capital Markets Union

A classification of the barriers to the creation of the European capital markets union is the following:

- Barriers to entry the capital markets of the European Union or in third markets - refers to the costs of listing and trading of the financial instruments.
- Barriers to integration. This includes existing major obstacles to the establishment and operation of cross-border companies and regulatory barriers, the cost of setting up investment funds and on achieving quality administrator who also varies between Member States.

The first barrier to entry is given by the high cost of issuing financial instruments in the capital market. From a study conducted by Oliver Wyman consulting firm (2013) was observed that only 5% of SMEs have issued equity instruments and only 2% of SMEs have issued debt instruments. SMEs in the European Union can be financed through the capital market in two ways: using traditional platforms, which are small but widely available to SMEs, such as Euronext or platforms, specifically designed for SMEs. New platforms of stocks and bonds represent the obvious alternative to bank financing, although the cost of issuing and trading of shares and bonds are high and involve complex legal and compliance framework. The total cost of printing (including the costs of underwriting, financial and legal advice) is estimated at approx. 90,000 euro and the annual fee for maintaining the platform is estimated at approx.100, 000 euro (PWC, 2015).

Another obstacle is the cultural barrier, because European investors are less

attracted to invest, directly in financial markets. The Risk aversion of individual investors and a high level of saving block the development of European capital markets. Another barriers arising from the operation of capital markets are the measures and securitization of costs. The capital regulations have two contradictory effects on the development of securitized products: promote the issuance of securities and diminish the attractiveness of this securitization (PWC, 2015).

The barriers to unification and full integration of European capital markets are the followings. The first barrier of this kind refers to asymmetric information circulating among actors, the heterogeneity and insufficient financial information provided by SMEs, and the asymmetric information between EU countries on national accounting standards. However, transparency of information must be in compliance with national legislation and European directives, ie to be disclosed only information and public data (Cristian Popa Miheş & Carmen Ardeleanu, 2008).

A major obstacle in terms of European investors is that investments taxation is not harmonized in the EU countries. Differences between the tax treatment of European countries create conditions of unfair tax competition and prevents market integration: different regimes of taxation between residents and nonresidents (UK), significant differences in the taxation of investments of individuals and legal persons (Slovenia, France) and many exemptions on the taxation of dividends (UK, Slovenia, Czech Republic). These should be gradually harmonized, the fiscal responsibility being very important if we want to have a sustainable development of the European Union (Ardeleanu Carmen Popa, Diana Cârmaciu, 2010).

Another major obstacle is the lack of coordination and surveillance of specific regulations of capital markets in the European Union. Following the financial crisis from 2008 was created the oversight body of the European Securities and Markets Authority that coordinates the actions of national financial supervisors across Europe. However, the daily financial supervisory actions is left to national supervisors and the convergence of regulatory practices of national supervisory authorities is low.

In the EU, the capital market supervision is fragmented along national lines, with a minimum convergence. Until this oversight remains fragmented, it will be difficult to achieve the European capital markets union, to achieve capital markets more integrated and a viable alternative for bank financing (C.P. Buttigieg, 2015).

It is quite obvious that the plan to unify the European capital markets brings with it the need for new regulations, new reforms for their level of centralization, one of the most important future danger being the error of systemic regulatory (Jennifer Payne & Elizabeth Howell 2015). What we do not know is how it will work and will stand the unique set of rules to European capital markets at a future financial crisis.

V. Conclusions:

Under the Treaty of Rome, capital must flow freely within the EU and thus capital markets must be fully integrated to be able to generate economic growth and sustainable development. All EU countries will benefit from EU capital markets; it offers new opportunities for all stakeholders. But for a country to benefit fully from the Union depends heavily on the thoroughness of the implementation of this action plan at national level.

Through this union of capital markets in the European Union would facilitate companies' access to finance, particularly for SMEs, to the detriment of traditional bank financing in Europe. But there are several barriers to achieving union of European capital markets: barriers to entry on the capital markets of the EU or in third markets and barriers to unification and full integration of European capital markets.

So, it seems pretty obvious that this plan for unification of European capital markets brings with it the need for new regulations reformed them. But what we do not know is how it will work and will stand set of rules unique to European capital markets at a future financial crisis.

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PURCHASED GOODWILL IN INTERNATIONAL ACQUISITIONS. MICROSOFT-NOKIA CASE

Sacui Violeta, Szatmary Miclea Camelia
Department of Management, Faculty of Economics and Business Administration, West University Timisoara, Romania
violeta.sacui@e-uvt.ro
elena.szatmary@yahoo.com

Abstract: *Purchased Goodwill appears when a company acquires another company. It can be defined as an intangible asset that arises as a result of the acquisition of one company by another for a premium value. International accounting bodies such as the IASC or the FASB require acquiring firms to record goodwill as an asset when they purchase a target firm and pay more than the fair market value of the identifiable net assets of that firm. As a consequence of these regulations, the goodwill appears in accounts of a company only when it acquires certain intangible assets that are not identifiable. Because the purchased goodwill arises in business combinations this concept is detailed in the standards on business combinations (FAS 141 and IFRS 3) rather than those on intangible assets and goodwill (FAS 142 and IAS 38). In this paper I present the modality in which is perceived currently the purchased goodwill and its components. In the present it is considered that the purchased goodwill is the result of an evaluation made by the bidding company over the target company and appreciating the contribution of it to the achievement of the strategic objectives of the purchaser. Goodwill is perceived as the sum of the present values of the additional cash-flows that can be generated at the level of acquiring company as result of acquisition. The sources of these future additional cash-flows are considered, in the present, unidentifiable intangible assets of the target company and the estimated synergies between entities that will combine. In the final part of my working paper I have analysed the level and the components of the goodwill that was paid in the Microsoft-Nokia transaction. As is reflected in the Microsoft Annual Report 2015 (Note 9 Business Combination), "the goodwill had a proportion of 37% in the value of total acquired assets and, was primarily attributed to the increased synergies that were expected to be achieved from the integration of NDS ". In this paper I present the results of my analysis related by the types of synergies that was estimated to be obtained as result of this transaction.*

Keywords: *goodwill, company, purchase, price, assets, intangible*

JEL classification: G32

1. The accounting rules with respect to the businesses combinations.

Purchased Goodwill appears when a company acquires another company. It can be defined as an intangible asset that arises as a result of the acquisition of one company by another for a premium value.

In 2001 in USA were issued the SFAS 141 "Business Combinations" and of SFAS 142 "Goodwill and Other Intangible Assets". In Europe in 2004 were introduced the IFRS 3 "Business Combinations" in conjunction with IAS 38 "Intangible Assets".

The US Financial Accounting Standards Board (FASB) and International Financial Reporting Standards (IFRS) require, for all acquisitions, the application of Purchase Price Allocation procedure (PPA). This is the process of allocating the cost of an acquired entity to its tangible assets, intangible assets, and assumed liabilities (including contingent liabilities), based on their respective fair values. After an acquisition whereby the acquiring company obtains control of the target, the acquirer has to disclose a PPA in its annual report. Consistent with the asset deal notion, all assets and liabilities have to be valued at their fair value from the acquisition moment.

According to FAS No. 141, the cost of the acquired company must, for accounting purposes, be divided, at the acquisition date**,** among the acquired assets and liabilities of the target company using the following principles:

„All identifiable assets acquired, either individually or by type, and liabilities assumed in a business combination, whether or not shown in the financial statements of the acquired company, should be assigned a portion of the cost of the acquired company, normally equal to the fair values at the date of acquisition; the excess cost of the acquired company over the sum of the amounts assigned to identifiable assets acquired less liabilities assumed should be recorded as goodwill".

According to SFAS 141 and IFRS 3 the acquiring company must reflects in its consolidated financial statements the all intangible assets of the target company regardless of the fact that they are identifiable or unidentifiable.

According to these accounting standards *the identifiability criterion* distinguishes goodwill from identifiable intangible assets of the company. An intangible asset is identifiable if it meets either *the contractual-legal criterion (*assets arise from contracts or other legal rights*) or the separabiity criterion (*assets are able to be divided by the acquired company), Intangible assets that do not meet these recognition criteria must be recorded as goodwill.

Under the acquisition method, the acquiring company must recognize separately in its balance sheet all identifiable intangible assets of the target company, including those that has not been recognized previously by the acquire. In such category of intangible assets that were absent from the balance-sheet of the purchased company are comprised internally generated intangible assets of this.

The intangible assets that must be recorded separately in a purchase price allocation procedure have been divided into five categories:

-marketing-related assets (trademarks, trade names, internet domain names, noncompetition agreements, etc.);

-customer-related assets (customer lists, customer contracts, customer relationships, etc.);

-contract-based assets (licensing agreements, advertising contracts, construction contracts, employments contracts, etc.);

- technology-based assets (patented technology, computer software, databases, unpatented technology, etc.);
- artistic-related assets (plays, operas, ballets, books, musical work, etc.).

2. The Definition and Components of Purchased Goodwill

International accounting bodies such as the IASC or the FASB require acquiring firms to record goodwill as an asset when they purchase a target firm and pay more than the fair market value of the identifiable net assets of that firm. As a consequence of these regulations, the goodwill appears in accounts of a company only when it acquires certain intangible assets that are not identifiable.

Because the purchased goodwill arises in business combinations this concept is detailed in the standards on business combinations (FAS 141 and IFRS 3) rather than those on intangible assets and goodwill (FAS 142 and IAS 38).

Goodwill is defined especially in terms of its calculation method.

The purchased goodwill can be approached from two points of view:

-quantitative point of view;

-qualitative point of view;

From a *quantitative point of view* (named also as Top-Down Approach), goodwill is viewed as the part of the purchase value that is not possible to allocate to the purchased identifiable assets. According to SFAS No. 141 purchased goodwill is "the excess of the cost of an acquired entity over the net of the amounts assigned to assets acquired and liabilities assumed." The glossary of the IFRS 3 “Business Combinations” defines goodwill as “any excess of the cost of the acquisition over the acquirer’s interest in the fair value of the identifiable assets and liabilities acquired as at the date of the exchange transaction”.

From a *qualitative point of view* (named also as Bottom-Up Approach), goodwill is viewed in terms of its components. Purchased goodwill represents the value of all unidentifiable intangible assets that are obtained as result of the acquisition of another company. It is viewed as a price premium that is paid for the acquisition of valuable unidentifiable intangible assets of the target company that can contribute to generating of additional economic benefits.

According to IASB 2008 goodwill can be specified as ``an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized``

FAS 141 highlights that „intangible assets that are not specifically identifiable, have indeterminate lives, or are inherent in a continuing business and related to an enterprise as a whole are classified as *goodwill*”.

In the present it is considered that the purchased goodwill is the result of an evaluation made by the bidding company over the target company and appreciating the contribution of it to the achievement of the strategic objectives of the purchaser. Goodwill is perceived as the sum of the present values of the additional cash-flows that can be generated at the level of acquiring company as result of acquisition.

The sources of these future additional cash-flows are considered in the present: unidentifiable intangible assets of the target company and the estimated

synergies between entities that will combine.

SFAS No.141 and IFRS 3 highlight that the purchased goodwill comprises a number of components as:

1) the fair value of the going concern element of the target company (going-concern goodwill);

2) the fair value of the expected synergies expected from combining of the two business; (synergy goodwill);

3) payments resulting from overvaluation or undervaluation of the assets and liabilities of the target company;

4) purchase premiums paid (or discounts obtained) as result of negotiation process of transaction.

According to these standards first two components are considered „true goodwill" or "core goodwill". From an economic point of view goodwill includes those assets that do not satisfy the condition to be identifiable and, the expected synergies reflected in the price that a company agree to pay for other company. The additional payments generated by overvaluation of the target company and transaction negotiation process form the "residual goodwill".

Going-concern goodwill

Johnson and Petrone (1998) define going-concern goodwill as: "the ability of a stand-alone business to earn a higher rate of return on an organized collection of net assets than would be expected if those assets had to be acquired separately".

The sources of going-concern goodwill of the target company can be grouped into two categories:

-synergies between identifiable assets of it;

-other unidentifiable intangible assets that cannot be separately recognized in the financial situations of the company;

In the category of *unidentified intangibles* that a company cannot account for in its financial statement but that are responsible for driving a superior earning power are included: assembled workforce, customer base, customer service capability, market position, outstanding credit ratings, favourable government regulations, etc (IFRS 3).

Synergy goodwill

Johnson and Petrone (1998) highlighted that an important component of the goodwill is the fair value generated by the combining the businesses and net assets of the two companies. This is *the combination goodwill* and reflects the value that arises from expected synergies between the acquirer and the target firm.

Henning et al. (2000) had defined synergy goodwill as the synergistic value created by the acquisition,

The combination of two companies can generate an increasing of revenues and/or a decreasing of costs at the level of the combined entity. These may be the result of management improvement, economies of scale, cross-selling opportunities, the improvement in production techniques and marketing methods, integration of resources, and more efficient uses of resources.

The synergies are unique to each combination and different combinations

would produce different synergies and, hence, different values. Synergies must be allocated to goodwill because these are generally not identifiable.

3. Purchased Goodwill in the case of Microsoft-Nokia Transaction

On 25 April, 2014, Microsoft acquired the Nokia's Devices and Services business for a total purchase price of $9.442 billion, including cash acquired of $1.5 billion.

By acquiring Nokia's Devices & Services segment, the major goal for Microsoft was „to accelerate the growth of shares and profits in mobile devices through faster innovation, increased synergies, and unified branding and marketing"(Microsoft Annual Report, 2015).

As is reflected in Microsoft Annual Report 2015, the major classes of assets and liabilities to which was allocated the purchase price were as follows:

Assets and Liabilities	**Amounts** (in millions $)	As a % of Total Assets Acquired
Cash acquired	1,506	10%
Accounts receivable	754	5%
Inventories	544	4%
Other current assets	936	6%
Current Assets	3,740	25%
Property and equipment	981	7%
Fixed Assets	981	7%
Intangible assets	4,509	30%
Goodwill	5,456	37%
Other	221	1%
Total Assets	14,907	100%
Current liabilities	4,575	
Long-term liabilities	890	
Total Liabilities	5,465	
Total purchase price	9,442	

Source: Microsoft Annual Report 2015, Note 9 Business Combination

As result of this transaction Microsoft has obtained a significant quantity of goodwill and identifiable intangible assets. The proportion of these in the total value of acquired assets was the 67%.

As is reflected in the Microsoft Annual Report (2015) "the goodwill was primarily attributed to increased synergies that were expected to be achieved from the integration of NDS ".

It was estimated that the acquisition of Nokia's Devices and Services business by the Microsoft will bring valuable synergies

At the point of acquiring Nokia phone business by Microsoft, Nokia was a downstream customer to Microsoft, while Microsoft was an upstream supplier to Nokia (Toriola, S. J., 2015). It was considered that vertical integration will help

Microsoft reduce costs and increase profits and combined company will become more cost-efficient and profitable.

It was estimated that Nokia acquisition brings some key capabilities to Microsoft that will allow the reducing the costs and increasing the growth. As result of acquisition, Microsoft will gain access to assets like Nokia's manufacturing facilities, patents, engineering talent, supply and distribution network, etc.

In a letter addressed to Microsoft staff referring to Nokia acquisition, Steve Ballmer the Microsoft chief mentioned (Sept.3, 2013):

"Microsoft acquired Nokia's smart phone and mobile phone businesses, its design team, most of its manufacturing and assembly facilities and operations, and sales and marketing support The acquisition also brings key capabilities around supply chain, distribution, operational processes and systems and skill in managing hardware margins to Microsoft. The unified company will benefit from speedier execution and best-in-class business operations [..] In addition to their innovation and strength in phones at all price points, Nokia brings proven capability and talent in critical areas such as hardware design and engineering, supply chain and manufacturing management, and hardware sales, marketing and distribution.[...] This is a smart acquisition for Microsoft, and a good deal for both companies. We are receiving incredible talent, technology and IP"

Two types of operating synergies:

The estimated operating synergies were divided in two types:

-*revenue synergies*

-and *cost synergies.*

Cost Synergies

The costs are considered the most reliable source of synergy in the case of combination of two companies (Hillario L. F., 2011). It was estimated that the consolidation process between Microsoft and Nokia will lead to considerable savings in the operating expenses.

In a document published by Microsoft entitled Microsoft`s Strategic Rationale for deal (sept.3, 2013), the company said that the transaction could create annual cost synergies of $600 million within 18 months after its close.

These reductions in operating expanses will be especially the result of unified branding and marketing, of restructuring program planned to be implemented after acquisition.

It were estimated the reductions in wage expenses as result of job cuts in manufacturing, engineering, marketing and other areas where appears overlap with the Microsoft business. Also, were estimated the reductions in other types of operating expenses (design, manufacturing, sales, marketing, supply) as result of restructuring of manufacturing facilities and consolidation of the marketing, sales, and supply chains.

Revenue synergies

Revenue synergies can be achieved through a combination of different functional strengths. It was considered that as result of Nokia`s acquisition by Microsoft will be created new business opportunities. It was estimated that by

combining their different strengths, Microsoft's software development and marketing campaign with Nokia's product line, hardware manufacturing expertise and distribution network, the combined entity may achieve new markets and higher growth in existing ones.

Stephen Elop, former Nokia CEO that was named, after the acquisition, the executive vice president of the Devices Group at Microsoft, said within the Microsoft Nokia Transaction Conference Call (sept.3, 2013): "Building on our successful partnership, we can now bring together the best of Microsoft's software engineering with the best of Nokia's product engineering, award-winning design, and global sales, marketing and manufacturing."

Steve Ballmer, Microsoft executive chief, highlighted within the same press conference that:

"It's a bold step into the future — a win-win for employees, shareholders and consumers of both companies. Bringing these great teams together will accelerate Microsoft's share and profits in phones, and strengthen the overall opportunities for both Microsoft and our partners across our entire family of devices and services."

It was considered that, as result of acquisition, Microsoft can focuses on integrating of its Windows Phone OS and the other platforms into mobile devices and expands its mobile market share.

By acquiring Nokia's Devices & Services segment Microsoft aimed to gain a stronger position in the hardware devices segment. It was estimated that "the acquisition of the Nokia Devices and Services business will enable Microsoft to accelerate its share of smartphones and feature phones in developed and emerging markets, and increase its role as a devices and services company"(Microsoft News Canter, April 25, 2014). Microsoft believed that it must have a mobile handset device business if it wants to compete with Google and Apple.

By acquiring Nokia's Devices & Services segment, an important goal for Microsoft was to gain access to the hardware platform for its mobile phone software. The Microsoft hoped that this acquisition could accelerate development on its windows phone platform.

According to Toriola, S. J. (2015) "the strategic intent of the Microsoft at the point of acquiring Nokia phone business was to push for the usage of its signature Windows operating system in mobile phone industry Nokia".

At a press conference in Espoo, Finland, on sept.3, 2013, Ballmer highlighted the importance of the deal for Microsoft. CEO Microsoft mentioned that Windows Phone will improve the health of the entire Windows ecosystem. The Microsoft hoped that a high market share in handheld devices will affect its market share in the PC industry. The increased smartphone sales will lead to increased tablet sales, and increased tablet sales will lead to increased PC sales.

The aim of Microsoft was to accelerate the growth of its share and profit in mobile devices through faster innovation. The hopes was that the two companies will combine assets and know-how to jointly develop new smartphone technology.

As Stephen D. Simpson (2011) highlighted, „the two companies hope that Nokia's distribution network and hardware capabilities can mesh with Microsoft's software development and create a platform that can challenge Apple, Google and the other smartphone leaders [...] Microsoft had big hopes for dominating the

mobile market like it had dominated the desktop market".

Conclusions:

Purchased Goodwill appears when a company acquires another company. It can be defined as an intangible asset that arises as a result of the acquisition of one company by another for a premium value.

International accounting bodies such as the IASC or the FASB require acquiring firms to record goodwill as an asset when they purchase a target firm and pay more than the fair market value of the identifiable net assets of that firm. As a consequence of these regulations, the goodwill appears in accounts of a company only when it acquires certain intangible assets that are not identifiable.

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The purchased goodwill can be approached from two points of view.

From *a quantitative point of view* (named also as Top-Down Approach), goodwill is viewed as the part of the purchase value that is not possible to allocate to the purchased identifiable assets. *From a qualitative point of view* (named also as Bottom-Up Approach), goodwill is viewed in terms of its components. The „core goodwill" includes those *assets* that do not satisfy the condition to be identifiable and, *the expected synergies* reflected in the price that a company agree to pay for other company.

In the present it is considered that the purchased goodwill is the result of an evaluation made by the bidding company over the target company and appreciating the contribution of it to the achievement of the strategic objectives of the purchaser. Goodwill is perceived as the sum of the present values of the additional cash-flows that can be generated at the level of acquiring company as result of acquisition. The sources of these future additional cash-flows are considered, in the present, *unidentifiable intangible assets* of the target company and *the estimated synergies* between entities that will combine.

In the final part of the paper I have analysed the level and the components of the goodwill that was paid in the Microsoft-Nokia transaction. On 25 April, 2014, Microsoft acquired the Nokia's Devices and Services business for a total purchase price of $9.442 billion, including cash acquired of $1.5 billion. As result of this transaction Microsoft has obtained a significant quantity of goodwill and identifiable intangible assets. The proportion of these in the total value of acquired assets was the 67%.

As is reflected in the Microsoft Annual Report 2015 (Note 9 Business Combination), "the goodwill had a proportion of 37% in the value of total acquired assets and, was primarily attributed to increased synergies that were expected to be achieved from the integration of NDS ".It was estimated that the acquisition of Nokia's Devices and Services business by the Microsoft will bring valuable synergies. As result of acquisition, Microsoft will obtain some key capabilities that will allow it to reduce the costs and increase the growth.

The estimated operating synergies were divided in two types: *revenue synergies* and *cost synergies.*

In a document published by Microsoft entitled Microsoft`s Strategic

Rationale for deal (sept.3, 2013), the company said that the transaction could create annual cost synergies of $600 million within 18 months after its close. These reductions in operating expanses will be, especially, the result of unified branding and marketing and of restructuring program planned to be implemented after acquisition.

It was estimated that revenue synergies can be achieved through a combination of different functional strengths of the two companies. It was considered that by combining their different strengths, Microsoft's software development and marketing campaign with Nokia's product line, hardware manufacturing expertise and distribution network, the combined entity may achieve new markets and higher growth in existing ones.

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USING BENFORD'S LAW TO THE DETECTION OF MISREPRESENTATION OF FINANCIAL STATEMENTS DATA

Radoslav Tušan[1]
[1]*Department of Finance, Faculty of Economics, Technical University of Košice, Košice, Slovak Republic*
Radoslav.Tusan@tuke.sk

Abstract: *Benford's Law is in certain situations, an important instrument to detect deliberate misrepresentation in the financial statements. Benford's Law is empirically derived and verified rule that the numerical data beginning with the digit by any of the groups 1, 2, ...9 appear in the files of large size with a certain probability. The likelihood of occurrence of numerical data in large data files according to the first numbers varies considerably. Numbers beginning with a digit 1 occur with a probability of 30.1%, numbers beginning with a digit 9 appear in this set with a probability of 4.58%. These values can be incorporated into the control procedures for assessing the quality of the reference data set. Various foreign authors have pointed out the possibility of using Benford's Law in examining the quality of primary data in the field of accounting and reporting. The authors investigated the differences between the empirical and theoretical frequency of occurrence of each number beginning with individual digits in financial reporting. Benford's analysis according them is more reliable when applied to the entire set of data. The intention of the article is to point out the possible misrepresentation in the financial statements of the registered entity whose shares are traded on the domestic stock exchange. One of the reasons for the detection of misrepresentation is that investors trust the financial statements of these entities. The research question was whether Benford's Law reveals the possible manipulation of financial statements data. The source data were financial statements of the entity for three years: balance sheet, income statement and cash flow statement. The number of each leading digit was counted and the actual frequency of leading digits to the expected distribution according to Benford's Law was compared. Potential manipulation was calculated by means of Kolmogorov-Smirnov statistics. Results of the analysis are mainly addressed to users of information of financial statements and confirmed the importance of Benford's Law in this meaning.*

Keywords: Benford's Law; reporting; financial statements.

JEL classification: C55; M41.

1. Introduction

In 1881, Simon Newcomb, an astronomer and mathematician, figured out that more numbers exist which begin with the digit one than with larger numbers. Newcomb determined that the probability that a number has a first digit, "d", is given by:

$$Probabiliy\ (d) = Log_{10}\left(1 + \left(\frac{1}{d}\right)\right), for\ d = 1,2, \dots, 9 \qquad (1)$$

In 1938, Frank Benford, a physicist, found that a large number of naturally-occurring datasets follow this pattern. He found that a pattern with low digits occur more frequently in the first position than larger digits. The first digit law discovered by Newcomb and later by Benford was called as "Benford's Law". This law gives information about the frequency of the appearance of each number as the first significant digit in a surprisingly large number of different data sets (Torres et al., 2007). Benford's Law is seeing increasing use as a diagnostic tool for isolating pockets of large datasets with irregularities that deserve closer inspection (Cho and Gaines, 2012). A comparative analysis of the bootstrap versus traditional statistical procedures applied to digital analysis based on Benford's Law realised Suh and Headrick (2011). They concluded that digital analysis based on Benford's Law is applicable in the area of reported annual earnings of S&P 1500 companies and Federal Election Commission data for example. These authors confirmed using this method over different periods of time and across small and large financial data sets. Certain sets of accounting numbers often appear to closely follow a Benford distribution (Boyle, 1994). The first researcher to apply Benford's Law extensively to accounting data with the aim to detect fraud was Mark J. Nigrini. His work used digital analysis to help identify tax evaders and to help auditors perform tests on sets of accounting numbers (Nigrini 1996; Nigrini and Mittermaier, 1997). Accounting data are mainly the result of mathematical procedures. Each accounting transaction stems out from mathematical combination of some numbers (e.g. number of items, price per item, asset value, liability value, equity). Most accounting data are expected to conform to a Benford distribution, and will be appropriate for digital analysis (Hill, 1995; Nigrini and Mittermaier, 1997). Assets accounts, liability accounts, residual equity item, revenue and expenses accounts are expected to conform. Results from Benford analysis are more reliable if the entire account is analysed rather than sampling the account. The larger number of accounting transactions or accounting data in the data set makes the analysis more precise. On the other side, some populations of accounting-related data do not conform to a Benford distribution (Durtschi et al., 2004). These are assigned numbers as check numbers, invoice numbers, purchase and payment orders, and human thought influenced numbers. Assigned numbers follow a uniform distribution than a Benford distribution. Since the late years of nineties occur to improving control tools in the field of accounting and auditing. Forensic accounting is intensively developing as a separate component of the methodology of accounting and auditing. Forensic accounting uses advanced mathematical-statistical methods and their application in solving specific fraud cases. From the audit practice in the United States are known processes that use the data quality evaluation methodology based on Benford's Law. Despite this fact, however, exact instruments are not considered to be generally applicable and the results obtained by them must always underlie to an analysis of content and formal characteristics of the surveyed sample (Durtschi et al., 2004).

Table 1 provides detailed information about items from the accounting is suitable for Benford's analysis.

Table 1: Differentiation of applicability of Benford's analysis by type of data

Suitable type of data
Set of numbers resulting from mathematical combinations: accounts receivables, liability accounts
Data from complex transactions: expenses, revenues
Large datasets: transactions throughout the year
Data files for which the mean value significantly different from the median: most sets of accounting data
Unsuitable type of data
Subset of data from a known set of data: numbers of invoices, orders
Numbers that are influenced human thinking: psychological prices
Accounts with a large number of specific numbers: account recorded a compensation from patients
Accounts for which are set maximum and minimum values: classification in assets

Source: Durtschi et al., 2004.

Probability of occurrence of the digits 1-9 in large data sets in the first place is following:

Table 2: Differentiation of applicability of Benford's analysis by type of data

Leading digit	1	2	3	4	5	6	7	8	9
Frequency	30,1%	17,6%	12,5%	9,7%	7,9%	6,7%	5,8%	5,1%	4,6%

Source: Durtschi et al., 2004.

Actual frequency of leading digits was compared with Benford's distribution of theoretical frequency and analysed by mean of Kolmogorov-Smirnov (KS) statistic. The Kolmogorov–Smirnov test (KS test) is a nonparametric test of the equality of continuous, one-dimensional probability distributions that can be used to compare a sample with a reference probability distribution, or to compare two samples (Hazewinkel, 2001). The Kolmogorov–Smirnov statistic quantifies a distance between the empirical distribution function of the sample and the cumulative distribution function of the reference distribution, or between the empirical distribution functions of two samples:

$$KS = max\{|AD_1 - ED_1|, |(AD_1 + AD_2) - (ED_1 + ED_2)|, \dots, |(AD_1 + AD_2 + \cdots + AD_9) - (ED_1 + ED_2 + \cdots + ED_9)|\} \quad (2)$$

where AD_i is actual frequency of the leading digits, and ED_i is the theoretical frequency of the leading digits.
Leading number is the first number of the absolute value of the accounting data. By comparing of cumulative values of actual and expected distribution was detected maximum difference in values of distribution (KS). Potential manipulation is recognised if KS > 1,36/√P, where P is total number of leading digits used.

2. Research and results

The research was started with assumption, that Benford's Law may be used to detect misreporting in financial statements of a company. Registered company was selected for the analysis due to the fact that investors have trust in its financial statements. Used source data were financial statements of the company for three years: balance sheet, income statement and cash flow statement. The number of each leading digit in the financial statements was counted and the actual frequency of leading digits was compared to the expected distribution according to Benford's Law. Potential manipulation in financial statements was calculated by means of Kolmogorov-Smirnov statistics. Financial statements of the registered company are in tables below. Leading digit calculation and Benford's distribution with Kolmogorov–Smirnov test are below financial statements.

Table 3: Balance Sheet, data in thousands of EUR

Data Year	**2012**	**2013**	**2014**
Cash	66	531	100
Receivables	3 973	2 452	2 945
Inventories	2 992	2 303	2 493
Other current assets	2	1	0
Total current assets	7 033	5 287	5 538
PPE Gross	26 834	29 304	30 907
Accumulated depreciation	18 532	20 503	21 332
PPE Net	8 302	8 801	9 575
Other assets	7	12	20
Total assets	15 342	14 100	15 133
Accounts payable	1 529	1 091	1 809
Current debt	1 591	1 445	1 890
Tax payable	158	175	128
Total current liabilities	3 278	2 711	3 827
Long term debt	4 114	3 543	3 996
Other liabilities	214	195	188
Total noncurrent liabilities	4 328	3 738	4 184
Retained earnings	4 444	4 353	3 824
Treasury stock	3 292	3 298	3 298
Equity	7 736	7 651	7 122

Source: financial statements of the company

Remark: "PPE" means Property, Plant and Equipment.

Table 4: Income Statement and Cash Flow Statement, data in thousands of EUR

Data Year	**2012**	**2013**	**2014**
Income statement			
Revenue	22 297	20 916	18 377
COGS	884	637	537
Gross profit	21 413	20 279	17 840
SGA	20 453	19 344	17 152
EBITDA	960	935	688
Depreciation	1 013	961	1 032
EBIT	-53	-26	-344
Interest	-63	-31	-52
Pre-tax income	-116	-57	-396
Income taxes	-33	-29	-85
Net income	-149	-86	-481
Cash flow statement			
Depreciation	1 013	961	1 032
Net cash flow from operating activities	671	1 955	311
Capital expenditures	-100	-1 456	-755
Net cash flow from investing activities	-89	-1 484	-721
Reduction of debt	-5	-5	-1
Dividends outflow	-140	-1	0
Net cash flow from financing activities	-145	-6	-21
Cash and cash equivalents +/-	437	465	-431

Source: financial statements of the company

Remark: “SGA” means Selling, General and administrative Expense.
“EBITDA” mean Earnings before Interest, Tax, Depreciation and Amortization.
“EBIT” mean Earnings before Interest.
“COGS” means Cost of goods sold.

Table 5: Leading digit calculation from Balance Sheet

Data Year	2012	2013	2014
Cash	6	5	1
Receivables	3	2	2
Inventories	2	2	2
Other current assets	2	1	0
Total current assets	7	5	5
PPE Gross	2	2	3
Accumulated depreciation	1	2	2
PPE Net	8	8	9
Other assets	7	1	2
Total assets	1	1	1
Accounts payable	1	1	1
Current debt	1	1	1
Tax payable	1	1	1
Total current liabilities	3	2	3
Long term debt	4	3	3
Other liabilities	2	1	1
Total noncurrent liabilities	4	3	4
Retained earnings	4	4	3
Treasury stock	3	3	3
Equity	7	7	7

Source: own elaboration

Table 6: Leading digit calculation from Income Statement

Data Year	2012	2013	2014
Revenue	2	2	1
COGS	8	6	5
Gross profit	2	2	1
SGA	2	1	1
EBITDA	9	9	6
Depreciation	1	9	1
EBIT	5	2	3
Interest	6	3	5
Pre tax income	1	5	3
Income taxes	3	2	8
Net income	1	8	4

Source: own elaboration

Table 7: Leading digit calculation from Cash flow statement

Data year	2012	2013	2014
Depreciation	1	9	1
Net cash flow from operating activities	6	1	3
Capital expenditures	1	1	7
Net cash flow from investing activities	8	1	7
Reduction of debt	5	5	1
Dividends outflow	1	1	0
Net cash flow from financing activities	1	6	2
Cash and cash equivalents +/-	4	4	4

Source: own elaboration

Table 8: Benford's distribution and Kolmogorov–Smirnov test

Leading Digit	Count	Actual Distribution	Expected Distribution	Cumulative Difference
1	37	31,4%	30,1%	1,3%
2	21	17,8%	17,6%	1,4%
3	16	13,6%	12,5%	2,5%
4	10	8,5%	9,7%	1,3%
5	9	7,6%	7,9%	1,0%
6	6	5,1%	6,7%	0,6%
7	7	5,9%	5,8%	0,5%
8	7	5,9%	5,1%	0,3%
9	5	4,2%	4,6%	0,0%
Total	118		KS	2,5%
			Cut-off	12,5%

Source: own elaboration

Maximum cumulative difference between actual and expected distribution is 2,5% (Kolmogorov–Smirnov statistic). This value is less than “cut-off” value which is 12,5% (1,36/√P, where P is total number of leading digits). Test result leads to the conclusion that the company did not manipulate the data in its financial statements.

Figure 1 point to tightness of the actual distribution and the expected distribution of leading digits according to Benford's Law.

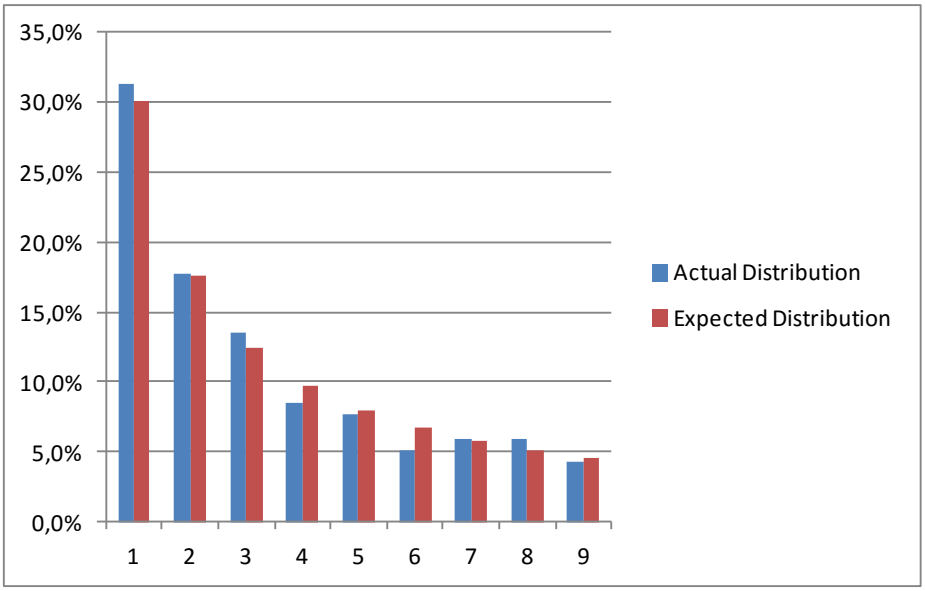


Figure 1: Actual and expected distribution of leading digits.
Source: own elaboration

3. Conclusion

Investors and lenders rely on the accuracy of data in the financial statements of companies listed on the Stock Exchange. Use of Benford's analysis helps the auditors to identify of manipulation in the financial statements. The aim of the article was to point out the possible misrepresentation in the financial statements of the listed entity whose shares are traded on the Stock Exchange. The research question was whether Benford's Law reveals the possible manipulation of financial statements data. The source data used for analysis were financial statements of the listed entity for three years: balance sheet, income statement and cash flow statement. The number of each leading digit was counted and the actual frequency of leading digits was compared to the expected distribution according to Benford's Law. Potential manipulation was calculated by means of Kolmogorov-Smirnov statistics. Maximum cumulative difference between actual and expected distribution was 2,5% (Kolmogorov–Smirnov statistic). This value was less than “cut-off” value 12,5%. Test result leads to the conclusion that the company did not manipulate the data in its financial statements.

4. Acknowledgement
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SUB-SECTION: BANKING

THE EFFECT OF MAJOR EVENTS ON BANK SHARE PRICE IN ROMANIA

Bogdan Căpraru[1], Iulian Ihnatov[2] and Nicu Sprincean[3]
[1]Alexandru Ioan Cuza University of Iasi, Faculty of Economics and Business Administration
[2]Alexandru Ioan Cuza University of Iasi, Faculty of Economics and Business Administration
[3]Alexandru Ioan Cuza University of Iasi, Faculty of Economics and Business Administration
csb@uaic.ro
iulian.ihnatov@uaic.ro
sprincean.nicu@gmail.com

Abstract: *The aim of this paper is to investigate three main events which have influenced Banca Transilvania's stock price movements. This paper employs the event study methodology. The expected returns are computed by using two different models: Market Model and Capital Asset Pricing Model (CAPM). Our results show that only for one event out of three the abnormal returns (ARs) were positive and statistically significant in the event day.*

Keywords: ownership change; CEO turnover; banking; takeover bid; event study

JEL classification: G14, G21

1 Introduction

The shareholders' wealth maximization is the main objective of any company and, in this context, the study of firm's value determinants is of major importance both for academics and practitioners. There are two main theories that explain the share price behaviour, namely the dividend hypothesis and the retained earnings hypothesis (Kumar & Mohan 1975). The ownership characteristics (McConnell et al. 2008) and CEO style of management (Bertrand & Schoar 2003) are factors have major impact on the major company's decisions and consequently on the share price on the market. The CEO change is therefore a major event for a company and it has even more importance when it happends in the banking sector.

The goal of this paper is to study the impact of some major events on shareholders' value: the company's executive turnover, the change of company's ownership and the dividend decision. We determine how the market players react by investigating the variation of abnormal returns through an event study. According to the Efficient Market Hypothesis (EMH) the news should immediately be incorporated into the stock price, either in a positive or in a negative way. Considering the theoretical assumptions of the effect of specific event on stock prices we can predict how other securities are likely to react to similar or different events.

In this paper we study the impact of three events on the evolution of stock price of Banca Transilvania (in chronological order): (1) the appointment of a new CEO – Omer Tetik – as revealed in an article published by www.bancherul.ro on 01/05/2013, being the event day (he was effectively appointed on 13/04/2015 and put in charge on 1st of June, 2013); (2) the takeover of the Romanian subsidiary of the Austrian banking group Volksbanken, Volksbank Romania SA by Banca Transilvania, as revealed in an article by Bloomberg on 26/11/2014 – the event day and (3) the distribution of the 2015 profit by granting a special cash dividend in addition to free shares, as the official communiqué published on the Bucharest Stock Exchange website on 17/03/2016 informed the stakeholders.

Banca Transilvania (ticker on Bucharest Stock Exchange - TLV) has experienced in the recent years a series of important events, three of which are being investigated in this paper. The market participants have reacted to these events by driving the stock price either upward or downward. Furthermore, TLV is one of the most transactionated (liquid) stock on Bucharest Stock Exchange (BSE), which is an imperative requirement for the validity of the abnormal returns.
The rest of the paper is organized as follows. Section 2 reviews the theory on the event studies and the empirical literature regarding the executive's turnover, ownership change and dividend policy. Section 3 presents the data and methodology, section 4 discusses the results and finally we draw the research conclusions.

2 Literature review

Dolley (1933) is the first author to use the event methodology in order to investigate the impact of the news on the stock prices. Later on, Fama et al. (1969) studied how the stock prices are adjusted due to new information publicly available. Ball and Brown (1968) analyzed the magnitude of price change due to unexpected income change and notice that the income report disclosure determines stock price changes. The event study methodology was also emploied by other authors (Brown & Warner 1985; McWilliams & Siegel 1997; MacKinlay 1997; Binder 1998). New insights have developed in order to capture the effect on stock prices of new information disclosure. The rationale under the event study approach is that the prices will quickly incorporate the news and generate abnormal returns. The methods of abnormal returns determination have different performances (Armitage 1995).
There are different types of information that influence the share price behavior, among which ownership change, CEO turnover or dividend announcements.
The change in institutional ownership of a company has a positive effect on the three-day abnormal returns after the announcement of the company's quarterly earnings (Ali et al. 2004). The firm share price first increases, then decreases after an insider's ownership purchase (McConnell et al. 2008).
The literature distinguishes two cases of CEO succession: the planned change (e.g. retirement) or the unplanned turnover (e.g. resignation, death etc.). The magnitude of market reactions to the deaths of CEOs was significantly larger in shareholders' perceptions considering more recent data samples (Quigley et al. 2016). According to Jensen & Meckling (1976) the CEO will not seek to maximize the shareholders' wealth. Consequently, the poorly-performing executives will be replaced in the companies with efficient supervisory boards and the stock price will rise (Wu & Hsu 2015), but may exhibit increased volatility (Clayton et al. 2000). Other researchers found that the CEO turnover may be followed by a company value reduction (Beatty & Zajac 1987; Suchard et al. 2001) or by no average stock price reaction (Warner et al. 1988). Thus the effect of CEO turnover on stock price is inconclusive in the empirical literature.
Stock price moves may also be determined by the dividend announcements. By using a dividend, a stock repurchase or a combination of the first two, the managers can signal their firms' true value (Ofer & Thakor 1987). Shocks to expected returns generate opposite shocks to current prices (Fama & French 1988), while average returns following announcements of large dividend changes are significantly larger for firms comparing to less performing companies (Lang & Litzenberger 1989). The empirical evidence support the hypothesis that management uses the labeling of dividend increases to signal to the market the future potential of the firm (Brickley 1983). However these early conclusions are not robust over time. DeAngelo et al. (1996) draw the conclusion that dividends tend not to be reliable signals because of a behavioral bias of the managers. Moreover, managers are poorly commited when they increase dividends, undermining the reliability of such signals. On the other hand, the current theory cannot fully explain excess returns (Kalay &

Loewenstein 1985). Other results confirm the dividend signalling theory: the dividend announcements have significant impact on share prices (Suwanna 2012).

3 Data and Methodology

In order to determine the normal behavior of the stock market factors and to capture seasonality effects we use an estimation window of 250 trading day period prior to the each event windoworder. A 41-trading day event window for the first two events is employed, comprised of 20 pre-event trading days, the event day, and 20 post-event trading days, as in MacKinlay (1997). For the third event, as the announcement day was on 17/03/2016, we do not have the necessary post-event trading days and thus only 11 days shall be used.

As we have defined the events *per se*, event days, estimation windows and the event windows, we can now describe the classical methodology for event studies. It involves four steps:

1. Compute daily returns for the estimation window in continuous time, as shown below:

$$R_t = \frac{lnP_t}{lnP_{t-1}} \qquad (1)$$

where P_t and P_{t-1} represent the TLV's and market portfolio's stock price at time *t* and *t-1,* respectively.

2. Compute the daily expected returns for the event window period. This will be done using two models: Market Model and an economic model, namely the Capital Asset Pricing Model (CAPM). The Market Model has the following form:

$$E(R)_t = \propto + \beta R_{mt} + \varepsilon_t \qquad (2)$$

where R_t and R_{mt} are the period-*t* returns on TLV and the market portfolio, respectively, and ε_t is the zero mean error term with $var(\varepsilon_t) = \sigma^2_t$. α, β and ε are the parameters of the market model to be estimated using Ordinary Least Square (OLS) method. The residuals will be tested for autocorrelation and heteroskedasticity using Breusch-Godfrey Serial Correlation LM Test up to five lags and ARCH LM Test up to five lags, respectively. If we detect only heteroskedasticity, we correct it using White method, and if we detect both autocorrelation and heteroskedasticity we employ Newey-West methodology to obtain robust standard errors and covariance. As a proxy for market index (market portfolio), we will use Dow Jones Total Stock Market index (DWG), which includes more than 12,000 securities from 77 countries—providing near-exhaustive coverage of both developed and emerging markets. Data for the index prices is downloaded from Bloomberg. The appropriateness of the model will depend upon the R^2 of the market regression. The larger the R^2 the greater is the variance reduction of the abnormal return, and the larger is the gain.

The second model, CAPM, has the following form:

$$E(R)_t = r_f + \beta[E(R_{mt}) - r_f] + \varepsilon_t \qquad (3)$$

where:

$E(R_i)$ **–** expected return on BCC;

$E(R_m)$ – expected return on the market portfolio;

β **–** market (systematic) risk, computed as a ratio between the covariance on the TLV return and market portfolio return and the variance of the market portfolio return;

r_f – risk-free rate;

ε_i – standard error for TLV share.

For the risk-free rate, 10-years Romanian bond yields will be used, from Datastream database. Unlike the market model, CAPM imposes additional restriction. One of them is that the intercept equals the risk-free rate and hence the variance of the error term will be larger than in the market model. Another one is that it is based on a series of hypotheses (Berk & DeMarzo 2014, pp.379–380; Hillier et al. 2012, p.140), as follows:

a. All the investors have a Markowitz behavior, considering only the variance and mean return of the portfolios.

b. There are no transaction costs or other spending for buying and selling financial assets (*frictionless markets*).

c. All the investors have homogenous beliefs, that is, estimate identical distributions for the future returns. There is a perfect competition between the investors and they will not try to beat the market by an active administration of the portfolios.

d. The stock markets are in equilibrium. The financial assets are correctly evaluated.

e. The time horizon of the investments is identical for all investors.

Despite the fact that CAPM is based on several assumptions, not applicable in the real world, being repeatedly criticized, it is still widely used in financial research and literature to determining expected returns on assets.

3. Compute daily abnormal returns of Banca Transilvania, as the returns in excess of its expected returns after compensating for risk:

$$\boldsymbol{AR_t = R_t - E(R_t)} \qquad (4)$$

To prove the significance of the abnormal returns for each day in the event window period, testing is performing with t-statistic calculated for each average abnormal return (AR) at time *t* using the following formula:

$$\boldsymbol{t_{AR} = \frac{AR_t}{SE\ of\ regression}} \qquad (5)$$

4. Finally, we sum the average abnormal returns over the *T* days for any interval in the event window to get the Cumulative Abnormal Return (CAR):

$$\boldsymbol{CAR_T(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_t} \qquad (6)$$

4 Empirical results

Table 1 reports the descriptive statistics for the abnormal returns on event windows for each event in particular, from both Market Model and CAPM (41 and 32 trading days in the case of third event, respectively). An examination of the characteristics displayed above, shows that in the case of all events, employing the both models in determining expected returns, the mean abnormal returns were negative, even for the third event – the distributions of dividend from the last's year profit – with the event window lasting from 18/02/2016 to 01/04/2016. In addition, the mean abnormal returns were the highest for the second event - the takeover of the Romanian subsidiary of the Austrian banking group Volksbanken, Volksbank Romania SA – with the event window lasting from 29/10/2014 to 24/12/2014, using market model, but however, not more volatile (riskier) in comparison with the other three events, as measured by the standard deviation: the most risky event appears to be the first one – the appointment of a new CEO – with the event window from 03/04/2013 to 29/05/2013. This could be a sign that the market participants were contained regarding the decision of the board to hire a new CEO. Table 1 also exhibits the skewness and excess kurtosis for the series of each event. With the exception of the first and third event (MM case) event, the positive value of the skewness shows that the distribution of abnormal returns has a long right tail. Furthermore, in all cases the value of kurtosis in greater than 3, meaning that the distribution is peaked (leptokurtic) relative to the normal.

This is also revealed by the Jarque-Bera test, for which we fail to reject the null hypothesis only for the third event (MM case) and conclude that the distributions of these abnormal returns is normal.

Table 1: Descriptive statistics for the abnormal returns

	Event 1		Event 2		Event 3	
	MM	**CAPM**	**MM**	**CAPM**	**MM**	**CAPM**
Mean	-0.00197	-0.00981	-0.00063	-0.01384	-0.0166	-0.01266
Median	-0.00105	-0.00891	-0.00059	-0.01355	-0.01396	-0.01419
Maximum	0.050948	0.043089	0.055008	0.042047	0.012112	0.03436
Minimum	-0.08141	-0.08923	-0.03831	-0.05128	-0.05128	-0.04052
Std. Dev.	0.019826	0.019819	0.017198	0.017229	0.012346	0.014436
Skewness	-0.99449	-0.99483	0.88129	0.906359	-0.55498	1.199564
Kurtosis	8.469263	8.472376	5.235218	5.263067	4.268483	5.638263
Jarque-Bera test	57.85934	57.92206	13.84244	14.36267	3.788105	16.95499
Prob. J.-B.	0	0	0.000987	0.000761	0.150461	0.000208

- First event – the appointment of a new CEO

The results from the regression in applying the Market Model are the following:

Table 2: Summary statistics from the OLS regression (1st event)

	Coefficient	**Std. Error**	**t-Statistic**	**Prob.**
α	0.000645	0.000968	0.665478	0.5064
β	0.838769*	0.141676	5.920349	0.0000
R^2		13.60%		
S.E. of regression		0.015305		

*Significant at 1% level.

Note: As the residuals suffer from heteroskedasticity and autocorrelation, the standard errors and covariance are HAC (Newey-West) consistent.

The R^2 statistic is quite low, meaning that only 13.60% of the variation TLV returns are explained by the variation of the market portfolio (DWG index) returns. Thus, the applicability of the Market Model in this context may not be appropriate. Usually, a value of at least 60% is considered to be suitable in applying the MM in computing the expected returns. The value of beta or the ratio between the covariance on the TLV return and market portfolio return and the variance of the market portfolio return is 0.83, lower than

unity, and hence for this period (18/04/2012 – 02/04/2013) Banca Transilvania had a lower systematic risk than market index.
The results from both Market Model and Capital Asset Pricing Model show that the rumor that TLV will have a new CEO has not had a significant impact on the market. Rather, the impact was in the post-event days, namely on 16/05/2013 (day +11), two days after the official communiqué on the appointment of Omer Tetik was released. In this day, the abnormal return was positive and statistically significant at 1% level. Moreover, in some days from the estimation window (-15 in applying MM and -6, -9 and -13 in applying CAPM) there were negative statistically significant returns at 1% and 5%, respectively.

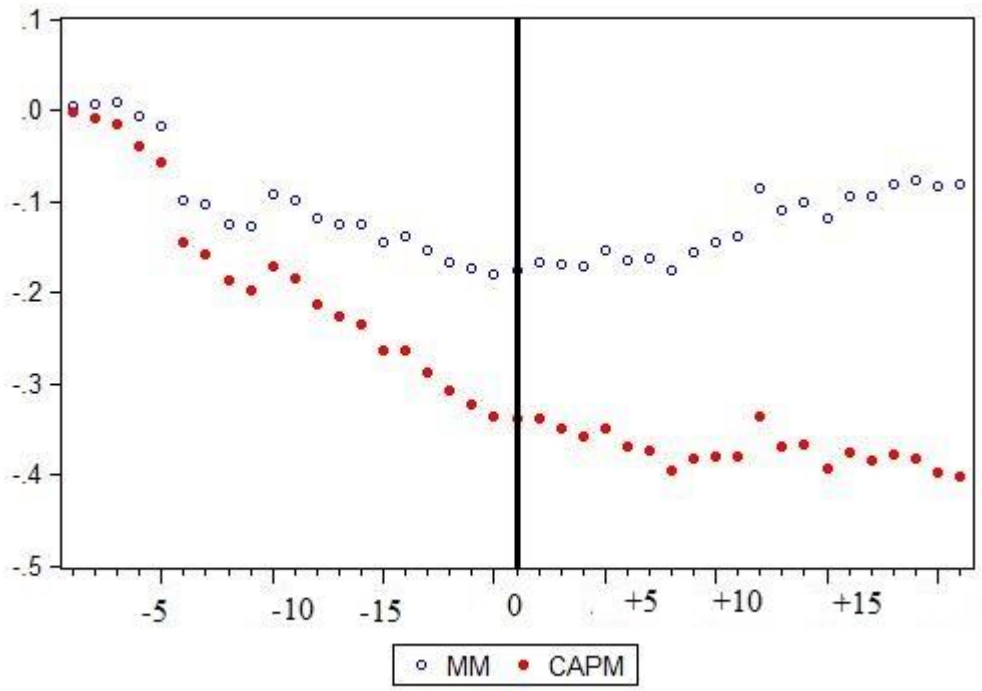


Figure 1: CARs from MM and CAPM (1st event)

As we can see from the above graph, employing MM shows us that the market has reacted rather negatively in the pre-event window, the CARs having a downward trend and a normal one in the post-event days. The only remarkable point in the day +11, when the cumulative abnormal return increased significantly, as the abnormal return in that day was positive and statistically significant. From the CAPM perspective, the market has not perceived the news as a good one, the cumulative abnormal return decreasing in the pre-event days and further in the post-event days, for the entire event window. As in the case of the market model, only in the +11 day CAR seems to be positive and significant.

- Second event – the takeover of Volksbank. The results from regression equation (2) are shown in the below table:

Table 3: Summary statistics from the OLS regression (2nd event)

	Coefficient	Std. Error	t-Statistic	Prob.
α	0.001424**	0.000835	1.705514	0.0894
β	0.605762*	0.200120	3.026988	0.0027
R^2		5.86%		
S.E. of regression		0.012806		

*and** denotes significance at 1% and 10%, respectively.

Note: As the residuals suffer from heteroskedasticity and autocorrelation, the standard errors and covariance are HAC (Newey-West) consistent.

The R^2 statistic from this regression is even lower than in the first event. It denotes that only 5.86% of the evolution of the Banca Transilvania returns is explained by the evolution of the stock market index returns. Moreover, the systematic risk of 0.6 shows a lower risk of TLV in comparison with Dow Jones Total Stock Market Index, which is assumed to be 1. The unofficial announcement of taking over Volksbank has not had a relevant impact on the evolution of the TLV's stock price in the event day. The impact has rather been in the post-event days, as both models MM and CAPM bring to light. Thereby, in the days -10 and -11 from MM and in the days -11, -12, -14 and -15 from CAPM the abnormal returns were negative and statistically significant. In the following two days from the event window (-16 and -17), however, the ARs were positive and statistically significant, as both models show. Thus, we cannot surely conclude the position of the investors in this concern. The plot of cumulative abnormal returns may bring to us more valuable details.

As we can see from the below graph plotting the CARs, in the case of applying market model to determine the mean returns the market had actually no reaction on the Bloomberg's announcement; as the source has pointed out, discussions were at a preliminary stage and there was no certainty they will be finalized through a transaction. On the other hand, CAPM shows that the investors perceived the news as a bad one, with the CARs having a downward trend for the whole estimation window. This may be imputable to the investors' uncertainty that Banca Transilvania will be better off from this transaction, as Volksbank was one of the most unprofitable bank from Romania, with a large portfolio of non-performing loans.

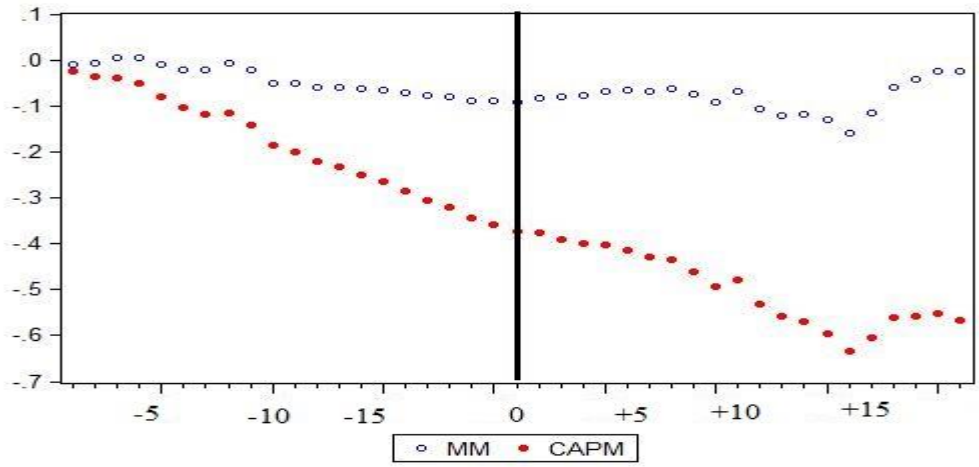


Figure 2: CARs from MM and CAPM (2nd event)

- Third event - Third event – the distribution of cash dividends for 2015

Table 4 Summary statistics from the OLS regression (3rd event)

	Coefficient	**Std. Error**	**t-Statistic**	**Prob.**
α	0.001041	0.000973	1.069904	0.2857
β	0.502948*	0.136725	3.678545	0.0003
R^2		7.57%		
S.E. of regression		0.015344		

*Significant at 1% level.
Note: As the residuals suffer from heteroskedasticity and autocorrelation, the standard errors and covariance are HAC (Newey-West) consistent.

Table 4 displays the results from the OLS regression in applying the market model for the third event under investigation. The R^2 statistic is only 7.57%, 7.57% of the evolution of Banca Transilvania returns being explained by the evolution of the market portfolio returns; beta is significant at 1% level and shows that Banca Transilvania for the estimation window (05/03/2015 – 17/02/2016) is two-times less risky than DWG index.
Unlike the previous two events we have investigated, the dividends distribution announcement day was significant at 1% level in terms of abnormal returns, using both methods of computing expected returns. Furthermore, the AR for the day +1 from the event window from the market model was also positive and statistically significant, meaning that the market has taken the news as a good one, as usually happens for listed stocks.

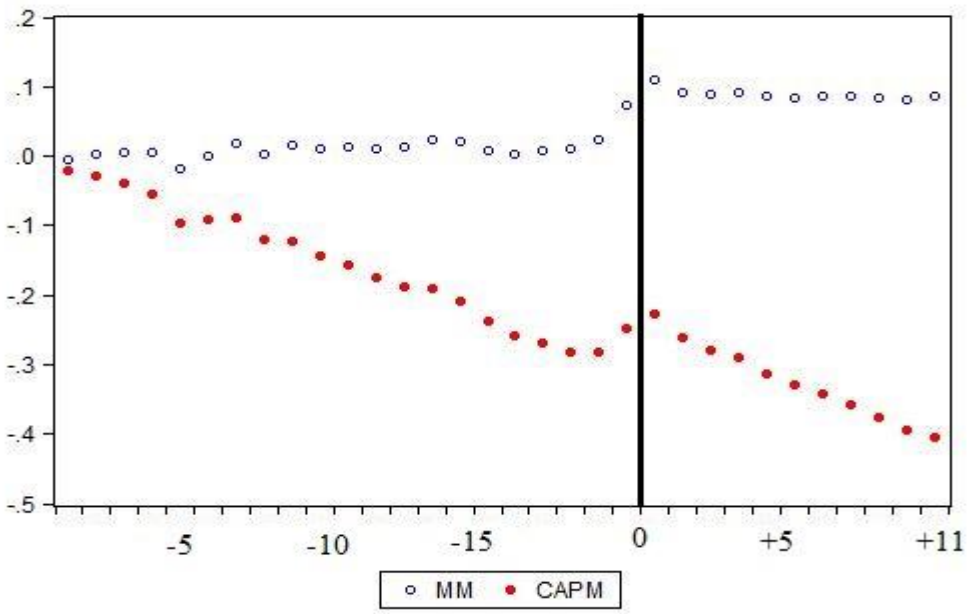


Figure 3: CARs from MM and CAPM (3rd event)

As graph number 3 shows, the market has expected the dividend announcement as the cumulative abnormal returns increased one day before the event day and further in the event day and post-event day. Nevertheless, in the post-event days, CARs followed a constant trend from the day +2 in the case of MM and a downward one in the case of CAPM.

It is worth mentioning that on 17/03/2016, the day of announcement of dividend distributions, the transaction volumes were over 11 million, another 6 million in the next day and over 3.5 million in the days of 21st and 22nd of March – which is over the daily average from the last months. As many analysts suggest, Banca Transilvania might has been incorporated into its price all the positive perspectives for the nearly future and its actual share price – 2.7 lei / share – is a historical maximum.

5 Conclusions

In this paper we study the impact of three events on Banca Transilvania stock price movements. The rumor that TLV will have a new CEO has not had a significant impact on the market. Rather, the impact was in the post-event days, and more precisely, two days after the official communiqué on the appointment of Omer Tetik was released. The unofficial announcement of taking over Volksbank has not had a relevant impact on the evolution of the TLV's stock price in the event day. The impact has rather been in the post-event days, as both models MM and CAPM reveal. Unlike the previous two events we have investigated, the dividends distribution announcement day was significant at 1% level in terms of abnormal returns, using both methods of computing expected returns. Furthermore, the AR for the day +1 from the event window from the market model was also positive and statistically significant, meaning that the market has taken the news as a good one, as usually happens for listed stocks.

6 Acknowledgement
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CROSS-BORDER TRANSMISSION OF UNCONVENTIONAL MONETARY POLICY

Sorina Ioana Coroiu[1], Anca Mitu[2]
[1]Department of Finance and Accounting, Faculty of Economics, University of Oradea, Oradea, Romania
[2]Romanian Academy, Bucharest, Romania
sorina_coroiu@yahoo.com
anca_mitu@yahoo.com

Abstract: To counter the intensifying financial crisis, monetary policy has increasingly used unconventional measures, because conventional measures have become less effective. Several central banks have developed and implemented an unconventional monetary policy set, to boost market liquidity and to stimulate economic growth. Although in the literature there is not a unanimous approach related to unconventional monetary policy measures, we considered the following classification: forward guidance, quantitative easing and credit easing. Neighter in the case of central banks, there is no standardization of unconventional policy measures, approaches are different, being adapted to the respective economies and structures. The type of unconventional measures is significantly different in the two sides of the Atlantic, because the economy financing is structurally different. However, it is unanimous that the volume of these unconventional measures is significant in all developed economies. International contagion of domestic monetary policy is felt worldwide, but its intensity varies from country to country, depending on cross-border transmission channels. In this paper we have tried to identify and analyze the transmission channels of unconventional measures: portfolio rebalancing channel, signalling channel, exchange rate channel, global financial markets, trade channel, international lending channel, confidence channel. This paper sets out a framework for unconvetional monetary policies, highlighting the channels of international spillovers. This analysis is very important because it shows which are the effects of unconventional monetary policy measures on the economies. Although unconventional policy actions have stimulated economic growth, it is clear that there is still a great uncertainty about the long-term effects of these policies. Given the uniqueness of the measures used, there are not known all the consequences. Therefore, knowledge and a better understanding of unconventional measures is nesessary, in order to ensure systemic stability. It is desirable for the future to limit massive unconventional actions, that appeared to be necessary during the crisis.

Keywords: Unconventional monetary policy, International spillover, Central banks.

JEL classification: E03, E52, E58.

1. Measures of unconventional monetary policy

In response to an increase in financial crisis, many central banks have developed and implemented a set of unconventional monetary policy, to boost market liquidity and to stimulate economic growth.

There are many differences regarding unconventional measures implemented worldwide, particularly on conceptual approaches to monetary policy, unconventional decisions on interest rates, the use of different channels of transmission and also different exit strategies of unconventional policy. Despite these differences, it is unanimous that the volume of these unconventional measures is significant in all developed economies.

In the multitude of conceptual approaches from the economic literature, we identified the following classification of unconventional monetary policy measures (Bernanke and Reinhart, 2004; Cerna, 2014):

- Forward guidance. Measures aimed at guidance of the economic agents expectations, regarding the future evolution of interest.
- Quantitative easing. Measures aimed at increasing the value of central bank liabilities and therefore increasing the monetary base, ie increasing the size of central bank balance sheet over the required level. Under this policy, central bank set and announce its quantitative target on commercial banks' excess reserves.
- Credit easing. Measures which aim to change the structure of assets (claims) of the central bank. These unconventional monetary policy measures consist in the purchase of securities, to influence the relative prices of these securities in relation to currency or to each other. The side effect of these measures is the central bank's asset quality degradation.

To central banks, there was no standardization of the unconventional measures; approaches were different, being adapted to economies and to those structures. Some of them have reduced the nominal interest rates at zero level or close to zero. Others have maintained the main refinancing rate at a certain distance from the zero bound. Also, they applied various unconventional measures: some have made substantial purchases of private securities; others focused on large amounts of treasuries purchases, combined or not with private titles; and another category was very much focused on providing liquidity to commercial banks.

The type of unconventional measures were significantly different in the two sides of the Atlantic.The main reason is that the economy financing is structurally different: banks play a key role in financing Europe and financial markets dominate US finance.

2.Channels of international spillovers

The international spillover of the domestic monetary policy is felt worldwide, but its intensity varies from country to country, depending on cross-border transmission channels. The main channels of transmission of unconvetional monetary policy, listed below, are as follows: portfolio rebalancing channel, signalling channel, exchange rate channel, global financial markets, trade channel, international lending channel and confidence channel.

Portfolio rebalancing channel

One of the most significant transmission channel of unconventional monetary policy measures is the portfolio rebalancing channel. The importance of this channel is given by the fact that the measures are designed to act via changes in the prices and yields of financial assets. At European level, when the European Central Bank buys short and long term government bonds from the eurozone, cause a decrease of yield of these securities, compared to the obligations from the Central and Eastern European countries. In this case, investors can turn to assets from Central and Eastern European countries, which have higher returns, and thus they diversify their portfolio, to include both low risk and low yield bonds and high risk and high yield bonds. In this way, they balance the portfolio that has been disrupted by the European Central Bank's accommodative measures (Cerna, 2016). According to some studies, the reaction of investors to change yields and prices of the state bond is the main channel for the effects of unconventional monetary policy measures taken by the European Central Bank (Falagiarda et al., 2015). At United States level, the treasury securities from here have an important role in the global economy, because the US dollar is the main reserve currency. If purchases of US assets diminishes long-term bond yields in the US, investors may turn to emerging market assets with similar maturities, to adjust their profit at a higher risk (Chen et al., 2014).

Signalling channel

The signalling channel allows central bank to communicate, in order to restore market confidence and to affect the private expectations regarding the future policy decisions. Usually, this channel is helpful when official interest rates are at the zero level and the central bank wants to give a boost to the economy (Coroiu, 2015). The signalling channel is closely related to portfolio rebalancing channel, because both acts through changes in the prices and yields of financial assets. However, what is specific to signalling channel is that it affects expectations about the future short-term interest rates. This influence is manifested when a central bank engages in public to maintain reduced levels of future interest rate, policy called forward guidance. The influence consists in (i) reducing the long-term interest, due to changes in interest rates forecasts, according to maturity structure criterion and also in (ii) changing in interest rates differentials between countries, differentials related to all bond maturities. Also, the signalling channel cause side effects, similar to those in the case of portfolio rebalancing channel (Cerna, 2016).

Exchange rate channel

Another channel of transmission for external monetary measures is the exchange rate. Through this channel, the national currency may depreciate against other currencies. Also, if there is a depreciation of a major international reserve currency, the impact on emerging economies may be particularly high. Currency speculation may increase the size and the volatility of capital flows. In some emerging economies, where currencies are relative to the US dollar, foreign exchange interventions could lead to significant accumulation of foreign reserves, which if not fully sterilized, could increase domestic money supply and credit (Chen et al., 2014).

Global financial markets channel

Another channel operates through global financial markets and is a combination of liquidity, asset prices and risk-taking channels. In a highly integrated global market, a policy of quantitative easing considerably increases the level of global liquidity. When it is expected that, in the near future, interest rates remain very low in the main developed economies, is estimated to persist higher interest rate differential, relative to emerging economies with potential macroeconomic fundamentals and with high growth prospects. Quantitative easing could boost transactions and capital flows into emerging economies with higher rates of return, which in turn, will lead to higher consumer prices and asset. In addition, an environment of low interest rates for a longer time and of liquidity abundant create incentives for financial institutions to seek higher returns, both in developed economies and in emerging markets. A prolonged period of low interest rates could make the banks to estimate wrong risks (Chen et al., 2014).

Trade channel

Another one is the trade channel, through which the real effects of quantitative easing in developed economies could spread directly through external demand. Quantitative easing can stimulate demand for goods and services in emerging economies, through trade credit and may increase spending in developed economies. But such effects depend on the degree of elasticity of imports in developed economies and must be balanced with the likely impact of emerging currency appreciation, caused by quantitative easing. Finally, quantitative easing monetary policy may require endogenous responses in other economies. For example, many central banks in emerging economies have kept accommodative monetary conditions, despite the economic recovery, higher inflation and higher asset prices. This would create fears that a widening of the interest rate would increase exchange rates and cause capital inflows, with disruptive effect.

International lending channel

International lending channel consists of the effects that global financial integration has on domestic credit conditions. These effects can cause the breakdown of the transmission mechanism of conventional monetary policy effects, being a major challenge for central banks from Central and Eastern European countries, which continue to apply traditional policy (inflation targeting). For example, opening financial systems and enhancing

international financial flows can influence domestic credit conditions, via an easier access of the banks to interbank markets and issuance of bonds and shares. In particular, the growth of liquidity in the euro area, as a result of unconvetional monetary policy taken by the European Central Bank, has direct, relatively strong consequences on the countries from Central and Eastern Europe, due to the presence of foreign banks, controlled by the parent-banks reside almost exclusively in euro area countries, in local banking systems. In other words, lowering the interest rate on interbank markets from the euro area countries, in which they are located parent-banks, causes a similar reduction in the cost of refinancing for subsidiaries. Thus, banks operating in Central and Eastern European countries can get cheap liquidity from parent-banks, which use them in place of more expensive liquidity, attracted from the local interbank market. In turn, this cause the reduction of the demand for loans in local currency and the decrease of interest rates on the local interbank market (Cerna, 2016). The increase in bank lending coincides with a loosening of lending standards, and not so much with an increase in loan demand (Boeckx et al., 2014).

Confidence channel

The confidence channel lies in the impact that monetary policy announcements, made by the European Central Bank leadership, have on the uncertainty from the markets of euro area countries and outside them. Usually, the "trust" effect is manifested through the developments of the financial asset prices. For example, increased confidence in the euro area as a result of monetary policy decisions determine, by expectations, capital flows which are reflected both in (i) commercial strategies (that assets issued in the Central and Eastern European countries are more sought after by investors because have a higher yield) and as well in (ii) more stable capital flows to these countries, as a result of a closer trade ties. However, restoring trust may cause the risk reassessment and the capital outflows from Central and Eastern European countries, especially if they were seen as safe places in times of high uncertainty. Via the confidence channel, the European Central Bank transmits the international announcements related to purchases of titles, through the Outright Monetary Transactions (OMT). To the extent that the OMT succeed in reducing risk related to public securities, issued by those eurozone countries that face a crisis of external debt, these operations increases capital inflows into those countries (Cerna, 2016).

3. In conclusion

Although unconventional policy actions have stimulated economic growth, it is clear that there is still a great uncertainty about the long-term effects of these policies. Given the uniqueness of the measures used, are not known all the consequences. These policies can contribute to excessive risk-taking in financial markets, as investors are looking for higher yields under conditions of low interest rates. In addition, there are potential negative side effects of prolonged monetary easing policy, as happened in expanded central bank balance sheets, combined with the low policy rates. These include delaying the recovery of public and private sector balance sheet economies affected by the crisis. They also include longer-term risks related to credibility and to operational autonomy of the central banks. Although unconventional monetary policy actions were required during the crisis, it is important to limit their volume.

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NON-BANK FINANCIAL INSTITUTIONS – ACTORS IN THE SHADOW BANKING SYSTEM

Silvia Ghiță-Mitrescu[1], Cristina Duhnea[1], Ionut Antohi[2], Andreea-Daniela Moraru[2]
[1,] Finance and Accounting Department, Faculty of Economic Sciences, Ovidius University of Constanta, Romania
[2] Business Administration Department, Faculty of Economic Sciences, Ovidius University of Constanta, Romania
mitrescu.silvia@gmail.com
cristina@duhnea.net
antohi_ionut@yahoo.co.uk
moraru.ad@gmail.com

Abstract:
This paper aims at investigating the importance of the non-bank financial institutions (NBFIs) as part of the shadow banking system in the Romanian financial system. The increased interest for the NBFIs in the last two decades is justified by the constant preoccupation both of the regulators and the financial analysts to find safety ways to provide funding to the real economy especially in time of economic and financial crisis without affecting the stability of the financial system. In order to obtain an accurate picture of the position of non-bank financial institutions in the Romanian financial system and the level of their activity we established several research objectives: determine the structure and the performances of the non-bank financial institutions; determine the level of the lending activity of the NBFIs and its evolution(the analysis is focused on the volume as well as the structure of the lending activity by currency, by debtor type and debtor activity sector. The methodology used to achieve these objectives is the quantitative and qualitative analysis using data provided by the monetary market authority through the interactive statistic data base available on the institution website and take into consideration the period 2008-2015. The findings of the research allowed us to draw the conclusion that, on one hand, the shadow banking system is poorly developed comparing to the traditional banking system and the NBFIs assets cumulated with the investments funds represent only 14% of the Romanian financial system, with an downward trend of the assets comparing with the banking system and a chaotic evolution of their profitability. On the other hand the non-bank financial institutions proved that their lending activity brings benefits for the real economy because they offer funds to those sectors of activities poorly financed by the traditional banking system as trade, services, mining and manufacturing, and agriculture and may be of interest to encourage the development of this segment of the financial market.

Keywords: shadow banking, non-bank financial institutions, Romanian financial system

JEL classification: G20, G23.

1. Introduction

Along with giving up the fixity of the exchange rates in the 70s and the emergence of new risks in the functioning of the financial markets in the structure of financial systems have emerged several categories of entities offering credit and investments services outside the traditional banking systems governed until now by a strict regulation and surveillance. The financial crises that affected periodically national economies but also the phenomena of contagion which proved that any open economy is vulnerable to external risks were determined after 90s a growing interest of the institutions regulating and supervising of the

financial markets for such entities considered to conduct non -bank credit activity and that the specialized literature calls it parallel banking system or shadow banking system.
The first attempts to define the shadow banking system and to identify the components of such system were made in the literature during 2000's but one of the wide recognized definition is given by The Financial Stability Board(FSB) describing "shadow banking system" as "credit intermediation involving entities and activities outside the regular banking system"(FSB,2011b, p1) stating that an "increased recognition of the importance of entities and activities structured outside the regular banking system that perform bank-like functions ("banking")" has occurred after 2007.
After 2010 the interest for the shadow banking system increased both regarding the content of the concept and the possibility to correctly evaluate the activity of this system taking into consideration the risks involved and the level of regulation and supervision.
The European Commission showed in 2012 that the shadow banking system is a subject of interest at European level by creating a green paper regarding this issue stating that this system has two important functions in the financial system (creating additional sources of funding and offering investors alternatives to bank deposits) (EU Green Paper from March 2012(p2).
The European Commission consider that the components of the shadow banking system are: entities that "operate outside of the banking system and engage in one of the following: accepting funding with deposit-like characteristics, performing maturity and/or liquidity transformation, undergoing credit risk transfer and using direct or indirect financial leverage" and/or engage in activities that "could act as important sources of funds for non-bank entities", including "securitisation, securities lending and repurchase transactions (repos)" (EU Green Paper from March 2012(p2).
As the definition shows the most important actors of the shadow banking system are represented by the non-bank financial institution.
The increased interest for the NBFIs in the last two decades is justified by the constant preoccupation of the regulators, the financial analysts and the entities in searching of funds to find safety ways to provide funding to the real economy especially in time of economic and financial crisis without affecting the stability of the financial system.
In 2015 European Central Bank declared that the expansion of the non-bank and non-money market investment fund sector is perceived as the main source of growth of the shadow banking sector, following the global financial crisis and a shift to market-based funding (Financial Stability Review, European Central Bank, 2015, p. 87).

2. Research objectives

The scope of the research conducted in this paper is to realize an analysis of the one of the components of the shadow banking in Romania – the non-bank financial institutions, as in the last ten years both at international and national level the financial system changed and the lending entities diversified due to the continuous rise of a relatively new component - the shadow banking system.
The research will be developed in an eight years' timeline, from 2008 till 2015, because the 2008 is the starting point of the financial crisis that affected the Romanian economy and the year that mark the appearance of an institutional interest of the regulators and financial analysts for the shadow banking system as an alternative for lending during financial crisis.
In order to obtain an accurate picture of the activity of non-bank financial institutions as a part of the Romanian shadow banking system we established several research objectives to be achieved in the present paper:

- Determine the structure and the performances of the non-bank financial institutions for the period taken into consideration;
- Determine the level of the lending activity of the non-bank financial institutions and the evolution during the 2008-2015 period. The analysis will be focused on the volume as

well as the structure of the lending activity by currency, by debtor type and debtor activity sector.
The methodology used to achieve the proposed objectives is the quantitative and qualitative analysis using data provided by the monetary market authority through the interactive statistic data base available on the institution website and the data available yearly in the Financial Stability Report for 2008-2015 period.

3. The structure and evolution of shadow banking in Romania

In Romania, the shadow banking issue became a preoccupation for both regulators and financial analysts in the last decade. As defined by the National Bank of Romania in accordance with the Financial Stability Board definition, the shadow banking sector includes non-bank financial institutions (NBFIs), investment funds and money market funds.

The share of shadow banking assets in GDP is relatively low in comparison with the share of the credit institutions assets. However, in the period of time that followed the 2008 financial crisis, two of the shadow banking components, non-bank financial institutions and investment funds kept an uprising trend in terms of their cumulative assets percent in GDP, reaching around 10% in total (figure 1).

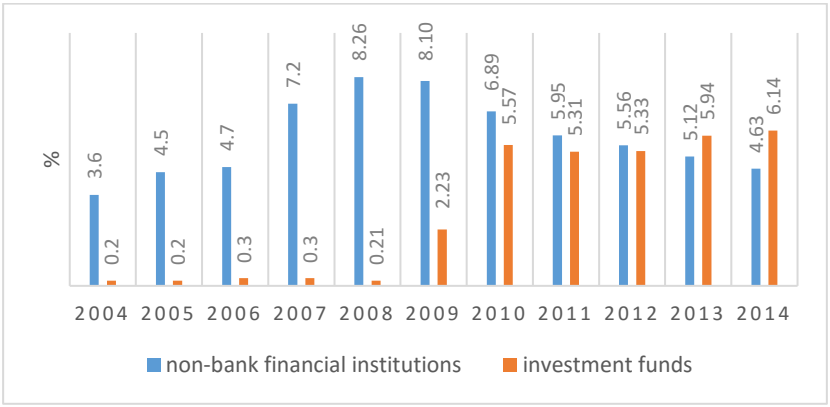


Figure 1: Shadow banking assets as a share of GDP in Romania
Source: NBR statistics www.bnr.ro

Between 2008 and 2014 the share in GDP of the shadow banking assets had an antagonistic evolution, NBFIs registering a diminution of assets, mainly because of the general economic crisis that reduced the access to lending for both firms and population, while investment funds started an uprising trend, due to the lowering of interest rates in the banking sector that sent investors in search for better investments opportunities.
In 2015, the shadow banking assets reached a total of 73.84 billion lei, which stand for nearly 14% of the financial system's assets, of which NBFIs assets represent 31.03 billion lei, adding 0.16 billion lei to the 2014 value, while investment funds represent 42.81 billion lei, with a 1.87 billion lei increase from the previous year (figure 2).

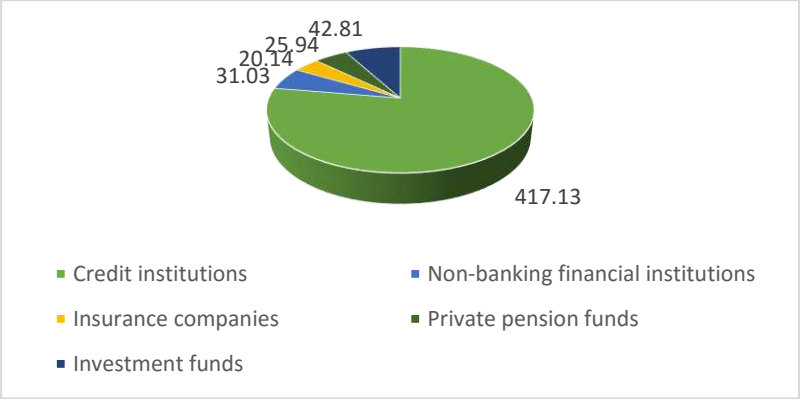


Figure 2: Romania's financial system structure in 2015 (total assets)
Source: NBR statistics www.bnr.ro

Although the size of the shadow banking sector in Romania is relatively small in comparison with other countries and with the size of the credit institutions, we believe that its upwards trend in the previous decade makes it an important topic for analysis in terms of structure, activities and links with the banking system.

4. The non-bank financial institutions as a component of the shadow banking

4.1. Structure and performances of non-bank financial institutions in Romania

Non-bank financial institutions are defined by the Romanian laws as entities, other than credit institutions, which professionally engage in lending activities (law no. 93/2009). The National Bank of Romania authorises and supervises the activity of NBFIs, dividing them into two categories: General register entities, comprising all NBFIs, and Special register entities, including NBFIs that meet special criteria regarding the size of their turnover, lending volume, level of indebtedness and total assets or equity capital.
Currently 175 NBFIs are registered as active in the two registers, classified by their activities as follows (table 1):

	General register(excluding special register)	Special register
Consumer credit	3	1
Microcredit	2	0
Trade financing	1	0
Factoring	1	0
Financial leasing	20	6
Issuance of guarantees	4	1
Multiple lending activities	102	34
Total	133	42

Table 1: Number of active NBFIs in Romania
Source: NBR www.bnr.ro

Between 2008 and 2015 the value of NBFIs assets decreased by more than 13 billion lei, from 44.5 billion lei at the end of 2008 to 31.03 billion in December 2015, with the lowest value of 30.87 billion lei in 2014. This descending trend is the result of the contraction of lending activities, especially real-estate credit and financial leasing and of the constant increase of regulatory provisions (figure 3). In the same period of time, credit institutions

assets manifested an opposite trend increasing their value by 77.63 billion lei. This evolution proves that credit institutions remain the most important financial intermediary actors on the Romanian market.

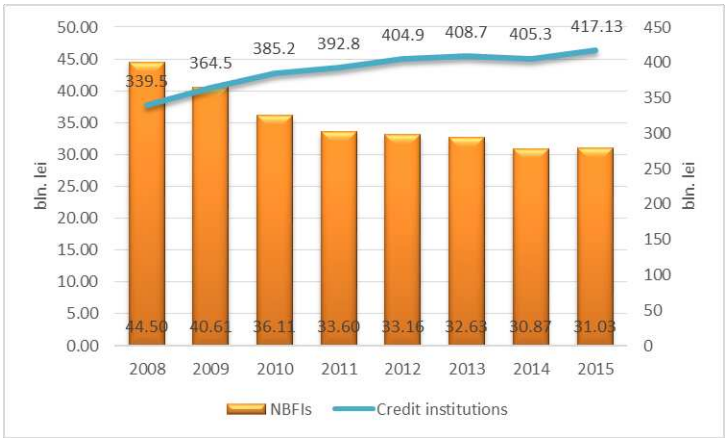


Figure 3: Total assets of NBFIs and credit institutions
Source: NBR statistics www.bnr.ro

In this context, the profitability of NBFIs in the last five years fluctuated between negative rates at the beginning of the period and positive outcomes by the end of 2015. If we take the profitability analysis further by looking at the two categories of NBFIs, general and special register, we can notice that the biggest fluctuations took place in the Special Register section, where profits varied between a 221.8 million lei loss in 2011 and a 281.9 million lei profit in June 2015. By the end of the period only Special Register NBFIs recorded profits, while General Register NBFIs results plunged into the negative area with a loss of 1.46 million lei (figure 4).

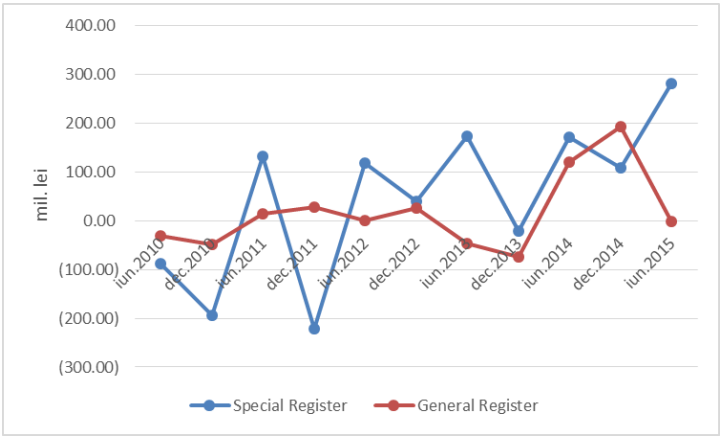


Figure 4: Profitability of the NBFI sector
Source: NBR statistics www.bnr.ro

The strengthening of financial results by the overall sector is more a result of the reduction of operating expenses and less an outcome of increased incomes from granted loans. The evolution of the lending activity of NBFIs is presented in the next subsection.

4.2. The lending activity of NBFIs in Romania

In the last five years, the annual growth rate of NBFIs lending activity has lagged behind

the growth rate of the real economy, as reflected by the evolution of GDP (figure 5). With the exception of the period from December 2013 to June 2014, the growth rate of loans granted by NBFIs range in negative territory, the lowest point being reached in September 2010, a 17.4 percent drop compared to the same month in 2009. At the end of the time series, in December 2015, the growth rate became positive, a 2.6 increase from the value in December 2014. The improved economic climate may favour a new development of the NBFIs credit, provided that the regulatory framework for credit institutions remains restrictive.

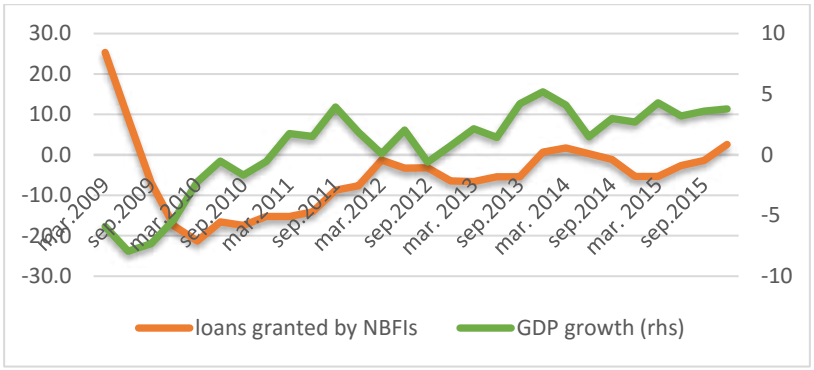


Figure 5: Annual growth of loans granted by NBFIs and GDP
Source: NBR statistics www.bnr.ro

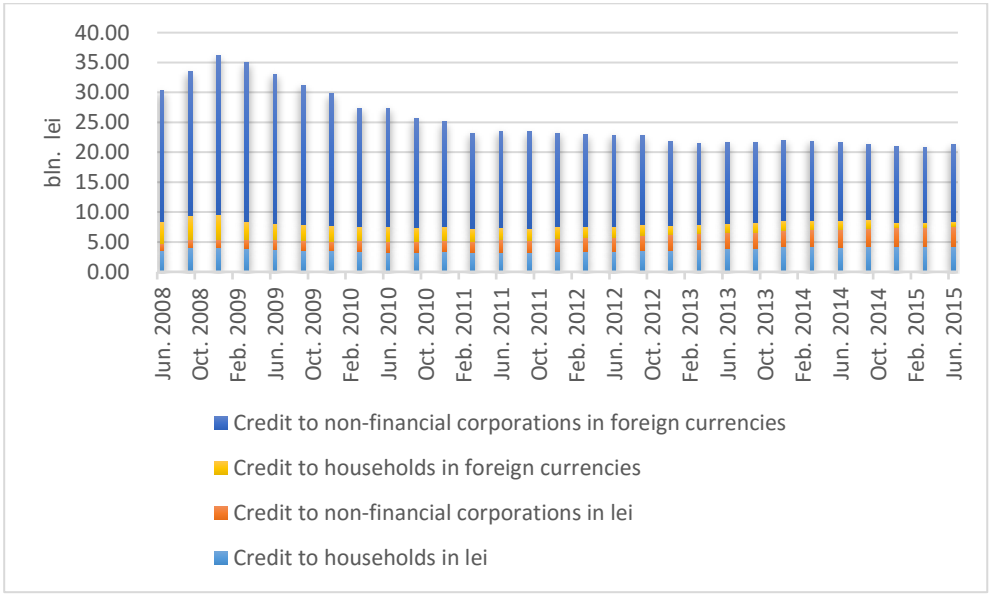


Figure 6: Loans granted by NBFIs by currency and debtor
Source: NBR statistics www.bnr.ro
Throughout the analysed period, the structure of the loans granted by NBFIs has shown the following trends (figure 6):

- lending to households represented a share between 19.29% and 26.39% of the total loans, with an average of 22.87% which stands for 5.83 billion lei;
- in absolute value, the highest amount of credit for the households was registered in September 2008, of 8.04 billion lei, while the lowest figure of 5.03 billion lei was reached in June 2015;
- by the end of the period loans to households set on a decreasing trend, while

loans to non-financial corporations showed a rebound;
- loans to non-financial corporations represented an average of 75.33% of the total loans, which stands for approximately 19.44 billion lei;
- the maximum value of loans to non-financial corporation was reached in March 2009, 28.13 billion lei, after which the granted credit contracted to a minimum of 15.65 billion lei in September 2014;
- in terms of currency, both households and non-financial corporations favoured foreign currency loans that represented an average of 75.5% of the total loans throughout the period, but in the last two years their relative weight in the total loans started to decline.

We can thus conclude that NBFIs lending activity is focused on non-financial corporations and on foreign currencies loans. While the first observation can be considered a benefit for the general economic climate, hinting that NBFIs credit are destined for production more than for consumption purposes, the second ascertainment highlights a bigger risk for the sector, credit risk being doubled by currency risk.

The loans granted by NBFIs to non-financial corporations in 2015 were dominated by the utilities and services sector with a share of 38.49% of total loans, followed by trade corporations (19.54%), agriculture (16.33%), constructions and real estate (13.16%) and mining and manufacturing (12.47%). Compared to the previous year, the breakdown of loans to non-financial corporations shows an increase of loans to the agricultural sector (14.77% in 2014) and to the utilities and services sector (37.77% in 2014) and a diminution of the share of loans to the other components, the largest reduction being recorded by constructions and real estate (14.42% in 2014), followed by the mining and manufacturing sector (13.20% in 2014) and trade (19.84% in 2014) (figure 7).

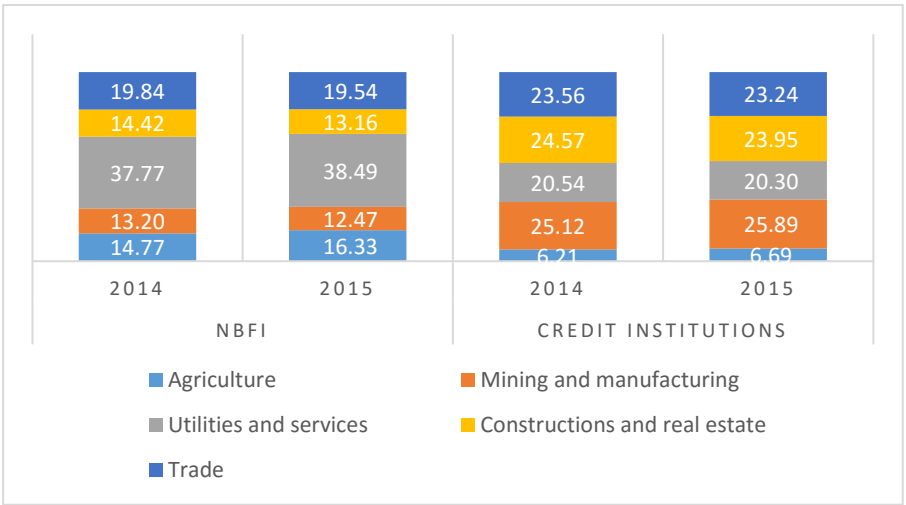


Figure 7: Structure of loans granted by NBFIs and credit institutions to non-financial corporations in 2014 and 2015
Source: NBR statistics www.bnr.ro

If we compare the structure of loans granted by NBFIs to non-financial corporations to that of credit institutions in 2015, we can notice a larger share of loans to mining and manufacturing in the portfolio of credit institutions (25.89%) while agriculture hold only 6.69% of loans granted by credit institutions. For credit institutions, the structure of loans portfolio has not change significantly in 2015 compared to 2014.

By putting the two major credit providers loans portfolio structure side-by-side we can highlight the role of NBFIs in financing economic sectors that credit institutions do not favour, such as agriculture or utilities and services. This implies that can NBFIs play an

important part in the development of this activities.
Another way in which NBFIs are financing the real economy is by issuing guarantees, which help reallocate credit risk across the financial system. The most important category of guarantees issued by NBFIs are destined for the "First Home" program, their value increasing over the last period. NBFIs also extend guarantees for loans to non-financial corporations, intended to support economic activity and lending.
The lending and guarantee issuing activities of NBFIs in Romania, although small in comparison to credit institutions' size, represent an important part of the financial system. As long as regulations of credit for banks will remain restrictive, we believe that, NBFIs can play a major part in financing both production and consumption in Romania.

5. Conclusions

Following the analysis realised in this paper we can draw the conclusion in Romania the shadow banking sector is relatively small compared to the traditional banking system representing in 2015 nearly 14% of the financial system's assets showing that this system is in early stages of development comparing with the traditional banking system. During the 2008-2014 period the assets of two of the shadow banking components represented around 10% from GDP with a descending trend of the value of assets for the non-bank financial institutions comparing with the investments funds.
The paper focused on the structure, performance and the lending activity of the non-bank financial institutions and the analysis revealed that during the eight years different indicators regarding these entities had opposite evolution.
The total assets of NBFIs a registered a decrease with around 30% in 2015 comparing with 2008 comparing with the banking system which had an increase with nearly 20% in the same period showing that this part of the Romanian financial system remains the main part of the intermediation activity.
If the total assets of the NBFIs had a clear trend in terms of profitability the evolution of these entities was characterized by a discontinuing trend and with differences between the two categories of institutions: the general register institutions registered a slight upward trend of their profitability but with losses alternating with profits from 2010 till 2015 when they obtained the highest level of profit; the special register institutions had a chaotic evolution registering their biggest loss in 2013 and the highest level of profit in 2014 and with a zero result in 2015.
As we showed in the paper the two indicators (total assets and profitability) had a very different evolution proving that the reduction of the assets wasn't an obstacle to perform and obtain profit.
Analysing the lending activity of the non-bank financial institutions through three criteria we have drawn the conclusion that from the volume point of view the lending activity registered negative annual growth rate during the whole period till 2015 when it became positive but it remained behind the real economy growth rate proving underperformance.
The structure of the lending activity of the NBFIs taking into consideration the currency, the type of debtor and the activity domain of the debtor reveals the positive influence that the shadow banking system has in the real economy because the analysis showed that non-bank financial institutions financed mainly non-financial institutions from sectors poorly credited by the traditional banking system as services, mining and manufacturing and agriculture and issued guarantees, which help reallocate credit risk across the financial system
A general conclusion from the research conducted in this paper is that, in the Romanian financial system, the shadow banking is yet in early stages of development but the entities actively involved in the lending activities have without doubt a positive influence on the economic activities representing a viable alternative to the traditional banking system for several domains of activity and with a proper regulation and supervision to prevent systemic risks and contagion phenomena can reach higher levels of development.

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THE DEBIT AND CREDIT CARD MARKET IN ROMANIA. A MACROECONOMIC PERSPECTIVE

Cosmin-Ionuț Imbrișcă[1], Alina-Maria Neațu[2]
[1]The Faculty of Administration and Business, University of Bucharest, Bucharest, Romania
[2]Ph.D. Student, The Bucharest University of Economic Studies, Bucharest, Romania
[1]imbrisca.c@gmail.com
[2]alina_neatu@yahoo.com

Abstract:
Credit is one of the core elements of a modern economy and easy access to credit is a hallmark of the development of the financial sector in a country. Credit cards have been in use, in many places of the world, for more than 60 years now and, in a lot of countries, having a credit card is the norm for most people. This, however, has not been the case for Romania where the market penetration of credit cards has been very limited at best. In this paper we aim to provide an overview of the debit and credit card market in Romania. We avoid focusing only on credit cards because of their limited scope at the moment of writing this paper and instead would like to determine whether they are not used because Romanians do not want to take on credits or because it is not easy to use cards as a means of payment. The paper is structured in two parts. In the first section we provide a presentation of the banking sector in Romania and how it has been impacted by the financial crisis of the last couple of years. This is followed up with a presentation of the debit and credit card market, in which we discuss both the number of transactions, by type and card, and the value of these operations. Our temptative conclusion is that the main limit on this market is the ease of use which, while improving, has not yet reach its potential. A more in-depth research, using methods specific to time-series analysis, would have been preferable, however the data series are too short at the moment and the results would have been questionable.

Keywords: Credit card; debit card; credit market Romania;

JEL classification: E51

1. Introduction

During the past two decades, the importance of consumer finance for the private sector has grown significantly and with it so has the competitiveness of the banking sector, with new financial products constantly being put forward on the market (Mitrică, 2005). At the same time, the importance of credit and debit cards, as a means of payment and of short-term financing cannot be debated (Hayhoe, et al., 2000).

The purpose of this study is to present a general picture of the debit and credit card market in Romania, in the aftermath of the Great Recession of the late 2000s. This is accomplished in two parts, first by presenting a general view of banking sector in Romania and following it up with a presentation of debit and credit card use in general, using macroeconomic data published by the National Bank of Romania.

2. Research focus and methodology

The purpose of this paper is to draw up an as clear as possible image of the credit and

debit card market sector in Romania. This objective is accomplished in two stages. The first one is a presentation of the banking sector in Romania and how it has fared, over the last couple of years, as a result of the economic downturn which has befallen the country. This is followed up with a presentation of the debit and credit card market in Romania and its evolution over the last couple of years. The analysis is based on public information available from the National Bank of Romania. A more in-depth analysis is not possible, at this time, using the publicly available data, due to the fact that we are working with time series data which is showing very strong signs of autocorrelation. The obvious solution would be to use techniques specific to time series analysis, however the available data goes back only to 2007 or 2008 and, as such, is insufficient for an adequate study.

3. A brief overview of the banking sector in Romania

In order to properly understand the context in which the market for credit and debit cards has developed over the past couple of years, it is necessary to have a clear image of the economy in general and the banking sector in particular and how they have changed during this period.

The economic situation in Romania, following the Great Recession of the late 2000s, has been difficult to say the least. During this time, most of the important macroeconomic indicators have taken a turn for the worse, thus GDP per capita (Anghelache, et al., 2013), foreign direct investments and the number of companies in the economy have fallen (Geamănu, 2012). The financial market has been affected as well with the number of investors dwindling, but, surprisingly, the value of the stocks has improved (Badea, 2012). The circumstances have not been amended by the reaction of the authorities who, in most cases, have had more of a passive role in situation, with the purpose of achieving certain quantitative objectives and not following through on qualitative changes (Socol, 2012).

The banking sector in Romania, under the close supervision of the National Bank of Romania, has had a fairly good evolution over the past couple of years. At a first glance it would seem that it was hit hard, with the number of credit institutions falling from a total of 40 in 2007 to 36 in July of 2015.

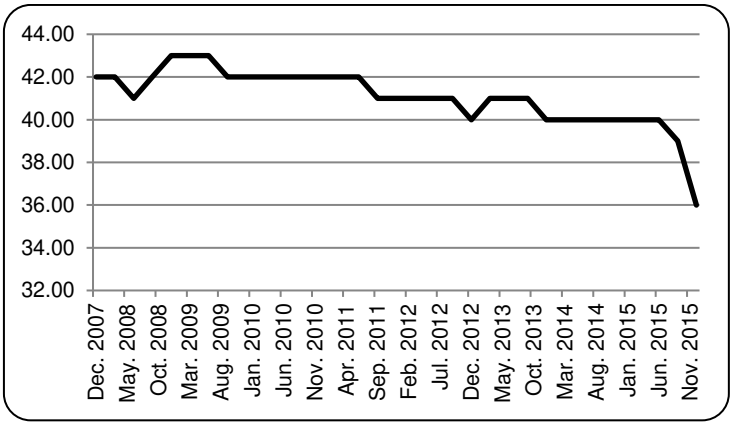


Figure 1: Number of credit institutions
Source: Created by the authors using data from the National Bank of Romania.

This evolution is not troublesome however, due to the fact that, during the same period, the value of the total assets owned by banks has increased, as can be seen from the figure below, which would indicate that even if there are fewer banks on the market, those which exist at the moment are stronger than before.

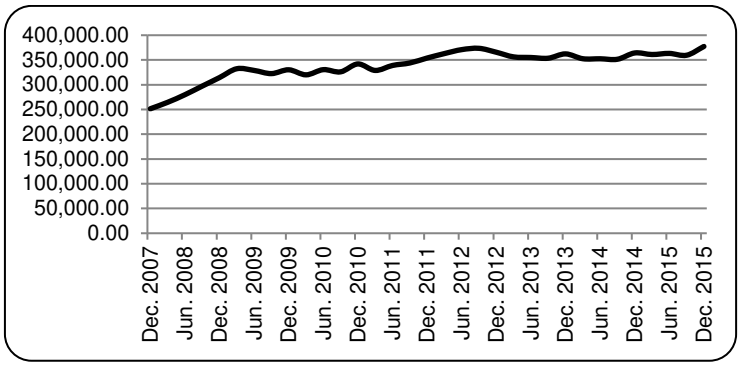


Figure 2: Total assets of banks in Romania
Source: Created by the authors using data from the National Bank of Romania.

This conclusion is corroborated by the solvency available in the banking system. With both the solvency rate and the leverage ratio being well above the 8% and respective 6% required by the standards imposed by the National Bank of Romania.

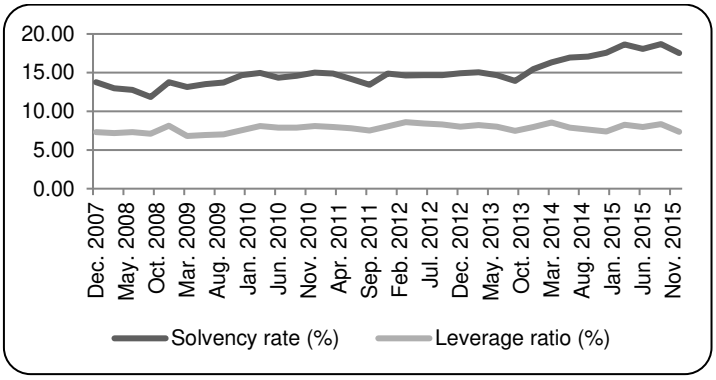


Figure 3: Bank solvency rate and leverage ratio
Source: Created by the authors using data from the National Bank of Romania.

During this period and in order to support the development of the economy, the NBR has promoted an expansionist policy with regard to money supply. This can be seen from the figure below which shows that the key interest rate has fallen significantly, from 7.5% at the end of 2007 all the way to 1.75% in May of 2015.

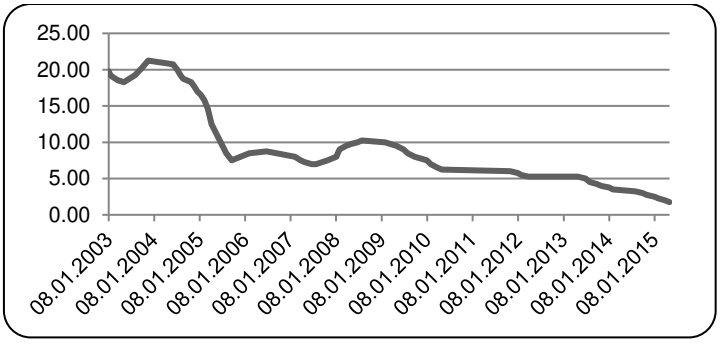


Figure 4: Key interest rate in Romania
Source: Created by the authors using data from the National Bank of Romania.

The only period which does not fit the same pattern as the rest is in the immediate aftermath in early 2008, when the key interest rate rose slightly. This was done in order to account for the slight dip in the solvency rate which occurred during that period and was a signal that a flight of capital from Romanian banks was possible. The measure had the desired effect and, immediately afterwards, the number of new deposits tripled whereas the number of new credits remained the same.

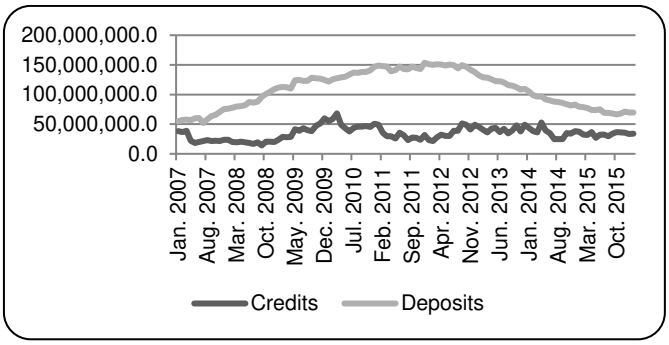


Figure 5: New deposits and credits in Romania
Source: Created by the authors using data from the National Bank of Romania.

Overall, the last couple of years have been a period of slow growth for the banking sector in Romania. A period during which significant returns have not been within their reach, but they have been able to buckle down and weather the storm in an appropriate manner and to come out the other side stronger than before.

4. The debit and credit card market in Romania

Credit cards have been in use for more than 60 years now (Garcia, 1980).Their introduction to Romania, however, has been a relatively slow process. The early 1990s were characterized by a process of massive reform of the financial sector, as it transitioned from a communist society and it adapted to the requirements of a capitalist way of doing things, as such, many banks were being privatized and restructured. At first, the number of banking services and products was very limited and the system was very rigid and slow to change (Caracotă, 2012).

In time, the banking industry has come to recognize the importance of the credit card as a means of increasing private financing, facilitated through different means of payment and reimbursed in installments, with or without interest. (Allen, et al., 2002).

In the following section we will look at the information concerning debit and credit card use, as published by the National Bank of Romania.

The first item that we need to take into consideration is the actual number of card in use and we can see their evolution in the graph below.

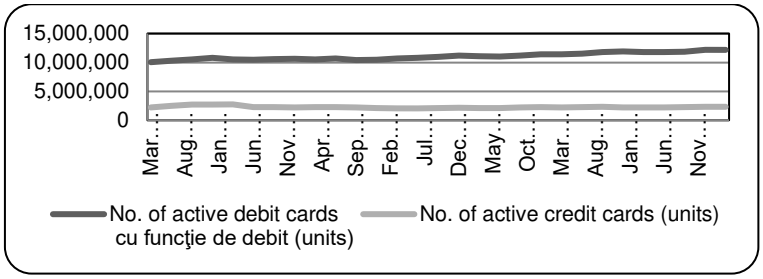


Figure 6: The number of active debit and credit cards in Romania
Source: Created by the authors using data from the National Bank of Romania.

From it, we can notice that the number for both of them has increased over the entire period. Furthermore, the number of credit cards is significantly smaller than the number of debit cards. This leads us to the think that Romanians, in general, prefer to avoid using a credit card and, should they require financing, they prefer an alternative method.
The next four figures illustrate how easy it is to use a card, be it credit or debit, and how the number of different types of transactions has changed over the course of the years.

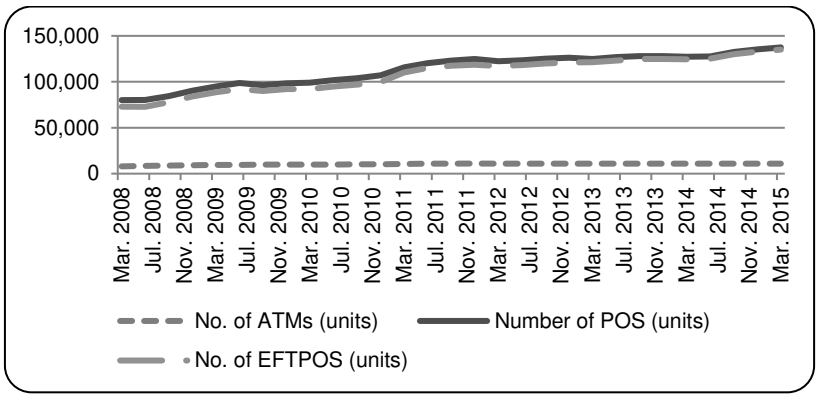


Figure 7: Ease of use for cards in Romania
Source: Created by the authors using data from the National Bank of Romania.

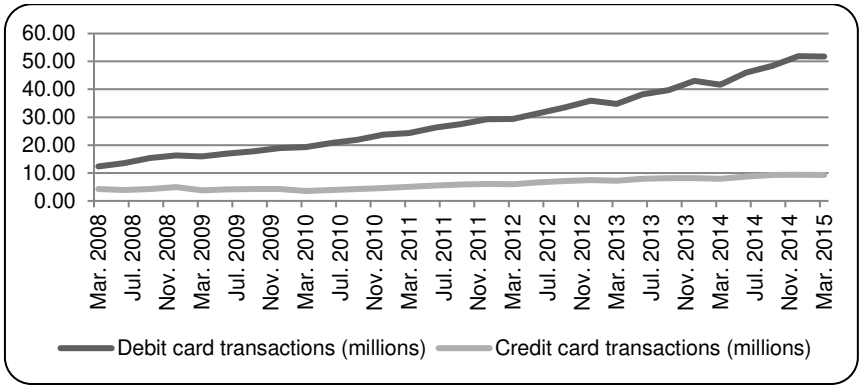


Figure 8: Number of debit/credit card transactions in Romania
Source: Created by the authors using data from the National Bank of Romania.

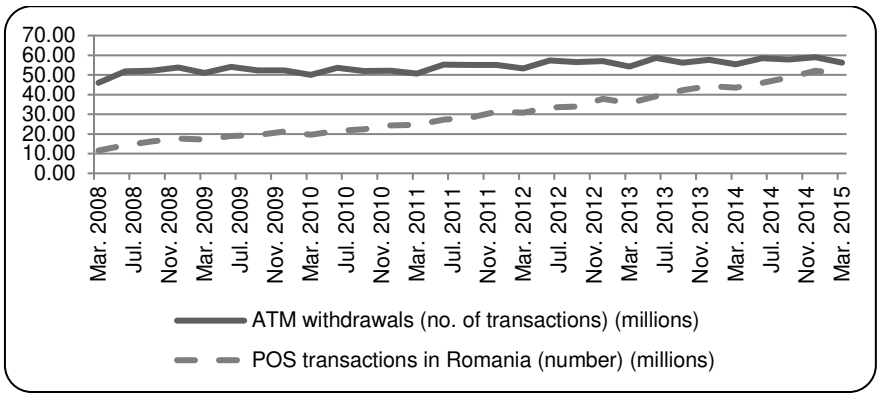


Figure 9: Types of debit/credit card transactions in Romania
Source: Created by the authors using data from the National Bank of Romania.

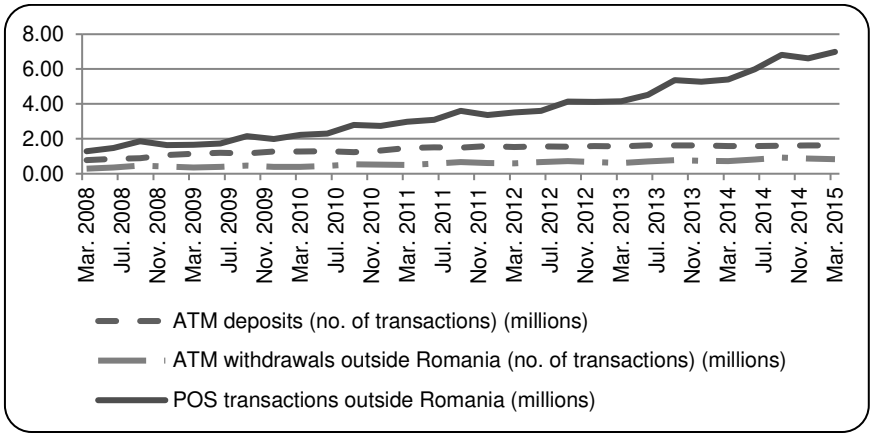


Figure 10: Types of debit/credit card transactions in Romania
Source: Created by the authors using data from the National Bank of Romania.

First of all, we can notice from Figure 7 that it has become a lot easier to use a card as a payment method because the number of merchants who accept some type of card has almost doubled. What is interesting here is the fact that the number of ATM has remained almost the same.

The number of transactions using a debit or a credit card has also had an interesting, yet somewhat expected pattern. It is easy to notice that the number of transactions with a credit card has doubled between 2008 and 2015 and this would be significant, if it wasn't dwarfed by the transactions with debit cards which have grown six times. This comes to support the idea that Romanians prefer to stay away from credit cards.

As for what exactly are the transactions themselves, the data is very surprising. By far the most common transaction is withdrawal from an ATM, which means that the vast majority of transactions in the economy are cash based. POS transactions have been catching up and, as acceptance of payment using a card becomes ubiquitous among merchants, it is likely to surpass them; however this has yet to happen. Other types of transactions play a much smaller role, but it is interesting to note that, when outside of Romania, the relationship is inversed and most people prefer to pay with a card as opposed to withdrawing money.

We will now take a look at the value of the transactions performed using a debit or credit card.

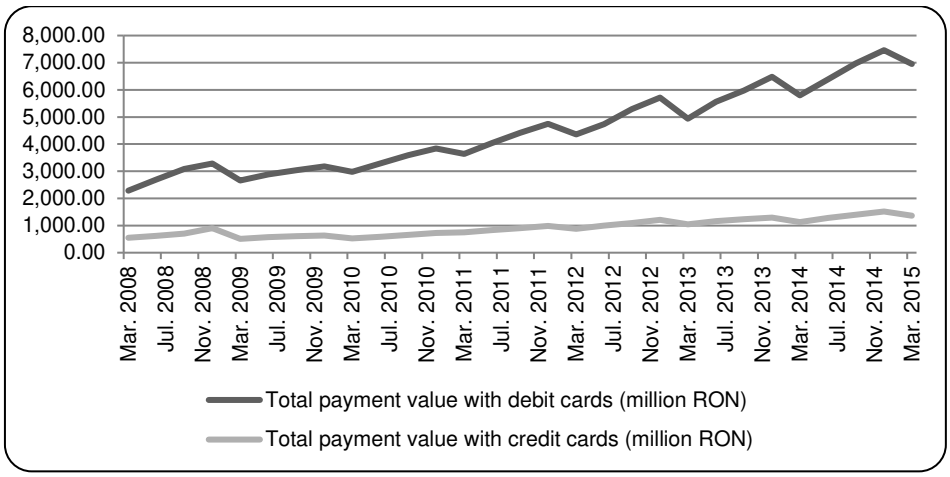


Figure 11: Total value of debit/credit card transactions in Romania
Source: Created by the authors using data from the National Bank of Romania.

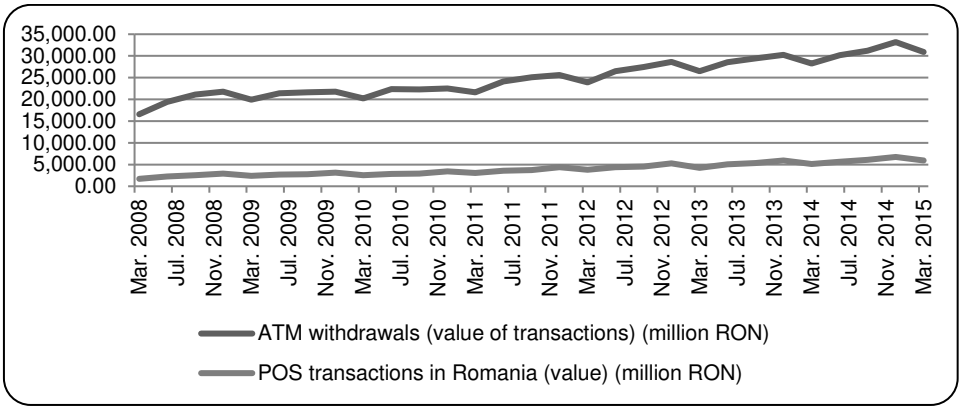


Figure 12: Total value of debit/credit card transactions by type, in Romania
Source: Created by the authors using data from the National Bank of Romania.

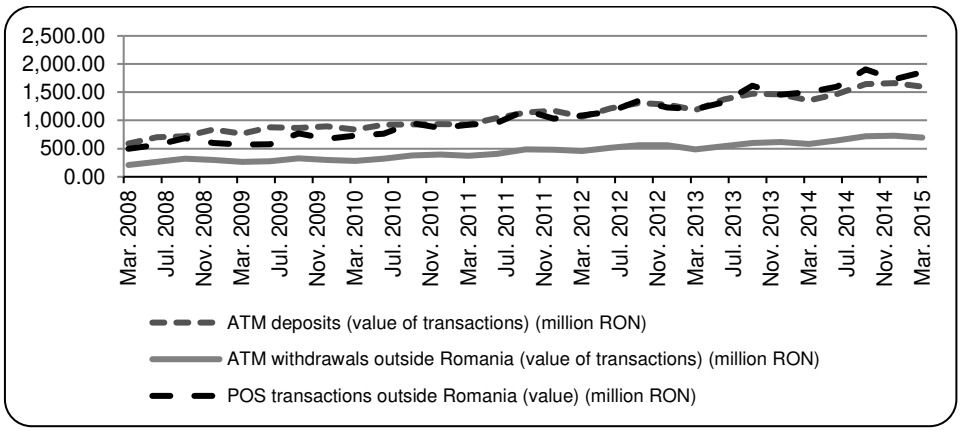


Figure 13: Total value of debit/credit card transactions by type, in Romania
Source: Created by the authors using data from the National Bank of Romania.

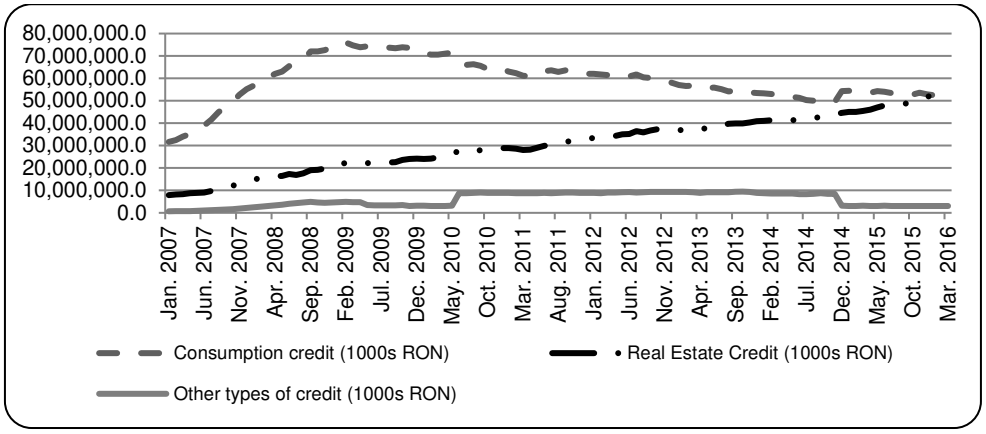


Figure 14: Types of credits in Romania
Source: Created by the authors using data from the National Bank of Romania.

From Figure 11 we can see that the value of the transactions follows the same pattern as their number. Thus, the value of the payments with credit cards has more or less doubled whereas the total payment value with debit cards has grown more than three times, a change that is not as large as the one in the number of transaction, but this is not surprising when considering that the value for debit cards was already six times larger than of credit cards and we are talking about a people who, for one reason or another, do not use any type of card in general. Figure 14 hints at the idea that consumption credits are quite popular in Romania, it's just that the credit card as a tool is not.
Figures 12 and 13 show the evolution of the different types of transactions. The results are similar to those from before, thus the most common type of operation conducted with a card is to withdraw money from the ATM. What is very interesting to note is that, even if the number of transactions at a POS has increased significantly, their value has not, which shows that there is a lot of room for future growth in this respect.

5. Conclusion

In this paper we have attempted to provide an accurate portrayal of the macroeconomic perspective on the debit and credit card market in Romania, after 2007. This has been done in two stages.
We started out by presenting the macroeconomic developments in Romania in the aftermath of the Great Recession of the late 2000s period. While doing this we have shown that the banking sector has gone through something of a cleansing period, during which the number of institutions has shrunk, but the value of their total assets has improved and so has the liquidity in available in the system.
This has been followed up by a discussion on the situation of the debit and credit card market in Romania. First of all, we have found that debit cards are by far more popular than credit cards and the trend doesn't seem to be changing. This, however, is not caused by an avoidance of credit, as a means of financing a purchase, as can be seen from Figure 14 which shows that value of consumer credits is significantly higher than that of real estate credits or other types. The limit; however seems to be the number of places where it can be used. We can easily see that as the number of EFTPOSs has increased, so has the number of debit cards, of credit cards and of transactions with either of them. However, that number is still too small and, if we're discussing in terms of value, by far the most popular type of operation is withdrawal of money from the ATM.
An important caveat of this research is that it should have studied the econometric relationship between the variables. This was not possible due to the fact that the time series is not long enough and does not permit a more detailed analysis. An area for future research is a microeconomic study which focuses on the items considered important by

the average person when choosing between a debit and a credit card.

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FINANCIAL LITERACY OF STUDENTS IN BUSINESS AND ECONOMICS HIGHER EDUCATION

Alexandra Pintye, Marietta Kiss
Institute of Marketing and Commerce, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
p.szandra22@gmail.com
kiss.marietta@econ.unideb.hu

Abstract: *Alongside the numerous negative effects of the 2008 economic crisis, we can emphasize perhaps one positive aspect: one consequence of the crisis has been that attention has been paid to the low level of financial literacy among the population and the importance of financial education. Research into financial literacy has given priority to young people, because in order to be able to avoid a crisis similar to the lows of 2008, the next generation must at least have a high level of financial literacy. Therefore, this study focuses on an analysis of the financial literacy of young people. In our primary research we wanted to describe the financial literacy of Hungarian university students of economics and business, and to show any difference in this area compared to "average" young people not receiving this type of education. We also looked at how economic and financial knowledge acquired in high school influences the financial literacy of students. In our research questionnaire we focused on the three components of financial literacy developed by the OECD in 2010: financial knowledge, financial behaviours, and attitudes to and preferences regarding financial matters. Our results show that the financial knowledge of those involved in economic and business education is at about the same level as the financial knowledge of "average" young people; however, financial and economic education in high school has a positive effect on students' financial literacy. In our analysis of financial behaviour, we came to the conclusion that the factors influencing economics and business students' choice of a bank are almost identical to those of "average" young people. In addition, similarities were discovered in borrowing, as well as in the willingness to finance everyday consumer goods through loans. However, in terms of the selection of savings provision and financial products, economics and business students are characterized by more conscious behaviour compared to their "average" counterparts. Furthermore, it was found that the financial attitude of all the tested students as well as of "average" young people is above the average, but this is not manifest in their behaviour regarding savings, so any measures taken in the future to improve the financial literacy of the general public should focus in particular on this component.*

Keywords: youth financial literacy; financial knowledge; financial behaviour; financial attitudes and preferences

JEL classification: A20; D12; D14

1. Introduction

Hungary has not escaped the unfolding 2008 international financial crisis, which has had numerous negative impacts on the country's economy and society. The most significant factor behind the crisis was the huge amount of innovation in the financial sector (ÁSZ, 2014a), which led to products appearing in the financial markets which were more complex, and required more in-depth knowledge. However, a significant part of the population of Hungary was not in possession of the essential financial and economic knowledge required for the conscious use of these complex products. This resulted in an

acceptance of a higher risk than corresponded to the real capability to bear loans, and consequently, over-indebtedness (Csiszárik-Kocsir, 2013). The crisis, however, has one positive effect: all over the world attention has been drawn to the deficiencies in the financial literacy of the population (Hornyák, 2013) and this has contributed to a realization that for the sake of the creation of each country's wellbeing and financial security it is essential to reduce those macroeconomic risks that arise from citizens undertaking financial decisions which are not well-founded (ÁSZ, 2014a). Recognizing, therefore, that the low level of financial literacy of the population could be detrimental to the stability of the economy, financial literacy and its development needs have increasingly came to the fore all over the world, including in Hungary (ÁSZ, 2013).

2. Financial Literacy

According to Béres (2013), if we want to take steps to develop the financial literacy of the population, it is essential that financial culture itself be defined, since if there is no specific picture of what we want to develop, any efforts made in this direction are useless. To date, research in the field of financial literacy is always determined by the purpose of the research, the target group and the research focus of the issue, and this decides what is meant by the concept of financial literacy. Examining existing research studies Hung et al. (2009) collected nine kinds of approach to financial literacy.

The OECD's International Network on Financial Education (INFE) defined financial culture as follows: "Financial literacy is a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing" (Atkinson and Messy, 2012:14). In accordance with this definition, Atkinson and Messy (2012) split financial literacy into three distinct components: financial knowledge, financial behaviour and financial attitudes and preferences. In our research we follow this threefold division.

Financial knowledge include, inter alia, knowledge of financial products and services and knowledge of financial terms (inflation, yield etc.), and these contribute significantly to prudent financial behaviour (Atkinson and Messy, 2012; Husz and Szántó, 2011). According to Atkinson and Messy (2012), financial behaviour is perhaps the most important element of financial literacy, as it determines the individual's financial well-being. The individual elements of positive financial behaviour – such as savings, which is a crucial element of the creation of financial security and the reduction on credit dependency – increase financial well-being. One of the bases of conscious financial behaviour is the acquisition of information about financial products before purchasing them, because if the individual seeks to make conscious financial decisions, he or she will study the market, and is more likely to choose a product that best meets his or her needs, and is less likely to become a victim of fraud or deceit. Financial behaviour, however, has negative elements, too, such as reckless borrowing, which has a negative impact on an individual's financial well-being in the long run (Atkinson and Messy, 2012). Attitudes and preferences are also an important part of financial culture (Atkinson and Messy, 2012).

The relationship between the three areas of financial literacy is well described by Nagy and Tóth (2012), who argue that people begin to acquire finance-related knowledge in childhood, with the help of common family purchases, and pocket money management. This is the kind of learning process during which young people associate with different attitudes to money, which then greatly affect money management habits.

Many research results support the idea that the level of financial literacy is low not only internationally, but also domestically. Among these surveys it is important to note those conducted by the Hungarian National Bank in 2006 (MNB, 2006), by the OECD in 2010 (Atkinson and Messy, 2012), and the research coordinated by the National Audit Office in 2013 (ÁSZ, 2013).

Given the growing financial importance of younger age groups, an increasing priority is

given to them in financial literacy research, since in order to be able to avoid similar economic lows to the 2008 crisis in the future, this generation, at least, must have a high level of financial awareness (Hornyák, 2011). Regarding finance, today's youth are uninformed since their knowledge of the operation of the economy and finance is acquired from the surrounding environment – which itself does not have a high level of financial literacy – through social learning, thus, they acquire a false image of the market economy (Kovács, 2013).
The theme has become particularly topical in Central and Eastern European countries, since after the creation of market economy structures following political transition – and the changing value system which evolved as a result – young people are expected to have different attitudes, different financial awareness and different financial habits from those typical of their parents (Kovács et al., 2013). For this reason, many countries treat the development of financial literacy among young people as a matter of national strategy (ÁSZ, 2014b).

3. Data and Methodology

In the framework of our primary research we examined the financial literacy of economics and business students at the University of Debrecen, Faculty of Economics and Business (UD FEB), which we compared with the results of earlier research studies into the financial literacy of young people mentioned in the previous section.
A factor in our choice of target group is that young people involved in higher education are already typically facing financial decisions which will define their lives for a long time, such as a student loan application or even choosing a bank.
The empirical data was collected on 16 February 2016 at UD FEB by means of printed questionnaires. Finally 118 valid questionnaires could be analysed. The sample included 47 students from the BA in commerce and marketing program, 20 from the BSc in agribusiness and rural development engineering program, 17 from the BA in tourism and catering program, 15 from the BA in business administration and management program, 6 from the logistics management master's program, 6 from the BA in international business program, 3 from the management and leadership master's program, 2 from the commerce and marketing vocational training program, one from the business development master's program, and one from the BSc in sports management program. The sample does not reflect the distribution of the faculty's students among majors and thus cannot be considered representative.
The students filling in the questionnaires were aged between the ages of 19 and 27. 47% of respondents live in county towns, 37% in other towns, and 14% live in villages. 31% of respondents had attended training in economic and financial subjects in high school.
Our main research question was whether the special economic and financial knowledge – hopefully – acquired day by day in the framework of the higher education system would emerge as an observable difference compared to the level of financial literacy of "average" young people not participating in such courses. Our hypothesis is that the economics and business students have a higher level of financial literacy in all three dimensions than "average" young people (H1). In addition, we also investigated whether economic and financial knowledge previously acquired in high school constitute an advantage compared to those who had not previously had such knowledge. Our hypothesis is that economic and financial knowledge gained in high school has a positive influence on the students' financial literacy, in all three dimensions (H2).
The preparation of the questions was mainly based on the surveys published by the National Bank of Hungary (MNB, 2006), the OECD (Messy and Atkinson, 2012), and the National Audit Office (ÁSZ, 2013). During the examination of the three elements of financial literacy, in addition to the descriptive statistical methods we used univariate and multivariate analysis methods (one-sample and paired samples t-tests, binomial tests).

We examined the relationship between the elements of financial literacy and the economic and financial knowledge gained in high school with the help of independent samples t-tests and by using crosstab analysis.

4. Results

In describing the research results we focus on the three components of financial literacy presented earlier.

4.1. Financial Knowledge

Students' financial knowledge was measured using seven questions, including four questions relating to concepts occurring in everyday life, and which are essential to make informed financial decisions, i.e. they test students' theoretical knowledge, while the remaining questions investigated the students' level of financial knowledge through three practical examples.

During the preparation of the practical questions we tried to ensure that they would be easy to answer given the students' appropriate sense of reality. These questions measured the students' ability to calculate inflation and yield, as well as their awareness on how to open a bank account. This was done by using closed questions (2, 3, and 4 possible answers given), thus assisting a response without the need for more serious calculations. Overall, we can say that the students' knowledge of these subjects is good, since a considerable proportion of them gave the correct answer to these questions (inflation: 84%, yield calculation: 91%, opening a bank account: 84%). The result achieved in the question testing the calculation of yields must be highlighted, as it shows a significant positive difference from the national average since this was the task that caused the most trouble for the respondents to the OECD 2010 survey (Atkinson and Messy 2012) (less than two-thirds of those surveyed could correctly answer the question).

With the theoretical questions about financial terms, those related to knowledge of the Annual Percentage Rate (APR) and Unified Deposit Rate Index (UDRI) showed the lowest rate of correct responses (51% and 40%, respectively). A slightly higher – but overall still low – proportion of students (72%) were able to correctly answer theoretical questions related to debit cards. The theoretical issues which received the most correct responses (87%) concerned the concept of inflation. It is, however, a matter for concern, that 13% of students participating in the economics and business education believed that inflation is an "exchange coefficient between the forint and the euro exchange rate", or is "foreign currency expressed in the domestic currency price".

The number and proportion of correct answers to the specific questions, and one-sample t-test statistics measuring their significant difference from a chance answer are shown in Table 1. The table shows that for all questions significantly more people answered them well than if they had chosen their answers by chance. The distribution of answers to questions related to opening of an account and to debit card, given that these answers are two bivalent variables were examined with a binomial test. The results for these questions (opening a bank account: $p<0.001$; debit card: $p<0.001$) show that significantly more people answered the questions well than implied by statistical probability.

Table 1: Characteristics of the answers to questions designed to reveal financial knowledge

Knowlege tested	Number of those responding correctly (individuals)	Proportion of those responding correctly (%)	Expected value	t value
Inflation (Practical)	99	84	0.33	-3.450***
Calculation of yields	107	91	0.33	-9.525***
Opening a bank account	99	84	-	-
APR	60	51	0.25	5.226**
UDRI	47	40	0.25	7.771**
Inflation (Theoretical)	103	87	0.25	-6.588**
Debit card	85	72	-	-

Source: Authors' own analysis, n=118
Note: ** significant at 1%, *** significant at 1‰

Following this, we examined the difference between real and perceived financial knowledge. Students' perceived financial knowledge was measured by a seven-point Likert scale, which produced a total score easily comparable to the seven questions testing real knowledge. Students' average perceived financial knowledge was 4.43 (SD=1.008), while the average of the correctly answered questions testing actual knowledge was 5.13 (SD=1.291). On the basis of the paired samples t-test results, we can state that students' real financial knowledge was significantly ($p<0.001$) higher than their perceived knowledge, i.e. a significant number of them undervalued their own financial knowledge.
We also investigated whether there is a connection between the level of financial knowledge and the fact that students have acquired financial and economic knowledge in high school. Based on the results of the independent samples t-test, we can say that high school students who had participated in economics education had a significantly ($p=0.025$) higher level of financial knowledge than those who had not taken part in such training. This is contrary to the results of research coordinated by the National Audit Office in 2013 (ÁSZ, 2013).

4.2. Financial Behaviour

The financial behaviour of young people in the study was tested using 12 questions. First we analysed the factors that influence students' choice of bank; before the research we asked whether they had a bank account at all, and when they were personally connected to the financial sector. 100% of respondents had a bank account. Of these, 13 (11%) were already in some relationship with a financial institution during their primary school years (i.e. up to 14 years of age), 67 (57%) opened their accounts during the high school years (14-18), while 38 (32%) opened a bank account during university years.
About two thirds (68%) of students with current accounts chose the bank that their parents or relatives recommended to them, while the second most important aspect (49%) that affects opening an account was the fees imposed by the bank. In third place was the bank's reputation and the public's awareness of it, at 39%. In comparison with "average" young people no great differences can be observed in terms of the most influential factor, since in the 2006 MNB survey, most respondents (64%) also nominated their parents' recommendation as the most important factor affecting their choice (MNB, 2006). There were differences, however, in the subsequent factors, since the second and third most

important aspect was the quality of services and the level of banking in the case of those surveyed in 2006. Factors influencing the choice of a bank among economics and business students are illustrated in Figure 1.

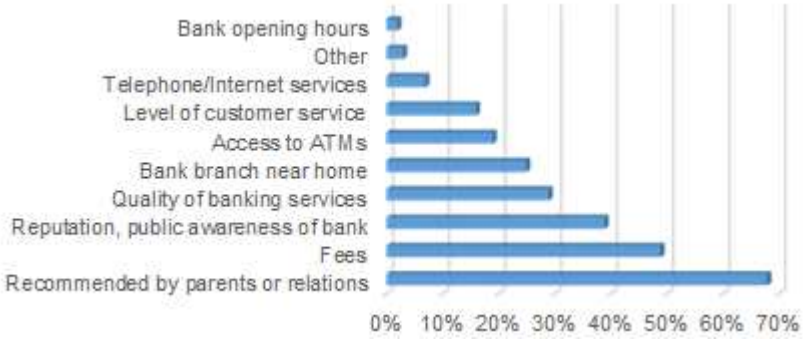


Figure 1: Factors influencing choice of bank (% of respondents)
Source: Authors' own research, n=118

The analysis of financial behaviour continued with an analysis of savings behaviour. Respondents were asked if they have any savings, and those with savings were asked to indicate what form they kept their savings in, while with those who had no savings we wanted to know what lay behind this.
The replies showed that 61% of respondents have savings. This ratio is much more favourable than the results of the survey conducted by the OECD in 2010 (48%) (Atkinson and Messy, 2012), so this area of economics and business students' behaviour can be described as much more conscious. 43% of students with savings kept them at home, while 35% kept them in a current account, and 4% entrusted them to their family, so these students are passive savers. A minority of the students surveyed showed conscious behaviour: 26% of them deposited money in a savings account, and 6% bought investment products. These students can be termed active savers.
Most of the students (87%) who are not able to save reported that their current income does not allow this kind of activity. Several of them (26%) said that they spent too much on trivial things or, because of a party, or travel (15%) they cannot put anything aside.
While we were studying students' saving behaviour we also examined the relationship between the economic and financial knowledge acquired in high school and saving provision, using a crosstab. The Pearson's chi-square value was 0.650 ($p=0.420$), suggesting that there is no relationship between the two variables.
The behaviour of students with loans was measured by two questions. First, we asked whether they have a loan and, if so, what type. 16 students (14%) have some form of loan, and all of these students use it to finance their studies. When asked whether in the future they would take out a loan to cover their daily expenses, only 5 (4%) answered in the affirmative, suggesting positive behaviour. This is slightly lower than the national average, as during the 2010 research, 14% of respondents said that they have recourse to credit, if their income does not cover their expenditure (Atkinson and Messy, 2012).
For the third component of financial behaviour, we examined the participants' behaviour in terms of the extent to which they found out about financial products before selecting them. The students' responses revealed that this behaviour is not universal, as only 39% of them try to consider carefully before making a choice. However, compared to the national average, their behaviour can still be considered more aware, since in 2010, only 5% of respondents said that they look around the market before selecting a financial product (Atkinson and Messy, 2012).

4.3. Financial Attitudes and Preferences

Students' financial attitudes were measured using three scaled statements ("In general, I live for today", "It is better to spend money than to set it aside for the long-term", "Money is there to be spent."). The respondents were asked to indicate on a Likert scale ranging from one to seven how much they agree with these statements indicating negative attitudes and preferences. The resulting values were coded as -3, -2, -1, 0, +1, +2, +3, so that the original value of 1 on the scale is assigned a value of +3, while 7 was assigned a value of -3. After summarising the values we created a composite index of financial attitudes (Financial Attitude Index, referred to as FAI). The FAI can feature a value ranging from -9 to +9 (since we combined the points values of the three questions), where +9 indicates an absolute positive attitude to money and savings, while -9 indicates students' total indifference to savings.

The average FAI among the surveyed students was 2.07 (SD=3.399), from which it can be concluded that the students are more characterized by a positive financial attitude than a negative one.

During the FAI analysis, we examined whether there is a relationship between the index values and financial-economic knowledge gained in high school. With an independent samples t-test we concluded that no significant difference can be detected between the FAI averages (p=0.933) of those students who received financial and economic education in high school and those who did not, both groups being characterized by a positive financial attitude.

Compared to the national average there was no significant difference in this area, since one of the main findings of the OECD's 2010 survey (Atkinson and Messy, 2012) was that Hungarian households' financial attitudes was above the average (in fact, the highest) of the 14 countries surveyed.

5. Conclusions

The results of the examination of the financial literacy of economics and business students broadly confirm earlier investigations into the field of financial literacy, the main findings of which are that the financial literacy of young people, despite numerous developments, continues to show shortcomings.

As regards the financial knowledge of the economics and business students in the sample, we can say that the vast majority of them are in possession of the necessary mathematical knowledge for everyday financial decisions; some of the theoretical issues, however, present problems for them. In contrast to the results of previous research, financial and economic knowledge gained in a high school environment has a positive impact on the financial literacy of students in the sample. The students' financial knowledge did not show a significant difference compared to the national average, but the economics students typically undervalue their knowledge.

Similar to the results of previous research, the description of financial behaviour has shown that when young people select a bank their parents' and relatives' recommendation is decisive. The provision of credit, as well as the purchase of daily consumer goods on credit also indicated no significant difference compared with previous results; both the behaviour of economics and business students and that of "average" young people shows consciousness. Examination of the provision of savings and the acquisition of information prior to the purchase of financial products indicate that the students have more positive behaviours compared to "average" young people. There was no correlation between the provision of savings and the financial-economic knowledge gained in high school.

The attitudes of students in the sample regarding financial matters is positive, and above average, as can also be seen in the nation as a whole on the basis of the results of the OECD survey (Atkinson and Messy, 2012). However, this positive attitude is not reflected in the saving behaviour of respondents, neither in earlier research, nor in the current study. Furthermore, the economic knowledge gained in high school did not improve the financial

attitudes of young people in the sample.
Our research has shown that the financial literacy of economics and business students – except in the dimension of financial behaviour – cannot be considered to be at a higher level than among "average" young people, so the first hypothesis (H1) is rejected. In addition, economic-financial knowledge gained in high school only has a positive influence on one aspect of financial literacy, so the second hypothesis (H2) can be rejected as well. On this basis we can conclude that the financial and economic education of young people is worth starting even at university level, but in any case it would be advisable to teach it during the elementary school years, as occurs in the world's developed countries, such as the USA (Hornyák, 2013).

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INTERNAL AUDIT IMPLICATIONS ON BANK PROFITABILITY. THE ROMANIAN CASE.

Paula Terinte[1], Mihaela Onofrei[2], Bogdan Firtescu[3]
[1]Doctoral School of Economics and Business Administration, University of "Alexandru Ioan Cuza", Iasi, Romania
[2,3]Department of Finance, Money and Public Administration, Faculty of Economics and Business Administration, University of "Alexandru Ioan Cuza", Iasi, Romania
paula.terinte@yahoo.ro
onofrei@uaic.ro
firtescu@uaic.ro

Abstract: The aim of this paper is to determine the implications of the internal audit on bank profitability. We have conducted a Multiple Linear Regression Model using data from 15 Romanian commercial banks. The data used in our model is for a ten years period (2003-2012) as reported by the Bureau Van Dijk database and the annual reports of the banks from our sample. The result of fixed effects (within) regression suggests that fixed model is a better choice than ordinary least squares models for estimating influence on ROAA. The results showed that independent auditors and CEO duality (as dummy variables) influence (being statistically significant and having expected sign of coefficients) bank profitability regarding the commercial banks in Romania in the analyzed period of time.

Keywords: Audit; Financial Reporting; Bank Profitability.

JEL classification: G21; M48.

1. Introduction

Internal audit represents a relatively recent activity and leads to new responsibilities providing a path in constructing new objectives in company risk management. Internal audit contributes to risk management and governance efficiency which leads to better performance that cannot be achieved without the collaboration and the support of the company's management, in our case, of the bank's management. Internal audit is the subject of numerous scientific papers, articles and studies in both nationally and internationally scientific literature.

2. Literature review

Internal audit must provide independence and objectivity and by providing that internal audit must consult and collaborate with company's risk management, control and corporate governance Al-Akra M. et al (2016). An effective internal audit and an effective internal audit committee are very important for the corporate governance and company efficiency (Alzebana A. and Sawanb N., 2015). The audit committee characteristics such as: the independence of the audit committee, the expertise, the size of the audit committee and the number of meeting has an important impact on the implementation of the internal audit recommendations. The authors showed that the independent audit member variable has a higher contribution in corporative risk management and corporate performance and to the external audit. Internal Audit evaluates and improves the effectiveness of risk management and control within an entity Zaharia D. et.al (2014). Internal audit is viewed from the perspective of the authors at the last level of internal control within a company. Internal

audit helps companies in fulfilling their objectives by adding value and transparency and by assisting the managers to a better strategy for the companies' activities (Botez D. 2012). Internal audit represents a needed factor for business efficiency regarding efficient management of the patrimony, reducing company costs, maximizing profit and achieving long-term objectives (Petraşcu D. and Tieanub A., 2014). Internal audit increases the credibility of the financial statements therefore it reduces the divergence in investors' assessments of firm value. The analysis conducted on Chinese companies (Chen C., et.al, 2014) showed that investors relay more on audited financial statements and internal audit contributes on diminishing inter-investors divergence. In East Asia, the independence on the audit committee is not enough to increase developmental performance there is needed both audit independence and legal expertise of directors to increase credibility of the financial statements for the investors especially when the ownership is concentrated (Woidtke T. and Yeh Y-H., 2013). Banks that have in their audit committees' busy directors are more likely to have a higher individual and total risk taking and banks that have in their audit committees' long board tenure have lower individual and total risk taking (Sun J., Liu G., 2014). They also find that company performance and risk management effectiveness are positively associated with banks that have in their audit committees' long board tenure, more female members and a large size audit committee. The relationship between the CEO and the board of directors is very important for the corporate governance and firm performance. Baldenius T., et al (2014) analyzed the CEO power regarding two aspects: if the CEO power controls the board nomination process and if the CEO can settle themselves by aggravating strategically the project complexity. In the first case the CEO tends to nominate an excessively focused on monitoring board and in the second case the CEO tends to nominate a board focused more on advising. The findings of the paper were that there is a negative association between the monitoring intensity of the CEO and the performance of the company. Bank governance and risk choice depend on the managerial ownership differences (Calomiris C.W. and Carlson M., 2016), they analyzed the central banks examination report analysis they considered that if the corporate governance is formal and the company has a high manager ownership then the two of them are negatively correlated and represents tools in resolving conflicts attracting outside funding sources in an environment that conflicts of interest are significant. They found that banks with low formal governance and high manager ownership have lower default risk and those banks that don't have formal governance and high manager ownership have greater reliance on cash in place of equity to limit risk. Formal bank governance determinates a higher tolerance for risk thus a better diversification of holdings of bank stock. An analysis of the implication of corporate governance on financial institutions (Zagorcheva A. and Gaob L., 2015) showed that in the US between 2002 and 2009 better governance has a positively impact on financial institutions performance and is negatively related to excessive risk-taking. Greater governance has a direct impact on higher provisions and reserves for the financial institutions in loan/asset losses. During the crisis the US the banks that had a directly report of the chief risk officer to the board of directors showed a higher performance that those who had the chief risk officer report first to the CEO Aebi V., et al (2012). The authors also analysed the standard corporate governance variables: board size, board independence and CEO ownership and found that during the crisis in the US banks the standard corporate governance variables are insignificant or more likely negatively related to banks performance. Thus we find interesting that the US banks before the crisis showed direct implication of the standard corporate governance variables, if the governance was better, then the bank had higher performance and during the crisis the corporate governance has an impact on the banks performance though chief risk officers reports, during the crisis the risk governance helps the bank perform and before the crisis better standard corporate governance variables were sufficient. This shows us that the US bank environment is an environment that conflicts of interest are relevant and the risk management may not receive as much attention that is needed.

An independent internal audit committee is related to greater quality in monitoring financial statements and the dual role of the CEO and chairman has an impact in diminishing this effectiveness of the independent audit committee in the non-financial companies Kamarudina K.A., et al (2012). The CEO duality has a negative impact on voluntary disclosure meanwhile the audit committee and board size and composition have a positively impact on voluntary disclosure Samahaa K., et al (2015). The frequencies of the audit meetings have a negative impact on the financial distress of Lebanese banks Sallouma C. et al (2014). Thus in this case the frequency of the audit meetings inhibit the financial distress of the banks and assures the effectiveness of the audit committee regarding the monitoring operation, the integrity of the financial statements and the effectiveness of the financial statements review, moreover the frequencies of the audit committee enhance bank performance. In China institutional environment the independence of the audit and the independent directors are mostly symbolic because of the lack of importance given to those variables as instruments that can influence the quality of financial reporting Wu H., et al (2015), the authors find that this two variables intertwine with conflicts of interest and power dependence. Audit firm size matters, most of the scientific papers associate the Big 4 auditors with higher quality audits and thus greater entity performance, better risk management and higher corporate governance (Lai K., 2013); Mo P. et al (2015); Chi H. and Weng T. (2014); Wang B. and Xin Q., (2011), one of the explanations can be that the Big 4 auditors are more concerned in maintaining their reputation than the non-Big 4 auditors. A study for small audit firms (Comprix J. and Huang H., 2015) showed that small audit firms have difficulties in constraining opportunistic managers but there is no evidence that the size of the audit firm can be correlated with real activity manipulation. We consider that the audit firm size and reputation are important in increasing the efficiency of a company regarding risk management and corporate governance

3. Methodology and data

The descriptive statistics of the variables included in our study is presented in Table 1. The investigate is based on data from 15 Romanian banks, analyzed for a ten years period (2003-2012).We have analyzed in our sample only commercial banks that have all the data available for the analyzed period, as reported by the Bureau Van Dijk database and the annual reports of the banks from our sample. Data is also obtained from the databases of the World Bank (Global Financial Development Database), and those related to banking industry were provided by ECB, Statistical Data Warehouse.

3.1. Definition of variables and expected signs

The variables and their description are presented in Table 1.

Table 1: Descriptive Statistics

Variables	Notation	Description	Expected Effect
Dependent			
Profitability	ROAA	The return on average total assets of the banks (%). ROAA calculated as net income divided by average total assets Or	
	ROAE	The return on average equity is defined as net income by average total equity	
Independent			
Bank-specific (internal factors)			
Capital adequacy	EA	Capital adequacy of a bank is measured by equity to asset ratio	+/-
Loan loss reserves rate	LLR	Loan loss reserve to gross loans	-
Management Quality	CIR	Cost to income ratio calculated as the operating costs over total income	-
Liquidity	LIQA	the ratio of liquid assets (cash and due from banks+ available for sale securities + government securities) to total assets (LIQA)	-
funding costs	FC	Interest expense on customer deposits as a percentage of average customer deposits	-
Income diversification of bank	NIIR	calculated as non-interest income over total gross revenues	+
Bank size	LNTA	Bank size is measured by the natural logarithm of the accounting value of the total assets of bank	+/-
Macroeconomic and Industry-specific Factors (External Factors)			
Economic Activity	GDP	GDP per capita growth (annual %)	+
Inflation	INF	The annual inflation rate (consumer prices)	+/-
~~Domestic credit*~~	~~DCPSB~~	~~domestic bank credit to private sector (% of GDP)~~	~~+/-~~
banking industry concentration	CR	Calculated as the assets of the five largest banks over total commercial banking assets (%)	+/-
Auditors Independence	AI	Dummy variable representing independent auditors	+
CEO duality	DUAL	Dummy variable CEO duality, if the CEO is also the CBO	-

*ID variable not included in the model

Source: Authors calculation

A brief description of the database, used as base for statistical calculations, being presented below.

Table 2: Data – brief description

Statistic	N	Mean	St. Dev.	Min	Median	Max
Year	150	2,007.5	2.882	2,003	2,007.5	2,012
ROAA	150	0.714	1.841	-10.940	0.870	3.980
ROAE	150	5.413	26.447	-256.540	8.375	42.570
EA	150	11.382	4.152	4.220	10.755	33.980
CIR	150	71.527	21.658	36.630	67.965	157.48
LIQA	150	35.464	20.084	1.920	31.395	109.32
FC	150	6.346	3.304	1.560	5.800	29.630
NIIR	150	36.709	14.444	-4.000	38.195	70.810
LNTA	150	8.734	1.364	4.670	8.880	11.250
LLR	150	5.297	5.991	0.160	3.500	34.990
CR	150	55.890	2.706	52.400	54.950	60.100
GDP	150	4.462	4.943	-6.020	5.425	9.750
INF	150	7.621	3.412	3.330	6.335	15.270
DCPSB	150	30.381	10.035	13.740	36.230	39.510
AI	150	0.593	0.493	0	1	1
DUAL	150	0.133	0.341	0	0	1

Source: Authors calculation

The Pearson's correlation matrix is available in Figure 1.

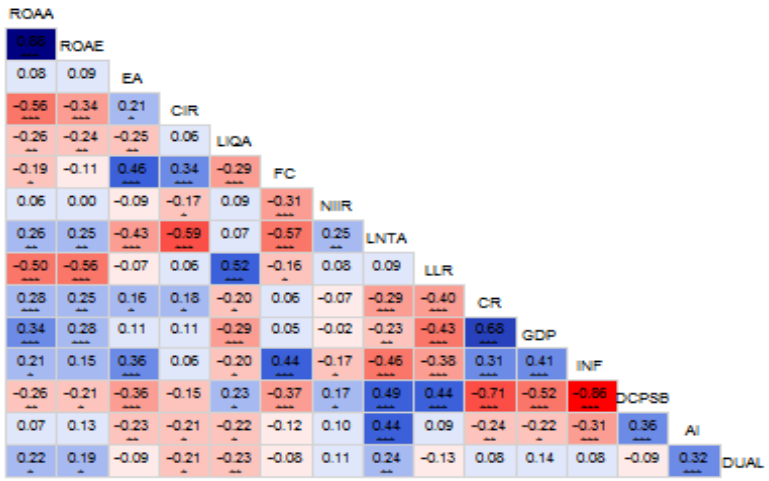


Figure 1: Pearson's correlation matrix

Source: Authors calculation

Due to some correlations between DCPSB and other independent variables, we had decided to remove DCPSB from our model (see annex for VIF from the OLS regression).

3.2.The model

The general regression equation is the following:

$$Dv_t = c + \sum_{i=1}^{n} \alpha_i BSV_{it} + \sum_{j=1}^{m} \beta_j MV_{jt} + \chi \sum_{k=1}^{l} IS + \delta \sum_{l=1}^{2} IA + \mu_{it} \quad (1)$$

where:
Dvt – Dependent variable, represented by banking profitability;
BSV – Bank specific variables;
MV – Macroeconomic variables;
IS - Industry-specific variables;
IA – Internal Audit variables (dummy variables coded with 0 or 1)
i, j, k – counters by categories in independent variables;
t – Time period (2003-2012);
N, M – numbers of independent variables;
α, β, γ, δ–Coefficients (estimated parameters);
c-constant;
u_{it} – Idiosyncratic errors.

3.3. Panel Data Multiple Linear Regression Model Testing Results

In panel data models, panel id variable is Bank, and time variable is Year. The results of fixed effects (within) regression, naive and robust, and random effects, default standard errors and robust, are shown below:

*Hypothesis Testing and Model Choosing f*or fixed effects, the *F test* results are shown below:

Table 3: F test results

F test for individual effects
ROAA F = 2.1682, df1 = 14, df2 = 123, p-value = 0.01253 alternative hypothesis: significant effects
F test for individual effects
ROAE F = 1.1842, df1 = 14, df2 = 123, p-value = 0.2957 alternative hypothesis: significant effects

Source: Authors calculation

As tests suggests, we conclude that fixed model is a better choice than ordinary least squares models.

For random effects, *Breusch-Pagan LM test* results suggests that random effects model is not appropriate.

Table 4: Breusch-Pagan LM test results for balanced panels

Lagrange Multiplier Test - (Breusch-Pagan) for balanced panels ROAA chisq = 2.6972, df = 1, p-value = 0.1005 alternative hypothesis: significant effects
Lagrange Multiplier Test - (Breusch-Pagan) for balanced panels ROAE chisq = 0.50228, df = 1, p-value = 0.4785 alternative hypothesis: significant effects

Source: Authors calculation
Testing for time-fixed effects shows that no time effects should be used (see results below).
Table 5: Breusch-Pagan LM test results for time-fixed effects

Lagrange Multiplier Test - time effects (Breusch-Pagan) ROAA chisq = 0.41651, df = 1, p-value = 0.5187 alternative hypothesis: significant effects
Lagrange Multiplier Test - time effects (Breusch-Pagan) ROAE chisq = 0.41651, df = 1, p-value = 0.4169 alternative hypothesis: significant effects

Source: Authors calculation

4. Empirical Results

The results for OLS regression robust errors are presented in Table 6.
Table 6: Results for OLS regression robust errors

	OLS ROAA	OLS ROAE
EA	0.112**	1.890*
	p = 0.046	p = 0.088
CIR	-0.046***	-0.271**
	p = 0.00000	p = 0.029
LIQA	0.011	0.297*
	p = 0.169	p = 0.051
FC	-0.091*	-0.621
	p = 0.099	p = 0.247
NIIR	-0.004	-0.125
	p = 0.636	p = 0.512
LNTA	0.022	4.155
	p = 0.873	p = 0.106
LLR	-0.128**	-2.688**
	p = 0.031	p = 0.043
CR	0.083**	0.647
	p = 0.029	p = 0.152
GDP	0.060***	0.714***
	p = 0.008	p = 0.006
INF	0.013	-0.146
	p = 0.748	p = 0.774
AI	0.468	10.569*
	p = 0.117	p = 0.076
DUAL	0.058	0.129
	p = 0.825	p = 0.971
	OLS ROAA	OLS ROAE
Constant	-1.711	-65.252
	p = 0.543	p = 0.118
Observations	150	150
R2	0.640	0.529
Adjusted R2	0.609	0.488

Residual Std. Error (df = 137) 1.152	18.927
F Statistic (df = 12; 137) 20.302***	12.827***

Notes: ***Significant at the 1 percent level.
**Significant at the 5 percent level.
*Significant at the 10 percent level.

Source: Authors calculation

The results of fixed effects (within) regression, clustered (by bank) robust errors are shown below:

Table 7: Fixed effects results, panel data clustered (by bank) robust errors

	Fixed effects ROAA	Fixed Effects ROAE
EA	0.080	1.415
	p = 0.197	p = 0.150
CIR	-0.047***	-0.211
	p = 0.001	p = 0.409
LIQA	-0.001	0.114
	p = 0.897	p = 0.503
FC	-0.069	-0.036
	p = 0.554	p = 0.968
NIIR	-0.019	-0.454
	p = 0.486	p = 0.420
LNTA	-0.325	6.558
	p = 0.444	p = 0.396
LLR	-0.110***	-1.978***
	p = 0.001	p = 0.010
CR	0.058	0.861
	p = 0.263	p = 0.281
GDP	0.072**	0.849*
	p = 0.027	p = 0.071
INF	-0.037	-0.038
	p = 0.662	p = 0.979
AI	0.856***	6.268
	p = 0.005	p = 0.168
DUAL	-0.431***	-4.293
	p = 0.004	p = 0.318
Observation	150	150
R2	0.572	0.403
Adjusted R2	0.482	0.277
F Statistic (df = 12; 123)	13.724***	6.923***

Notes: ***Significant at the 1 percent level.
**Significant at the 5 percent level.
*Significant at the 10 percent level.

Source: Authors calculation

We were interested to find if the presence of corporative governance and internal audit rules (delta in the models) have had impact on bank profitability in the analyzed period of time. We used in the model two dummy variables for AI and DUAL (coded with 1 for having AI – independent auditors and DUAL – CEO duality or 0 for not having these), and we find that AI has the expected effect – positive effect and statistically significant on both ROAA and ROAE.

Conclusions

The empirical study suggests that having independent auditors (AI) has benefic effects (positive sign and statistically significant coefficient) on ROAA (confirmed by fixed effect

panel data model) and ROAE (confirmed by OLS regression). CEO duality (DUAL) has the expected impact on reducing the profitability ROAA (coefficient has negative sign and it is statistically representative).
We can conclude that in the presence of the AI, the bank profitability ROAA is improving with 0.856, while ROAE is higher with 10.569 (the banks with AI have higher bank profitability than other banks), while not having different CEO and CBO is estimated to reduce ROAA with 0.431 (the profitability is higher in banks with different CEO and CBO).
The findings of our paper confirm other studies such Baldenius T., et.al, (2014), the research finding that there is a negative association between the monitoring intensity of the CEO and the performance of the bank, and Samahaa K., et.al, (2015), a survey that observes CEO duality negative impact on voluntary disclosure, affecting the profitability of an entity.

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Annex 1. Variance Inflation Factor (VIF)

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VIF's after removing DCPSB
=============================================================================
EA    CIR  LIQA   FC   NIIR  LNTA   LLR   CR    GDP   INF   AI   DUAL
-----------------------------------------------------------------------------
1.510 1.782 1.919 2.088 1.140 2.909 1.847 2.067 2.256 2.040 1.658 1.294
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SUB-SECTION: ACCOUNTING

POLICIES AND ACCOUNTING OPTIONS UNDER PRESENTATION OF AN ACCURATE IMAGE OF ACCOUNTING INFORMATION IN THE ACCOUNTING INFORMATION SYSTEM AT TRADE ENTITIES

Adrian-Cosmin Caraiman
The West University of Timisoara, Faculty of Economics and Business Administration, Accounting and audit Department, Timisoara, Romania
adrian_caraiman@yahoo.com

Abstract: Constant modification of the conditions of the market and the fierce competition imposed within the economic entities in general, and those in the trade, in particular, finding more efficient ways for obtaining certain information to capture, on a continuing basis, all relevant aspects of internal processes and the interaction with the external environment; so, using solutions based on information technology in the work of economic entities has evolved over time from option to necessity. At economic entities in general accounting policies applied, for the purposes of the regulations in force, refers to the set of procedures applied by the management of an entity with legal personality for accounting operations undertaken since the preparation of the annual financial reporting and respectively of simplified annual accounts financial situations. In the preparation of accounting policies must take account of the specifics of the technical-economic activities carried out by each entity. Managers must design accounting policies so as to ensure transmission through the financial statements/annual accounts, of data and information which are: relevant, credible, complete and neutral, in all significant aspects. Detailed notes have to explain some phenomena, aspects concerning the operations, respectively the accounting records. Accounting notes are presented systematically for each item in the balance sheet and of the profit and loss account. Considering the fact that concerns about the efficiency of managerial decision and hence, in this context, the improvement of accounting information system are not new, I am also of the opinion that the accounting information system, in general, without being exhaustive, must meet the requirement of the rationalization of the accounting information in order to increase the quality of the decision-making process.

Keywords: accounting policies, accounting notes, accounting options, financial statements, explanatory notes, accounting information system

JEL classification: M 41

1. Generally Introduction:

Considering the definition "*accounting policies represents principles, base, rules and specific practices applied by an entity in the preparation and presentation of financial statements*" (IAS 8, aligned 5), and I am of the same opinion with Herbei (2015:102) and that we can say that accounting policies have an important role on the ballance elements registered, recognized, assessed and reflected in the financial statements. In other words, the position, the financial performance and accounting policies are better reflected at the level of the financial statements.

1.1. The accounting policies and accounting notes at trade entities

Over time, the number of potential users of the financial statements has considerably increased, which led to the pursuit of a pressure from the increasingly powerful on line publication of financial information. Thus, the risk of conflict between adminstrators and external users exists, and his presence implies the necessity of accounting rules and the audits of the financial statements.

Therefore, we can appreciate Feleagă's assertion correct, quoting Marquès, according to which "*the purpose of accounting is not an uniquely way to pose in an entity's operations memory and into a means of periodical calculating a performance indicator of the economic establishment*" (Feleagă, 1997:106).

According to IAS 1 - *Presentation of financial statements*, the financial statements provide information on the following items:

- assets;
- debts;
- own capital;
- revenue and expenditure;
- other changes in equity;
- treasury cash - flows.

Please note that this information, together with the information contained in the notes, assists users of financial statements with regard to the estimation of future treasury cash flows of the entity.

The information presented in the notes include (OMFP No. 1802/2014, aligned 466):

- the name of the reporting entity;
- the fact that the annual financial statements are its own, and no group;
- the date on which the annual accounts were drawn up;
- currency at the time of the financial statement;
- expressions of the figures included in the reporting.

Directive 2013/34/EU presents information concerning accounting policies as "representing the key elements of the explanatory notes to the financial statements, among them should be the method of evaluation applied to the various items, a statement of compliance of the respective accounting policies to the going-concern principle, and any significant changes to the accounting policies adopted" (Directive 34/2013/EU, art. 1, aligned 24).

Directive take account of better regulation, with the objective of designing and drafting of regulations of the highest quality, which at the same time comply with the principles of subsidiarity and proportionality, and to ensure that administrative tasks are proportionate to the benefits they bring.

In the notes to the annual financial statements, entities must submit, except other mentions, in addition to the information required, information relating to accounting policies adopted. (OMFP No. 1802/2014, aligned 468)

At trade entities also accounting policies must cover all assets, liabilities, equity, income and expenses and to ensure the transmission of relevant, reliable, understandable and comparable information with respect to the entity's financial statements.

1.2. Accounting policies and explanatory notes at trade entities

Once the Romanian accounting system complied with European Accounting Directives, elaboration and substantiation of accounting policies by each entity

becomes an important consideration to ensure the preconditions for obtaining information of accounting and financial statements credible and quality. (Cernuşcă, 2012:15)

In another vision, accounting policies mean options arising from certain interests, subject to certain principles, rules and conventions regarding the registration, recognition and evaluation elements described by the accounting, preparation and presentation of financial statements. (Ristea, 2000:19)

To the extent that these rules become imperative, applicable by legal and regulated texts, accounting policy relates and is subject to the regulatory system in this field.

At the same time the author makes a demarcation between the accounting policies and accounting procedures. Thus, if accounting policies are options regarding the principles, assessment bases, conventions, rules and procedures adopted by a specific entity in the preparation and presentation of financial statements, then the methods represent processes or procedures used by the entity in accordance with the rules and accounting policies to produce and deliver reliable information concerning the financial position, financial performance and cash flows of the entity.

Accounting policies provide a framework for selecting which of the assets of an entity of commerce, for instance, are recognized in the financial statements as presented and evaluated; source accounting policies being retrieved in accounting regulations.

At economic entities in general, the existence of the explanatory notes as an integral part of annual accounts appears as a informational necessity. Also at trade entities, in my opinion, the explanations about balance sheet, about the profit and loss account make this structure an important cathegory of financial statements, indispensable to users.

Thus, the explanatory notes represents mainly (Pahone, 2005:123):

-the necessary explanations about understanding the elements of the balance sheet and the profit and loss account, of the rules, the accounting methods used, the commitments reflected in the financial accounts and records, etc.;

-complementary elements in relation to the balance sheet and the profit and loss account, which makes the notes to be a complementary document to the first two annual accounts (e.g. presentation of inventories in gross values, net, reversible and irreversible downs presentation, presentation of fixed assets by groups of fixed assets, detailing of debts and receivables on exigibility, etc.);

-represent deviations from accounting principles which have been taken in the compilation of the balance sheet and the profit and loss account, in order to reflect the true image of the financial situation of the entity's performance (e.g. indication of changes in accounting methods, deviations from an accounting principle, adjustments to information submitted in the previous exercise, etc.).

The economic entities in general, users usually want multiple and diverse information for their needs, which cannot be supplied entirely through balance sheet and profit and loss account. So that at trade entities, the large number of users determine which loan decomposable hierarchies can be satisfied through the balance sheet structures of the revenues, expenditures and results.

I also am of the opinion that the processing of information to be considered in view of the complexity of the problems faced by users of accounting information, definition of new practices and new needs, and for this, as Pahone also said, new

information elements, as explanation of procedures used in the construction of the annual accounts are requested.
Also, at trade entities the notes relating to financial statements include:

1. Fixed assets;
2. Provisions for liabilities and charges;
3. Allocation of profits;
4. Analysis of the result from operations;
5. The situation of the receivables and payables;
6. Principles, policies and accounting methods;
7. Stocks and bonds;
8. Information relating to employees, managers and directors;
9. Example of calculation and analysis of the main economic and financial indicators;
10. Other information.

The Romanian legislation, concerning the notes relating to the financial statements, requires that their content, they must submit the following as follows:

-the main methods chosen for preparation of financial statements, information about accounting policies selected and applied for significant transactions and events;

-information required by International Accounting Standards that are not presented elsewhere in the financial statements;

-additional information that is necessary for a fair presentation.

Thus, as the author says, every item in the balance sheet, profit and loss account and cash-flow situation should refer to the appropriate information from your notes. Accounting policies are set out in the explanatory notes in order to determine the values of items in the balance sheet, the profit or loss of each financial year, the cash flows and equity changes.
To do this, also at trade entities, will be presented in relation to fixed asset, for example, the following:

-if the fixed assets are included in the financial statements at historical cost, at revalued amount, or the amount adjusted for inflation, according to IAS 29;

-specific accounting policies adopted for the proper understanding of the financial statements.

With regard to provisions for risks and expenses, at trade entities also, if during the financial year, an amount is transferred from the provisions for liabilities and expenses, in the explanatory notes shall be presented with the following information regarding the:

-the amount of provisions at the beginning of the financial year;

-the amounts transferred to or from the provisions during the financial year;

-the nature, amount or use any other transfer;

-the amount of provisions at the end of the financial year.

For each item listed in the accounts payables will mention the following:

-the total amount of debts included in this post balance sheet which have terms of payment after 5 years from the date of the closure of the financial year;

-the total amount of debts for which the entity has filed certain guarantees;

-information on the nature of these guarantees lodged.

At trade entities also the changes under accounting policies can be brought about by the adoption of a standard, in which case it should be taken into account in accordance with the provisions of that standard, and where there is a change in

accounting policy with significant effect on the current period, can have significant effects on the future period, and the entity must submit the following:

-the reason for the change;

-the amount of the adjustment for the current period and for the periods presented;

-the adjustments made in prior periods to those included in the comparative information;

-if recalculations were carried out allowing for comparability of information.

In view of the above, the conclusion, Pahone mentions, at economic entities in general, that the notes are a must on the information generated by globalization and the insufficiency of the information provided by the balance sheet and the profit and loss account that does not provide an image closely over the assets, financial position and results of the entity; as a result with this idea, presented above, I also agree and I think that applies unconditionally at trade entities too.

1.3. The policies and accounting options in presentation of an accurate images of accounting information at trade entities

As Radu (2009:91) said, logical approach developed by accounting, presentation of an accurate image of the assets, financial position and financial results, based on a rational thought, a gradual knowledge domain investigated, concepts, tools and processes that allow penetration into the essence of economic phenomena and processes.

Theoretical framework brings together a number of concepts that are considered fundamental to regulatory or accounting systems applied at the level of the entity to have clearly specified the coordinates of the base and are able to achieve cohesion between the objective of financial statements as true and fair view, financial information and policy characteristics and estimation techniques as a form of expression towards the recognition and presentation of financial economic reality.

The author considers, in the defined context of the accounting system applied within the entities in general, that including principles presents not only a crucial premise, as well as real necessity in order to obtain an accurate image of the performance and financial position of the entity.

Modeling of accounting information through concepts, conferring, once "objectivity" for accounting system chosen, and, on the other hand, allows to obtain an accurate image.

The author outlines four fundamental concepts that ensure the objectivity of accounting information as follows:

- accrual accounting;
- business continuity;
- accrual;
- accounting judgement.

Accrual accounting takes into account the fact that the effects of transactions and other events are recognized when transactions and events occur (and not as cash or its equivalent is received or paid) and they are recorded in the financial statements of the periods. Also at trade entities we can say that the financial statements are prepared on the accrual basis of accounting and it provides information about past transactions (supply, sales, payments, receipts, etc.)

respectively upcoming events (propspective incomes, future payments). At the same time the author mentions that also the international normalization referencial specifies that "in order to achieve the objectives, financial statements are prepared in accordance with accrual accounting"; in addition, the majority of regulated accounts, including romanian accountancy, follows the principles of accrual accounting which, in turn, have imposed concepts of accounting assets, liabilities, income, expenditures, debt. However, development of the cash flow situation can be assessed in recognition of the relevance of information on receipts and payments effected during the financial year.

Business continuity means the drafting of the financial statements starting with the presumption that an entity will continue its activity in the foreseeable future, on the assumption that the entity has no intention and no need to liquidate or to significantly reduce its activity. Moreover, as the author said declaration of continuation capacity or of non-continuation of exploitation, is equivalent, in fact, with validation of health status or the insolvency of the entity in question; thus, in the case of continuity, heritage assessment and, including determination of results, are done by taking into account the value of utility assets; and in the case of non-continuation, will resort to other lichidative values.

The concept of independence of the exercises is considering appropriate delimitation of the revenue and expenditure for the financial year covered by reporting without regard to the date of receipt or payment amounts.

Radu (2009:93) says that applying for exercises independence arises several consequences, namely:

-practicing an accrual accounting, which means, as I detailed above, record revenue and receivables/payables/expenses on the occasion of their appearance and not their receipt, respectively payment;

-using regularization accounts: constant expenses in advance and constant revenues in advance;

-debt payable and claims receivable;

-the necessity of calculating depreciation and provisions at the end of each fiscal year;

-the mention in the annex relating to the income and expenditure in previous exercises;

-accounting of events subsequent to the closure of the financial year, but preceding closure of the accounts, which significantly affects the financial position and the results of the exercise;

-highlighting the events subsequent to accounts closure, that have impact on the financial situation.

Professional reasoning is the concept that manages the accounting system construction of an entity, having as theoretical support one of the theoretical frames of reference and regulatory framework of reference of the competent authority and is the expression of the system of judgments, informed, providing relevant and credible information. (Paraschivescu, 2005:69)

Radu asserts that the accounting policies and estimations are under the decisive influence of a variables complex, the applicable situation also at trade entities, in our case, namely: the nature of the entity's property, category of entity, entity size, activity, territorial subdivisions of the dispersion of the entity, the continuity of the supply process, characteristics of the goods, the degree of automation of accounting information treatment, human potential, managers on the management

concept, etc.
In other words, professional reasoning underlies the accounting policy and estimating techniques through which it builds and operates its own accounting system of the entity, its specificity and adequate environmental conditions, for presentation of the financial position with accuracy, performances and modification of financial position of the entity's.
In fact, generally speaking, managers are sitting in front of a truly essential and elemental, at the same time, namely that an accounting system from an entity cannot be functional and efficient at the same time, and cannot achieve the mission only on the basis of some perceptions of accounting regulations.
As the author said, opinion which I agree, is in dire need of economic entities in general, its own accounting system, constructed and applied informed, oriented towards fundamental values (principles and laws) of the conceptual demands and of the applicable regulations.
In this context, the objectives of professional reasoning follow: balancing the qualitative characteristics of financial information that gives a true and fair view of the situation of the entity; items that will be recognized in the balance sheet (assets, liabilities, equity) or charged to the profit and loss (income and expenditure); evaluation methods and accounting rules; basic treatments (historical cost); alternative treatments (current cost, revaluation); determination of significance threshold by posting items in separate posts, if they are significant in common positions, whether they are insignificant; elaboration and approval of the entity of its own chart of accounts specific to the activity, with appropriate accounts relate.
So, in view of the above, we can say that reasoning turns out to be a fundamental concept of norms, regulators of accounting rules, but, equally, also of managers and professional accountants who integrate accounting information in terms of the market economy, as business and useful product realisation of economic decision-making.
As about the possibility of choosing between different methods and accounting treatments permitted within the same accounting system, Radu (2009:95) believes that it is the primary way by which the "offer person"by accounting information manifests subjective option with a particular purpose. In the same vein the author states that the accounting information are generated by three different sources and uneven in terms of quality, namely:

-those arising as a result of transactions and events in the current period that are accounted for at the time of the occurrence through rigorous application of accounting policies;

-those that come from events after the closing date of the balance sheet, but before the annual accounts must be approved by conditions that existed at the balance sheet date and which lead to the adjustment of financial statements;

-those that come from events after the closing date of the balance sheet, but before the annual accounts must be approved by conditions which did not exist at the balance sheet date and which do not lead to the adjustment of financial statements.

Therefore, in view of the above, in the author's opinion, is out of reach, at the discretion of the directors of the entity to determine what conditions existed at the

balance sheet date:

-where, after the date of the balance sheet, there are new evidence or information regarding those conditions, then it is necessary to make an adjustment to the financial statements if the amount involved is significant;

-where the additional information does not relate to conditions that existed at the balance sheet date, requires the information to be provided in additional notes, if the managers consider that the values involved are meaningful or that they can influence decisions made by third parties on the basis of the financial statements;

-with regard to dividends period from which the related reporting and that are proposed or declared after the balance sheet date, the author highlights the fact that it is not necessary to be reflected in the accounts of that period, since they do not represent a condition existing at the balance sheet date.

At economic entities in general, accounting information users, are interested to have access to this information because the decisions we take about the entity in question are affected by them.

In this regard, in the author's opinion, accounting policies are detailed methods for the recognition and valuation of financial statements, structures for which the entity has chosen, from among those supported by regulations or standards that are used on an ongoing basis in order to carry out an exact accounting, of a accurate images.

The field of applying the accounting policies includes mainly published financial statements taken as a whole, whether they are individual and consolidated management reports thereon, the twice-yearly reports as well as information subject to disclosure, and in terms of the typology of appropriate accounting policies the author considers the following boundaries, as follows:

- Depending on the time and frequency of their application:
  -specific accounting policies accounting;
  -the accounting policy relating to the preparation and presentation of financial statements;
  -the subsequent preparation of accounting policies and presentation of financial statements;

- Depending on their scope:
  -the accounting policies for individual accounts;
  -accounting policies the consolidated accounts;

- Depending on their nature:
  -accounting policy assessment;
  -policies of financial statements;
  -financial communication policies.

According to the author's choice of accounting options involve accounting policies or estimation techniques relating to the preparation and publication of financial statements that generate the best information, which really means getting and providing a true financial position and performance for decision making, and whatever the accounting system, we can find with practiced ease that accounting policies support the charging of the effects of transactions or of an entity's financial position event and/or financial performance. That's why the author believes that the

conceptual difficulties relating to the entity's accounting policies are maintained largely by "dispute"-balance the profit and loss account in regard to the reflection of the performance of the entity.

2. In conclusion:

Today fierce competitive environment, determines economic entities, including those from trade, to identify, to assimilate and exploit all the resources available to them and to enable them to optimise, reducing costs while increasing performance, reducing response time to market changes and the legal framework. Among the instruments to assist in the attainment of economic entities they are assimilating information technology solutions offered by incorporating them into information systems.

Theoretical framework brings together a number of concepts that are considered fundamental to regulatory or accounting systems applied at the level of the entity to have clearly specified the coordinates of the base and are able to achieve cohesion between the objective of financial statements as true and fair view, financial information and policy characteristics and estimation techniques as a form of expression towards the recognition and presentation of economic reality. In the preparation of accounting policies must take account of the specifics of the technical-economic activities carried out by each entity in the part, and managers must develop accounting policies so as to ensure that through the financial statements/annual accounts, data and information to be relevant, credible: complete and neutral, in all significant aspects.

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IAS 8 – Politici contabile, modificări ale estimărilor contabile și erori.

OMFP nr.1802/2014 pentru aprobarea Reglementărilor contabile privind situaţiile financiare anuale individuale şi situaţiile financiare anuale consolidate.

Directiva nr. 34/2013/UE a Parlamentului European și a Consiliului din 26 iunie 2013 privind situațiile financiare anuale, situațiile financiare consolidate și rapoartele conexe ale anumitor tipuri de întreprinderi, de modifucare a Directivei 2006/43/CE a Parlamentului European și a Consiliului și de abrogare a Directivelor 78/660/CEE și 83/349/CEE ale Consiliului.

CHALLENGES INCURRED IN THE AUDITING OF FAIR VALUE MEASUREMENTS

Silviu-Virgil Chiriac
Alba Iulia "1 Decembrie 1918" University
silviu.chiriac@emantes.ro

Abstract:

The purpose of the auditors' work is to establish confidence between the producers and users of accounting information. Thus, auditors help protect the interests of different categories of beneficiaries of accounting information when they make economic decisions. The prevalence of fair values in the financial statements as their inherent measurement uncertainty has increased dramatically in recent years and is recognized as representing a significant problem for regulators. In these circumstances we ask which are the difficulties encountered by auditors in auditing fair values, what kinds of deficiencies they find within auditing and whether the complexity of measurements of fair value jeopardizes the ability of auditors to give a highly secure opinion.

Keywords: Audit, measurement, fair value

JEL Classification: M40, M41, M42

1. Introduction

The main objective of this article is the presentation of certain aspects related to the fair value measurement according to the International Standard of Financial Reporting, Assessment Standards and the Order of the Ministry of Public Financers n. 1802 / 2014.

Generally, the term "*audit*" comes from the Latin word "audire', to listen and to inform the others; in the nowadays Anglo-Saxon countries, this term means a review of the accounting and other information, performed by an independent professional, in order to express an opinion on the regularity and honesty of the audited information (Toma 2006:14)

„The exertion of audit is based on certain reference norms based on which the auditor sets the objectives to be reached and establishes the most suitable investigation techniques." (Briciu, 2006: 439) Considering that more and more assets and liabilities are measured at their fair value, the auditors and normalizers must understand not only the measurement models and processes through which the management has determined the entry data of the used model, but also possible predispositions and management errors in the application of models, the identification of the data for entering the market and the hypothesis issue. The auditors and normalisers also have to understand which are the most probable sources of distortions and errors that appear during the auditing of fair values recognised in the financial situations.

The auditing of fair values is approached by a very small number of studies. This research gap is somehow surprising, considering the trend of fair value recognising

in the past three decades (Barlev & Haddad, 2004) and the considerable study volume on the impact of the fair value measurements on the variables of the capital market.
The research regarding the relevance and credibility of fair value estimations have concluded generally that the fair value measurements based on entry data taken from active markets are more credible compared to those based on information from less active markets or those specific to the entity (AAA FASC, 2005). Although these studies are useful to the accounting normalisers, they do not refer directly to the problems the auditors encounter as they tend to be more preoccupied by the extent in which these evaluations can be verified rather than their relevance. As a consequence we will focus our attention on the formal and practical guidance supplied by the audit standards, but also on the academic research in economy, in relation with the auditing of the fair values.

2. International conceptual notions regarding fair value

The 18th century marks the beginning of the development of the value theory. The classical school was the first to identify the four production factors: earth, capital, work and coordination and it put in debate the relationship between the basic factors which create the value and the supply and demand ratio on the market.
The classical school continued the development of the physiocrats' theses proposing a value theory based in the production cost. A. Smith (1712-1790) considers that value is an objective phenomenon as it is created by combining the capital factor with land and work.
In the practice of enterprise evaluation, the asset-based approach (mainly the use of cost in the assessment of assets in the patrimony of an entity) is built starting from the classic theory of value based on the production cost.
Generally speaking, the management or creation of the value currently imposed as a standard indicator of the performance at microeconomic level and as a universal measure of the pertinence of strategic decisions. (Casta, 2001: 179)
The notion of "fair value" has been used for the first time in the year 1953 by the "Accounting Research" Magazine, in relation with the re-evaluations in the accounting balance.
The concept of fair value becomes more and more popular in an accounting plan by the end of the 20th century. However, it has been present in the specialised literature and accounting regulations of the important European counties and the Anglo-Saxon world three centuries before that. Moreover, some practices of assessment of the unachieved elements or non-discounted at the lowest value between the purchase value and the resale value (market value) goes back to the 14th century. (Casta, 2001: 115)
The concept of fair value has awaken the interest of many theoreticians, practitioners and accounting normalizing authorities who make opinions on defining it.
The fair value, also called "venal value" by some authors, represents the price at which an asset can be exchanged during a balanced transaction. (Tournier, 2000: 39)
Another variant of the previous definition is: the amount for which an asset can be exchanged for in a balanced transaction, between informed and determined parties, other than in a sale forced by liquidation. (Holmes, 2002: 49)
IASB gives the following definition for fair value: The price for the sale of an asset

or the discount of a liability, willingly, between acknowledging parties, within a transaction in which the price is determined objectively (International Accounting Standards Board, 2008).
We can observe the equivalence made between the "fair value" term and the "market value" term. This association is based in the type of asset that required the accounting measurement of another value than the accounting value. This is about financial instruments that offered at any moment a market value through their stock exchange rate, being quoted on the equity market. Later on, there was a need for the extension on all the patrimony elements of the entity in what regards the measurement of their current value.
As considered within professional standard of asset evaluation, even in the conditions of aiming a market value, the fair value obtained this way in accounting purposes can vary from what is understood by licensed evaluators connected permanently at the market conditions through this concept. Hence, there is the case when different conditions than the ones announced by the definition of the market value (according to the measurement standards) can be applied, namely it is possible that there are no conditions that allow the normal ordered sale of the assets or that the hypothetical sale is under a sort of constraint (Champness, 1998, 23). Also, the term "market value", as understood in accounting is used ambiguously in the case of the real estates for which it refers to a market price obtainable on the spot, from the sale of a trading investment, such as the equity dealt on an active market and not in the typical conditions found on the real-estate markets. This type of investments excludes corporate assets (Champness, 1998, 54). The same observation appears in another specialized work, which states that the term real value is usually paired with the one of market value. (Obert, 2004:61)
In order to bring clarifications related to the fair value measurement, FASB (Financial Accounting Standards Board from the USA) decided to release a standard regarding the evaluation at the fair value which will supply a single set of rules to be applied any time when other standards request the use of the fair value. Thus, in September 2006 SFAS n. 157 regarding the "Fair value measurement" was issued.
At national level, we mention Matiş and Mustaţă (2004) who consider that currently and in the near future we will be the witnesses of a mixed evaluation model, characterized both by historical cost and fair values. The economic entities use the historical cost as a measurement value due to tax reasons. The elaboration of two series of accounts (at a historical cost and the fair (market) value) is not justified in all the circumstances if we consider the cost-benefit analysis in the production of the accounting information.
Another argument **pro** fair value is mentioned by the various field specialists, in view of achieving a better comparability regarding the current and future financial performances of the economic entities, as well as the fact that it is advisable to recognize the tangible fixed assets at the fair value.
Other authors believe that the literature existing on the theme of the fair value treats especially the gaps of the accounting systems and practices, especially the traditional ones, based on their historical cost.
We consider that the notion of fair value is wider than the one of "market value" because for the first time we have the possibility to turn to specific techniques in order to determine it.

4. Auditing of the fair value measurements

The synthesis made on the specialized literature includes the important issues referring to the auditors' understanding of the way the fair value measurements are made. These measurements frequently include anticipative information reflected in the market exchange, but also the reasoning regarding the applicability of these entry data taken from the market in the company's specific conditions. The future conditions and events cannot be promptly foreseen; hence, a judgment element is always involved as well. Since more auditors have a poor training in measurement, there is often the need for specialists for the auditing of fair values. Research specialists, as well as those who elaborate policies within an entity can be confronted with the possibility that the structure of the existing audit team is not compatible with the audits that require more and more specialized measurement knowledge (Vera-Munoz et al., 2006).

Except for the lack of knowledge regarding the elaboration of measurements at the fair value that can be felt among the auditors, they can take into account the errors and the tendencies that can influence the reasoning of those who make the measurements. For example, the auditors should take into consideration the fact that in the process of estimating the preparing fair value they might rely too much on the information used to obtain these values (Slovic, 1982; Davies et al., 1994; Paese & Sniezel, 1991; quoted by Martin et al., 2006). As a consequence, the preparers can get in the situation of not taking into consideration other scenarios, relevant information or measurement possibilities.

Also, the previous researches prove that the individually made previsions are featured by inconsistency ad considerable errors. Even if they are used as statistical instruments for the data analysis to facilitate the provisions, the specialised literature suggests the fact that the decision-making individuals can, unconsciously, influence the estimations towards the preferred directions (the references in the specialized literature are Kunda, 1990; Wilks, 2002; Kadous et al., 2003; quoted by Martin et al., 2006).

One of the important issues related to the auditing of the fair values consists in the preoccupation of the auditors regarding the trust in the internal control exerted on the process of fair values measurement. Barlev & Haddad (2004) sustain that this control should be different than the one made during regular transactions. The auditors must make sure that the fair value measurement control activity is made properly especially in what regards the separation of tasks.

On the other hand, the auditors also have to be cautious in what regards the actors that can influence the audit of fair values. For example, the auditors must not only seek evidence that confirms management's assertions, although the current audit guidance specifies this approach. The finding of such evidente is very simple if the auditor only aims that. However, the auditor should also consider the evidence that might invalidate management's assertions. Although no previous research has examined directly this aspect in relation with the audit of the fair value measurements, there are researchers (Koonce, 1992; Kennedy, 1995; Anderson & Koonce, 1998; quoted by Martin et al., 2006) who treated this problem broadly and suggested certain useful steps in avoiding the confirmation bias.

Finally, the auditors must be capable of identifying the suppositions and key entry data in the process of fair value measurement. The lack of guidance in what might represent a significant supposition suggests the fact that the normalisers of the audit activity will have to specify the necessary principles for the identification of

this type of suppositions. The identification of the key suppositions and testing of their reasonable character represents a major preoccupation of the auditors in what regards the fair value measurements.
The SAS 101 audit standard *Auditing Fair Value Measurements and Disclosures* (AU Sec. 328, AICPA 2003) issued by the *American Institute of Chartered Accountants* – AICPA represents a general approach of audit of the fair value and other associated information to be supplied. This standard does not represent a guide for the auditing of patrimony elements in particular (assets, debt or own capital elements reported to the fair value), but they supply a general framework for the auditing of all the fair value measurements.
In the beginning of this standard it is mentioned that the company's management is responsible for the performance of the fair value measurements and the information to supply associated to them included in the financial situations. More precisely, the management must establish the necessary accounting and reporting processes for the determination of the fair value measurements, select the proper evaluation methods, identify and motivate properly any significant presuppositions used, make the evaluations and ensure that their presentation and information to be supplied are according to the generally accepted accounting principles – GAAP.
Many of the fair value measurements result rather from approximations than exact measurements and involve numerous estimations, classifications, arguments and distributions (Public Company Accounting Oversight Board, 2004). The audit of these measurements is made with the purpose to increase their credibility through the reduction of the errors on the valuator or the measurement process (Carmichael, 2004). The direct verification of the accounting measurement by the auditors tends to minimize these errors. However, many fair value measurements are based on measurement techniques (for example, the value of the options on stock granted to the employees) which incorporate entry data that cannot be verified directly and the auditor is forced to act carefully, including to turn to professional scepticism.
We consider as an example the estimations of the fair value for the employee stock option - ESO. These estimations derive directly from a model based on estimated entry data, therefore the auditors must consider whether these estimated entry data – individually and collectively – could be the object of uncertainty of estimation, of the unjustified use or errors. The research suggest that the management uses the admissible action freedom as an opportunity to influence, in the meaning of decreasing, the fair value of these options (Aboody et al., 2006; Balsam et al., 2003; Bartov et al., 2004; quoted by Martin et al., 2006). But more recent results indicate the fact that this freedom might actually improve the predictive accuracy through the transmission by the managers of the private information through estimations (Hodder et al., 2006, quoted by Martin et al., 2006)
Also, we state that all four types of entry data of the model (option's life expectancy, expected volatility of the price of the support action, expected dividends of the equities and the interest rate without risk for the stock's life expectancy) are used systematically to influence the estimations of the fair value for the employee stock options (Balsam et al., 2003; Aboody et al., 2006; Johnston, 2003; citaţi de Martin et al., 2006).
In order to help the auditors, SAS 101 presents a few necessary requirements for the auditing of the measurements at fair values and the information to be supplied associated to them. We consider that these requirements establish two general

challenges for the auditors:

- To understand well enough the entity processes and the relevant control in the determination of the fair values so as to be capable to develop a more efficient audit approach;
- To analyse whether the entity evaluation methods and the significant presumptions are adequate and whether it is likely that they will supply a reasonable basis for the fair value measurement and for the information to be supplied in the financial situations.

Evaluation uncertainty refers to the ambiguity of assessing an element (for example a financial instrument) or the estimation of the discreet number (for example the estimation of the non-retrievable amounts). The nature of the fair values is so complex that it can put in opposition even well intended experts when there is no market for an element or it exists but it is not liquid.

There are two sources for the fair value measurement: marking-to-market and marking-to-model. Both the IFRS 13 International Standard Fair value Measurement and Topic 820 within the Ammerican Accounting Standards establish a hierarchy of fair values based on the entry data used in measurement. According to the hierarchy, the preparers of financial situations must first give priority to the quotations on the active markets for identical assets or liabilities (Level 1) in front of other data than those at level 1 observable directly or indirectly (Level 2). In case there is no level 1 or level 2 data, the preparers will use unnoticeable entry data (Level 3) which reflect the suppositions of the entity about what the participations to the market would use to set the price of an asset or a liability. The subjectivity of the data observable at level 2 and that unobservable at level 3 induce a great uncertainty to the estimation.

The acknowledgement of the verifications made by the USA Public Company Accounting Oversight Board on the audit missions of the companies forming the Big 4 suggest the fact that some of the auditors find it difficult to determine what represents a reasonable insurance in case of fair value measurement with high uncertainty level based on the current audit standards. A few of the deficiencies reported by PCAOB in the 2010 control reports refer to the failure of the auditors to measure the reasonable character of the significant hypothesis made by the management, the excessive trust in the inquiry without confirmation, the failure in testing the indicators regarding the fair value, such as the brokers' quotations and the improper reliance on a test for the determination of the reasonable character which was not accurate enough because the calculated interval allowed the seven times variation of the significance threshold (Bell & Griffin, 2012).

One of the auditors' concern reasons is incorporated even in the audit standards: „The auditor should obtain evidence supporting management's assertions about the fair value of the derivatives and securities measured or disclosed at fair value. (SAS 92, paragraph 35)".

If the auditors followed this instruction they would literally become „victims" of the confirmation tendency because they would only look for evidence that supports management's assertions, not evidence that might invalidate these statements.

The opinion discrepancies related to the nature, duration and extension of the audit procedures in case of high uncertainty fair value measurement are understandable because an inherent uncertainty, although estimable, is irreducible and as a consequence it cannot be decreased or eliminated through auditing. Moreover, there might be a clarity and specificity lack within the current audit standards in

what regards the responsibilities of the auditor in the fair value measurements featured by a high uncertainty since the normalizers or auditors are at the beginning in what regards the experience in auditing new, various and complex assets and liabilities.

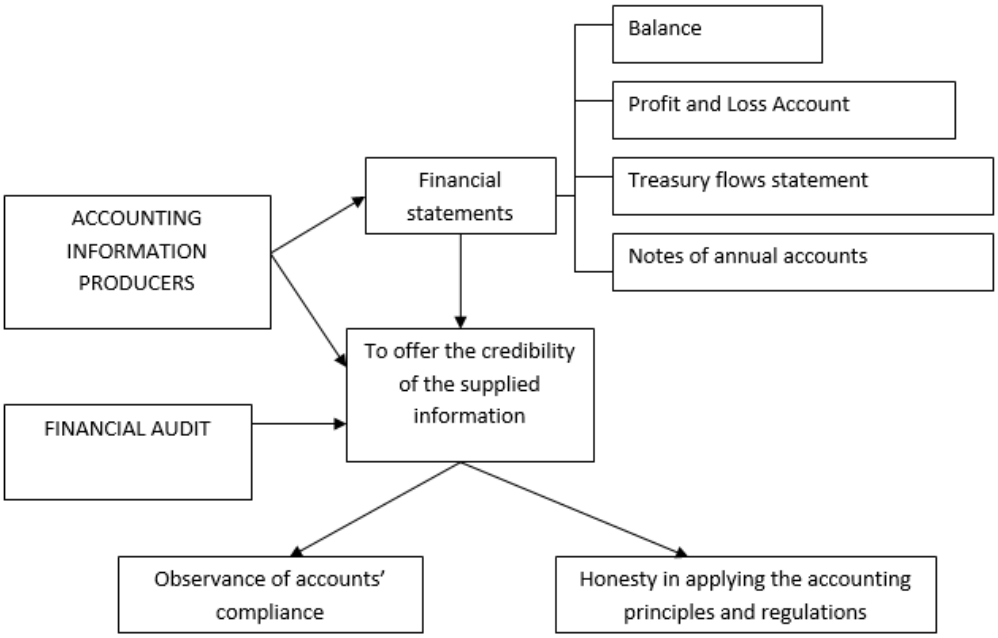


Figure1: .Rolue of financial audit
Source: Own projection

In the analysis of the audit process, the risk evaluation occupies and extremely important place. The evaluation of the audit risk should represent the auditor's main preoccupation. The audit risk could be defined as the risk that an auditor assumes in order to issue an improper audit opinion in what regards the financial situation they audit. The audit standards retain the following definition of the audit risk: "the risk the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated."
For this reason the auditors follow the risks that can appear and that can lead them to opinions that do not reflect reality especially ever since the moment when they accept the audit mission, but also during the mission itself. After the moment of risk identification, the auditors establish the extension of the audit procedures according to the risk areas.
Thee influences and difficulties that might appear in the exertion of the auditor's activity are presented in the following table:

Table 1: Influences and difficulties

Influences	Difficulties
- Anchorage; - Confirmation tendency; - "Overconfidence" + my amount of available information; - The will of not incurring losses; - Excessive optimism; - Extrapolation tendency	- Uncertainties of the external environment; - The control of entity on the fair value; - The complexity of auditing fair values - Potential influences ("motivated reasoning") - Specific evaluation knowledge.

Source: Own projection

In one of his articles, Eugeniu Ţurlea talks about the audit of investments which in his opinion „starts from the assessment of company's performance reflected through the profitability and liquidity indicators, though the analysis of the gross or net profit (taking the sales as a reference basis) and the analysis of the efficiency indicators that reflect the extent to which the efforts made by the company justify the effects generated by its activity. Of course that a pyramid analysis can also be made based on a balance and profit and loss account, without omitting the analysis of the financial risk. […] *the role of financial auditors can be determined in the recommendations of sale-purchase-keeping of the securities and the estimation of the future earnings* (as a base for determination of the price of the securities). As a consequence, the auditor that evaluated the financial-accounting information and the investment decision through the financial analysis used as audit method can motivate the use during a SSIF audit, respectively the audit of the performance in the decision of financial investment and can even create an audit debate group. This group represented by specialists of the capital market, accounting experts and financial analysts must express the point of view based on the audit through the collection of quality audit evidence and through the application of the audit standards, so that the information supplied be useful and indispensable to all investors." (Ţurlea, 2006)

Better quality audits and more detailed audit report will increase confidence in markets, at the same time informing the interested factors about the problems of a certain entity. The direct beneficiaries of the confidence increase are not only the investors and creditors, but also the audited companies (as well as their employees).

5. Conclusions

- The more and more frequent use of the fair values puts the normalizers and practitioners in front of a great challenge, but on the other hand it creates opportunities for the researchers in the audit field;

- The studies should investigate the method and the efficiency of the professional reasoning used by those who make fair value measurements. If this process were understood, auxiliary means could be developed (statistic models) which could help the improvement of the fair value measurement;
- The specialized works draw the attention upon a number of situations the auditors are confronted with in what regards the audit of fair values: The internal control exerted on the fair value measurement process should be different than the one performed during regular transactions, not only the evidence that confirms the management's assertions should be taken into consideration, even if the currrent guidance in what regards audit specifies this approach and the auditors must be capable to identify the suppositions and key entry-data in the process of fair value measurement;
- The fair patrimony measurement which ensured estimation values as close as possible to those possible to be accepted in the case of performing the transactions are based, among others, on pertinent accounting information and, at the same time on the valuator's professional reasoning which can be independent and objective. Thus, the assessment does represent a guarantee in what regards the credibility of the information it offers;
- On its turn, the accounting information that is obtained through a fair measurement acquires extra quality and it contributes significantly to making economic decisions suitable for a good management of the patrimony and entity activity;
- The measurement at the fair value aims a big number of non-financial assets and liabilities; it can be the basis of a new model of accounting representation of the company whose objective will be the one of better transposing the financial situations, the uncertainty that affects the cash-flow provisions and the investment opportunities;
- The fair value of the real estate must reflect the current state of the market and the circumstances existing on the balance and not at a previous or future date;
- The value is created by the interaction of *four independent economic factors:* utility, rarity, will and actual buying capacity;
- An efficient communication between auditor-evaluator-entity as well as an entity that meets the presentation requirements in the financial situations will represent important elements in the investors decision making process;
- The tendency is that the auditor holds relevant knowledge in the measurement process;
- In case a quoted market price is not available, the elaborators must make an estimation of the fair value using the best available information;
- The market determines and sustains the use, the best use determines the market value. The market data lead to a size order of the market value, not to a reasonable estimation.

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WHERE IS THE HUNGARIAN LOCAL TAXATION HEADING?

Éva Darabos, Kornél Tóth
Institute of Accounting and Finance, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
toth.kornel@econ.unideb.hu
darabos.eva@econ.unideb.hu

Abstract: *Operation of the Hungarian municipalities has undergone significant change since 1990. While the regulation aimed to decentralise the tasks and sources after introducing the municipal system, the government has taken measures strengthening the centralization since 2010. Aim of the treatise is to present the weight of budget of municipalities within the state finances, the role of own revenues and local taxes in the budget of municipalities, highlighting the development in amount of the business tax by settlement type. Ratio of the own revenues and local tax revenue have increased in the budget revenue of municipalities and the local business tax paid by the companies has played a bigger and bigger role. In addition to the restructuring of resources, the scope of compulsory tasks has also decreased; the state has taken over the public education and the specified areas of health service which has resulted in a decrease of almost 30% in the budget revenue of municipalities. Due to the territorial concentration of the country, the capital and its districts as well as the cities with county rights levy more than 60% of business tax. The largest companies have settled in the capital and most of the undertakings also operate here so the HIPA revenue concentrates here as well. Since 1 January 2015, there has been a change in utilizing the classical taxes: the revenues from the local business tax shall/may be used for funding the social services belonging to the competence of the body of representatives and for the wage costs of office workers. Since 1 January 2015, the municipalities are allowed to introduce not only local taxes but a settlement tax insofar as it is not prohibited by other law as well as the subject of the settlement tax is not burdened by any common charge. The revenue from settlement tax may be used for funding social services and settlement development only. However, according to the first experiences, a restructuring of local taxes has started by introducing the settlement tax and limiting the utilization of local business tax in bigger settlements. Based on the data, it can be stated that there has been a significant change in the structure of revenues of municipalities since 2008; the local taxes play a decisive role in the budget revenues and those ones serve as important sources of funding.*

Key words: municipality, state finances, budget, local taxes, business tax.

JEL classification: G28, H26, H61

1. Introduction

In recent years, the management of local municipalities has been followed with particular attention both in the EU's and OECD countries. In one respect, the financial crisis erupted in 2008 has also affected the municipal sector in most

countries, on the other hand, transformations have taken place in the system of distribution of tasks and resources between the central and local levels of government in most countries. Numerous authors have digested the domestic and international experiences of the subject-matter (Bordás, 2015; Fellegi, 2012; Halmosi, 2013; Horváth et al., 2014; Lentner, 2015¸ Sivák, 2014). In the course of the research, we will present the main characteristics of local taxation of the Hungarian municipalities, we will analyse the development of budget revenues of the municipalities, we will separately examine role of local taxes and business taxes as well as we will point out some peculiarities of the local taxation. There have been legislative changes concerning the management of municipalities several times throughout the past years but we do not strive to present the change of regulation in detail due to its complexity. Regulation of the Hungarian municipal system was formerly characterized by decentralization of the resources and tasks but the role of the state has increasingly coming to the fore since 2011. We have carried out the analysis based on data of the National Regional Development and Spatial Planning Information System (TEIR), the Hungarian State Treasury (MÁK) and the State Audit Office.

2. Tax harmonisation

One of the most important concepts of the international taxation is the tax harmonisation. Since the second half of the 1990s, the conscious application of the Hungarian tax policy in accordance with the requirements of the European Union has accelerated which was the first step for the commencement of accession negotiations. During the legislative harmonisation, it is required to endeavour to adapt the domestic tax conditions to the tax policy solutions of the EU member states not only in the interests of the budget but it should reflect the priority of other areas of the economic policy as well. Tax harmonisation appears in case of more laws, not only in case of the direct taxes (VAT, excise duty) but in case of the indirect taxes and budget support as well. (Földes, 2005)

In the area of harmonising the direct taxes, a cardinal issue of the European harmonisation is the action against the harmful tax competition. In the interests of forming and operating the single market, the aim and result of the tax harmonisation is the liquidation of tax law conflicts ensuing from the international relations and differences of the national tax systems or from applying same methods. The European Union does not exercise fully intervention in the tax systems of the member states but it uses the influencing instruments of the legislative harmonisation in order to avoid the negative processes and the double taxation as well as to ensure the operation of the single internal market. (Erdős, 2012)

Regarding the direct taxes, the rules are less harmonised than in case of the indirect taxes. Relating to these taxes, not the harmonisation prevails but the coordination, the reason of which is that the decisions of the European Court give direction how the direct tax may or may not be regulated. It is important to mention because, apart from the enforcement of the four freedom principles, there are no EU expectations in case of the direct taxes, particularly in relation to the local taxes. This is the reason why the local tax is one of the most important instruments: each member state can elaborate its own tax system in accordance with its intent. In addition to the discrimination, there are no other expectations regarding the local

taxes; this fact gives the legislators and the settlements a large scope for action. (Deák, 2013)
Significance of the local taxes is also considerable in the OECD countries; the property taxation has come to the fore in the local taxation. Central questions of the local tax reforms: in one respect, how a connection can be established between certain tax categories and the services used, on the other hand, creating a balance between the central and the local taxes. (OECD, 2013a) Besides, for instance, decentralization of educational tasks is also a priority issue in most of the OECD countries. (OECD, 2013b)

3. Introduction of local taxes

The aim of introducing local taxes is to ensure the independence of a municipality and to exercise the right of local taxation. Act C of 1990 on Local Taxes (hereinafter Htv.) has empowered the municipalities to exercise the right of local taxation. The tax categories defined in the Act are introduced in the area of their competence by means of a regulation. Since 1990, the tax assessment right has been being performed – we could even say – without traditions.
Due to the Act, 308 municipalities introduced local taxes in 1991. Those ones were mostly larger cities and cities with county right which introduced business tax, communal tax of entrepreneurs and tourist tax. However, the continuously changing economic situation has required more and more municipalities to introduce local taxes, especially the business tax. In 1992, a significant change occurred since 1 461 municipalities had already introduced local taxes and the local tax revenues had significantly soared. While it had been HUF 4 billion in 1991, HUF 17 billion was already received from the local tax revenues in 1992. In 1993, there was no change in number of municipalities introducing local taxes but the revenue resulting from local taxes already reached HUF 27.1 billion (*ÖN-KOR-KÉP, 1997*).
Year of 1994 was characterized by the elections which resulted in that the newly established body of representatives used the opportunity of introducing local taxes. Thanks to this, the number of municipalities introducing local taxes increased to 1 578. In January of 1996, the Act on Local Taxes was modified under which the exemptions and allowances narrowed and the tax rates increased. By 2001, the number of municipalities introducing local taxes (3 027 pcs) increased tenfold compared to 1991. Until the end of 2013, further 127 municipalities introduced local taxes. Currently, 3 178 settlement municipalities work in Hungary and 3 135 of them have introduced some type of local taxes since 1 January 2015. This means a ratio of 98.6%.

4. Weight of municipalities in the state finances

In modern market economies, extent of the weight of municipalities within the state finances shows a quite varied picture and represents the degree of decentralisation prevailing in a given country. Role of the local municipal level is significant in ensuring the collective goods and in organizing the public services. The issue of decentralisation is always a central issue in the course of adjudicating the operation of municipal systems and during the reform of systems operating. Namely, the experiences indicate that the benefits of decentralisation do not prevail

automatically as well as the combinations of advantages and disadvantages are very different from county to country. This diversity is reflected in the fact that, in developed economies, processes of decentralisation and centralisation alternate with each other in the division of tasks among governmental levels according to the state policy. (Sivák, 2014)
In Hungary, the system of state finances has two subsystems since 2010: the central budget and the budget of municipalities. Tables 1 and 2 contain the development of revenue and expenditure structures of state finances.

Table 1: Revenue structure of state finances (%)

Description	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Revenue of central subsystem	80,5	80,2	79,9	83,7	87,1	86,8
Revenue of municipal subsystem	19,5	18,8	20,1	16,3	12,9	13,9
State finances in total	100,0	100,0	100,0	100,0	100,0	100,0

Source: I1., I3.

Table 2: Expenditure structure of state finances (%)

Description	2009	2010	2011	2012	2013	2014
Revenue of central subsystem	81,2	80,5	82,4	84,7	88,2	87,6
Revenue of municipal subsystem	18,8	19,5	17,6	15,3	11,8	12,4
State finances in total	100,0	100,0	100,0	100,0	100,0	100,0

Source: I1., I3.

In the Hungarian municipal system, the Municipality Law adopted in 2011 has resulted in one of the most significant changes with regard to the task system and, of course, it has also caused a significant change in extent and composition of the resources. Decentralisation of the educational and health tasks to local levels has ceased; these ones were compulsory tasks of the municipalities previously and formed a large item of the municipal expenditures. At macroeconomic level, the change is financially shown by that the weight of municipal system within the state finances has changed – i.e. significantly decreased – as a result of the centralisation measure that took place. The ratio of the municipal subsystem revenue within the state finances was 19.8% in 2011 but only 13.2% in 2014. A change has occurred on the expenditure side: the ratio of expenditures was 19.5% in 2010 and only 12.5% in 2014. Of course, this change also meant a significant decrease in the revenues of municipalities; Table 3 contains the figures.

5. Forms of local taxes

In recent years, the revenues resulting from local taxes play a more and more decisive role within the own revenues and the municipalities strive to increase the tax revenue. It reveals itself in the continuous increase in the measure of local taxes and in the introduction of such tax categories that were not introduced previously. Figure 2 illustrates the grouping of local taxes.

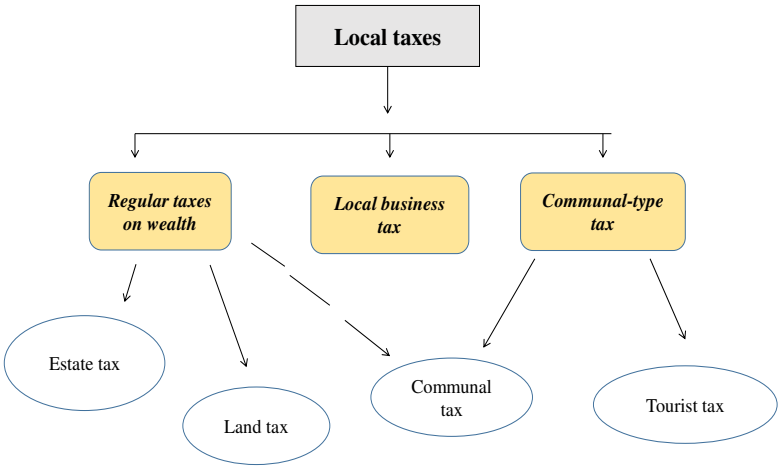
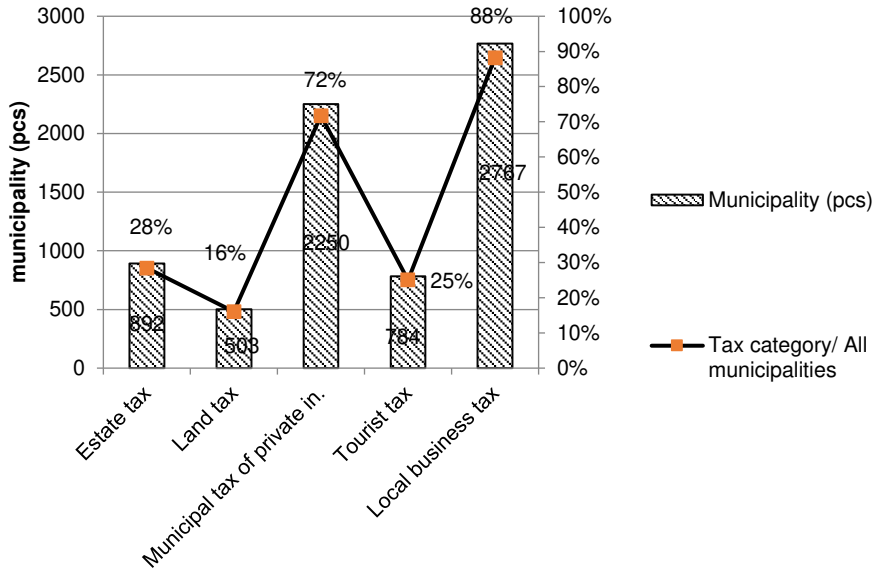


Figure 1: Grouping of local taxes
Source: Herich, 2016

Based on the data of Figure 2, it can be seen that 72% of the local municipalities introduced the communal tax of private individuals and 88% of the municipalities introduced the local business tax in 2015. The local business task burdens the undertakings. Based on statistical data, it can be observed that the taxation of undertakings has been brought to the forefront in the cities being more developed industrially. Tourist tax has primarily been introduced in those areas which are popular from the point of view of tourism; this kind of tax does not burden the local residents but the tourists arriving at the settlement. Population could be obliged to pay local tax where neither the business tax nor the tourist tax is specific.
However, the levy of local taxes was never without limits; it is set out in law what type and how large tax can be levied, how large the limit of its extent is and what allowances and exemptions can be enforced. (Bordás, 2015) At the same time, the opportunity to increase local taxes is limited by numerous economic and political circumstances reinforcing each other. In 2008, Lóránt already worded that the increasingly strict economic circumstances. The tax burden of potential taxable entities (undertakings and private individuals) is equally influenced by the central taxes, unemployment, the growth in number of inactive people and the decrease in real incomes. In case of introducing certain local taxes, the municipalities are also forced to consider seriously from the aspect of choosing the taxable entities (undertakings and/or population) as well as determining the tax rate, allowances and exemptions. (Lóránt, 2008)



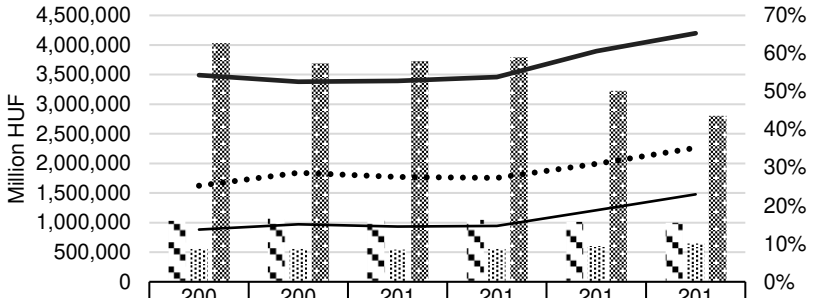
Fifure 2: Number of levied taxes by tax category (2015)
Source: Hungarian State Treasury, 2016 (I1)

6. Role of local tax revenues

Amount of total revenues of the municipalities exceeded HUF 4 thousand billion in 2008. It significantly regressed after the crisis: it decreased by 8.5% by 2009, by almost 15% from 2011 to 2012 and by further 15% i.e. to HUF 2.8 thousand billion by 2013 (Figure 3). One of the most significant changes of the municipality law (Mötv.) adopted in 2011 i.e. the restructuring of the task system explains the decrease in revenues. Decentralisation of the primary and secondary education and the healthcare tasks to local level has ceased and the state has taken over these ones which were previously a part of the compulsory tasks of municipalities. Thus, the municipalities have lost meaningful revenues, the expenditure structure of their budget has also changed and the scope of their compulsory tasks has narrowed simultaneously. (Sivák, 2014)

Structure of the resources has also changed simultaneously with the restructuring of the tasks. The most significant element is that the personal income tax has been removed from the resources as well as the state aid and contributions have decreased due to the centralisation of a part of the compulsory tasks. During 6 years, amount of own revenues has decreased by 4%; in contrast, the local tax revenue has continuously increased by HUF 111 billion in total i.e. by almost 16.5% between 2008 and 2013, except the year of 2010. Nevertheless, the share of local taxes from the revenue has significantly increased in the years examined. Ratio of the local taxes within the own revenue has increased from 54% to 65% and its ratio compared to the budget has increased from 14% to 23%. Data demonstrate that the municipalities need an increasingly growing own revenue to carry out their remaining tasks.

Based on researches of Horváth and his co-authors, the western-eastern differences in the economic and developmental levels of certain large regions can be seen from the territorial data (Horváth et al, 2014). The municipalities are capable of utilizing the possibilities of their own revenues in the developed parts of Central Hungary and Transdanubia while the ratio of own resources is much smaller within the total revenues in the other regions. In 2010, ratio of the own revenues in the total revenues was the highest in Central Hungary (44.2%) and Western Transdanubia (33.6%), it was the lowest in Northern Great Plain (22.2%) and North Hungary (21.8%) while the national average was 31.9%.
Horváth also points out the differences of urbanization that the amount of local tax per capita is double the national average in Budapest while the local tax revenue declines sharply in settlements with less than ten thousand residents, its sum per capita amounts to only a few thousand HUF.



	2008	2009	2010	2011	2012	2013
Own revenues	1,018,26	1,058,05	1,027,28	1,035,21	999,133	986,953
Local tax revenue	553,341	556,251	542,585	556,625	605,761	644,589
Total revenue	4,032,69	3,688,64	3,730,57	3,793,31	3,225,13	2,804,28
Local tax/Own revenue	54%	53%	53%	54%	61%	65%
Local tax/Total revenues	14%	15%	15%	15%	19%	23%
Own revenues/Total revenues	25%	29%	28%	27%	31%	35%

Figure 3: Development of local tax revenues of the Hungarian municipalities
Source: TEIR, I5

7. Business tax

The local taxes amount to almost two-thirds of the own revenues and a quarter of the total revenue (Figure 3). In addition to taxes relating to real estate (communal, wealth), the local business tax paid by the undertakings has been most frequently introduced by the municipalities. It can be seen from data of Table 3 that the revenue resulting from business tax was HUF 472 billion in 2010, HUF 501 billion in 2013 which amounts to approximately 85% of the local tax revenues. Share of the other tax categories is about 15% in the local tax revenue of the municipalities. (State Audit Office, 2010)
Due to the territorial concentration of the country, the capital and its districts as well

as the cities with county rights levy more than 60% of business tax. The largest companies have settled in the capital and most of the undertakings also operate here so the HIPA revenue concentrates here as well. There are also significant divergences in the amount of revenue per settlement. While the national average was HUF 159 million per settlement in 2013, the amount was HUF 99 billion in Budapest and HUF 4-5 billion in the capital, its districts and the cities with county rights. The tax levied by 2074 village municipalities is only tenth part (HUF 16 million) of the national average.

Settlement	People Thousand	LBT* Million HUF	%	LBT per settlement Million HUF	LBT Million HUF	%	LBT per settlement Million HUF
	2010				2013**		
Capital		94 431	20	94 431	99 554	20	99 431
District (23)	1 705	108 596	23	4 722	95 650	19	4 159
City with County Rights (22)	1 986	103 874	22	4 722	113 084	23	5 140
Other towns (266)	3 089	122 760	26	462	140 650	28	528
Large village (152)	643	14 165	3	93	10 232	2	67
Village (2704)	2 702	28 329	6	11	42 065	8	16
Country in total (3145)	10 125	472 155	100	150	501 238	100	159

Table 3: Local business tax revenues of the local municipalities by settlement type
Source: State Audit Office, 2010-2013, Hungarian State Treasury
Explanation:
*LBT: local business tax.
**From 2010 to 2013, the number of population decreased by almost 216 thousand heads which arises from the difference between number of births and deaths. At the same time, it can be observed that number of capital and urban population has increased somewhat while the number of people living in villages has decreased.

If we consider the number and ratio of the residents then around 61% of the local business tax is levied in the territory of the capital, its districts and 22 cities with county rights where almost 37% of the total population lives. Besides, the business tax is significant in case of a few other settlements having high tax-power ability (e.g. Paks, Budaörs). The business tax does not mean a decisive source of revenue for the villages, large villages and small towns, at least 3 000 settlements; it does not provide real solution to their funding problems. (Fellegi, 2012)

8. Settlement tax

Since 1 January 2015, the municipalities are allowed to introduce not only local taxes but a settlement tax insofar as it is not prohibited by other law as well as the subject of the settlement tax is not burdened by any common charge. In 2015, 128 local tax liabilities were newly stated. Most of the municipalities (66 settlements) introduced the local business tax among the existing local taxes. According to the data of MÁK (Hungarian State Treasury), 98 municipalities have introduced the newly stated settlement tax which means 116 tax liabilities. The following tax

categories belong to the newly stated settlement taxes: land tax levied by most of the municipalities, vehicle tax, high estate tax, dog tax and road tax. In the real estate registry, the following items are subject of the land tax: plough-land, vineyard, orchard, reeds, field, pasture, wooded area, fish pond and agricultural land recorded in land usage. (MÁK, 2016)

Before a settlement tax would be introduced, the body of representatives should ponder whether it makes sense to introduce another tax burden and how large resource will be provided for the settlement, what can be funded by means of it. In 1987, Stanford already worded seven requirements in respect of introducing local taxes; these are the following: a local tax shall be wide and relatively evenly distributed, the tax burden shall concern the local residents, the levied tax shall be high and it should possibly ensure constant returns, the cost of levy shall be thrifty, fair and transparent as well as it should ensure the accountability at local level. Bordás draws up a further expectation that the tax cannot be devolved to other entity i.e. the limitation of tax export should prevail. (Bordás, 2015)

In the Hungarian practice, according to the experiences, the companies reckon the local taxes as cost when defining the market prices, they calculate the taxes into the price so they make the customers pay the taxes. Majority of settlement taxes (land tax, vehicle tax) is attached to agricultural activities and it is against the policy of the central government since it burdens the agricultural producers.

The question may arise why the municipalities have decided to introduce more classical taxes (local tax) than settlement tax. This is due to several factors. One reason is that the municipalities did not prepare in time for receiving the opportunities, they were afraid of the administrative burdens. The other reason is that the revenue resulting from settlement tax may be used for funding social services and settlement development only; thus the revenue resulting from these taxes is favourable just for those municipalities which have no enough resources for funding these tasks. Contrary to the settlement tax, the local tax was free to use until 2015 therefore it ensured a kind of flexibility for the municipalities. Since 1 January 2015, there has been a change in utilizing the classical taxes: the revenues from the local business tax shall/may be used for funding the social services belonging to the competence of the body of representatives and for the wage costs of office workers.

9. Summary

In Hungary, there were more modifications in the funding system of municipalities during the last quarter of century but the system built step-by-step could work – toward the decentralisation.

The economic crisis erupted in 2008 has made a large contribution to the decrease in revenue of the municipalities. A part of the settlements has tried to solve the situation having lack of resources by borrowing money and other ones have eased the lack by increasing the tax revenues. In 2011, the state primarily tried to deal with the situation by decreasing the expenditures which resulted in decrease of municipal support. At macroeconomic level, the change is shown best by the fact that the weight of municipal system within the state finances has significantly decreased as a result of centralisation actions. Ratio of the own revenues and local tax revenue have increased in the budget revenue of municipalities and the local business tax paid by the companies has played a bigger and bigger role. In

addition to the restructuring of resources, the scope of compulsory tasks has also decreased; the state has taken over the public education and the specified areas of health service which has resulted in a decrease of almost 30% in the budget revenue of municipalities.

In addition to the restructuring of resources and tasks, it can be stated based on the data that there are significant so-called urbanization differences between the amounts of local taxes levied by the settlements: the capital and the city with county rights can earn 61% of the business tax while 37% of population lives in these settlements. On the other hand, the local business tax revenues are extremely low in around 3000 settlements where a few hundred or a few thousand people live. However, according to the first experiences, a restructuring of local taxes has started by introducing the settlement tax and limiting the utilization of local business tax in bigger settlements.

Self-governance is an essential feature of the democratic states and it involves the decentralisation as well as the realisation of central measures at local level. There are such countries where the decision-making entitlements of the municipalities are more limited and the local authorities are under strict control. In other countries (e.g. England), the right of participation in public affairs prevails almost fully. (Paulo et al, 2013)

Based on domestic and international experiences, the Hungarian decision-makers should strive to ensure independence and a predictable law environment for the long-term operation of municipalities.

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THE GROWING IMPORTANCE OF INTERNATIONAL FINANCIAL REPORTING STANDARDS

Kornél Tóth, Éva Darabos
Institute of Accounting and Finance, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary
toth.kornel@econ.unideb.hu
darabos.eva@econ.unideb.hu

Abstract: *This paper highlights the importance, development, and evolution of International Financial Reporting Standards (IFRS), emphasizing some relevant issues in contemporary accounting, such as the need for a globally recognized financial reporting system and a conceptual base of different accounting measurement approaches in order to increase transparency and comparability in financial reporting. The first section of the paper illustrates the main reasons for the changes in financial reporting that are required in order to satisfy the information needs of both existing and potential investors of business entities in global capital markets. The subsequent section describes the main purpose and role of financial accounting, followed by a description of different ways of regulating financial reporting emphasizing the increased role of the standard-setting activities of private-sector bodies, such as the International Accounting Standards Board (IASB). This section also reveals that the standards published by the IASB are gaining ever wider acceptance and recognition in today's globalized world economy, although this also illustrates the growing future importance of IFRS and the IASB's work in several areas. The next part of this section presents the main advantages, features, and stages of the standard-setting process of the IASB, providing evidence about how investors can use IASB's standards as a valuable predictive device. The third section of the paper introduces some major problems associated with contemporary accounting measurement issues, for example delivering new measurement concepts in financial reporting. This section also establishes that measurement is fundamental to accounting, and for this reason the improvement of measurement concepts must be emphasized in financial reporting. In the last section the paper assesses the increased role of reporting under IFRS today and argues that the constant improvement of standard-setting contributes to satisfying the needs of investors. The main finding of this paper is that the continuous and marked improvement in standard-setting by the IFRS Foundation enhances the quality and usefulness of financial reporting.*

Keywords: financial reporting; International Financial Reporting Standards; conceptual framework; accounting measurement

JEL classification: M40; M41

1. Introduction

One of the central questions in accounting is how to identify the stakeholders of financial reporting, since the groups identified as stakeholders change and expand in line with social and economic changes (Lakatos, 2013). Sztanó (2015) claims that communication at a corporate level becomes more intense as globalization is

accelerating and international economic relations are growing. According to Beke (2009), a unified and harmonized accounting system helps increase transparency, overtness, predictability in valuation and decision-making.
As the pace of globalization and cross-border financial activity increases, capital markets become more interdependent, and there is a greater need for the development of internationally accepted standards. The International Financial Reporting Standards (IFRS) and its development can be a particularly useful device to promote a well-established and secure international regulatory environment. IFRS satisfies today's accounting and disclosure purposes, and it contributes to the improved transparency of global financial reporting. Effective financial reporting and good corporate governance is fundamental to investor confidence, therefore standards-setting and their ongoing improvement respond to changes and developments in the markets and the information needs of investors (Richard, 2008). Over the past few decades stock market capitalization has increased considerably worldwide, and an increasing number of business entities are considering listing their shares in foreign markets to gain equity at a lower cost. The adoption of IFRS can be very advantageous for these companies, as a high quality, transparent standard, accompanied by converging corporate governance standards, can cease added costs of compliance with different jurisdictions. Nonetheless, the convergence of disclosure requirements provided by IFRS offers high-level disclosure requirements that investors pursue (Pine, 2010).
Since accounting measurement concerns have become more and more relevant nowadays, besides the continuous improvement of each standard there is a need for updating conceptual framework for financial reporting, as well. In connection with this, Barth (2014) notes that the International Accounting Standards Board's (IASB) Conceptual Framework published in 2010 does not identify the purpose and definition of measurement, nor does it include a conceptual base for choosing among different measurement methods.

2. Literature Review

Accounting can be defined as a process of identifying, measuring, and communicating economic information in order to allow knowledgeable judgements and efficient decisions by the users of the information. Another view might suggest accounting is a service activity, and its main role is to provide quantitative information (mainly financial) about business entities through financial reports. Financial accounting is the branch of accounting intended for users outside the business entity. Basically, the regulation of financial reporting is designed for external users, for example to supply investors with useful information; however, the needs of different users are likely to be very diverse (Alexander and Nobes, 2013). According to the IASB's Conceptual Framework for Financial Reporting 2010, the primary users of financial reporting include present and potential investors, and creditors, who use financial information to make economic decisions (IFRS Foundation, 2010).
Financial reporting can be regulated in several ways, comprising legislation (for example acts or commercial codes), rules issued by departments of government, or by committees operating under their control, rules of stock exchanges or governmental regulators of stock exchanges, and accounting guidelines or standards issued by committees of the accountancy profession or independent

private-sector bodies representing the public interest. In this sense a financial reporting or accounting standard is a document containing a series of instructions on a particular topic of financial reporting. The standard is written in the private (non-governmental) sector and is intended to be obeyed in full. Nowadays it can be evidenced that the standards published by the IASB are receiving greater and greater recognition and acceptance worldwide. The IASB's predecessor, the International Accounting Standards Committee (IASC), was established in 1973. The members were the accountancy bodies of the following countries: Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom, Ireland, and the United States. In 2001 the IASC was reorganized, and replaced by the IFRS Foundation. The main operating arm remained the IASB, accompanied by other organizations. By the 2000s, the number of member bodies was over 140, from over 100 countries. The members of the IASB are appointed by trustees from the world's financial community representing the public interest. The IASC's International Accounting Standards (IAS) were adopted by the IASB; the new standards are referred to as International Financial Reporting Standards, and together both IAS and IFRS are referred to as IFRS. Since countries influenced by the Anglo-American tradition are the most acquainted with setting accounting standards in the private sector, most standards closely correspond to those of the United States and United Kingdom (Alexander and Nobes, 2013). Figure 1 represents the three-tier structure of IFRS Foundation.

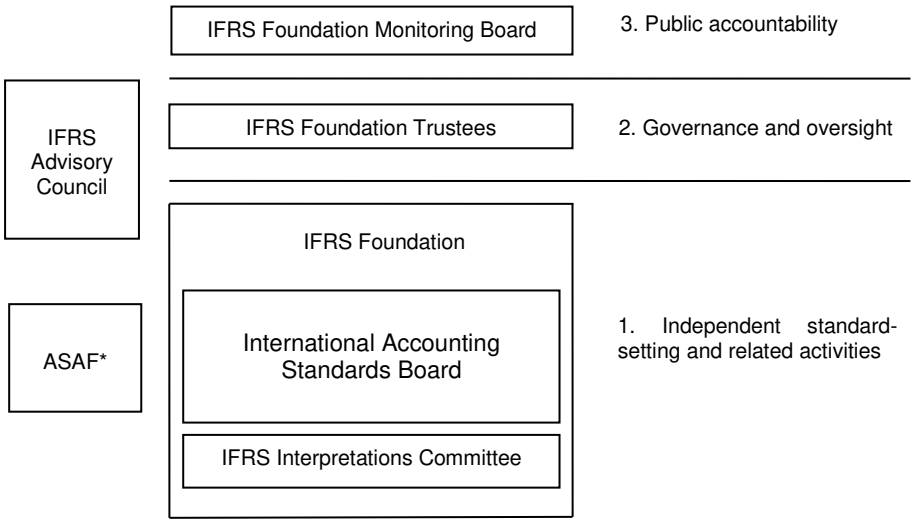


Figure 1: The three-tier structure of IFRS Foundation
Source: edited by the authors based on IFRS Foundation (2015a:3)

According to IAS 1 paragraph 15, it is required that financial statements must present fairly the financial position, performance and cash flows of a business entity. In general this is called the 'true and fair view' requirement, meaning that fair

presentation entails faithful representation of the effects of transactions (Alexander and Nobes, 2013; IFRS Foundation, 2007). The IASB's Conceptual Framework defines this requirement as meaning that financial information is useful when it is relevant and faithfully represented (IFRS Foundation, 2010).

Nowadays the growing importance of IFRS and the IASB's work can be perceived in three main areas: adoption of IFRS as national rules, influence on national regulators, and voluntary adoption of IFRS by different business entities. For example by the 2000s, large Swiss groups, such as Nestlé, Roche, and Novartis, were using IFRS for their consolidated financial statements. The IASC had been negotiating with major stock market regulators through the International Organization of Securities Commissions (IOSCO) since the late 1980s. The main goal was to make IFRS a global financial reporting system that is accepted on all stock markets, especially in the case of foreign corporations. Also, in 2000 IOSCO recommended acceptance of IFRS to its members for any foreign business entities listed on the stock exchanges that they regulate (Alexander and Nobes, 2013).

An important step was taken in 2002 when the European Union adopted legislation that requires listed business entities in Europe to prepare their consolidated financial statements under IFRS from 2005. Australia followed this rule for that year, and so did Canada for 2011. Regarding compliance with IFRS, the same applies to China and Japan as well. In 2008, the Securities and Exchange Commission of the United States declared it was considering adopting IFRS from 2014 onward; however, full acceptance is still quite uncertain (Alexander and Nobes, 2013; Mirza et al., 2008). Zeff (2012) concludes that one of the challenges currently facing the IASB as the global accounting standard setter is a need for the Board to inspire securities market regulators to facilitate listed companies' compliance with IFRS. As stated by Pine (2010), international regulatory organizations, such as the IFRS Foundation and the IOSCO should foster IFRS and identify how to retain high quality corporate governance standards.

The main purpose of the IASB is to develop standards ensuring transparency, accountability, and efficiency for global financial markets. The public interest is served by raising trust, growth and longstanding financial stability. Under IFRS, transparency means enhancing the international comparability and quality of financial information, which enables investors and other market participants to make efficient economic decisions. IFRS might contribute to a strengthening of accountability by reducing the information gap between stakeholders and business organizations, and this system can help investors identify opportunities and risks, which improves capital allocation worldwide (IFRS Foundation, 2016).

In the process of standard-setting there is an independent standard-setting board overseen by a geographically and professionally diverse body of trustees, who are accountable to a Monitoring Board. During this process an external IFRS Advisory Council, an Accounting Standards Advisory Forum of national standard-setters, and an IFRS Interpretations Committee can offer guidance when divergence arises. The due process is open, participatory, and transparent. Throughout the whole procedure, engagement with investors, regulators, business leaders, and the global accountancy profession is ensured (IFRS Foundation, 2015a). The study of Choi et al. (2013) provides evidence that the introduction of IFRS in the United Kingdom resulted in accounting numbers which are more useful to investors for prediction and valuation purposes. Taken together, their results proved that IASB was successful in creating standards which are more useful to investors as a

predictive tool (Choi et al., 2013).

3. The Need for New Measurement Concepts in Financial Reporting

Currently several measurement bases can be used in the financial statements prepared in accordance with IFRS, including historical cost, current cost, realisable (settlement) value, and present value. Although the most common measurement basis is historical cost under IFRS, numerous assets and liabilities are permitted or required to be measured at fair value, for example investment properties and many financial instruments (IFRS Foundation, 2010; Milburn, 2013). One of the most significant problems associated with contemporary accounting measurement issues is the area of fair valuation, and this can provide a decent example of the need for new measurement concepts in financial reporting (Barth, 2014). According to Milburn (2013) there are extensively contradictory opinions on measurement issues with theories supporting them, and these differences of opinion have made standard-setting for financial reporting complicated and have resulted in inconsistencies.

Barth (2014) examines subsequent measurement of individual assets and liabilities and concludes that fair value measurement is more consistent with existing concepts than modified or unmodified historical cost. It is also revealed that unmodified historical cost is consistent with some concepts, but nowadays the generally used modified historical cost is mostly not consistent. Unmodified historical cost means cost-based amounts that have not been changed since initial measurement, while modified historical cost is a cost-based amount that has been modified as a result of, for example, amortization and impairment (Barth, 2014). In IFRS 13 paragraph 9 fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date” (IFRS Foundation, 2011).

The IASB’s Conceptual Framework for Financial Reporting 2010 describes the objective of, and the concepts for financial reporting. Primarily it is used to support the IASB to develop standards, and assist preparers to improve accounting policies when no standard applies to a particular transaction, or when a standard allows different choices among accounting policies, and it can also assist other users to interpret standards. Nevertheless, the Conceptual Framework needs to be revised for several reasons, including the fact that certain significant areas are not covered, the guidance in some areas is not clear, and some aspects of the Conceptual Framework are outdated. In relation to this the Exposure Draft ED/2015/03 Conceptual Framework for Financial Reporting, published by the IASB in May 2015, declares that the overall objective of revising the Framework is to improve financial reporting by providing a clearer, more comprehensive, and more advanced concept. The Draft also addresses the point that one of the key areas not covered in enough detail in the existing Framework is measurement (IFRS Foundation, 2015b).

Since measurement is essential to accounting, the lack of measurement concepts can be a main weakness in improving financial reporting. Financial reports describe economic transactions in words and numbers; however, measurement is about the numbers, and the IASB’s Framework published in 2010 only lists some measurements used in standards without any explanation. Although this Framework identifies the concepts underlying financial reporting to provide a basis

for standard setters to make decisions, but it is impossible without conceptual guidance on how to evaluate measurement bases in different circumstances. In summary, numerous measurements are used in financial reporting nowadays, not only historical cost, but other bases as well. For example, fair value is not mentioned in the Framework, but is used for several financial assets and liabilities, and some nonfinancial assets. Even if the measurement methods were presented in their entirety, without concepts underlying their use, the Framework would be incomplete; consequently giving more emphasis to measurement concepts in financial reporting is very necessary (Barth, 2014).

4. Conclusion and Discussion

This paper has examined and illustrated the main purposes and evolution of financial reporting in an international approach. As a result of the fact that financial activity across borders is increasing, the role of the International Financial Reporting Standards published by the International Accounting Standards Board has today become more and more significant. Based on the related literature we have scrutinized, we can conclude that the IFRS Foundation and the permanent improvement of standard-setting efficiently contribute to the international regulation of financial reporting and to satisfying the information requirements of investors worldwide. In accordance with the key findings presented in the paper, the development of different measurement concepts should be emphasised as the intention to provide continuous improvements in financial reporting strengthens at the international level.

In another view, since accounting is a knowledge-intensive business service activity, its regulation should be reconsidered on an ongoing basis, and this approach can provide a basis for further investigations in this field (Máté et al., 2016). Besides, the different valuation purposes and methods described by Choi et al. (2013) and Kiss (2015), together with their results, can also be treated as a good starting point for supplementary discussions on the implementation of various corporate governance and reporting issues.

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SECTION: MANAGEMENT, MARKETING, ECONOMIC INFORMATICS AND CYBERNETICS

SUB-SECTION: MANAGEMENT

VISION AND STRATEGIC THINKING IN THE ROMANIAN FAST GROWING FIRMS MANAGEMENT

Nicolae Bibu[1], Diana Sala[2], Maria Alb [3],
[1] Management Department, Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, România
[2] Management Department, Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, România
[3] Doctoral School of the Faculty of Economics and Business Administration, Management Field, West University of Timisoara, Timisoara, România
nicubibu@yahoo.com
mariaalb@yahoo.com

Abstract: *The purpose of this paper is to present preliminary specific issues concerning the vision and the strategic thinking of the managers of Romanian fast growing firms in the years of rapid growth. This paper clarifies two research questions. (1) The first research question is what is the message of the manager's vision of the Romanian fast growing firms? Therefore, we must first verify if the managers of the Romanian fast growing firms have a concrete vision about the business they run and if so, what is the vision of the managers about the companies that they lead? (2) The second research question is what findings can be drawn about the role of strategic thinking of the managers in the management of the Romanian fast growing firms? The research that we have conducted is a qualitative research. The research method that we used is the interview. The interview is specific to qualitative research. Regarding the method of analysis that we used it is the content analysis. The research was conducted on a total of 17 Romanian fast growing firms that are located in Timiș County. The firms were identified based on a specific selection criteria set after a thorough review of the literature in the field. The 17 companies that we have analysed represent the foundation of 17 in-depth case studies, which we believe helped us to better understand what it means in the Romanian context to grow fast, through the entrepreneurs managers vision and strategic thinking. The results presented in this paper come to strengthen the results reached by other researchers in this field. The results present an image of the current Romanian context – about the role of strategic thinking of the entrepreneur manager in the management of Romanian fast growing firms. The paper presents a detailed analysis of managers' vision of the Romanian fast growing firms. The paper also presents findings about the role of strategic thinking in helping managers achieve rapid growth in the Romanian context.*

Keywords: fast growing company; vision; strategic thinking;

JEL classification: M10;

1. Introduction in literature review

Vision and strategic thinking are two topics of interest for researchers in the field of entrepreneurship.

In our research, these two topics are of interest because both the vision and the strategic thinking can be considered characteristics of fast growing firm's managers as shown in the literature of the field, where several researchers have shown that the vision is one of the important factors characterizing the managers of the fast growing firms.

As we found little information about the vision and strategic thinking of the Romanian fast growing firms in the Romanian literature of the field we considered it appropriate to perform a broader research in which to analyse the two aspects, vision and strategic thinking in relation with the rapid growth of companies in the Romanian context.

1.1. Vision

Vision of the company is one aspect that suggest something about the intentions of the entrepreneur manager in relation with the company he or she leads. Barringer, Jones and Neubaum (2005) emphasize this in their research showing that a declared vision or mission in writing, express something about the intentions of firm's growth of the entrepreneur-manager. In this context, we believe that the message transmitted by a declared vision can be considered valid for drawing conclusions about the attitude and expectations of the company's manager since the message is from a valid source of information.

In the literature of the field Mason and Brown (2010) present that fast growing firms have management team with a clear vision of the future of the business and motivation to grow the business. We are interested to find out how Romanian fast growing firms are positioned to this finding.

Bygrave (2004) shows that entrepreneurs have a vision of how the future may look like for them and their business, and the ability to implement this vision.

1.2. Strategic thinking

Abraham (2005) defines strategic thinking as the way in which are identiyied alternative viable strategies or business models that provide value to the customer.

Năstase (2010) shows that a firm, regardless of its size, small, medium or large, needs a strategic leader and shows that the special task of a strategic leader is the strategic thinking namely, his or her ability to understand the overall organization the complexity of relationships that occurs between subsystems and interactions with the outside world.

Haycock, Cheadle and Bluestone (2012) show that through creativity and innovation the strategic thinking can build a vision of the future of the organization before the linear development of the strategic plan. Haycock, et. al. (2012) present that a strategic thinking manager admits that a strategy that works today might not work as well tomorrow.

Heracleous (1998), Goldman (2007) refer to strategic thinking as a different management activity that aims to discover unique, imaginative strategies that can be used to rewrite the rules of competition, respectively, that can be used for thinking potential future that differs from the present.

Heracleous (1998) shows that strategic thinking should precede strategic planning and that the purpose of the latter would actually be to improve strategic thinking.
18 years ago, Liedtka (1998) defines strategic thinking as a particular way of thinking that has specific atributes. În the author's opinion strategic thinking has an important meaning in the plannig process of the companies.
We believe, the management of the company need a strategic thinking development under the influence of which can be implemented growth strategies.
In our opinion strategic thinking is valuable as long as the implementation of actions arising out of strategic thinking leads to the achievement of the expected result. In our opinion, this point of view holds true especially nowadays when the competitiveness between companies is fierce and dynamic business environment is higher.
Wootton and Horne (2001, pg.V) present about strategic thinking that involves three different activities: collecting information, formulating ideas and planning actions; namely, that each activity requires different thinking skills.
Strategic thinking helps to develop business strategy. Among the authors who support this point of view are Haycock et al. (2012), for instance. In their opinion, the strategy is based on two concepts: strategic thinking and strategic planning. In this paper, we approach only the concept of strategic thinking at managers of Romanian fast growing firms.

2. Research methodology

The research methodology that we have applied to the study can be summarized in three parts. The first part refers to how we identified the Romanian fast growing firms. The second part refers to the collection of information. The third part concerns the analysis and interpretation of data / information collected.
Romanian fast growing firms were identified using specific indicators. We decided the reference period between 2008-2013 because we believed that companies that grew rapidly during the 2008-2013 period will provide useful information about the fast growing firms management during the crisis. We applied the condition that companies from Timis County to have an annual turnover growth rate of at least 20% during 2008-2013 period. Thus, resulted 153 Romanian fast growing firms that had rapid growth in the framework of 2008-2013 period.
Considering the criteria for identifying fast growing companies presented by the OECD (2007, 2012), further we have identified Romanian fast growing firms based on two approaches.
An approach based on (1) the calculation of the annual turnover growth rate and (2) to have a minimum of 10 employees from the beginning of the growth period. The second approach, based exclusively on the calculation of the average annualised growth of both the turnover and the number of employees during the same reference period.
Out of the 153 companies, only 17 had a rapid growth of both the turnover and the number of employees during the same reference period, calculated based on the average annualised growth.
In regard to the collection of information, we chose the interview because in our opinion it represents the research instrument that gives us the possibility of a throughout study of the Romanian fast growing companies.

We chose a sampling group from the population of Romanian fast growing companies, resulting a number of 17 interviewed companies. Each interview has its own transcript.
In case of a refusal, we chose another Romanian fast growing company. The replacements continued until we reached the number of companies from the sampling group.
After collecting the information during the interviews, it followed the third stage of the methodology: the assessment and operation of the collected information. In this stage, we chose the substance assessment technique also known as content analyses. We considered that the content analyses is the most appropriate technique in order to analyse the transcripts because it helped us understanding the specific of each message in the transcript.

3. Results

3.1. The assessment of the vision of Romanian fast growing companies' managers

In reference to the first research question, the results we reached after assessing the transcripts discloses a few interesting aspects about the vision of Romanian fast growing companies' managers.
At each transcript we assessed the visions described by the interviewed manager entrepreneurs and we have noticed that part of the manager entrepreneurs (64.71%) had a vision in mind, and they didn't find it difficult to expose during the interview. The other part of the interviewed manager entrepreneurs (35.29%) started the business without having in mind a clear vision from the beginning, therefore they found it difficult to expose the vision that determined them to start the business.
Out of the managers who expressed their vision during the interview, (64.71%), a percent (54.54%) used competitive words/expressions: "to be the best", "a reference business", "famous", "to grow', "professional business". The other percent (45.46%) used words/expressions regarding the ways to provide the best services provided for their clients: "to have a healthy activity", "to respond to the requirements of modern clients", "gross input and fine output", "we saw a market, a developing sector", "to work with famous brands", "to help companies grow using our services".
The managers who had difficulties in exposing an accurate vision for starting their business (35.29% from the interviewed entrepreneurs) and who specified that their vision became clear later used words/expressions describing actions: "to do", "to become successful", "to expand", "to grow", "something new", "to have my own place", "our products should have a larger expand", "to have our own distribution network", "to bring other products", "to take good care of the employees", "to be trustworthy for the suppliers and the clients", "to consolidate my position", "to sell my business".
In our opinion, the assessment we have made reveals the ambitions of the Romanian fast growing companies' managers. The assessment shows that all the entrepreneurs started their business with a thought. Some have been able to

expand a correct vision instantly from that thought, others started their business, and developed their vision later, after acquiring some experience as entrepreneurs.
The assessment exposed the main messages sent by the visions to managers of fast growing companies in Romania, indicating the main orientations of the managers according to the visions they expressed (competition, differentiation and action).

3.2. Findings on the relationship between strategic thinking and actions carried out by managers in the years of rapid growth

In connection with the strategic thinking, the analysis of content shows that in case of Romanian fast growing firms, managers are the main people who thought the company's development in the years of rapid growth.
The study shows that all managers interviewed have acted intentionally, which highlights the fact that before acting, managers have reviewed several options, depending on certain factors considered in relation to the company profile at one moment in time or another one.
On the occasion of the performed analyses, we noticed harmonization between managers' vision and strategies implemented within the company. In our view, this suggests that managers of the rapid growth oriented Romanian firms had strategic thinking.
The strategic thinking of managers swivelled around the ides to increase business and business development. Strategic and operational actions of managers were influenced decisively by the strategic thinking of each one. The results of the analysis that we developed strengthen the idea that the strategic thinking managers preceded their strategic and operational actions.
The sequence and nature of the investments made during the period of rapid growth have revealed a process of rational and prudent thinking of the Romanian fast growing firms' managers.
Our opinion is that depending on the importance and the urgency of the decision, the thinking of managers might have been slower or faster.
With respect to the way how the strategic thinking of Romanian fast growing firms' managers was reflected into the companies' management, we specify that the analysis of each transcript made possible the extraction and deduction of certain purposes for which managers think strategically.
For example, we found that the reason why Romanian fast growing firms' managers think strategically is to establish concrete actions to help the company to comply in terms of performance with the vision for which it was created.
Through concrete actions during the period of rapid growth, the interviewed managers have fulfilled their managerial objectives.

4. Discussions

When interviewing we wanted to learn as much as possible about the managers' vision regarding their companies' development. We hoped to understand how the firms in the sample had rapid growth, especially in a time of economic crisis. We considered that the managers' vision showed us the way by which firms have grown rapidly, while their strategic thinking showed how companies have grown rapidly in the Romanian context.
The study helped us understand that both business vision and strategic thinking

were two important aspects that a manager must possess in order to have a chance to master the rapid growth of the company.

In our opinion, some of the important factors for achieving rapid growth of the company in the Romanian context are strategic thinking and vision. From the study we noted that both strategic thinking and vision are indispensable traits for managers of Romanian fast growing firms.
Vision and strategic thinking of the interviewed managers did not remain the same over the years, but reconfigured once the initial goals were achieved and once they have gained experience in entrepreneurship.
The results presented in this study support the views of researchers in the field.
For example, detailed analysis of the visions of Romanian fast growing firms' managers revealed that managers are pragmatic and serious about the purpose for which they created the companies they run and are able to carry out actions resulted from strategic thinking.
The analysis we made reinforces the opinion of Barringer et al. (2005) that in the case of managers of Romanian fast growing firms, vision says something about the managers' intentions. For instance, in this paper we found that the visions of managers of such Romanian companies, based on meaning and connotation, can be grouped into competitiveness-oriented vision, vision oriented towards customer servicing (differentiation), and action-oriented vision.
In our opinion, vision and strategic thinking of managers contributed to the rapid growth of companies in the Romanian context.

5. Conclusions

The research conducted has led us to certain conclusions about the vision of Romanian fast growing firms' managers and the role of their strategic thinking in the company's management.
Strategic thinking along business vision stood out as indispensable tools for Romanian fast growing firms' managers oriented. The results of the study showed that all managers have thought the business development in terms of perspective. 64.71% of the interviewed managers have developed an ambitious vision about their business development.
The research results confirm that the company's rapid growth is influenced by how the company is targeting to achieve its goal. The company is directed towards achieving the desired result under the influence of strategic thinking. The strategic thinking of managers reflects their skills and experience.

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CHARACTERISTICS OF UNIVERSITY SPIN-OFFS. THE ROMANIAN SITUATION

Nicolae Bibu[1], Valentin Munteanu[2] , Delia Gligor [3], Lavinia-Maria Cernescu[4],
West University of Timisoara, Faculty of Economics and Business Administration,Timisoara, Romania
nicolae.bibu@feaa.uvt.ro
delia.gligor@e-uvt.ro
valentin.munteanu@e-uvt.ro
lavinia.cernescu @e-uvt.ro

Abstract:
Along the history the interest in entrepreneurship and small firms had an impact on the academic world. The option to create wealth, competitive advantage from the commercialization of research by valorization of the inventions, in what has historically been a non-commercial environment, raised new entrepreneurial challenges.
University spin-offs bring researchers together, creating a context with the purpose of commercializing products.
The objective of this article is to review the available literature on university spin-off and to present the situation of university-spin-offs, funded in Romania with EU grants, between 2007 and 2013.

Keywords: innovation, academic entrepreneurship, university spin-offs, economic growth.

JEL classification: M13, O30, O31, O32.

INTRODUCTION

The evolution catalyst of the economical growth, innovation has a double role: resource-consumer by absorbing the funds from the economy, and resource-provider by commercializing the research results to the final industrial applicators, which in our case are: private companies and state-owned enterprises.
Almost all the international agreements, the National/Regional/Local Development Strategies, European Commission papers foster the idea of innovation and sustainability in all the activity domains of enterprises.
Policy makers and the economical environment are very interested and opened to support and increase the performances of the innovative firms. It is believed that the main source of innovation which contributes to the economic and social welfare and regional development is provided by universities and other public research organisations (Tidd and Bessant, 2011).
In other to satisfy the society's needs, the generation of new ideas, technologies and scientific knowledge are fundamental for a sustainable growth, job creation and the formation of a competitive industrial economy.

To reach economic growth, the research results from the universities and public research organisations have to be somehow commercialized.
The technological transfer is a process developed by the universities and research organizations, through which a patent knowledge system is transferred to other entities capable of materializing the information.
A technological innovation is transferred when it is commercialized into a product or service, which is sold on the market.
The creation of innovative firms requires entrepreneurial skills. Innovative firms are part of a new economy, because they produce the latest technologies and create the new sectors of production.
The creation of a new company requires: to develop a business concept, gain necessary resources and take the right decisions.
The study of entrepreneurship and small businesses has become one of the most popular fields of research in management studies (Landstrom, 2005). Elpida said that entrepreneurship is the process that leads to the emergence and development of new ventures based on the exploitation of new or existing knowledge (Elpida, 2010).
Growth of young companies is the result of a strategic choice made by entrepreneur (how to create and maintain a sustainable competitive advantage, how to manage growth, how to overcome barriers for growth) in a turbulent environment (Bibu and Sala, 2010).
The biggest challenge of the innovative firm is the ability of the new venture during the early stages of growth to become an established firm in a market, capable of earning sustainable profits.
If the entrepreneurs achieve to overcome this transition from one phase of growth to the next, then the success of the company is guaranteed.
Academic institutions have been associated with economical growth. An interesting issue to be discussed is how can universities generate economic returns from government research support?
University research knowledge provides opportunities to develop new or improved products.
Etzkowitz (1983) highlighted the active role of the entrepreneurial university in transferring the academic research.
According to Siegel et al. (2004), to foster a climate of entrepreneurship, university should focus on: reward systems, staffing practices of the technology transfer office (TTO), designing flexible university policies on technology transfer, university resources and working to eliminate cultural and informational barriers that impede the transfer process.
Implementing an effective government strategy for innovation is particularly important as key trends – the spread of global value chains, the increasing importance and mainstreaming of knowledge based capital (KBC), and rapid technological progress, including the rise of the digital economy – are 3 leading to the emergence of a “next production revolution” (OECD, 2015).
The contribution of university to economic development and growth has made policy makers interested in the role of universities as potential vehicles for innovation and employment.
Universities are changing the setting shifting from the role of educational scientific knowledge providers, to a more complex ‘entrepreneurial university model’, which implies knowledge commercialization and active participation in the development of

research-based spin-offs (RBSOs) in the local and regional economy (Etzkowitz et al., 2000).
Rasmussen (2006) talks about the differences between academic entrepreneurship and industrial entrepreneurship.The difference in culture and work practice between university and industry is substantial (Anderson, 2001).
Table 1 above illustrates the differences between the two contexts: academic and capitalist.

Table 1. Academic context vs. capitalist context

Features	Academic context	Capitalist context
Management	Academic freedom	Hierarchy
Motivation	Prestige, publications	Profit
Role	Knowledge production	Knowledge exploration
Goal	Novelty important	Market accept important
Knowledge	Sharing of knowledge	Protection of knowledge
Cooperation form	Loose relations (couplings)	Formal contracts
Time horizon	Long term	Short term

Source: adapted after (Rasmussen 2006)

Firms are collections of resources and capabilities, and which convert this resources into products or services from which revenue can be obtained. Capabilities are based on developing, carrying, and exchanging information through the firm's human capital.
Transforming an academic idea into an innovative product or service requires resources and capabilities that most universities and academic entrepreneurs lack.
The creation of spin-off companies appears as a mechanism for transferring knowledge and technologies from research organizations to the private sector for commercialization.
Table 1 presents the two contexts that involve the idea of USOs. University spin-offs are emerging from a non-commercial environment (university research) to becoming established as an independent business entity (capitalist setting). During this transformation they undergo, the technology and the human capital involved change the scene from an academic to an industrial setting. The table highlights the differences between the two settings in order to understand the obstacles that spin-offs are facing.
Changing the settings from an academic vision to a business one is very difficult, because there are a lot of factors which need to be changed. Inventors, professors, researchers might have the desire to contribute to employment and national economic development, but they don't have the pecuniary interest. They are driven by other types of motivational factors, personal ones like: prestige, publication, social recognition.
The entrepreneurs, during their activities as students, professors or researchers at a university, acquire technological knowledge or develop a new technology that will, in the future, be used with the support of the university´s business incubator (or another mechanism) to develop a product or a business concept that will be explored commercially by a new venture.
Economically speaking, university knowledge can embracive many forms of which the most common are namely: technological transfer to existing companies and create new entities (university spin-offs).

The paper is organized as follows: in the next section we will present the literature review concerning the university spin-off, followed by the second section which illustrates the position of Romania concerning innovation and the creation of spin-off between 2007-2015, using European funds.
In the last section we also present the obstacles and the factors, found in the available literature, which can influence the creation of a university spin-off.

2. University spin-off. Definitions and interpretations

2.1. A literature review

There have been several attempts in the academic literature to define university spin-offs, and although they are not all consistent, common features may be identified.
Some studies are much more ambiguous, and more inclusive in their use of the spin-off term. However they are sharing the following features: the technological transfer from the parent organization to the new venture and the transfer of human capital, for example through researchers or students leaving the parent organization to form the new venture.
In the literature spin-offs, also found under 'university spin-outs' or 'research related start-up ventures', are acknowledged as the key drivers of economic change and growth (Bercovitz and Feldman, 2006).
In order to derive a conceptual framework that would enable us to address diversity among USOs, we reviewed papers published since 1996, in general in order to identify the main characteristics.
Analyzing the literature we identified the need to distinguish between the creation and the development of different types of spin-offs.
Originated in a non-commercial environment, university spin-offs are collections of resources and capabilities created by students, graduates or academic staff, which transforms the academic idea into a market-ready product or process innovation.
First of all, a number of studies of university spin-offs are mentioned in the study of technology-based firms. For instance Mustar (1997) found that two of five high-tech enterprises in France were set up by university researchers, while a study by Heirman and Clarysse (2004) estimated that nearly four percent of high-tech and medium-tech companies in the Flanders region of Belgium were research-based start-ups.
The university spin-off phenomenon is not new (Etzkowitz, 2000) and research related to this type of firms is often found under the label of technology-based new firms (or new technology-based firms).
According to Shane (2004), spin-off companies are 108 times more likely than the average new firm to go public and also to create more jobs than the average new business in the United States.

Table 2. Spin-offs definitions

Definition	*Term used*	*Purpose*	*Parent organization*	*Structure*	*Reference*
A spin-off is a mechanism in which governments seek to generate economic impact from their R&D, by transferring technology from the R&D function to a commercial organization. *A spin-off involves: technology originator, the entrepreneur, the R&D organization itself, and the venture investor.*	*spin-off*	*generate economic impact by transferring technology*	*R&D function*	*technology originator, the entrepreneur , the R&D organization itself, and the venture investor*	*(Roberts and Malone, 1996)*
" ... SMEs set up to exploit research findings"	*SME*	*exploit research finding*			*(Mustar, 1997)*
new company that is formed (1) by individuals who were former employees of a parent organization, and (2) with a core technology that is transferred from a parent organization	*new company*	*technological transfer*		*former employees*	*(Rogers and Steffensen, 1999)*
"... new firms created to exploit commercially some knowledge, technology or research results developed within a university."	*new firms*	*exploit commercially some knowledge, technology or research results*	*university*		*(Pirnay et al., 2003:355)*

"..university high-tech spinouts are ventures founded by employees of the university around a core technological innovation which had initially been developed at the university."	*a venture university high-tech spinouts*	*technological innovation*	*university*	*employees of the university*	*(Vohora et al., 2004)*
a technology transfer mechanism because it is usually formed in order to commercialize a technology that originated in a government R&D laboratory, a university research centre or a private R&D organization.		*a technology transfer mechanism*	*government R&D laboratory, the University, the University research centre a private R&D organization*		*(Rogers and Takegami 2001)*
A spinout involves: -the transfer of a core technology from an academic institution into a new company. -the founding member(s) may include the inventor academic(s) who may or may not be currently affiliated with the academic institution.	*spinout*	*the transfer of a core technology*	*academic institution*	*inventor academic(s) who may or may not be currently affiliated with the academic institution*	*(Nicolaou and Birley 2003)*
"... a university spin-off is a new company formed to exploit a piece of intellectual property created in an academic institution." " university spin-offs are an important subset of start-up firms because	*university spinoffs subset of start-up*	*exploit a piece of intellectual property created*	*academic institution*		*(Shane,2004)*

they are an economically powerful group of high-technology companies".				
"A university spin-off is defined as a new venture which is initiated in a university context and based on technology developed within a university.	*university spinoff new venture*	*university*		*(Rasmussen, 2006)*
"...USO are founded by one or more academic inventors (faculty or student or staff), who may (or may not) be currently affiliated with the academic institution and/or the firm, and is created based on a license or other agreement with an academic institution to transfer a core technology."	*USO*	*academic institution*	*more academic inventors (faculty or student or staff), who may (or may not) be currently affiliated with the academic institution and/or the firm*	*(Zahra et. al., 2007)*
"…a university spin-off involves the transfer of a core technology from an academic institution into a new company. The founding member(s) may include the inventor academic(s) who may or may not be currently affiliated with the academic."	*university spin-off*	*academic institution*	*inventor academic(s) who may or may not be currently affiliated with the academic institution*	*(O'Shea, et.al.,2008)*

Academic spin-offs are very special start-up companies that are founded by an academic inventor with the aim to exploit technological knowledge that originated within a University setting in order to develop products or services.	*very special start-up companies*	*aim to exploit technological knowledge*	*university setting*	*academic inventor*	*(Bigliardi et. al 2013)*	

Source: Own processing

Even though these definitions are useful for defining the topic, they have weaknesses.
First of all, the founders of the university spin-off: students, academics, and external entrepreneurs may be involved in developing technologies, but also they might leave the university environment.

The second weakness is that such definitions do not explain clearly the fact that the parent organization can be: government R&D laboratory, the University, the University research centre, a private R&D organization. What about public and private universities, can they both create university spin-offs?

All the definitions have in common in describing university spin-offs is the origin of the innovative product/ process/service that serves as the main revenue source.

From our perspective, it is not desirable to define a restrictive definition of university spin-off firms by reducing the group of actors and institutions included in the research framework, but it is important to mention that the technology transfer should have a university patent as a starting point.

The logic of university spin-off agreed upon, is new entrepreneurial firms, which transfers technology (patent) from their parent organization (university), with the purpose of obtaining profit, by commercialization of an innovative product.

From a dynamic perspective it is important to understand the changing relationship between a university spin-off and its parent organization.

In our opinion some definitions mentioned above (like: O'Shea, R.et.al., 2008, Nicolaou and Birley, 2003) are unclear, because they consider every firm as a university spin-off so long as it is founded by academic inventor, which can be or not be affiliated to the university.

However, this definition, in turn, is also problematic because it implies that the majority of all existing firms should be classified as university spin-offs, based on the premise that they were started by someone with a university degree.

Furthermore, in Figure 1 we described the process of a university spin-off

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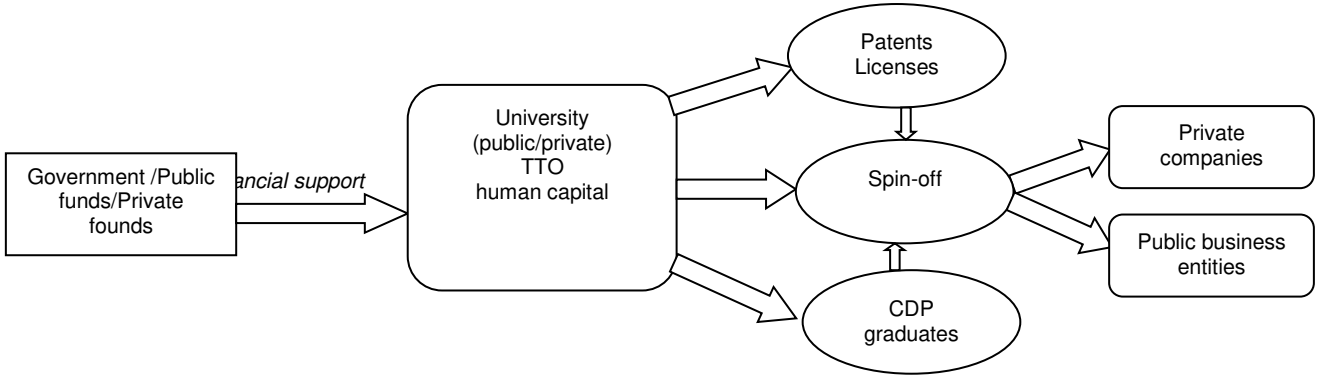


Figure 1.The university spin-off mechanism
Source: made by authors

In conclusion, the academic spin-offs are focusing on a technology transfer system that converts into application in society.

2.2. Typologies and particularities

In 1997, Autio develops a model which classifies technology-based firms into science-based firms and engineering-based firms. Also he discusses the roles and impacts of technology-based firms (NTBFs) in a small open economy by providing details on the changing population of NTBFs in Finland between 1986 and 1993.
Radosevich (1995) classifies spin-offs from the perspective of the entrepreneurial skills in:

- inventor entrepreneur, which involve laboratory employees who are commercializing the inventions;
- surrogate entrepreneur, which involve entrepreneurs who are not the inventors.

Nicolaou and Birley (2003) underline 3 types of spin-offs:

- orthodox spin-off both the academic inventor(s) and the technology are spinning out from the academic institution;
- hybrid spin-off involves the technology spinning out, while the academic(s) retains their university position;
- technology spin-offs: technology spins out, while the academic(s) maintains no off operative connection with the newly established firm.

Research undertaken by Scholten et al. (2001) classifies spin-offs from the perspective of the extent to which the venture has to establish external relationships as being:

- *exploitative spin-off*, which is addressing an established environment accustomed to the technology;
- *explorative spin-off*, which addressing a new environment that is not familiar with the new technologies, products or services.

Upstill and Symington (2002) classify spin-offs from the perspective of the method of technology transfer adopted:

- direct spin-offs: companies involving a research organization and former staff of the parent organization;
- indirect spin-offs: companies established by former staff of the parent organization to exploit its tacit knowledge;
- technology transfer companies: companies based primarily on the intellectual property from the parent organization.

Pirnay et al. (2003) classifies spin-offs from the perspective of type of knowledge involved in:

- Type I- involving codified knowledge and researchers;
- Type II- involving tacit knowledge and researchers;
- Type III- involving codified knowledge and students;
- Type IV- involving tacit knowledge and students.

Bathel (2010) classifies spin-offs from origin of the founders in:

- sponsored spin-offs are the result of particular university research projects, and apply specific knowledge inputs in the development of their initial core technology;
- unsponsored spin-offs, which find their foundation in decentralized idea

development outside of the university setting, almost entirely rely on generic broad knowledge bases for the development of innovative products and services, which have enabled the firm-formation process.

Zahra said that the development of academic spin offs and corporate spin-offs different from the "knowledge conversion capability" (KCC) perspective, which it represents the capacity to transform research and scientific discoveries into successful products and goods that are efficiently and quickly commercialized to create value (Zahra et. all.2007).

From our point of view the typologies mentioned above present weakness, because many spin-off cases can belong to several types at the same time. The spin-off typologies as we found them in the literature are useful for defining the concept of university spin-off, and to see that their definition situates them at a certain point in time based on being in a close proximity with an university.

Romanian law provides the existence of two types of spin-offs:

- the total assets and liabilities of a company, ceasing to exist, are split up between two or more already existing or new companies;
- partial spin-off: only part of the assets and liabilities of a company, continuing to exist, are transferred to two or more already existing or new companies.

Also Mustar et al. (2006: 290) conclude in their review that there is ''an important gap in our comprehensive understanding of the diversity of RRSOs'' (research-based spin-offs).

3. European support framework for spin-offs

3.1. Innovation- sustainable growth in Romania

According to the Innobarometer 2015 "The innovation trends at EU enterprise", between the 2nd and 20th of February a survey was conducted in the 28 EU Member States as well as in Switzerland and the United States on 14 118 respondents.

The survey shows clearly that the main problems for the commercialisation of innovative goods or services in Romania are: the established competitors (65%), the lack of financial resources (67%), the cost or complexity of meeting regulations or standards (42%), 49(%) lack of human resources, (36%) administrative or legal issues, low demand for the innovative goods or services (50%), lack of marketing expertise (41%), weak distributions channels (39%), difficulties in maintaining intellectual property rights (19%).

According to the survey in Romania the contribution to the development of innovation in companies was due to: (98%) to management, (80%) to employees of the company contributed to the development of ideas for innovations, other companies (49%), (58%) individual consumers, (23%) public sector organizations, 14% to universities or research organizations.

In contrast the survey highlights that in Denmark, public sector organizations (22%) and universities or research organizations (25%) are considered to register the highest scores in comparison with other countries.

The survey shows that support for training staff in how to promote and market goods and services would be the type of public support with most positive impact.

Likewise companies in Romania, on the other hand, are less likely than those in Hungary to say training (15% vs. 17%), meeting regulations or standards (8% vs. 12%) or accessing or reinforcing online selling (6% vs. 16%) accessing or reinforcing their presence in export markets (6% vs. 21%) would have the most positive impact.
In 15 Member States, companies argue that training staff how to promote and market goods or services would have the most positive impact, and this is of Belgium (31%), Portugal (30%) and Spain (29%).
When asked if the companies had any involvement with public procurement half of the companies in each Member State say they have never investigated or submitted a tender. This is the case of Estonia (76%), Spain, Romania (both 74%) and Malta (73%) vs. Ireland (50%), Croatia and Belgium (both 51%).
According to the Global Competitiveness Report 2015-2016 (World Economic Forum, 2015) from the stages of development perspective and the weighted index, Romania together with Croatia and Hungary are all at the transition from stage 2 to stage 3.
Fostering sustainable growth, innovation is considered the 12th pillar of the competitiveness.
It involves sufficient investment in research and development (R&D), the presence of high-quality scientific research institutions; extensive collaboration in research between universities and industry; and the protection of intellectual property.
Being in the same stage of development, Romania ranks 84th out of 140 economies for innovation, while Hungary, the Czech Republic rank much higher position: 72th, 63th.
Overall The Global Competitiveness Index in detail shows that, Romania is situated below Hungary and above Croatia in ranking the positions out of 140 participants: for university – industry collaboration for R&D (71th vs. 36th vs. 81th), availability of scientists and engineers (57th vs. 51th vs. 78th), for no. procedures to start a business ranked (38th vs. 22th vs. 76th).
At the same time, according to the Innovation Union Scoreboard 2015, Romania ranks 38th in the EU for R&D public sector, linkages and entrepreneurship 9th, with 13 public- private scientific co-publications per million population (Innovation Union Scoreboard, 2015).
Considered a modest innovator, Romania's performance has declined due to a dramatic decrease between 2013 and 2014 (in particular due to a very strong decrease in Sales of new innovative products (-21%) with the performance level relative to the EU dropping from 46% to 37%.
Performing well below the average of the EU, Romania registered the lowest values in linkages and entrepreneurship dimension and the PCT patent applications indicator.

3.2. European funds focused on research in Romania

In 2007, Romania joined the European Union, and policy makers focused their attention on acceding EU funds to improve their capacity in R&D and innovation absorption. However, in spite of the big amounts of money allocated for financing the creation of innovative companies, major problems were identified in their implementation process, due to different internal and external factors that acted as

obstacles.
At a national, regional level policy makers each year are allocating substantial amount of resources to promote the creation of university spin-off firms.
If the academic literature shows that university spin-offs in other countries appeared in 1995-1996, in Romania this concept appeared only in August 2008. Nowadays the number of this type of initiatives at universities in Romania is very low.
The Government Ordinance no. 3823/2015, Art. 6, Al d) of Ministry of Education and Scientific Research defines “spin-offs as new companies that are created based on the result of a research project of a public R&D organization or a university”.
The main objective of the National Strategy for Research and Development of Romania is that by 2020 Romania will be regionally and globally competitive through innovation supported by research and development, thus generating wellbeing and prosperity for its citizens.”
Even though The Innovation Union Competitiveness Report 2011: Country Profile – Romania (European Commission, 2011) shows that R&D intensity has increased from 0.37% in 2000 to 0.48% in 2009, Romania still remains one of the lowest ranked countries in Europe for R&D intensity. Investment in R&D has been significantly impacted by the economic downturn; however a target of 2.0% R&D intensity as a percentage of GDP is being targeted by 2020.
Between 2007-2013, the creation of university spin-offs in Romania was fostered by the European Regional Development Fund (ERDF) Operational programme for Romania, entitled "Operational Programme Increase of Economic Competitiveness". The budget for the period 2007-2013 was around EUR 3 billion.
The purpose of the program was to strengthen the R&D cooperation between research institutes/universities, and firms as the basis for the future development of enterprises’ international competitiveness.
The objective of the Priority Axis 2: Research, Technological Development and Innovation for Competitiveness is focused on: increase of R&D capacity, stimulation of cooperation between RDI institutions and enterprises, and facilitating the enterprises’ access to RDI.
The low level of funding (both public, and private) for research, technological development, and innovation (RDI) had as direct results the obsolete RDI infrastructure, the decreasing number and increasing average age of researchers, and the low performance of RDI activities. The lack of funding also hindered enterprises’ access to RDI activities and technology transfer.
The purpose of this program was to strengthen the relationship between R&D institutions and enterprises by stimulating technology transfer , the creating and reinforcement of high-tech firms and the development of poles of excellence/competitiveness.
One of the key intervention of the program is RDI support for enterprises, is focusing on:

- Support for high-tech start-ups and spin-offs
- Development of R&D infrastructure in enterprises and creation of new R&D jobs
- Promoting innovation in enterprises Innovation through R&D.

The three indicative operations mentioned above where chosen to increase the private investments in RDI activities, to reduce the high technological and

competitiveness gaps. A cause of the expressed by the low level of innovation in enterprises, the reduced capacity of enterprises to absorb R&D results, and the slow development of R&D activities in enterprises.
The target for the output supported high-tech startups and spin-offs forecasted to be reached in 2015 is a number of 50 startups and spin-offs (Table 3).

Table 3. Indicators of high-tech startups and spin-offs

Indicators		2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Innovative start-ups	Realized	0	0	5	2	-	-	-	-	-	7
	Target	0	5	5	5	5	5	4	0	0	29
Innovative spin-offs	Realized	0	0	4	11	-	-	-	-	-	15
	Target	0	0	5	5	5	5	1	0	0	21

Source: www.poscce.research.ro/.../informatii.../informatii-ref-

As table 3 illustrates, Romania didn't archive the target of the output indicators: only 15 innovative spin offs out of 21, and 7 innovative start-ups out of 29. This proves in Romania, universities are facing problems regarding the creation of spin-offs.
We consider that the causes that explain the low performance of this indicator are a lot of obstacles, from which the most important are: lack of entrepreneurial skills and the bureaucracy.

3. Obstacles and factors to support the economical growth of academic spin-offs

In the academic literature we can find a lot of *obstacles* directly related to resources and capabilities in in the creation of a university spin-off.
Geenhuizen (2009) identified different types of obstacles, seen as ''problematic situations in gaining resources'': market-related, financial and management obstacles (figure 2). He described that market-related obstacles occur most often, with financial and management obstacles in the second and third place, respectively.

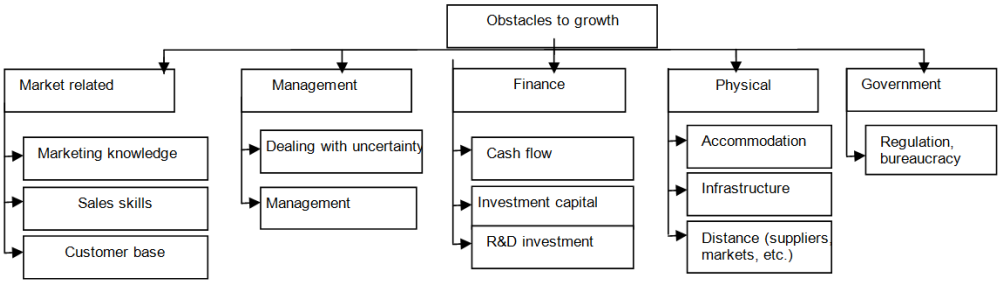


Figure 2. The nature of obstacles
Source: adapted after Geenhuizen (2009)

Understanding how universities can promote the establishment and growth of spin-offs requires detailed knowledge about how these firms develop and the type of conditions and support that facilitate their success.
Academic spin-offs have a historical relationship with university such as their professors previously or former colleagues, which can could to a recommendation and intermediation to potential industrial partners or investors.
From Shane point of view (2014) the technology licensing officers play an important role in the creation of university spinoffs.
Prior research indicates that faculty members with ties to investors or business, or industry experience, are more likely to engage in spinoff activity.
Spin-offs, companies with strong future perspective are facing obstacles in obtaining financial resources [Shane, 2004; Siegel et al., 2003]. From Wright et al. (2006) point of view, spin-offs are very risky because of their inability to obtain funding in order to continue with their innovation activity.
The firms are different taking into consideration the following terms: the type of resources, the business model and the institutional relationship/background.
The spin-offs biggest obstacle consists in the facts that evolve from an initial idea in a non-commercial environment to becoming established as a competitive firm.
Clarysse et al. (2005) highlight the problems of conflicts between stakeholder objectives with regard to the type of ventures they wish to create and the resources they seek to commit.
In order to understand the mechanism of these firms it is important to understand the nature of these firms. From Steffensen et al. (2000) an important factor in the success of the spin-offs is the degree of support received.
From Krabel and Mueller (2009) perspective the creation of a spin-off depends on the patenting activity of the scientist, entrepreneurial experience, the personal opinions about the benefits of commercializing research and close personal ties to industry.
Shane (2014) shows that in technology licensing officers vision the best inventor for opening a spin-off needs to have the main characteristic of an entrepreneur: male, immigrant, with industry experience, and easy to work with.
Elpida' s opinion (2010), we can find the supportive *factors* : in the beginning of the university spin-off development are:

- *Market Needs*- a critical factor for sustainable success of the spin-off is to connect the new concept with adequate market needs.
- *Human capital* plays. Skills and experiences of the entrepreneurial inventors are indispensible for a successful commercialization of the invention.
- *Policy makers*- are encouraging research-based universities to increase the rate of spin-off formation.
- *Legislation*: At local, regional, national or even global level legislation can influence the spin-off creation. The environment can foster entrepreneurship through the tax and regulatory environment for new businesses, insolvency law reforms and promoting efficient financial markets in all member states.
- *Nature of capital***.** Having the idea or invention is not enough, finance becomes critical for a spin-off company. As external source financing we find venture capital and business angels financing**.**

- *Bridging Institutions*: technological parks, incubators, innovation centers, develop and encourage the process of diffusion and transfer of knowledge and technology.

Incubators play a very important role for the academic spin-offs because of the following reasons: cheap and flexible accommodation, including shared services and access to pre-seed capital, programs for improving the entrepreneurial capabilities of founders/managers.

Conclusions

Successful businesses are conditioned both quick and easy access to knowledge as skilled labour, technical and specialized social support and the clear identification of suppliers, customers and innovative solutions.

Universities must become more active players in the Romanian economy based on knowledge, able to respond effectively to market demands. In economically advanced countries, prestigious universities have a key role in their growth. Consequently, the economic-university relationship is of strategic importance and of public interest needed to be developed and continuously streamlined by appropriate government policies.

The more inventors are linked with the private sector the more their interest in creation of spinoffs raises.

The most important key elements in creation of an academic spin-off are: entrepreneurs, resources and opportunity. In order to increase the economical rate, universities have to prepare the graduates, the future managers, to develop the right competences in order to create spin-offs and start-ups.

The lack of entrepreneurial skills is considered to be a barrier in promoting the academic entrepreneurship and dilutes any positive effects of spin-off investments and programs.

Studies show that universities with closer ties to industry tend to generate greater numbers of spin-offs and exhibit more entrepreneurial activity.

Although Romanian universities, especially public ones, should access EU funds for R&D projects, the current low absorption degree and the problems manifested as well as the certainty that the funding will reappear in the next financial programming period (2014 – 2020), underlies the necessity to study R&D projects' implementation framework and the factors that determine its success or failure.

The incubator acts as mediator or a direct supplier of resources without substantial costs.

In order to become more profitable and more well-known the academic spin-offs has to be included in a business incubator. In this way likelihood of failure is reduced and the business incubator in provides an ideal environment to create, exploit, and share knowledge.

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CREATING A MODEL CULTURE OF MANAGEMENT CHANGE

Boca Gratiela Dana[1], Lindita Mukaj[2], Marsida Vishkurti[3]
[1]Technical University Cluj Napoca, North Center University of Baia Mare, Faculty of Sciences, Department of Economics, Romania
[2]Regional Department of Education Durres (DAR), Albania,
[3] "Aleksander Moisiu" University, FASTIP, Durres, Albania
bocagratiela@yahoo.com
lindita_muka@live.com
mvishkurti@fastip.edu.al

Abstract: The role of the study is to quantify the influence of the organization culture presented as models of success in a new economical market and new orientation of job market. Also the study identifies the factors of influence upon the next generation in how to choose a new product and type of activities in global market. The question that arises is whether such culture model can be adapted in different countries. The propose model using the ADKAR and RACI models as management change tools, it is created to answer to Who, Why, What, When and How it is possible to change the organization culture. The questioners were structure, taking in consideration the traditional behavior, culture and customers identity in a global market demand. Albanian organization culture and models applied for diferent services were presented and the original ideas for services to adapt them to other cultures show the new model of entreprenurs and their creativity. For a business the multicultural elements provide general indicators of the national beliefs, norms and values, which foreign organizations may compare to their own cultural profile when interacting with professionals in other countries.

Keywords: ADKAR, quality, management change, culture, leadership, RACI, 5W

JEL classification: M11, M13, M14

1. Why use the ADKAR model of change?

The model present a business dimension of change taking in consideration the stages of implementation and adaptation of business using ADKAR model for management change. Including also the opportunities, the scope and objectives of business and the solutions for implementation of new business, the study is trying to sustain the importance of standard elements of a business change that managers feel most comfortable managing Figure 1.
Boca (2013) proposes in her research regarding the ADKAR model versus Quality management, a model of application for organization which shows that problems with the people dimension of change are the most common cited reasons for organization management failure.

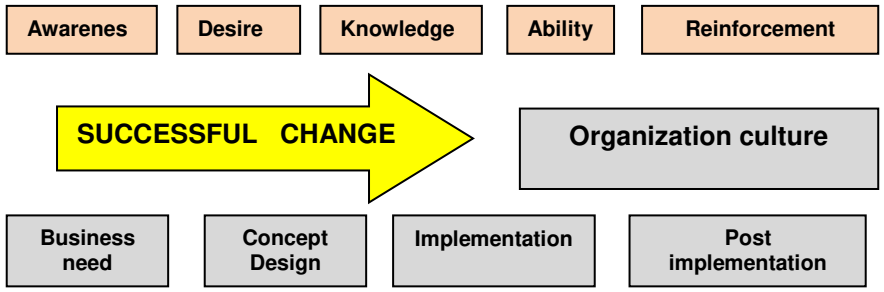


Figure 1. A culture model for business management change of organization
Source: By authors

1.1. What use the ADKAR model of change?

Effective management of the people dimension of change requires managing five key goals that form the basis of the ADKAR model and aslo of RACI model which present the stages of future project of management change in organization like in Table 1.

Table 1. A benefits of ADKAR and RACI model

Model		Benefits
ADKAR	• Awareness of the need for change • Desire to support and participate in the change • Knowledge of how to change • Ability to implement the change • Reinforcement to sustain the change	Sumarises the process steps of change Effective management checklist Provides an under
RACI	• Responsible of the activity • Accountable • Consulted an important stakeholder • Informed who needs to know	Help people to structure the information Present people their role in organization Improve the communication

Source: By authors

1.2. How we can use ADKAR model ?

A model for culture evolution in organization it is presented in Figure 2., and will be applied in different small business discover in Durres and Tirana cities from Albania. It is very clear that the concept will help the new small business to adapt their business to a new culture generation and customer's behavior. The researcher in this study reviewed the literature to locate the most relevant multicultural theories, factors, and instruments in order to measure Albania's national culture. The paper aims to discuss these issues.

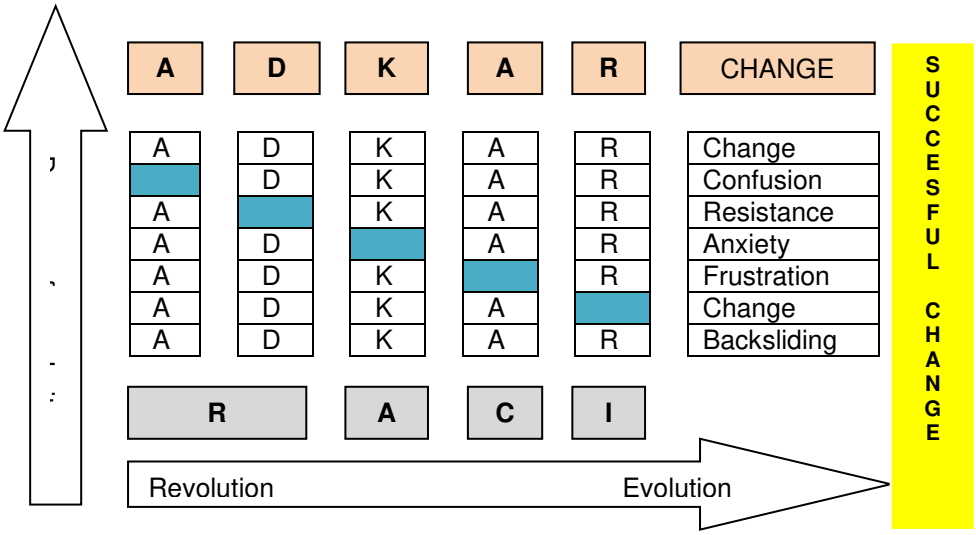


Figure 2. A model for culture evolution in organization
Source: By authors

2. Methodology

An innovative combination of exploratory and confirmatory survey and Gemba analysis (D.G.Boca, 2015), was used to fit the multicultural construct to the sample data and then estimate the national culture.
The multicultural impact were identified for some services generally accepted as national culture factors to compare with the benchmarks from actual market. Adapting the organizational culture questionnaire porposed by Vele (2013) we will be able to identify the cultural particularities present inside the company (manager) and outside the organization (market environment), the degree in which the culture supports a strategy orientated view.
From a strategy perspective, we will evaluate the strategic efforts undertaken by the manager organziations in their quest for competitive advantages

3. Case study

The article explores the economic cycles influence between innovation and creativity in Albania economy.
The target of survey were 115 organizations involved in economic activities in Durres and Tirana cities from Albania.
A model that explains organizations ups and downs of cycles of explotation of different opportunities is proposed.
We investiagate and briefly describe the personal manager changes trying to identify the influence of qualities characteristics and their attitude upon standardization and his importance, associated with the needs of management

changes:
Awareness. the reasons that the respondent believe the changes are necessary;
Desire. the factors (good and bad) that create a desire for this change, motivating factors, including the person's conviction in these factors and the innovative importance, rate his/her desire to change (Boca and Mukaj 2013);
Knowledge. the skills and knowledge needed to support the change, rate this person's knowledge or level of training in these areas (Sabou, 2013);
Ability. the skills and knowledge identified in the previous question, evaluate the person's ability to perform these skills or act on this knowledge, knowledge and behaviors to support the change;
Reinforcement. the reinforcements that will help to retain the change, helping support the change.
Investigating the nature, ideas and activities of organizations in a global market a systematic documentation and an empirical base of evidence it was necessary to understand the motivation of some managers to reoriented their activities and organization culture.
Therefore a questionnaire was designed, and structure to address type activity, to innovation and quality management and to identify the flexibility of organization management regarding the new trends on market and the openness to management change.
Another part of questionnaires identifies the level of specialization and the manager opinion upon global market, if they have participated to international events, asking them to describe their profile, activities and priorities.
The Albanian's organizations have a young face, half of theme were set up in the field of small and medium services including here backery, cosmetics, bar and restaurants and only few of them in the field of construction or manufacture production.
Following the Pianta (2005) research arguments of a relationship between specific innovative strategies and their employment outcomes we identify in our study similar influence, taking into account that changes in demand and wages, are radically different, when new products may open up new markets and offer new jobs, and in downswings, when new processes may come to dominate technological change, leading to restructuring and job losses.

4. Results

4.1. ADKAR assessment for a business change

In these study the focus is on the ability of the organization using techno-economic paradigm to support a new business, to growth a business or to adapt a business over several decades through the opportunities offered by new market trends, leading to a broad range of radically new products with a large potential demand offering also a large opportunity for job creation.
The respondents are managers of small and medium services 61 % are male and only 39 % are female.
These categories characterize the main orientation of sectors in terms of the nature of innovative efforts and can be used in order to appreciate the impact of innovation on value added, employment and productivity.In Bogliacino and Pianta (2010), the differences in technological change are studied through the introduction of a Pavitt's (1987) taxonomy extended to services.

Majority of the respondents are involved like Pavitts suggest in small and medium activities oriented in services 43 % (caffee bar, restaurants, small shops, cosmetics, tailoring, turism agency, jewerlly), 20% in equal procent the retailer and wholesaler activities and a procent of 17% in production activities (construction, fishery, tailoring, backery, turkish deligts, small activities as manufacture own products as production activity) (Figure 3).

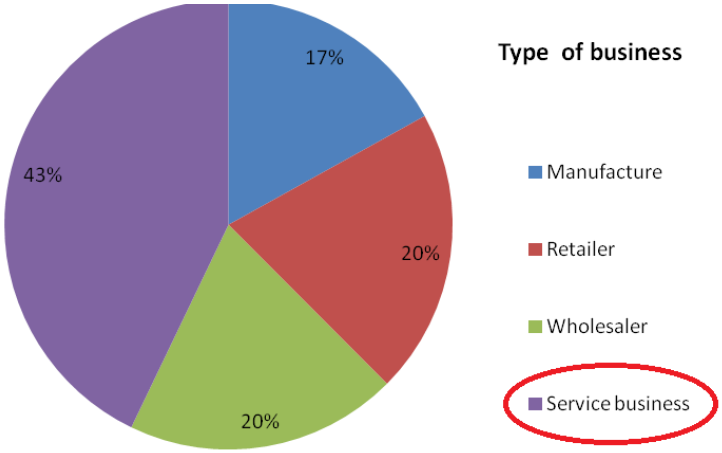


Figure 3. Type of business
Source: By authors

Starting from the distinction between product and process innovation in Schumpeter (1934) theory Pianta (2001) identifies two different types of strategies, technological and cost competitiveness.
The results present the association with the search for product innovation for a better quality of products and a general orientation towards new markets. The feed -back of new orientation of organization culture is tied to the search for labor - saving process innovation, price competitiveness and flexibility in production.
Although Lucchese and Pianta (2011) recall the Schumpeterian idea of clustering of innovations, manager's techno-economic paradigms require the presence of favorable social and institutional conditions, including the presence of human and social capital.
The ADKAR model helps to measure the effectiveness of the change process. Progress can be measured down to the individual level, gaps diagnosed, and corrective action is directed. An instrument to provide a diagnostic of corrective actions was applied to identify the gaps of organizations presented in Table 2.
In conclusion the respondents present

- that people are in a continuing process of change, not organisations in a direct interaction and under the market and global influence,
- the successful change occurs when individual change (managers and staff) are matches the stages of organisational change.

The analysis of survey data are:

- 58% from respondents participate to different courses or specialization in their field as a motivation of organization management changes, and only 42%

didn't participate to any kind of specialization in their field activities;

- 78% managers agree with the necessity of adaptation of their organization and products with European standards and quality characteristics, only 22% are not agree;
- a 88 % from respondents agree with the necessity of tarining and participation for improvement of their knowledges in specific activities, only 12% believe that they don't need any information about new orientation of their organization culture.

Table 2. Developing corrective actions with ADKAR

GAP ADKAR	**CORRECTIVE ACTIONS**	
AWARNESS	**Why?** Need to change	Management communication Customer input Market changes about the business reasons for change Face to face communication Impact change Ready access information
DESIRE	**Who?** Participate and support change	Look resistance Identify the root cause Change desire Fear of job Career advantages Trust and respect of leadership
KNOWLEDGE	**How**? to change	Training and education Information across Examples of role models how to change the skills needs after the change
ABILITY	**What?** Implementation of skills and behaviours	Job training Job aides to support new behaviours Coaching and troubleshooting Mentoring Removal of barriers Practice applying new skills
REINFORCEMENT	Sustain the change	Compensation changes Individual coaching sessions to identify gaps\personal recognition Celebrations Change support by leaders

Source: Adapted by authors

About manager vision for innovation and adaptation of organization culture the

results are presented in Figure 4, where **S**-reprezent the manager participation to different courses or specialization in their activities, **C**- courses the necessity significance the specialization training, **Q**uality importance for organizatin culture.

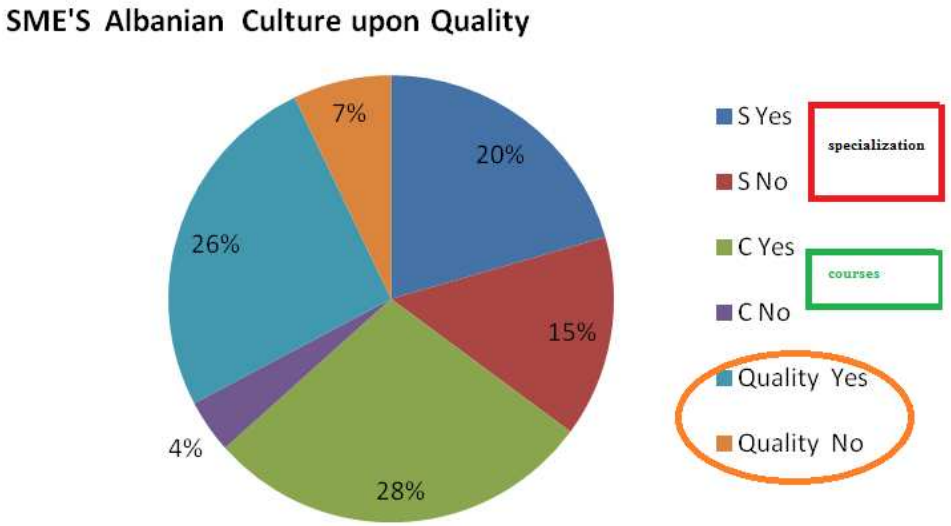


Figure 4. SME's Albanian Culture upon Quality
Source. By authors

In Figure 5. we present an adaptation of organization culture to the needs of customers from Albanian market.



Figure 5. Albanian organization culture adaptation of services
Source: By authors

The multicultural generally accepted national culture present an asymmetric culture which were created for a positive critical comparison of Albania with other theoretically selected countries, found to be most similar to its Balkan and Turkish neighbours, as compared with Western cultures and of the USA.





Figure 6. Albanian fast food under customer's culture
Source: By authors

In Figure 6. it is easy to recognize the fast food culture, and the adaptation process of organization in function of new culture.
This process leads to changes in production systems throughout the young Albanian economy, with the adoption of superior technologies contributing new inputs, sources of energy, and modes of advertising, of design and under the standardization policy.
The research identifies some solutions on global market, suggested by the bar and pub's manager's which adapt their services using the innovation and creativity with traditional culture and maintaining the characteristics of culture level.





Figure 7. Albanian solution for traditional culture coffee pub's
Source: By authors

ADKAR model can be used to:

- Diagnose employee resistance to change;
- Help employee transition through the change process;

- Create successful action plan for personal and professional advantage;
- Develop a change management plan for your employee;
- Help to identify why changes are not working;
- Understand where the change is failing and address that impact point.

5. Conclusion

Albanian organization culture and models applyed for diferent services were presented and the original ideas for services to adapt them to other cultures show the new model of entreprenurs and their creativity.
Also the managers skills to involve organization in new projects taking in consideration the global market present also an alternative to evolution.
From a business standpoint, the multicultural elements for Albania provide general indicators of the national beliefs, norms and values, which foreign organizations may compare to their own cultural profile when interacting with professionals in this country.
The best use for such indexes is for benchmarking and comparison. Foreign government, private corporations, or nonprofit organizations may compare their own culture profile with that of Albania to be aware of the similarities and differences Figure 8. .



Figure 8. A provocation for organization culture
Sourse: https://www.google.ro/imghp

Made in Romania program ''Made in your country'' was launched in 2000 amid an apparent decline continue domestic production and the loss of important landmarks of the national economy.
The new campain strategy is implemented to influence the customers mentality, to educate and to create a culture for customers behavior.
It is a big challange also for Romanan' s organizations, a campaign that put the spotlight products made in the country and work of the people that make them.
The aim is to print on products made in the country , a barcode custom that has become the trademark of all goods manufactured in Romania, Figure 8 with the shape of our country.
We have so many products and quality stuff made in Romania that is a shame not to make them known in the country but also worldwide.
They are already products from different counties appreciated by many of us, and

also who try them or test them at least once, why not find out even more about them?
We hope organizations will find this study useful for continuing and improving their work, and prepare researcher and policy makers to listen now closer the voice of customers.

Research limitations/implications
The researchers discussed the implications of knowing Albania's national culture profile with reference to how other countries might collaborate and transact with this emerging transition economy.
The future research will apply the model in other countries, East countries, to identify the managers solutions using the same models.

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HOW TO ENHANCE ENTREPRENEURSHIP IN UNIVERSITIES. BUCHAREST UNIVERSITY OF ECONOMIC STUDIES CASE STUDY

Eduard Gabriel Ceptureanu
Management Department, Faculty of Management, Bucharest University of Economic Studies, Bucharest, Romania
eduard.ceptureanu@man.ase.ro

Abstract: *Entrepreneurship has been an area of interest among academics across the world. It is admitted as a booster for market innovation, product and technological growth. Small and medium enterprises (SMEs) are considered an important factor for health of the economy. It is seen as the force that revitalizes the economy and leads to economic progress, job creation for the community. Higher education institutions play a vital role in providing society with skilled human resources, owning specific skills accordingly to economy needs. The aim of this study is to investigate ways in which the Bucharest University of Economic Studies (BUES) could amplify the entrepreneurial potential of their students. Results showed that cooperation of universities with entrepreneur NGO's and other local institutions and organizations, apprenticeship courses, innovative educational content and use of creativity- centred methods of teaching were the most effective improving entrepreneurial skills of students. Detecting the challenges and competencies of entrepreneurial students could help professor to consider these challenges in developing the student's capabilities that allow them to successfully conduct entrepreneurial activities. Thus, we propose three major implications for actors involved in enhancing entrepreneurial engagement at higher education institutions. First, differences between universities organizational structures (i.e. faculties and departments) regarding organizational norms and cultures should be taking account when encouraging entrepreneurial engagement. Second, all levels of the university hierarchy should be considered when developing the support system for academic entrepreneurship. Third, despite their subordinate position, today's students will soon have influential positions in the university. Hence, any attempt to create a more entrepreneurial university should pay particular attention to this group of academics. Whilst senior academics may be difficult to influence, our study shows that students seem to be receptive to communication about the commercialization of research results. Our findings indicate that initiatives and research about the creation of entrepreneurial universities should put students in a central position.*

Key words: *University education, entrepreneurial skills, students, entrepreneurship*

JEL classification: L26, M1, O30, O10

1. Introduction

Universities are currently in the "process of change and adaptation to shifting environment and social context expectations regarding increased facilitation of entrepreneurship among faculty and graduates" (Ceptureanu SI, 2015a). By

supporting academic entrepreneurship, universities can address these expectations whilst also becoming more entrepreneurial institutions. However, more knowledge is needed on how this support provided by different levels in the university organization is perceived by academics.

Entrepreneurial activity has seen a mean of revitalizing economy and helps to cope with unemployment problems (Hatten et al., 1995; Green et al., 1996; Alstete, 2002; Gurol and Astan, 2006, Ceptureanu SI et al., 2012). Furthermore, entrepreneurship it is admitted as an booster for market innovation, product, and technological growth (Jack and Anderson, 1999; Ceptureanu EG et al., 2012). On the other hand, small and medium enterprises are considered an important factor for health of the economy. It is seen as the force that "revitalizes the economy and leads to economic progress, job creation for the community" (Ceptureanu SI, 2015a).

For last couple of decades the importance of entrepreneurship for economic health of a country is widely understood, as evidenced by interest taken in establishing universities, colleges for imparting entrepreneurial education, establishment of different supporting and facilitating authorities, and forums and platforms at different national and international levels (Nicolescu O et al., 2009).

Entrepreneurship education would produce better quality entrepreneurs in the future (Cavaller, 2011; Ceptureanu SI, 2015b). We have been "witnessing a remarkable escalation in entrepreneurship education at various universities in Romania" (Ceptureanu EG et al., 2012). Entrepreneurship generates "millions of job opportunities, offers a variety of consumer goods and services, and generally increases national prosperity and competitiveness" (Nicolescu O et al., 2009, Ceptureanu SI, 2015b).

Unemployment is one of the most important issue of Romanian society nowadays, "with more than 25% of young people being unemployed" (Ceptureanu EG, 2015a). Delivering job opportunity for "thousands of unemployed university graduates has been recognized as one of the most demanding challenges facing our society today" (Ceptureanu EG et al., 2014).

In Romania, a significant "boost in the development of higher education institutions all across the country during the last two and a half decades corroborated with lack of a rather holistic and comprehensive strategy on supply and demand of educated manpower represent the holistic "picture" of academic trends" (Ceptureanu SI, 2015b). As a result of emergent, entrepreneurship has recently been an interesting issue in much of the developed countries as well (Block and Stumpf, 2003; Mccline, 2004; Ceptureanu EG, 2015a).

2. Theoretical background

The concept of the entrepreneurial university was addressed as early as 1983 by Etzkowitz in his discussion of American academic science and how research results can be applied in commercial settings. Since then, this concept has been broadened and developed, for example by Clark (1998) who described entrepreneurial universities as striving to 'include more useful knowledge, to move more flexibly over time from one programme emphasis to another, and finally to build an organizational identity and focus' (p. 14). It has become increasingly established that universities and how they interact with other actors are crucial components in knowledge-based regional development (Etzkowitz & Klofsten, 2005; Svensson et al., 2012; Ceptureanu EG, 2015a, Ceptureanu SI, 2014).

Development towards an entrepreneurial university entails working with organisational capacity, people and incentives; external relationships with stakeholders for knowledge exchange; as well as supporting various pathways for entrepreneurs (OECD, 2012). From this, it follows that academic entrepreneurship has become a vital part of a university's activity portfolio. Klofsten and Jones-Evans (2000) suggest that it should be viewed broadly and that it can encompass eight types of activities, ranging from academic spin-offs and patents to contracted research, consulting services and provision of external educational courses. It has often been argued that a bottom-up approach which engages individuals is more conducive to fostering academic entrepreneurship than a top-down approach (Jacob et al., 2003; Ceptureanu SI, 2015c). However, it seems as if there are synergies between approaches at different levels, such as central university management, departments and individual faculty and students, as well as external actors at national and regional level (Graham, 2014). This can lead to differences between faculties, departments and research groups on problems regarding i.e. concerning how commercialisation is encouraged, interpreted, and practised. Furthermore, a significant variation in the actual level of entrepreneurial activity can develop between departments within the same university (Bercovitz & Feldman, 2008). The local environment can strongly influence faculty engagement in academic entrepreneurship through specific histories, cultures and rules, as has been shown by Kenney and Goe (2004) in their study of electrical engineering and computer science at UC Berkeley and Stanford.
Davies (2001, p. 27) proposed a more holistic view where entrepreneurial culture included 'mutually supportive and informal relations between individual, department and centre' as well as abilities within the organisation to learn collectively and change structures and rules. A recent review of the literature on academic engagement and commercialisation shows that these are multi-level phenomena (Perkmann et al., 2013). The study concluded that academic engagement was influenced by interplay between factors at institutional, organisational, and individual levels. Furthermore, it found that commercialisation activities were more dependent on support provided at the organisational level than on academic engagement (Perkmann et al., 2013). Hence, the perceived support for academic entrepreneurship at different levels within the university seems to be of importance when academics decide whether or not to behave entrepreneurially (Rasmussen et al., 2010). A better understanding of such perceptions is warranted because they may be linked to actual behaviour. The entrepreneurship literature recognises entrepreneurial intentions as the best predictor of entrepreneurial behaviour and perceived support may have an important impact on these (Kolvereid et al., 2006; Krueger et al., 2000). To sum up, universities are heterogeneous organisations and it has been recognised that the support may vary between the supervisor, research group, department and central university level.

3. Method

In our survey, academia of BUES university formed access population of the study (N= 771 according to 2011 data) out of which a sample size of 72 were selected using criteria such as qualification on entrepreneurship and past experience in develop programmes or conference with students on this area of research. Respondents ratify 26 items regarding potential impact on the improvement of

entrepreneurial skills of students, utilizing a Likert-type scale for impact. Table 1 and 2 shows findings regarding our research.

Table 1: Ways to improve student's entrepreneurial skills in BUES(Cronbach's alpha= 0.90).

Rank	Mechanisms	Mean	SD	CV
1	BUES- entrepreneurs (young) NGOs	4.211	0.752	0.171
2	BUES- apprenticeship courses	4.178	0.747	0.162
3	BUES- educational content and recent scientific advances	4.181	0.571	0.129
4	BUES- creatively-centred methods of teaching	4.142	0.705	0.161
5	BUES curricula based on job market demands	4.122	0.622	0.149
6	BUES- experiential opportunities	4.093	0.749	0.177
7	BUES- academic projects regarding entrepreneurship	3.865	0.819	0.204
8	BUES- career counselling regarding future job	3.835	0.768	0.195
9	BUES- extracurricular activities regarding entrepreneurship	3.831	0.755	0.189
10	BUES- students' entrepreneurial ideas	3.782	0.649	0.168
11	BUES- simulations regarding practical experience on future job opportunities	3.759	0.844	0.216
12	BUES- entrepreneurial education content	3.752	0.759	0.198
13	BUES- business incubators and start-ups inside university	3.709	0.812	0.211
14	BUES- TIC skills	3.692	0.915	0.242
15	BUES- teaching entrepreneurship as the content of education	3.681	0.725	0.192
16	BUES- workshops on creative thinking	3.680	0.758	0.201
17	BUES- entrepreneurship centres' inside universities	3.591	0.837	0.227
18	BUES- mentorship	3.577	0.904	0.248
19	BUES- writing proper business plan	3.492	0.888	0.249
20	BUES- developing academia entrepreneurial skills	3.451	0.857	0.242
21	BUES- agreements with student entrepreneurial organizations	3.432	0.862	0.247
22	BUES- adapting educational planning to students' needs	3.429	0.801	0.229
23	BUES- number of conferences on entrepreneurship	3.381	0.900	0.253
24	BUES- publishing educational materials regarding entrepreneurship	3.301	0.864	0.257
25	BUES- providing information regarding record of a new enterprise	3.292	0.895	0.269
26	BUES- proper financial tools on business plans for students	3.113	0.761	0.232

Table 2: Factors and variables

Factor	Variable	Eigen value
Entrepreneurship focus	BUES- mentorship	0.488
	BUES- agreements with student entrepreneurial organizations	0.637
	BUES- publishing educational materials regarding entrepreneurship	0.632
	BUES- providing information regarding record of a new enterprise	0.772
	BUES- writing proper business plan	0.813
	BUES- proper financial tools on business plans for students	0.689
Education	BUES- experiential opportunities	0.638
	BUES- apprenticeship courses	0.688
	BUES- creatively-centred methods of teaching	0.574
	BUES- students' entrepreneurial ideas	0.561
	BUES- developing academia entrepreneurial skills	0.589
Curriculum	BUES- workshops on creative thinking	0.531
	BUES- academic projects regarding entrepreneurship	0.509
	BUES curricula based on job market demands	0.632
	BUES- entrepreneurial education content	0.681
	BUES- teaching entrepreneurship as the content of education	0.511
	BUES- adapting educational planning to students' needs	0.621
Others issues	BUES- number of conferences on entrepreneurship	0.558
	BUES- extracurricular activities regarding entrepreneurship	0,492
	BUES- simulations regarding practical experience on future job	0.498

	opportunities	
	BUES- business incubators and start-ups inside university	0.611
	BUES- entrepreneurship centres' inside universities	0.521
	BUES- TIC skills	0.579
	BUES- career counselling regarding future job	0.628
	BUES- entrepreneurs (young) NGOs	0.551

4. Results and discussion

Academic education must be transformed in order to be able to meet the needs of upcoming economy needs. In our opinion, a combination of activities integrating academic- organizational learning experiences followed by a redefinition of educational curricula and teaching methods were the most important mechanisms in order to stimulate entrepreneurship behaviour in our university (Ceptureanu EG, 2015b, 2015c). Findings support, Nicolescu O et al. (2009), Chambers (2002) and Ceptureanu SI et al. (2015b) researches. We can consider that academic staff must stay focus on:

- Innovative teaching techniques,
- Entrepreneurs and entrepreneurships,
- Creativity techniques

and

- Incubating student's ideas.

We propose three major implications for actors involved in enhancing entrepreneurial engagement at higher education institutions. First, differences between universities organizational structures (i.e. faculties and departments) regarding organizational norms and cultures should be taking account when encouraging entrepreneurial engagement. As shown by Louis et al. (1989), the policy and structure of the university may have little effect on scientists' entrepreneurial behaviour, whilst characteristics at lower hierarchical levels might be more salient in influencing attitudes and intentions concerning academic entrepreneurship. Second, all levels of the university hierarchy should be considered when developing the support system for academic entrepreneurship. As noted above, there could be a need to involve the departments and divisions, i.e. the middle levels of the university hierarchy, more strongly in the promotion of entrepreneurial activities. These levels are often responsible for managing resources and choosing priorities that directly influence the ability of academics to engage in commercialization activities. Third, despite their subordinate position, today's students will soon have influential positions in the university. Hence, any attempt to create a more entrepreneurial university should pay particular attention to this group of academics. Whilst senior academics may be difficult to influence, our study shows that students seem to be receptive to communication about the commercialization of research results. Our findings indicate that initiatives and research about the creation of entrepreneurial universities should put students in a central position.

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CRITICAL SUCCESS FACTORS FOR INFRASTRUCTURE EUROPEAN FUNDED PROJECTS

Sebastian-Ion Ceptureanu
Management Department, Faculty of Management, Bucharest University of Economic Studies, Bucharest, Romania
sebastian.ceptureanu@man.ase.ro

Abstract: *Absorption of European funds is on top of Romania's public agenda for the last years although the first programming period has ended and the necessary lessons were learned so far. To have a high degree of absorption of funds provided by the EU must be of quality projects and their implementation to be successful. Through this work we aimed to investigate the success factors of infrastructure projects with European funding in Romania, Bulgaria, Moldova, Ukraine, Serbia and Kosovo, and identify critical success factors of these projects through a research surveying the teams of consultants and support personnel from the countries in an international consulting company. The research results are therefore constitute the empirical evidence of what constitutes critical success factors of infrastructure projects financed by the European Union and can be used as a starting point for scientific studies of the management of European projects or other actions that investigates measures that can be taken to improve the success rate of projects implemented in the area mentioned above.One of the contributions of this paper is to identify the critical success factors of success factors present in literature. With more so as they are critical success factors of infrastructure projects with European funding still required field studies and analysis performed in the present context. In addition, the critical factors were operationalized in a conceptual framework. Moreover, this framework includes leadership style of project manager as critical success factor has been identified in the research as the most important in the context in which it was conducted. As such, this paper demonstrates, with the necessary limitations, the importance of management style of project managers in the context of specific European funded infrastructure projects. And this is happening even though there are sophisticated project management tools availabe and relevant knowledge exists at both local and international consultants. We also hope the study results represent an impetus for both theorists who bring new evidence in this direction but also for practitioners to focus their efforts on these key areas.*

Keywords: management, project management, critical sucess factors, infrastructure projects

JEL classification: M10, O1, L2

1. Introduction

Literature on project management suggests that there are many factors that influence the success of the project and there is no general consensus on a particular set of critical success factors (Ceptureanu SI, 2015a). The term "critical success factor" was first used by John F. Rockart and MIT Sloan School of Management in 1979 as a way to help managers to define their information required for the management of their organizations (Rockart, 1979 p.85). Rockart

created the term based on the concept of "success factors" introduced by D. Ronald Daniel. Daniel has discussed the problem of inadequate information for management setting up targets, design strategies, make decisions and measure results. He argues that the information required for organizational planning should focus on "success factors" that were described as "factors that determine success ... key activities [which] must be performed extremely good for a company to be successful "(Daniel, 1961, p.54).

Successful implementation of a project usually include a wide variety of criteria. However, in the simplest terms, the success can be considered to incorporate four basic issues. A project is generally considered to be successfully implemented if:

1. It is finished within the planned period (time criterion);
2. The cost does not exceeds the planned budget (monetary criterion);
3. Reach all the goals initially set (efficacy criterion);
4. It is accepted and used by the customers for whom the project is intended (customer satisfaction).

As such, a first definition of what constitutes successful implementation of a project it includes a definite time frame for completion, a limited budget and a specified set of performance characteristics.

Concept of successful project has changed over the years (Ceptureanu EG, 2015a). Jugdev and Müller (2005) provides a thorough review of the literature on this. Looking at how the success of the project was measured in the last 40 years they conclude that there is an increase in the list of factors affecting the success of a project.

The 80s were marked by an emphasis on planning and control tools, as well as customer relations and team project (Morris, 1988 p.6; Pinto and Slevin, 1988 p.68). Performance evaluation criteria such as time, budget and functionality have dominated this period and turned gradually to more subjective factors such as customer satisfaction.

The 90s have shown an increasing interest in behavioral and interpersonal factors and increased awareness of how project management is about managing human resources to achieve results, not necessarily about managing work itself (Turner, 1999 p.107) . A subsequent study by Müller and Turner (2005) showed that variation in understanding the success of projects depends on the culture and complexity of the projects.

Nowadays, project's success is commonly presented in the literature (Morris and Hough, 1987 p.4; Wateridge, 1996 p.35; Turner, 1999 p.107) as a combination of:

• Critical success factors of a project, which are the elements of a project that can be influenced to increase the probability of success;
• Criteria for measuring the success of a project, what are those measures on which the success of the project is evaluated.

2. Critical project success factors

Success means different things to different people and in the case of projects, the situation is no different (Ceptureanu SI et al, 2015a). One common hypothesis is if a project is completed on time, within budget and agreed quality, then the project is considered successful. The existing evidence suggests that this is far from the truth.

Since the late, project management researchers have tried to discover what factors lead to project success (Baker et al, 1974:25, 1988:15;. Pinto and Slevin, 1988

p.68; Lechler, 1998 p.61). Most of the initial studies have focused more on the reasons leading to project failure than its success (Balachandra, 1984 p.17; Hall, 1980 p.5).
According to Pinto & Slevin (1998) full completion within budget and with a satisfied customer are common elements that measure the success of a project. However, they suggest that there are few topics in project management, which are discussed so often and yet so rarely agreed that the concept of successful project (Pinto & Slevin, 1998 p.67).
Most project objectives, however, include multiple criteria, including time, cost, quality and safety. Project management usually must compromise between thsese criteria. If compromises are agreed by the project manager and client, the project could still be accepted as a success, even if some of the objectives have not been fully met.
In identifying the factors commonly associated with successful projects, Nicolas (1989) suggests that, to the extent that these practices are present in a project, likelihood of success, while not guaranteed, however, is improved.
A more recent study by Shenhar, Tishker, Dvir, Lipovetsky, Lechler (2002) analyzed 127 different projects, arguing that the critical success factors are not common to all projects, for various reasons. A seemingly obvious reason is that not all projects are alike. Each project is different and every project operates in its own environment. As an example, they suggest that projects of considerable uncertainty must be managed differently from projects with a lower degree of uncertainty.
A first systematic classification of critical success factors in project management is performed by Schultz, Slevin and Pinto (1987). These authors identify two groups of factors - strategic and tactical - influencing the performance of the project in different phases of the project life cycle. For example, the strategic factors includes support from top management and good planning of the project. Tactical factors includes customer consulting, selection and training of human resources. Moreover, Pinto and Slevin (1988) increased the range of success factors by considering the specifics of the various stages of the project life cycle.
Research has shown that impact success factors can vary in different phases of the project life cycle and in terms of success measures identified by analysts.
Alexandrova and Ivanova (Alexandrova, Ivanova, 2012) and presents a list of critical success factors relevant for projects with European financing, factors that were identified by literature review and from a pilot study performed in Bulgaria in 2012. The resulting critical success factors are as follows:
1. Jurisdiction of Project Manager;
2. Support from the contracting authority;
3. Clarity of project objectives;
4. Support of top management;
5. Team members competence;
6. Level of motivation for project's team members;
7. Effective communication between project stakeholders;
8. Quality of subcontractors;
9. Accuracy in documenting and archiving project information;
10. Effective coordination of project activities;
11. Compliance with the rules and procedures established by the contracting authority;
12. Systematic control of project implementation;

13. Access to organizational resources;
14. SMART planning;
15. Competence and adequate support from external consultans.
This paper uses this list as a starting point to asess critical factors to which we have added a number of 6 factors considering literature and our own expertise. They are as follows:
1. The purpose of the project is well defined;
2. Objectives are clear and accepted;
3. Support from management;
4. Parties involved in the project have the required expertise for project implementation;
5. The risks are identified and managed;
6. Management style of project manager is essential for project success.

3. Research Methodology

Setting up research objectives

1) Identifying the most important success factors that impact public interest projects with national and European financing in selected geographic area and a list of critical success factors.
2) Building a conceptual model of "successful project" implemented by company's teams in chosen geographical area and the construction of a definition (Ceptureanu SI, 2015b).
3) Determining the current situation regarding project management capacity both in terms of consultants and project beneficiaries.
4) Identify those aspects that have improved the management capacity of the public infrastructure projects in selected geographical area to increase the chances of win a successful project in the chosen geographical area.

Research hypotheses

First we wish to investigate whether "successful project management" is considered the same as "successful project" in the target area chosen since literature covering these two concepts are distinct. Hence hypothesis A states that in *the chosen area there is the difference between "successful project management" and "successful project".*
Hypothesis B states that *most subjects are able to determine the impact of a factor on the success of a project and thus produces a list of critical success factors*.
The third hypothesis was chosen considering why we want to know the impact of various factors on the success of a project of public interest with European funding, namely improving the management capacity of projects and as such hypothesis C says that *most subjects are capable to identify those aspects that lead to improved project management capacity*.

Sample size and structure

To determine the sample size consisting of employees with the role of consultant or support staff involved in infrastructure projects of public interest with European funding the following formula applies (Cătoiu, 2009):

$n = \frac{z^2 * p * q}{e^2}$, where:

n = sample size required;
z = confidence level default; z = 0.95
p = proportion of people engaged in projects (estimation); p = 0.80
q = complement of p, ie the percentage of cases that do not possess the attribute (ie, those not engaged in projects) and is determined by the relation 1 - p; q = 0.20
e = maximal perceived error, e = 0.05
After applying the formula we consider that the investigated sample will include 58 respondents ie 57.7.
The sampling method used was random sampling (probabilistic) method because all people are part of the research unit have equal opportunities to be selected and placed in the sample research. Once picked one respondent, it is no longer considered for selection following sample components.

Design and testing of questionnaire

The research was done using an individual, highly structured and disimulated questionnaire (Cătoiu, 2009). The questionnaire includes questions about the success of a project (questions Q1, Q2_1, Q2_2, Q2_3, Q2_4, Q2_5 and Q2_6, Q3 and Q4), questions about the factors that impact the success of a project (Q5 - Q23) question on the number of years of experience in implementing European financed projects (Q24), open questions about perception opposite the capacity to manage projects with European financing consultants and beneficiaries and issues that have contributed to improving the management capacity of projects (Q25 and Q26) and questions the classification of respondents (Q27-Q33). The questionnaire consists of closed questions (Q1-Q24 and Q27-Q33) and open (Q25 and Q26). Scale types used in the performance of questions in the questionnaire is Likert scale questions except Q24 - Q33.
The questionnaire was tested for the formulation of the complexity and time required for completing the three people chosen randomly from the list of employees involved in projects resulting from sampling (Ceptureanu EG, 2015b).
The persons selected to be in the sample were contacted either directly by e-mail (Romania) or indirectly through a company representative in the target country in question, namely Serbia, Kosovo, Bulgaria, Moldova and Ukraine. This solution was chosen to provide a speedy data collection. Questionnaires were filled in electronic format provided and returned via e-mail. Proof of completion survey respondents are names, their addresses and e-mail attachments transmitted. Once the data were collected, they were analyzed using SPSS 17.0 statistical program.

Data analysis

We performed Reliability Analysis, which involves identifying the degree of precision that measures a characteristic scale. This step was carried out using Cronbach's coefficient alpha internal consistency, which indicates the inter-item consistency of the scale is based on the average analyzed and the correlations between the items of the scale.
According to the internal consistency index value (0.694) shown in fig. 1, the variables analyzed show a very good correlation, which means that the items were accurately perceived (correctly) and have left no room for interpretation by all

respondents.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.663	.694	17

Fig. 1. Measuring Cronbach alpha coefficient of internal consistency (summary results obtained through SPSS)

4. Results

The first and one of the most interesting conclusions of the research is that more than half of respondents (53% overall) believe that successful project management is the same as "successful project". As such, for most of those involved in the implementation of projects either posture manager, consultant or support staff to successfully manage a project is equivalent to having a successful project. This result contradicts the hypothesis which says that the chosen area is the difference between "Successful Project Management" and "successful project", these two aspects are not considered the same thing.

Another interesting aspect is that of those who did not agree with the statement (32% total) only 15% are project managers (team leader, project manager or project responsible) or a position with management responsibilities (Deputy team leader). We find sufficient evidence gathered from studies and scientific or empirical research performed over the years because between "Successful Project Management" and "Project Success" to be a clear distinction. For a project to be considered "successful" have met many more conditions than to secure a quality project management.

In terms of the concept successful project confirmed the issues identified by the bibliographical study which defines this concept (see question Q2 and all its sub-points Q2_1 - Q2_6). All aspects record high percentage (over 70% of respondents), of which nearly matches the achievement of project objectives unanimity (91%) of those questioned in. While that is important, although not a significant difference, a project to satisfy all stakeholders (77%) than only customer for that project is executed (75%). Furthermore, the results achieved to question Q3 which respondents were asked to confirm or deny the claim such that a project can be considered successful if conducted over a period of time, with a budget exceeding the initial estimate but achieve all objectives initially established and accepted and used by the beneficiary for the project is intended to show that 60% of them are "agree" and "strongly agree" while 23% still have not formed an opinion (disagree nor disagree with the statement). By correlating these results with those recorded question Q4 which sought to determine the frequency of similar cases to the one shown in Question Q3 in project management in the target area at the time of the research, which shows that 52% of those surveyed believe that this happens

"often" or "very often" and 38% believe that the only times you encounter a similar case although projects exceeding the period and estimated budget chances are that they be considered "successful projects" if they met their objectives and are accepted by the recipient.
Analysing the responses received in relation to the factors that have the greatest impact on the success of a project respondents have the following ranking based on percentages recorded for each of the items in terms of maximum impact on the success of a project (marked as "very important (a) "questionnaire):

Table 1. Ranking of success factors from research

No.	Success factor	Question	Total score %
1	Leadership style of the manager (leadership)	Q22	86.7
2	Project team composition	Q17	78.3
3	Fulfill the purpose and objectives of the project	Q6	76.7
4	Quality of contractor	Q12	76.7
5	Control of execution	Q13	76.7
6	Project manager competence	Q16	75
7	Effective communication between project stakeholders	Q23	71.7
8	All parties involved (contracting authority, consultant, building contractors, sub-contractors, etc.) must have the required expertise for project implementation	Q14	70
9	Effective coordination of project activities	Q19	68.3
10	Identifying and managing risks	Q15	63.3
11	Support from top management company	Q7	60
12	Support from the contracting authority	Q9	56.7
13	Quality of service provided by sub-contractors	Q11	56.7
14	Motivating the project team	Q18	51.7
15	Rules and procedures established by the contracting authority	Q10	41.7
16	Access to organizational resources	Q8	36.7
17	Accuracy in documenting and archiving	Q21	36.7
18	Flexibility in planning project activities	Q20	31.7

Comparing these results with those acquired by Alexandrovna and Ivanova, these are:
1. Project Manager Competence => 81.8%
2. Compliance with the rules and procedures => 78.0%
3**. Team members' competence => 66.7%**
4. Quality of services provided by sub-contractors => 66.7
5. Support from the top management => 64%
(Results from initial study)

1. The management style of the manager (leadership) => 86.7%
2. **Project team competence** => 78.3%

3. Fulfill the purpose and objectives of the project => 76.7%
4. Quality of sub-contractors => 76.7%
5. Control of execution => 76.7%
(Current study results)
Only "project team competence" appears in two studies among the most important factors that impact the success of the project.
That the current study "the quality of sub-contractors" and "control of execution" appear in the top five factors is normal and to be expected given that type of project is about infrastructure, no matter where it was built, namely transport, environment - water and waste water, waste, energy, buildings, etc.
The most important result of the study is that the first are "management style of project manager (leadership)" which differs from "competence" (factor ranked no. 6 in the rankings shown above), which means technical knowledge (Ceptureanu SI et al, 2015a).
This result is part of the trend outlined by studies in recent years that the project manager identifies leadership as a very important critical success factor. Kerzner (Atencio, 2013) argues that "project managers are often selected or not depending on their management style (leadership)". Also, after bibliographical study the link between project success and ability and leadership style of the manager was identified and demonstrated in a study led by Muller and Turner in 2007. It is mentioning previous studies leadership as a critical success factor but we believe that the work in 2007 two more well founded in this case. Besides the two authors conducted several studies on the subject over several years between 2005 and 2007 at which publishes mentioned above. In the 2005 study two authors said that, surprisingly, the success factors of the projects mentioned in project management literature to date does not include driving style project manager as a success factor. Atenció mentions that although his driving style is considered a success factor at the organizational level for a long time, however, this concept has been adopted relatively recently in project management. This assertion is supported by other authors identify the bibliographic study also cited by Atenció in his work, namely Dvir (2005), Turner and Muller (2005 and 2006), Ceptureanu EG et al, (2014) or a more recent works such as that of Jiang (2014).
In the aforementioned study, Jiang (2014) states that if we look at things from the perspective of the model developed by Yang (2011) project manager's leadership style influence project success through teamwork and the results of this study - "competence team project" ranked as the second most important critical success factor - which indicates the importance of team and teamwork (Ceptureanu SI, 2015b, Ceptureanu EG et al, 2012)
Another interesting aspect is that of the 14 factors that have registered more than 50% of the respondents eight of factors relates to human resources (Q22, Q17, Q16, Q23, Q14, Q7, Q9 and Q18) only three are related to project management (Q6, Q19 and Q15) and the remaining three relate to quality assurance (Q12, Q13 and Q11).
Further study results show unequivocally that the target area of the project management capacity of consultants and beneficiaries has not improved in recent years which should draw an alarm signal. However 60% of respondents did not think they had improved the ability of consultants to manage projects.

5. Conclusions

One of the contributions of this paper is to identify the critical success factors of success factors present in literature. With more so as they are critical success factors of infrastructure projects with European funding still required field studies and analysis performed in the present context. In addition, the critical factors were operationalized in a conceptual framework (Nicolescu et al., 2009; Ceptureanu SI, 2014).

Moreover, this framework includes leadership style of project manager as critical success factor has been identified in the research as the most important in the context in which it was conducted (Ceptureanu SI, 2015c). As such, this paper demonstrates, with the necessary limitations, the importance of management style of project managers in the context of specific European funded infrastructure projects. And this is happening even though there are sophisticated project management tools availabe (Ceptureanu EG, 2015c) and relevant knowledge (Ceptureanu SI et al, 2012) exists at both local and international consultants. We also hope the study results represent an impetus for both theorists who bring new evidence in this direction but also for practitioners to focus their efforts on these key areas.

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CAN ROMANIA BECOME A REGIONAL NATURAL GAS HUB? A COMPARATIVE STRATEGIC VIEW

Andrei Covatariu, Dobrin Cosmin
Bucharest University of Economic Studies, Romania, andrei.covatariu@gmail.com

ABSTRACT:
Taking into consideration Romania's geographical position, the ambition of becoming a regional natural gas hub makes perfect sense. A regional hub brings multiple advantages like revenues from managing the natural gas transit, geopolitical leverage or more sources of supply for internal use. But developing a regional natural gas hub is not an easy job, for this sort of projects implies time and investment, while at the same time managing the regional competition of other contenders. This paper stresses the advantages and obligations attached to Romania's ambition of becoming a regional natural gas hub and it analyzes other neighbor countries' plans.
JEL Classification: Q40, Q41, Q48

1. INTRODUCTION:

At the moment, the European Union is heavily dependent on energy imports, most of them from Russia. This is actually one of the main reasons the Energy Union project was developed. Nowadays, most of the gas-related projects (except Nord Stream 2) aim to diminish the dependence on Russian natural gas by diversifying the supply sources.
According to Eurostat, an analysis regarding the overall energy import dependency shows that for 2014 Romania places third (after Estonia – 8.9% and Denmark – 12.8%) in a top of the least dependent countries in the EU. Moreover, according to the same organization, Romania is the least dependent EU country on natural gas imports (5%) (except Denmark and Netherlands, which were net exporters).[44]
Driven by these numbers and, of course, by the fact that being a regional energy hub (be it electrical or natural gas) brings a lot of benefits to any owner – such as geopolitical leverage, significant revenues mostly due to transport management and the increase in energy security and energy independency – Romania is a strong candidate when it comes to choosing the perfect spot for a regional natural gas hub in South-Eastern Europe.
The same benefits are targeted by our neighboring countries, Greece and Bulgaria being hard to beat candidates. Also, a country that has a lot of arguments in favor of its candidacy is Turkey, which also needn't comply with EU energy policy, explicitly with the Third Energy Package (unbundling and third party access).
Basically, a natural gas hub is a point of converging pipelines, which has a large storage capacity and permits redirecting natural gas.

2. REGIONAL CONTEXT

At this moment, in the South-Eastern Europe are being developed a few important natural gas projects (some of them are functional, while others are just plans or in construction phases).
The Southern Gas Corridor

[44] http://europa.eu/rapid/press-release_MEMO-16-308_en.htm

The most important one, which is actually a group of smaller projects, is the Southern Gas Corridor, meant to bring natural gas from the Caspian Sea to Europe. The project comprises of the South Caucasus Pipeline (SCP), the Trans Anatolian Pipeline (TANAP) and the Trans Adriatic Pipeline (TAP), which totals over 3500 km and crosses seven countries. The total anticipated investment revolves around US$45 billion.[45]

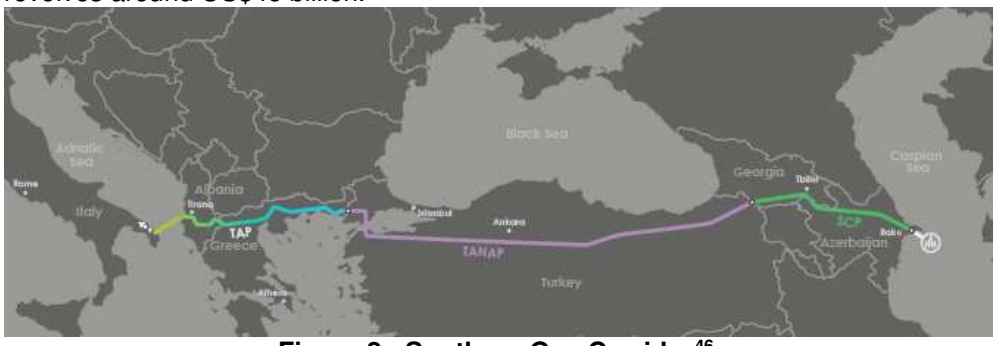


Figure 2 - Southern Gas Corridor[46]

The South Caucasus Pipeline (SCP)

With a length of 691 km, SCP was planned and developed in order to bring natural gas from Azerbaijan (from the natural gas field Shah Deniz) to Georgia and Turkey. The pipeline has been functional since the end of 2006, for the Azerbaijan-Georgia route, and beginning July 2007, the link to Turkey was operational.[47]

The Trans Anatolian Pipeline (TANAP)

The pipeline is design to start from Azerbaijan's terminal of Sangachal and will lead to the Turkey-Greece border. The construction started in March 2015 and is expected to be fully functional by the end of 2018. The pipeline will be able to transport about 16 billion cubic meters of natural gas per year.[48]

Trans Adriatic Pipeline (TAP)

The TAP project aims to bring natural gas from Greece (where TANAP ends), passing Albania and the Adriatic Sea, to Italy. The length of the pipeline is 870 km, with an estimated discharge level of 10-20 billion cubic meters per year and the construction is scheduled to be finished in 2018.[49]

[45] http://www.tap-ag.com/the-pipeline/the-big-picture/southern-gas-corridor

[46] http://www.tap-ag.com/the-pipeline/the-big-picture/southern-gas-corridor

[47] http://www.bp.com/en_az/caspian/operationsprojects/pipelines/SCP.html

[48] http://www.euractiv.com/section/energy/news/turkey-and-azerbaijan-begin-construction-of-tanap-pipeline/

[49] https://en.wikipedia.org/wiki/Trans_Adriatic_Pipeline

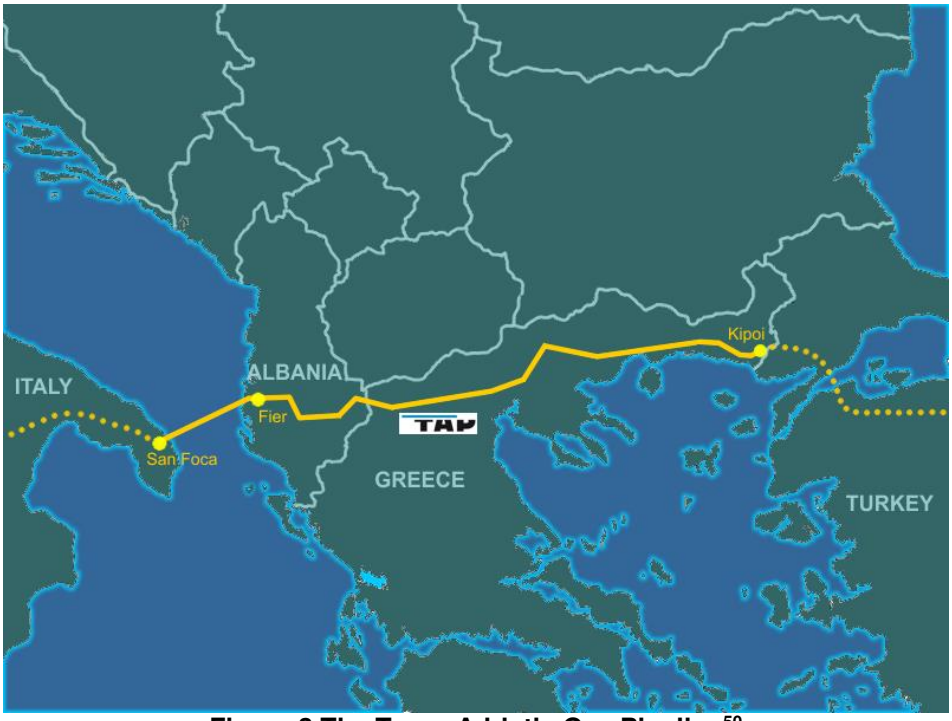


Figure 3 The Trans Adriatic Gas Pipeline[50]

BRUA (Bulgaria-Romania-Hungary-Austria) Pipeline

BRUA is the only project, among those that are actually being developed at the moment, in which Romania is participating. The BRUA corridor's purpose is to bring natural gas from Bulgaria to Central Europe, via Romania, Bulgaria and Austria.

The pipeline will consist of a system with a length of 500 km – only on Romanian territory – with the possibility of building an extension of 300 km, in order to access the Black Sea area. The pipeline will be able to transport approximately 1.5 billion cubic meters per year between Romania and Bulgaria and 4.4 billion cubic meters between Romania and Hungary, while the interconnectors will have a reverse-flow technology. The BRUA corridor is scheduled to start operating in 2019, after a total investment of 560 million Euros.[51]

[50] https://en.wikipedia.org/wiki/Trans_Adriatic_Pipeline

[51] http://www.nineoclock.ro/brua-new-natural-gas-pipeline-appears-on-south-east-europe%E2%80%99s-map/

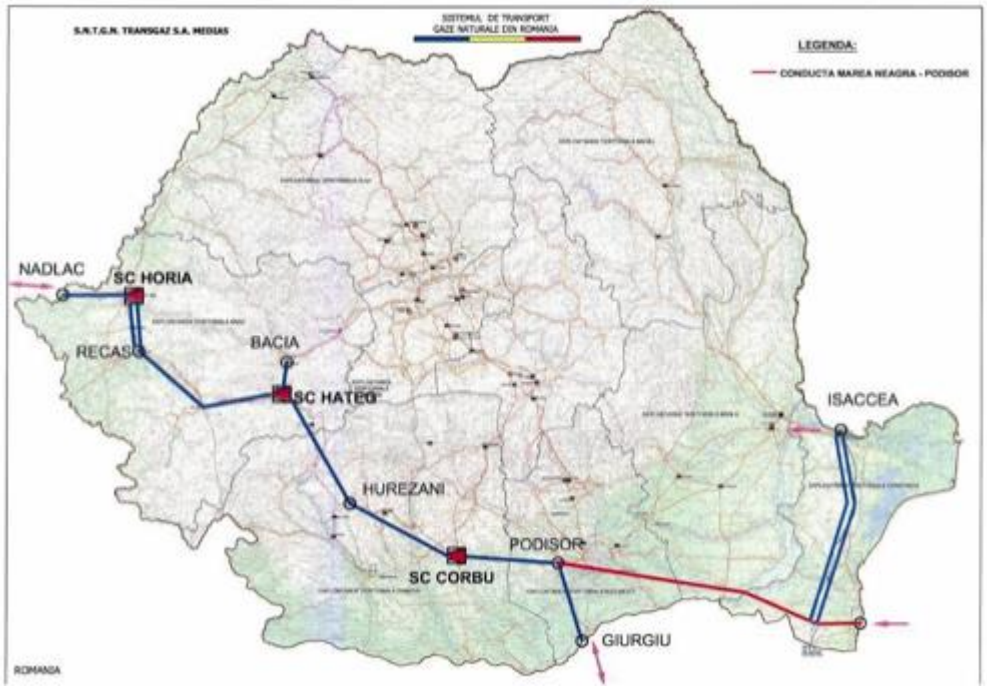


Figure 4 The BRUA Corridor[52]

The project was included in the European Union' Project of Common Interests and Romania requested, by the Romania Gas Operator, Transgaz, funding for the domestic section of the pipeline. As a result, at the end of January 2016, the European Commission granted approximately 180 million Euros for the Romanian part of the BRUA project.[53]

Other important projects in the region were the Turkish Stream (a pipeline meant to bring natural gas from Russia to Turkey, across the Black Sea), abandoned in December 2015, and Nabucco, which is not a priority at the moment.[54]

3. ROMANIA AS A NATURAL GAS REGIONAL HUB

When it comes to defining a good candidate for a regional natural gas hub, one must take into consideration some key requirements, such as:

Storage capacity

Romania's current storage capacity for natural gas revolves around 3 billion operational cubic meters per cycle, split between 7 storage facilities across the country. Multiple projects are being developed to increase storage efficiency and to increase the national storage capacity.[55]

If we analyze it, from a regional perspective, Romania has a huge advantage when

[52] http://www.naturalgaseurope.com/interconnecting-central-and-south-eastern-europe-a-time-of-opportunity-for-romania-27214

[53] http://www.thediplomat.ro/articol.php?id=6832

[54] https://en.wikipedia.org/wiki/Turkish_Stream

[55] Ministerul Energie – Analiza stadiului actual al sectorului energetic din Romania (2016)

it comes to natural gas storage. According to Gas Infrastructure Europe's database, Romania places second among the aforementioned candidates[56]:

- Bulgaria has a storage capacity of 500 million cubic meters per cycle (in 4 storage facilities) and is planning to double the Chiren storage station. The expected expansion will give Bulgaria an additional 1.65 billion cubic meters per cycle.[57]
- Greece is planning a storage capacity of 360 million cubic meters per cycle, at South Kavala, facility which is going to be operational in 2020;
- Turkey is operating approximately 4.1 billion cubic meters per cycle, in 2 storage facilities, making it the best candidate, in terms of storage capacity. Moreover, for the next years, Turkey is going to develop almost 1.6 billion cubic meters more storage facilities, which will come in help of the new major projects, like TANAP;

Natural gas sources

Romania has an important domestic production of natural gas (approximately 10.8 billion cubic meters, in 2015[58]), while additional reserves were discovered in the Black Sea Coast (which are estimated at more than 100 billion cubic meters). Despite that, these may not be enough when it comes to the number of supply sources.

One the other hand, Turkey is once again, one step ahead, mostly due to geographical reasons, which gives it the possibility of choice (Russia, Azerbaijan or even Iran). At the same time, Greece has also an important advantage, due to the LNG (Liquefied Natural Gas) infrastructure which explains the diversification of natural gas supply sources.

Market Liberalization and trading platforms

Every candidate still has regulated prices for natural gas, even if we talk only about one category of customers (like households in Romania). Romania has a liberalized retail market for companies, while the household customers have regulated prices until July 1st 2021. A fact that could bring Romania in pole-position regarding liberalization is the actual level of natural gas prices. In the spring of 2016, the Romanian regulator, ANRE stated that it will suggest to the IMF an early gas liberalization process, taking into consideration the low level of the natural gas' prices in the international markets.[59]

A regional hub, be it electrical or for gas, must have a free market, where prices are set only by the supply and demand.

Speaking of free markets, an energy hub must also benefit from trading platforms. Trading platforms for electricity have been developed, more or less, in every country in the region, but for natural gas trading mechanisms are still not available

[56] http://www.gie.eu/download/maps/2015/20150507%20-%20GSE%20map%20database%20-%20EXTERNAL%20final.xlsx

[57] http://www.naturalgaseurope.com/south-east-european-natural-gas-hubs-28086

[58] Ministerul Energie – Analiza stadiului actual al sectorului energetic din Romania (2016)

[59] http://www.energyworldmag.com/10/03/2016/romania-havrilet-anre-we-will-suggest-imf-early-gas-market-liberalization/

at an important level. The Romanian natural gas market, for instance, lacks the liquidity of the wholesale centralized market, reference prices and a balancing market.[60]

4. CONCLUSIONS

- Romania can be an important candidate for a regional natural gas hub in the South-East of Europe.
- A regional hub means significant revenues from transit management, an important position in terms of geopolitics and of course many supply opportunities for domestic customers.
- Although Romania is not part of the development of the Southern Corridor, a system of pipelines (SCP, TANAP and TAP) which aims to bring natural gas from the Caspian Sea to Eastern Europe (via Greece) and to Central Europe (via Italy), Romania is an important member of the BRUA project – the system developed between Bulgaria, Romania, Hungary and Austria – for which it received important EU funding for its sector of the project (approximately 180 million Euros).
- In terms of natural gas storage, Romania has an important role in the region, placing second (after Turkey) with around 3 billion cubic meters per cycle.
- Romania is the country least dependent on natural gas imports, with only 5% of the consumption being imported. Despite that and the fact that Romania has important production resources – while others have been discovered offshore in the Black Sea region – Romania has some disadvantages in terms of number of sources of supply. Turkey is privileged, due to geographical reasons, being able to choose as natural gas supply between Russia, Iran or Azerbaijan. Moreover, Greece has also a diverse supply system, due to its LNG terminals.
- Regional markets are not fully liberalized and lack operational and high-liquidity trading platforms. Romania liberalization calendar can be accelerated due to the low level of prices of natural gas, an element that can bring the necessity of further developing the available trading mechanisms.
- Although the competition is tough in the region, Romania has some important arguments of becoming a regional natural gas hub or, at least, an important member in the Eastern Europe. Doubled by the over production of electricity, Romania will have an important contribution to the Energy Union, being an energy security pillar in the region.

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THE ROLE OF CREATIVITY FOR ACHIEVING PERFORMANCE IN MANAGEMENT

Suzana Demyen, Jeanina Ciurea
Department of Economic Sciences, Faculty of Economic Sciences, University "Eftimie Murgu" of Reşiţa
suzana_demyen@yahoo.com
j.ciurea@yahoo.com

Abstract: The present paper aims to illustrate the role that creativity holds in achieving a higher level of performance, whether we speak about micro level enterprises, small or medium sized organizations. The first part of the paper highlights theoretical aspects in defining creativity, as well as stating the main barriers that can occur, while the second part consists in a case study based on a recently drafted survey, applied on a representative sample of individuals, consisting in employees from various fields of activity.

Keywords: creativity, management, performance, employees

JEL classification: D23, J24, M19

1. Theoretical background on the issue of creativity

The issue of creativity has become a central theme of research in the field of management even since the mid-twentieth century, however, until today there hasn't been established a general consensus on the main aspects that define it as a concept. It is also important to note that the oldest concerns regarding creativity originally have developed during Antiquity, when Plato and Aristotle were the first who showed interest in this concept.
The 1950s were characterized by analogy between the notion of creativity and the following ideas:
- Inspiration;
- Talent;
- Giftedness;
- imagination.

Jaoui (H. Jaoui, 1990) addresses the notion of creativity in terms of the "ability to achieve genuine and effective combinations based on existing elements and believes that everyone can be creative", the issue of creativity beeing considered both a mental and social process, but also a human attribute (Totolici), which involves generating new ideas, new concepts, or the establishment of new joint traditional concepts.
As a result, although it is still a vague concept, the defining element of creativity lies in generating new ideas. The term "creativity" was discussed by various authors in literature, the proof consisting in over 100 interdisciplinary definitions. It can be expressed as the intellectual ability to enunciate an idea, to propose a new way of solving a problem, by combining various information (Bibu et al, 2008, pp.

249-253).
Creativity can be thus stated on the one hand as a broad concept, defined as a "combination of qualities that generates the new" (set such by Allport, 1937), regardless of the field of interest (Gavrilă, Lefter, 2004, pg. 167), whether we speak about the scientific area, the economical one, about social or technical aspects, while other representatives in literature define this term as "the faculty to introduce the world a new thing" (Levi Moreno), as well as a "substantial contribution to improving all facets of human activity "(Gavrilă, Lefter, 2004, pg.167). It is seen both as a conjugated activity "of all psychic functions of a person (at intellectual, emotional and volitional level), conscious and unconscious, native and acquired, of biological, psychological and social order, involved in introducing original and valuable ideas (Moraru I, 1995) or even "a process of raising awareness to problems, deficiencies, gaps in knowledge, missing elements, disharmonies and so on; identification of difficulties or seeking solutions to the shortcomings of assumptions: testing and re-testing these hypotheses and possibly a modification and re-testing of them; finally the communication of the results" (Torrance, 1966).
Regardless of the approach or the scientific definitions previously given, it is certain that new ideas are the basis for creativity (Dănăiață et al, 2004, pp. 298-301) as a psychological process, regardless if we explain it at individual or group level, or as an intrinsic or extrinsic proces (Bibu et al, 2008, pp. 249-253). Creativity can thus be reffered to as a complement to scientific research, for a positive outcome of the work developed and objectives set out in the organization, through a "combination of well known elements, in order to produce new ideas and solutions" (Laswell), beeing considered as a multidimensional concept, manifested in various fields.
Over time there were developed many and varied means of investigation for understanding and measurement of the ability, intelligence, emotional reactions, attitudes, materialized in the form of tests, questionnaires, observation files and other tools, creativity identifying itself as "the capacity to identify new linkages between elements that apparently are not connected", but which, in fact, imply the existence of a set of activities, ideas or processes which are unique, unusual, or at least different.
Whether we speak about creativity in the perspective of process, in which case this concept is based mainly on intuition (Goldsmith in Moore, 1975), revealing the novelty of some relationships, whether we treat the concept of creativity in accordance with the peak of Maslow's pyramid, there can be identified a main variety of creativity types, involving on one hand "the combination of structures already known" (Drăgănescu) or the assimilation of new ones, on the other hand, taking into account both the individual that performes the act of creation, and the result gained or the ongoing process.

Table 1: Main characteristics of creativity

Creativity as a proces	Creativity as a product	Creativity as a topic
- combination of known elements in a new structure - characterized by originality - expressed through visual images, sounds,	- represents value for society, an element of novelty - includes inventions, scientific theories, rationalism, methods of inevstigation	- a conglomeration of factors, behaviours, skills - determines the creative potential

representations, signs, words.		

source: information processed by authors, after Băloiu et al
(http://www.biblioteca digitala.ase.ro/biblioteca/carte2.asp?id=119&idb)

The concept of creativity is therefore treated from the perspective of different disciplines, both psychology and sociology or cognitive sciences, stated in direct connection with the field of creative arts, which does not deny its fundamental character regarding the field of exact sciences or the technology.
But the process of creativity can not take place without a strong motivation of those involved, assuming also a wide openness to accepting new and innovative ideas. At the core of the creative process is however the information, requiring a good knowledge of the market (Totolici). Whether we address the issue of creativity as a state, skill or process (according to Webster Dictionary, 1996), these three aspects come to complement each other in order to define creativity as the "ability to do, in other words, to produce something new, whether offering a new solution to a problem or proposing a new method, a new device, a new artistic object or form "(according to the British Encicopedia).
We speak of creativity from the following perspectives:

Table 2: Perspectives on creativy

Haefele	The ability to accomplish valuable innovations from social point of view
Feier	The ability to develop new and original elements
Rupert	Non-traditionally thinking process
Roth	Material, spiritual and organizational neoformations
Pop	Specific human activity, concerned with the improvement of life, relationships, social institutions, according to the objectives and aspirations of individuals.
Căpâlneanu	Human behaviour, intended to focusing of instincts, intelligence, skills, thinking, memory, will.

source: processing made by authors, according to literature

The notion of "IQ" was introduced by W. Stern, as an indicator calculated by dividing the intellectual age (determined by test results) to the chronological age. The scope for creativity is wide, the human factor holding a strong role, while creativity is considered an essential attribute of individuals.

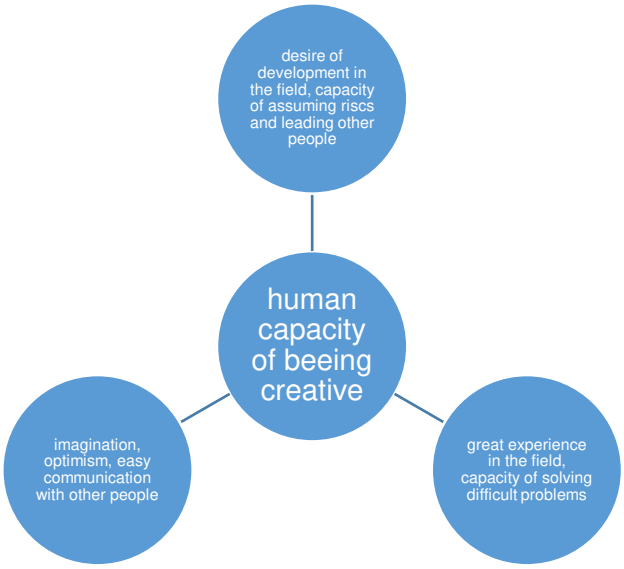


Figure 1 – The human capacity of beeing creative
source: processing made by authors

2. Creativity jams

Sidney Shore inventoried three types of creativity jams: emotional, cultural and perceptual (Jaoui, 1990):

Table 3 Creativity jams

Emotional jams	• the fear of risk; • The distrust regarding superiors, colleagues, collaborators; • the apparent desire for security of the "known" and the "obvious"; • resistance to change; • excessive reliance on the opinions of others; • lack of competence to submit a sustained effort in order to carry out the process of solving a problem, from of identifying it, until its settlement.
Cultural jams	• conformity to social models, the desire of belonging; • accent on statistical evidence; • practical nature; • a poor ability to transform or modify ideas; • excessive emphasis on reason; • conformism.
Perceptual jams	The inability to distinguish between cause and effect; • the difficulty to break a problem in its components; • the difficulty to distinguish between the facts and the problems; • identifying pseudo-solutions to problems; • the inability to define things;

	• limited point of views; • denial of creation capacity.

source: Jaoui, 1990

3. Methodology and findings

The research method applied consists in a survey based on a questionnaire and it mainly has the advantage of providing a good opportunity to explain the research objectives and also ensuring anonymity of the respondents.
The survey on which the present paper is based on, was conducted on a sample of 600 individuals, employees or representatives of companies (small and medium sized enterprises in various fields of activity: agriculture, trade, services, tourism, industry, constructions) from Resita and Timisoara, in the month of November 2015, aiming at the following:
- Assessing the level of creativity within organizations;
- Identifying the managers' attitude on the issue of creativity;
- Assessing the importance of creativity in promoting staff;
- Establishment of a linkage between creativity and innovation.

The present research was based on the following hypothesis:
H1. The efficiency of an organization depends largely on the level of creativity of staff;
H2. Staff creativity entails a higher level of prestige;
H3. Creativity is an issue that will gain more important valence in the future than today.

The results obtained from the analysis of the answers given by the individuals interviewed, indicate that the majority of them (40%) consider the creativity of staff as a key element that ensures the efficiency of the organization, while a rate of 6.67% states an opposite opinion. This aspect is considered to be especially important in the field of services, where 40% of respondents indicate as important the aspect of creativity, this view being shared also by a percentage of 50% of representatives of organizations from the field of construction.
The percentage decreases in the field of trade, as well as the transportation area of activity - 30%. Creativity is considered essential for small businesses, where 46.67% of respondents believe that this feature brings numerous benefits for the organization, while medium-sized enterprises indicate the same conclusion at a rate of 62.86%.
Regarding the possibility to implement their own creativity, the respondents revealed the following conclusions:

Table 4 The posibility of applying personal creativity

Grade		**1**		**2**		**3**		**4**		**5**	
Frequency		Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%
TOTAL	**600**	36	6,00%	52	8,67%	153	25,50%	195	32,50%	164	27,33%

1 – very low level, 3 – intermediate level, 5 – very high level

source: processing made by authors

Regarding the criteria of creativity, it can be stated as a necessity in any business. However, not in few cases, management does not encourage the creativity of

employees, who are limited in their posibility to bring a personal contribution to their work.
Still, even in these conditions, 359 of the 600 respondents believe that in the enterprises where they develop their activity, they have the opportunity to apply at a large or very large extent their personal creativity, while the rest of those surveyed indicate either an average level of possibility for personal involvement or a very low level, evidence of this being the 14.67% of individuals who associated this criterion minimum grades, of 1 and 2.

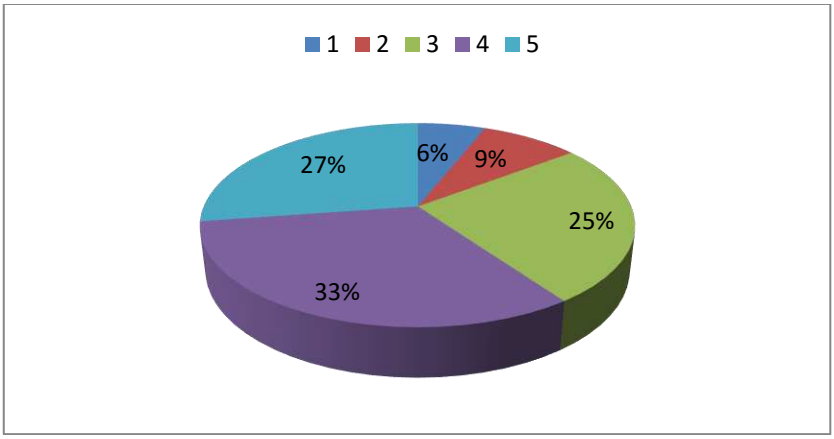


Figure 2 The posibility of applying personal creativity
1 – very low level, 3 – intermediate level, 5 – very high level
source: processing made by authors

Indicator	$\bar{x} = \frac{\sum_{i=1}^{m}(x_i * n_i)}{\sum_{i=1}^{m} ni}$	Mo	$\sigma^2 = \frac{\sum(xi-\bar{x})^2 * ni}{\sum ni}$	$\sigma = \sqrt{\sigma^2}$	$v = \frac{\sigma}{\bar{x}} * 100$
Level/value	3,67	N=4 / f=195	1,3	1,14	31,06

Although the coefficient of variation acquires a level that exceeds the originally agreed as optimal, we believe that results verify in statistical terms, and the explanation lies in the fact that, in terms of staff, the opportunity to implement their own creativity is subject to a various number of elements, from which we can analyze at least the following conclusions.

Table 5 The posibility of applying personal creativity – according to the size of the enterprize

Grade		**1**		**2**		**3**		**4**		**5**	
Frequency		Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%
Microenterprises	**203**	13	6,40%	26	12,81%	54	26,60%	57	28,08%	53	26,11%
Small enterprises	**194**	11	5,67%	9	4,64%	49	25,26%	73	37,63%	52	26,80%
Medium sized enterprises	**203**	12	5,91%	17	8,37%	50	24,63%	65	32,02%	59	29,06%

1 – very low level, 3 – intermediate level, 5 – very high level
source: processing made by authors

Conclusions

The possibilities for implementing creativity are conditioned not so much by the size of the organization but by the field of activity and the hierarchical level at which a respondent is located within the enterprise; consequently, whether we speak about microenterprises, or small and medium-sized organizations, the grades from 3 to 5, awarded by the individuals, based on the evaluation grid of the creativity intensity in the organization, indicate similar percentages, varying around an average of 28%. We still consider prevailing the grade 4, since among all three possible scenarios, we recorded here the highest rate of response.

The lower level of homogeneity is due to the dispersion of responses, thus:

• agriculture is characterized by the fact that all employees in this field have given average grades to maximum, the highest rate being the one corresponding to the grade 4 - 40%; we believe that this assumption is acceptable, creativity can be seen in the depiction of a mix of activities to which the employee can bring a personal contribution;

• industry can be associated by analogy to science, but it is necessary to take into account the fact that the sample of respondents included in its structure both representatives of the manufacturing industry and those of light industry, and also categories of staff that cover several hierarchical levels. We speak therefore of a different distribution of responses, represented by the fact that a worker in the clothing industry can demonstrate a lower level of creativity at work, precisely because of the mechanization processes and the large number of operations carried out, while a tailor conceiving a single clothing item can develop his own ideas in a creative way. On the same model in the heavy industry, a welder has a smaller "palette" of activities, and it is not possible to demonstrate widely his personal creativity, while a turner can create a wider range of objects, for the creation of which he can bring his personal contribution, from a creativity point of view.

• Trade and services are considered the main areas where creativity can prevail, this being demonstrated by the large number of respondents who awarded grades of 4 and 5 (57 and 37 respondents from 164, 54 and 68 respectively respondents from 170), while 47 in the field of trade and 33 subjects in the field of services asigned an intermediary grade (3) as representative for this issue.

• construction is the only field of activity where the share of low grades (1 and 2) exceeds 30% of the responses, 24 respondents out of 74 considering that they are offered very little opportunity to apply personal creativity in the development of the activities developed at the workplace.

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ROMANIAN HEALTH CARE SYSTEM IN THE EUROPEAN UNION CONTEXT

Ovidiu-Iliuta Dobre
The Bucharest University of Economic Studies (Institute of Doctoral Studies, Business Administration), Bucharest, Romania
ovidiudobre87@gmail.com

Abstract: *The aim of this research paper is to analyze the Romanian health care system in the context of European Union, highlighting the differences in terms of life quality and resource allocation. The results show that although improvement has been noticed in the past years regarding life expectancy of the population, it can be mainly explained by an increase in the income of the population, one of the significant factors that predicts the well being of the individuals, according to World Health Organization. Meanwhile, Romanian healthcare system continues to be underfinanced, placing Romania on the last place among EU countries. Moreover, data show that Romania lacks medical personnel, while the discharges of hospital inpatients are above EU average. These are the signs of a poor human resource management and the effects can be seen looking at the high number of personnel leaving the system. In this context, the dominant organizational culture found in hospitals, along with the corresponding values, play a significant role in the quality of services given to population. The research found, using the Organizational Culture Assessment Instrument, that the dominant culture in the sample is hierarchical, confirming the initial hypothesis. The analysis of the data also reveals that the preferred culture is still hierarchical, followed by market and clan. However, there are some differences between the actual organizational culture and the preferred one, so some policies could be chanced so the employees would be more engaged in the decision making process. This would in turned make them feel more valued and this will develop, in turn, a higher involvement in their work and it will also increase the cohesion of the organization, around its main values and behaviors. In the lack of a health care financing at least similar to EU average, the organization culture can be a valuable instrument to foster higher quality of the services offered to the population.*

Keywords: organizational culture; public health care; European Union

JEL classification: I18; M14;

1. Introduction

The health status of people and the responsibilities of public systems in making sure the population is healthy are key issues in any society. All countries face challenges of assuring a balance between costs and providing access to health services. Since Romania has joined EU, the health care given to people from other EU member states has become a real benchmark for Romanian citizens. Data have shown that a child born in Romania has 5 times more chances of dying before first anniversary than one born in Germany and 2 times more than one born in Hungary. In addition, mortality rate for children under 5 is 11 per 1000 children in

Romania, while EU average rate is under 5 per 1000 children. Health is one of the fundamental principles of the EU, article 35 stipulating that “everyone has the right of access to preventive health care and the right to benefit from medical treatment under the conditions established by national laws and practices”.
While in the early 80s, health status in Romania was comparable with ones in countries with more powerful economies (France, Germany), the last ten years of communism era brought many challenges, making it to lag behind almost all European countries. After the 1990 the increase in poverty and decrease in standard of living took its toll on the health status of Romanian population (Vladescu et al., 2008)
Although progress has been made over the last years since the integration, the gaps are still significant, leaving a lot of room for improvement, as seen in Table 1. In the same time, statistics show that heath conditions and diseases that in other EU states have been eradicated are still the culprit for the death of many Romanians or they put a negative pressure on the quality of their lives. For example 8.9% of the total population aging 20-79 suffer from type 1 or type 2 diabetes, while the average prevalence rate in EU is 6.2, according to Eurostat data for 2015. In addition, Romania along with Bulgaria has the highest incidence of tuberculosis from all EU member countries and it is continuously increasing. The same reality applies to hepatitis B. The women from Romania have the highest rate by uterine cancer, the risk of dying because of this condition being 10 times greater than in France, for example. Most of these conditions can be prevented and kept under control nowadays by an efficient sanitary system.

Table 1: Hospital morbidity tabulation (per 100000 inhabitants)

	Cancers	Circulatory systems	Respiratory systems	Digestive system	Pregnancy Childbirth	External causes
Romania	1940	3002	2721	2230	1552	1127
Bulgaria	1787	3971	3025	2281	1826	1373
Hungary	2329	3557	1545	1458	1337	1368
France	1180	1885	1038	1482	1528	1341
Germany	2457	3609	1473	2216	1074	2388

Source: made by author using data from Eurostat

If we further refer to the deaths that could have been avoided the numbers are shocking, as almost half of the deaths in men could have been prevented and almost a third in women. In other words, an efficient health system can save lives by treating and preventing their conditions, but we must change the paradigm and seeing health as an investment rather than expenditure.
In the same time, a new challenge is made to the public health sector by the freedom of movement Romania has gained once it entered the EU. Since 2007 a significant number of the working force from sanitary system has decided to work abroad. Over 6000 medical doctors leave Romania yearly to work in other countries, while just under 5000 enter the system by graduating faculties of medicine. If this trend will not change Romania risks having no medical doctors in 2040. The medical personnel are mainly dissatisfied with the working conditions and not just with the salaries.

2. Romania's Public Health System

The World Health Organization (WHO) defined health in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." A country's health care financing system has a small impact on the heath status of its citizens. Mainly, health is determined by the circumstances and the environment in which people live. To a very large extent the following factors have significant impact on health: where we live, our income, genetics, our education, the environment or our relationships with family and friends. On the other hand, the access and use of health care services have usually a lower impact. Some of the most important health determinants are, according to WHO:

- Income and social status: the higher the income, the healthier the individuals
- Education: individuals with lower education have poorer health, as well as lower self confidence
- Physical environment: safe water and healthy work environments influence the heath status
- Culture: the traditions and beliefs of a family and community influence the health status
- Genetics: the genetic baggage plays a significant role in the likelihood of developing certain illnesses. In addition, men and women suffer from different type of diseases and have different life span
- Health services: it is essential to have access to health care services to prevent and treat illnesses

According to the World Health Organization, the health system is represented by "all organizations, institutions and resources devoted to better health". Important institutions in Romanian health system are: Ministry of Public Health, National Insurance House, Medical College, College or Pharmacists, patient's associations and the National Medicines Agency. However, other institutions have different roles and competencies in healthcare, as well. For example, Ministry of Public Finance is managing resources of public finances including the budget of national health insurance single Fund. Often these are the institutions found guilty for any malfunctioning of the health care system, although, as shown above, there are many factors influencing the health status of the population. The main principles behind public heath care is to create an active partnership between the public government and local authorities, the former creating the directions of public health care intervention, while the latter have to implement them locally.

It is almost universally accepted that health care cannot be the sole responsibility of the citizens and that the state should have a specific role in such matters, mostly in the allocation and redistribution of resources. While in theory, an optimal allocation of resources can be attained in a perfectly competitive market, in reality this is very hard to obtain, due to many obstacles. For example, the patients have limited information about the effectiveness of different treatments or procedures, relying mostly on the producers of health care. Moreover, a perfectly free market cannot be obtained due to the high cost of medical services, limiting therefore demand.

Generally speaking, health systems have three main goals. On one hand, they have to improve the health of the populations they serve. Secondly, they need to respond to the reasonable expectations of the populations. Last but not least, the

health systems need to collect the funds in a fair manner.
Regardless of the level of economic development, al countries face a continuous struggle to keep their health systems efficient, while the demands are increasing (Fried & Gaydos, 2002). Among these pressures are the need to achieve a balance between costs and access to health care services, between public and private services and between the preventive and curative services.

2.1 Romanian Health System in EU context

Table 2 shows clearly different patterns regarding the health status of inhabitants in EU countries. While the life expectancy gaps between the Romania, on one hand, and the western countries, on the other hand, has decreased, a lack of financial resources for health and citizens' lifestyle (no resources to influence it) might explain some of these differences (Figure 1).
The average life expectancy is Romania 74.9 years in 2015, as reported by World Health Organization, five years shorter than EU average and more than 6 years shorter than in Germany.

Table 2: Life expectancy in EU

Country	Life expectancy: 1970-1975	Life expectancy: 1995-2000	Life expectancy: 2015
Romania	69.2	69.8	74.9
Bulgaria	71	70.8	74.4
Hungary	69.3	70.7	75.7
France	72.8	79.1	80.6
Germany	71.4	77.9	81.7

Source: made by author using data from Eurostat

Figure 1 highlights the differences in GDP per capita between Romania and other countries in EU, in the same period of time. While the trend is positive, considering Romania's GDP more than doubled since 2000 to 2015, the nominal gap between it and the western economies continues to enlarge.

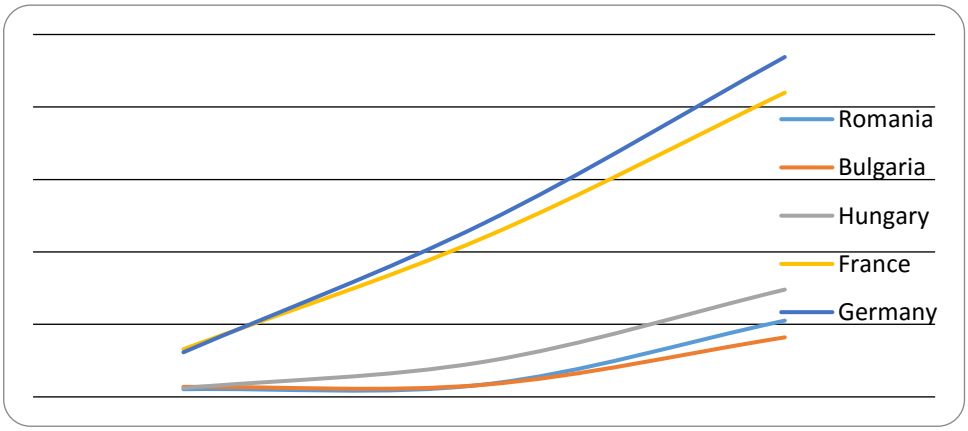


Figure 1: GDP per capita
Source: made by author using data from Eurostat
If we combine the two sets of data, one regarding the GDP evolution for Romania

and the other regarding the life expectancy in Romania, we can notice a similar trend, confirming the findings of World Health Organization, which state that income is a significant predictor of life expectancy (Figure 2).

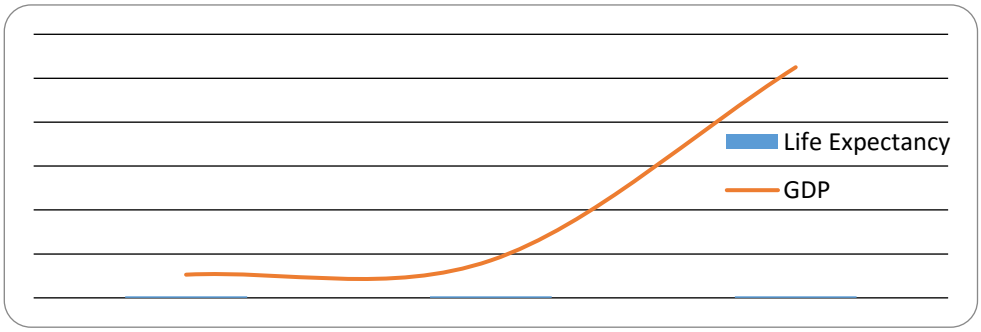


Figure 2: GDP and life expectancy in Romania
Source: made by author using data from Eurostat

However, showing the percentage of GDP allocated to public health expenditures is even more eloquent than the previous data and can be one of the causes of the still significant differences between Romania and other EU countries.

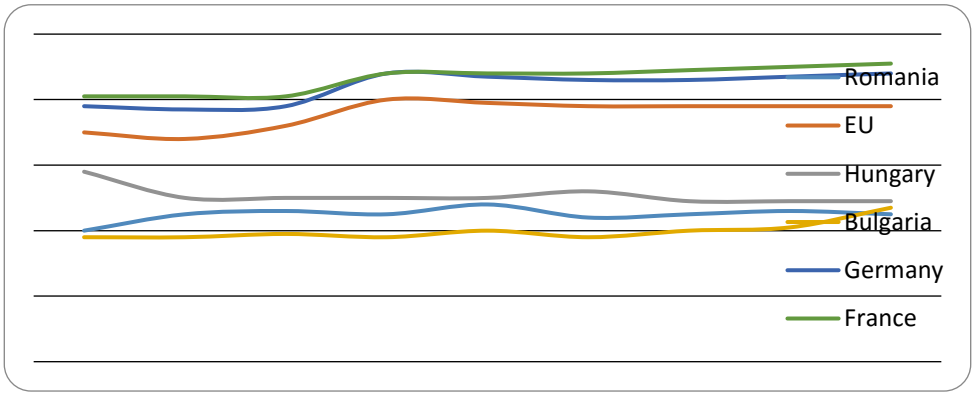


Figure 3: Percentage of public health expenditure from GDP
Source: made by author using data from Eurostat

Not only Romania's GDP is lower than EU average and much lower than in Western economies, but so it is the percentage of GDP allocated to public health expenditures. Figure 3 highlights that the allocation of resources decreased in Romania increased slightly from 2006 to 20014, from 4% to under 5%. This evolution can be partially explained by the economic crisis which hit Romania and by the corresponding austerity measures taken by the government, but also by the smaller number of personnel. We can also notice that Bulgaria allocated more resources to the public health sector in 2014 than Romania, but both countries are bellow EU average (8%) and France (9%).

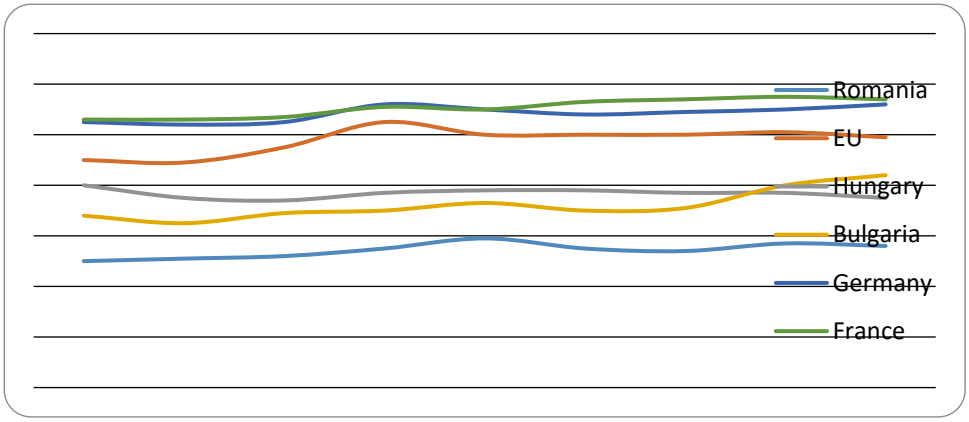


Figure 4: Total health expenditures (percent of GDP)
Source: made by author using data from Eurostat

If we also add the private health expenditures (Figure 4), the differences between Romania and the other countries increase even more. We can notice that Bulgaria's total health care expenditures are significantly higher, placing Romania on the last place among the EU countries. The trends concerning access to health are worrying, as accessibility of services and equality of access are decreasing. Currently there are some categories excepted from contributing to the Single National Fund for Health Insurance, but pressures coming from international institutions (IMF, WB) might determine the authorities to eliminate these exceptions, preventing them from having access to specialty health care services.
Usually, the efficiency of health systems is evaluated using broad measures of mortality, such as total mortality, life expectancy, premature mortality or years of life lost. More recently, other measures have been added to the list, such as: the time lived in poor health.

Table 3: Performance of health systems (WHO, 2000)

Rank	Country	Rank	Country
1	France	50	Poland
2	Italy	99	Romania
3	San Marino	102	Bulgaria
10	Japan	150	Nepal

Source: made by author using data from World Health Organization

Analyzing Romania's health system performance based on these pillars, a study made my World Health Organization ranks it 99th in the world, as seen in Table 3. There is significant potential for improvement, considering Hungary, which has a similar GDP.
Romanian health system is mainly based on hospital care, having one of the highest hospitalization rates in EU. In addition, the access to medical drugs remains one of the most acute problems of Romanian health system, especially for the categories of population with low income, such as unemployed or retired people.

Table 4: Healthcare indicators (per 100000 inhabitants)

	Practicing physicians		Hospital beds		Hospital discharges of inpatients	
	2002	*2012*	*2002*	*2012*	*2002*	*2012*
Romania	196	239	766	612	-	21825
Bulgaria	352	391	649	635	-	26060
Hungary	319	309	785	719	24354	19944
France	-	308	771	637	16904	15734
Germany	334	389	887	822	20204	24069

Source: made by author using data from World Health Organization

Table 4 shows the Romania has one of the smallest number of practicing physicians in Europe, while the number of hospital beds is similar to EU average. However, as already stated the number of hospital discharges is one of the highest in Europe. Large differences between the health status and access to health care services also refer to the different geographical areas in Romania, especially if we speak about the rural area, where the number one physicians is a few times lower than in the urban areas. The same differences apply to the number of hospitals, pharmacies or health centers. With 46% of the total population of Romania living in rural areas, according to the 2011 census, this should represent a significant concern. These data show that the management of human resources in the Romanian health care system is poor, considering the lack of medical personnel compared with EU average statistics that has to handle one of the highest level of hospitalization discharges in EU.

2.2 Health Status and Economics

Health has a significant role in the economy, as it is a very dynamic sector that generates jobs and wealth. Most jobs created in the healthcare system require qualifications and innovations. In Romania, according statistics, about 4% of the total active population works in the healthcare and social work sector, as compared to 9% in the EU. Moreover, health has a direct influence in the quality of the workforce, by prolonging life spans, by increasing the availability and profitability of organizations and by improving training. In addition, improving the health of the population would increase in turn the productivity of the working population. Considering that nowadays services account for about 70% of the total GDP, the role of health is even more important than ever. An increase in life expectancy by 10% will lead to a 0.3$ increase in the GDP per year, according to Barro (1998).

On the other hand, a poor health of the population is an obstacle in the development of any country. A significant amount of the economic growth difference between rich and poor countries can be explained by the heath status. However, the relationship between the economic growth, the level of healthcare expenditures and the health status of the population is a subject that has raised many question marks. For example, a high level of healthcare spending might mean a lower spending on other productive areas, putting a negative pressure on the economic growth. Some economists even suggest that above a certain level of public healthcare expenditure, the effects on population health status are marginal. Usually, the health care budget is the result of negotiations between several parties, as there is a competition for the same limited pool of resources (spending

on health of education?). In addition, even inside the health care system there are different views on which areas or policies to direct the spending.
Organizational culture has been found to be one of the elements that influence the quality of the services provides by hospitals (Purcell et al, 2004). Some aspects are shared by all organizations providing health care services, but each one has its own approach when establishing a culture aiming at delivering safe and efficient services. As Mosadeghrad showed (2012) the healthcare professionals have different experience, abilities and personalities, so their differ in terms of quality and not only. Leaders also play a significant role in establishing such a culture, as they are the ones making the mission and the direction of the organizations clear. Generally speaking, leaders' actions don't go unnoticed. Most hospitals are large organizations with multi-levels so in order to get full support for the vision, the staff must be emotionally connected to the values. In order to achieve this, staff must be consulted and involved in the discussions from the early stages. These discussions should cover topics such as the expected behaviors that match the values promoted by the organization. Some organizations go even further, by including these behaviors in the annual assessment of the staff. Leading organizations with aimed at quality and efficiency show it clear that culture is an important factor to the delivery of the health care services.
A study conducted in UK (Robinson et al, 2012) shows clearly that top performing organizations in the health sector have invested time and effort to develop cultures that focus on the delivery of high quality, safe and efficient care. In these organizations, the mission and visions are promoted by the management team, but all staff members are encouraged to take part in the preliminary steps when the values are discussed (Alvesson, 2002). The key is the staff engagement and connecting with each individual on an emotion level, helping them to acknowledge that some behaviors are detrimental to the organization. In addition, research has found that the job security helps when trying to change the behavior (Schein et al, 2004). Considering the under financing of public health system in Romania, many employees do not feel safe, making it harder to build an organizational culture around the values of safety and quality. Good human resource management increase employee satisfaction and loyalty, but on the other hand it also influences customer satisfaction. Employees which are committed to the organizational values perform better health care services which determine better results in terms of patient satisfaction.

3. Research methodology

The present scientific paper studies the organizational culture found in emergency hospitals in Bucharest, using the competing values framework. This research is based on non-probabilistic sampling, more specifically on rational theoretical guided sampling. Medical personnel working in hospitals from Bucharest filled questionnaires and were interviewed face to face. The studied population is represented by medical personnel from an emergency hospitals located in Bucharest. The organizational culture was diagnosed using the OCAI (organizational culture instrument). Individuals had to respond to six items. This instrument has been found to be accurate in diagnosing the aspects of an organizational culture. The instrument helps indentify both the current and the preferred culture of the organization. Questionnaires were sent by email to 114

persons working in the above mentioned organizations, of which only 87 have been returned, 87 being valid. All the questionnaires were sent after face to face discussion with medical personnel from the hospitals. All the questionnaires were checked for validity, before analyzing the data.
Out of the 87 persons that filled the questionnaires and whose answers were valid, 52 persons were women and 25 were men. Out of the 87 respondents, 80% had higher studies. The hypothesys (H1) of this study is the dominant organizational culture found in the sample is hierarchical.

4. The results of the research

As in other industries, the public healthcare system is competitive, especially with the increasing number of private hospitals and considering the liberalization policies. The hospitals also face the pressure of attaining economic objectives, besides having to offer health care services. Any hospital, as any other organization has a corporate culture. The scientific literature has presented many example of organizational culture having a significant impact on corporate performance. The hospitals being living organizations have to develop strong cultures that bond the workers together and that gives them a higher purpose for their daily work. The need to diagnose the organizational culture for hospitals is more important than ever, as they have to change and adapt to structural changes that have occurred (capitalism, economic crisis, technology breakthroughs) (Denison, 2000).
Organizational culture reflects social phenomena which translate the codified character and norms of an organization, including the beliefs, system of values, symbols, myths and others.
According to Cameron and Quinn (1999), the culture in an organization can be seen between two dimensions: focus (internal versus external) and processes (organic versus mechanical). Using the Competing Values Framework, four dominant organizational cultures emerge, based on the intersection quadrants of above mentioned axes: clan, adhocracy, hierarchy and market.

- The clan culture distinguishes by a very friendly work environment where people feel free to be themselves and to share a lot of their true selves. It can be viewed as an extended family, where the leaders are seen as mentors. In the clan culture the commitment is high, as well as the loyalty. The organization focuses on long term development and the success is defined in terms of concern for customers. The main values of clan culture are teamwork, participation and consensus.
- The adhocracy culture is dynamic and entrepreneurial. The work environment is very dynamic, where people are encouraged to take risks. In this culture innovation and experimentation are the forces that bond together the organization. The organizations focus on growth and acquiring new resources and success is defined in terms of creating unique new products.
- The market culture is result oriented, the main objective being getting the job done. The people working in this culture are competitive, while the leaders are hard drivers. In this culture the focus is on winning, as well as on reputation and success. Moreover, these organizations want to capture as much market share as possible.

- The hierarchy culture can be described as a very formal clime to work in, The leaders think in term of efficiency and consider themselves as great coordinators and organizers. The formal rules and policies hold the organization together, while the long term focus is on stability and efficiency. Success is defined in a hierarchy culture in terms or dependability, low cost and scheduling.

This instrument of research is designed so it represents the balance of different cultures present in the same organization. Furthermore, the CFV examines the beliefs and unspoken assumptions that truly influence the attitudes at work, as well as the behaviors.

Table 5: Organizational culture types found in the hospital

	Mean	Standard Deviation
Clan	2.87	1.301
Adhocracy	2,79	1.178
Market	3.2	1.062
Hierarchy	3.62	1.007

Source: made by author

After analyzing the data collected through the questionnaires, it can be seem that the dominant organizational type found in the hospital is the hierarchy one, followed by the market and clan culture (Table 5). The results are consistent with the H1 and with previous studies. Considering the limited sample, we can interpret the results as being explained by the nature of the healthcare industry, which is based on stability, order and control. These organizations need to be stable, predictable and to follow mechanical process, while paying attention to costs, due to the limited resources.

Considering that the success of an organization resides on the extent to which the organization's culture matches the demands of the competitive environment, we can notice that there is an alignment between the two sides. The nature of an industry requires leaders to ensure the procedures, measurements and monitoring systems are in place to maintain the processes and performance in control. In addition, coordination must exist within the organization, as well with other units and managers have to share information. The members of a hierarchy culture are helped to become clear what is expected from them, as well as what are the standards of the organization.

In the case of a mismatch between the demands of the environment and the culture's traits, an organization will find it hard to survive. In addition, the dominant culture tells us what kind of leadership attributes are valued within the organization, what behaviors are likely to be rewarded and what management style is proffered by the medical personnel. In healthcare organizations, the leaders are very well informed and have the power of expertise. The leaders must also be attentive to details and their influence has roots in the control of information. The persons in charge are dependable and reliable, due to the nature of their work and to the impact of any mistake. In an organization with a hierarchy culture, stability and control are actively pursued. In addition, the standard set of procedures and policies are stated clear, so everyone knows how to get the job done.

When analyzing the data referring to the preferred organizational culture, we can notice several differences. First of all, the order of the dominant culture remains the

same, but the strength of each one differs. Table 5 shows that the medical personnel wants a stronger adhocracy and clan culture, as they value some of the corresponding beliefs and behaviors associated to them.

Table 6: Preferred organizational culture

	Mean	Standard Deviation
Clan	3.126	1.224
Adhocracy	2,189	1.203
Market	3.237	1.098
Hierarchy	3.568	0.947

Source: made by author

In order to increase the clan culture, surveys could be done to find out the employees needs. In addition, the management could focus more attention on improving ream work and the participation of the staff in decision making processes. However, increasing the clan doesn't mean that the employees would become undisciplined or they would not work hard.
In order to increase the adhocracy culture in the organization, the management could implement a few policies. Therefore, they should encourage innovation and become a more forward-looking organization and have a more clear vision for the future. Increasing the strength of adhocracy culture doesn't mean that the personnel should disregard customer requirements or they should take unnecessary risks.

5. Conclusions

Romanian health care system faces significant challenges, in terms of financing and number of professionals working in hospitals, having a direct impact on the health status of the population. Most of the indicators have improved since Romania's integration in EU, but they still lag behind the EU average.
The quantitative research reveals that the dominant organizational culture found in the studied sample is hierarchical. The results support the initial hypothesis and are consistent with previous studies and with the nature of the activity. However, the results show that in a preferred situation, employees would want to feel more engaged in the decision making process and that the organization would support more innovation.
The limitations of this research are about the number of respondents and their location, as the primary data were collected from professionals working in one emergency hospital from Bucharest.

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THE ROLE OF QUALITY MANAGEMENT IN ROMANIAN INFANT'S VACCINATION DEBATE

Cosmin Octavian Dobrin, Ruxandra Dinulescu, Voicu Laura Violeta, Costache Raluca
The Bucharest Academy of Economic Studies, Faculty of Management, Bucharest, Romania
cdobrin@yahoo.com
ruxandra.dinulescu@gmail.com

Abstract: *Lately, in Romanian health care system there are several issues and debates about the importance of vaccines at the infants. Because of some rumors from USA, about the risks of vaccines (there were unproved cases which claimed that the vaccines would have induce autism to children) for infants less than 12 months old, the whole Europe, and also Romania, opened a dispute around these vaccines.*
In every healthcare system a key element is represented by quality. This means that everything in the interior of a hospital or clinic must have certain quality standards assured by the Healthcare Ministry, in order to provide the best quality for the patients.
In other words, the concept of quality can be seen as a characteristic or property that each health care system must have.
In our article we will focus on what attributes must have a qualitative healthcare system and how these attributes should influence the decision of infants' vaccination.

Keywords: hospitals; quality management; patient; infant vaccination; decision tree.

JEL classification: I11; I15; I19.

1. Introduction to Romanian healthcare quality management

The term of "quality management" is relatively new for our country. While in European clinics and hospitals this term is well known and applied, in Romania the healthcare managers do not have a clear image on what exactly involves the concept of quality.
Still, our hospitals do have quality standards and over 90% of health care institutions are quality accredited according to ISO norms, but, unfortunately, healthcare managers do not organize specialized trainings for medical staff, in order for them to learn and apply the quality management principles.

In 1966 Avedis Donabedian first described his quality model, called the "Donabedian Model". The model is composed by 3 elements:

1. Structure - in this section we can see all the factors that could affect the context in which health care is delivered. Here we can include physical facilities, medical staff, medical equipment, payment methods etc. Usually, this step is easy to observe.

2. Process – represents the amount of all medical interventions (diagnose, treatment, etc)
3. Outcome – the effects that a national healthcare system provides for its patients (changes, human satisfaction, knowledge).

Among these 3 indicators, we can affirm that the last one, the outcome, could be seen as the most important quality indicator, due to the fact that the main objective of each healthcare system is to improve the patients' status.

Basically, a vaccination process should follow the Donabedian's model along with the main quality healthcare dimensions:

- Accessibility - the ease with which the patients can contact their generalist in order to vaccinate their infant;
- Specificity – the constant care of the generalist for the infant;
- Continuity – the possibility that an infant has to be vaccinate at the same doctor;
- Efficacy – the correct vaccination procedure applied;
- Patient oriented
- Safety – families that come with their infant must not stay on the same corridor with ill people. Also, the vaccination must be made in a special room.

In Romania, we could say that in more than 90% of cases these principles are being successfully applied. Though, there are still some deductions from parent according to weather or not they should vaccinate their infant.

2. The vaccination image in Europe and Romania

As we have mentioned above, the quality in Romanian healthcare system, which should be also applied to the vaccination step, is related to the following major points:

- Healthcare safety – the vaccination process should be performed in a special room, separate from the same cabinet where ill people enter;
- Attitude staff – the assistants must perform a basic control for the infant (take his weight, length, etc)
- Doctors – generalists should be able to explain the patients the advantages and possible risks of every vaccine.
- Rate of errors – generalists should avoid errors like performing the vaccine in the wrong place or even confusing one vaccine with another one.

Vaccination represents one of the most effective health interventions available in present, being able to save millions of children from illness, disability and death.

In the 21st century every child owns the right to live without vaccines, but the actual diseases still represent a risk in Europe, that is why a strong immunization is required.

Before going out on the market, vaccines are well tested in laboratory, then licensed and introduced into national immunization schema (program) of each country.

However, some people are still concerned about the risks that vaccines could have on their children. Indeed, some vaccines might have some minor side effects, and there are also the rare cases in which infants could develop a mild or serious reaction to a certain vaccine. Still, these things are not made due to vaccines and

are often simple coincidences, and, in some cases, are due to human error.

Nowadays, throughout Europe, not only in Romania, there is an open dispute about the fact to whether or not vaccinate the infants from their first days of lives.

About 10 years ago, children's immunization was seen as being something normal, something that must be done and so it was accepted by almost 90% of the population, even if there were some rare cases in which the parents denied the vaccines. Those who denied the immunization were misunderstood by the society and were even thought of putting their child in danger, because of several diseases that may affect him because the vaccine was not made.

In present, the immunization issue, for new born (between 0 and 1 year old) became more and more disputed and parents started to argue about this problem. In USA, for example, the majority of parents start to refuse vaccination because of several cases in which different infants died after a vaccine dose. Also, in USA first started the dispute about vaccination. Here, came out for the first time the information that the vaccine against measles could cause ADHD. Though, this story was not based on double medical studies that could prove this information.

2.1 The 3 main countries with the lowest vaccination rates throughout the world

According to a report conducted by BBC about the growth of global immunization,

they insisted on the fact that almost 1.5 million children continue to die from different diseases that could be easily prevented by vaccines.

In the following paragraphs we will present the main 3 countries that have the lowest vaccination rate:

1. The Central African Republic (non vaccination rate of 49%) – over the past years this country has suffered from violence and insecurity becoming also one of the poorest countries in the world. Because of mass violence and conflicts, this country has denied the access to basic health care for millions of people and thus children are constantly at risk from a disease that can rapidly spread. Nowadays, in Central African Republic, the main cause of death infant is represented by measles, a disease that could be easily prevented with a routine vaccine.
2. Somalia (non vaccination rate of 46%) – this country has also met violent conflicts and wars that banished the health care access for more than half of population. The vaccination rate for measles is only 46%. Although, in present the health care volunteers started to expand the vaccination programs.
3. Nigeria (non vaccination rate 42%) – here, parents refuse to vaccinate their children being afraid of the vaccine's side effects.[61]

3. Romania's national vaccination scheme

[61] http://www.bbc.com/news/health-24519949

According to the order issued by the Health Care Ministry in 2015 about the technical standards for national healthcare programs, in Romania we have the following national vaccination calendar:

Table 1: Types of vaccines for infants from 0 to 12 months

Recommended age	Type of vaccination	Made by:
The first 24 hours 2-7 days	Vaccine hepatitis B (Hep B) Vaccine Calmette Guerrin (BCG)	In maternity
2 months	Vaccine Hemophilic B- hepatitis B (DTPa-VPI-Hib-Hep B)	Family doctor
4 months	Vaccine polio-Hemophilic B hepatitis B (DTPa-VPI-Hib-Hep B)	Family doctor
11 months	Vaccine polio-Hemophilic B hepatitis B (DTPa-VPI-Hib-Hep B)	Family doctor
12 months	Vaccine measles-rubella-mumps (ROR)	Family doctor

Source: HealthCare Ministry www.ms.ro

The European Union's legislation guarantees the quality, efficacy and the safety of the above mentioned vaccines.

The vaccine is a medicine which is subject to the rigors of profile law. Basically, all vaccines that are available in our country are firstly controlled and only after they meet the necessary requirements, are taken out on the market.

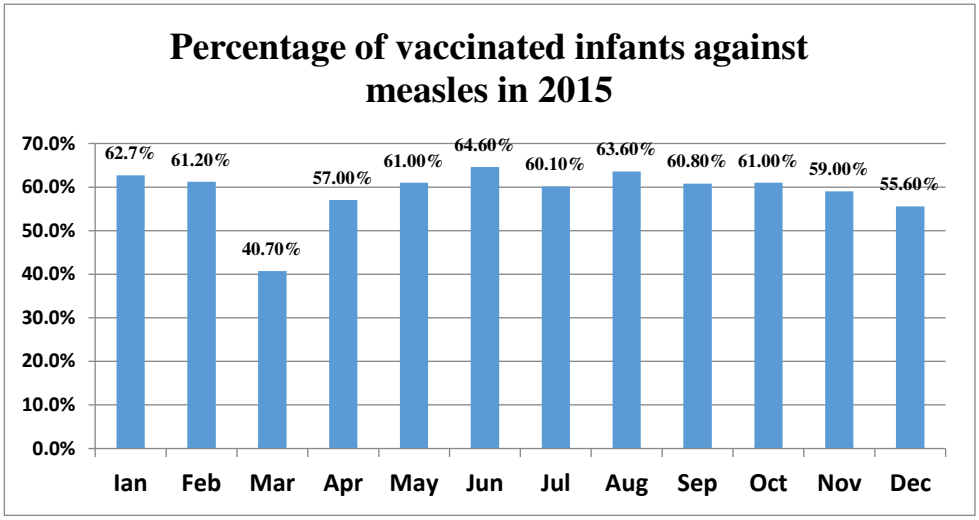


Figure 1: Percentage of vaccinated infants against measles during 2015

Source: The annual report regarding the activities conducted at the National Public Healthcare Institute in 2015

4. "Decision tree" method applied to a national health issue (should infants be vaccinated or not?)

Even if the vaccines are capable of preventing numerous diseases that could affect the infant, still the question of whether or not the children should be vaccinate remains a main topic among Romanian families.

Therefore, we have built a Decision Tree (based on a generalist's help) to present, in a more systematic way, the 2 options.

Every parent has the choice to vaccinate or not his infant. The Decision Tree below shows us what happens in both cases. If the parent chose to vaccinate his infant, than the infant would have 90% chances to be protected from diseases like measles, and also to be immune in front of other diseases, and only 10% chances, case in which the vaccine did not succeed in immunize naturally.

In case the parents choose not to vaccinate their children, then the infant would have 60% chances of illness, and since the most prevalent disease among infants is measles that could lead to poliomyelitis, the infant would present a high risk of death.

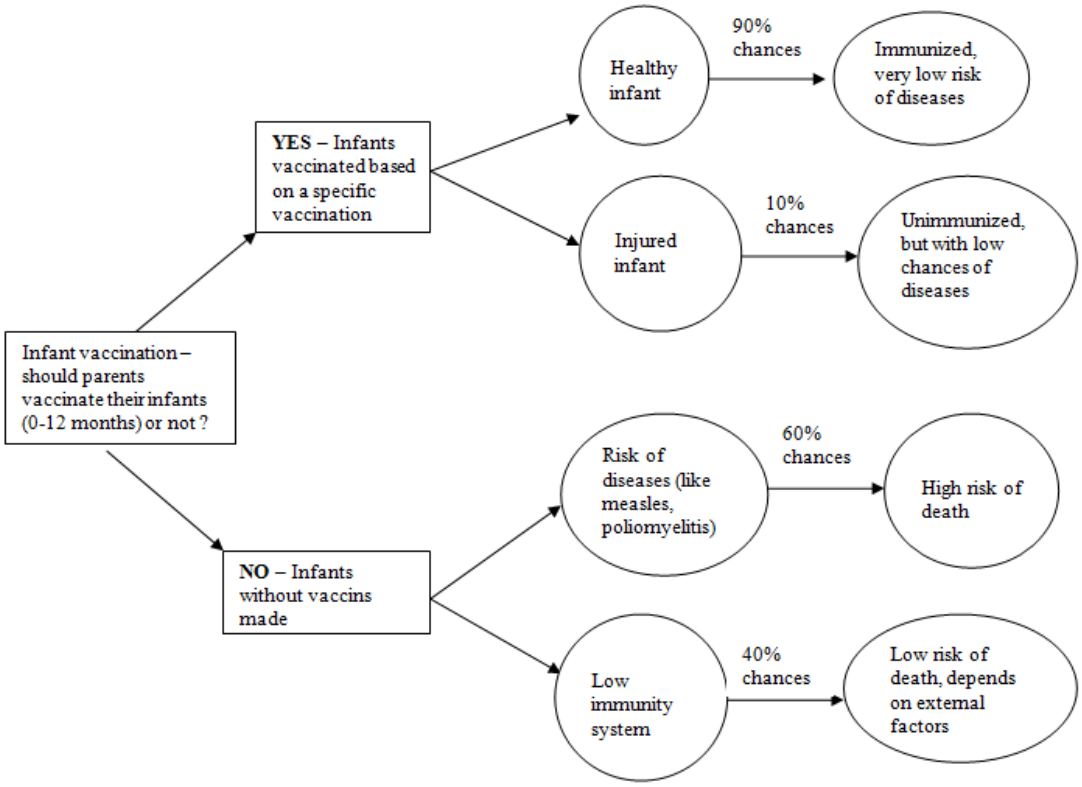


Figure 2: Decision Tree

Taking into consideration the percentages from the scheme, we could conclude that the decision of whether to vaccinate the infant or not should straighten forward the positive case, more precisely, the decision of acceptance of vaccination.

5. CONCLUSION

A sanitary system is qualified as being a qualitative one when the patients' satisfaction and trust are at its highest points.

Most of the Romanian patients vaccinate their children at the generalist (family doctor). There are also, as other options, the kindergarten doctor or any doctor from any private clinic. The only huge difference between these 3 is the fact that the family doctor (the generalist) has the patience to explain, to every patient with infants, the advantages and possible adverse reactions of the each vaccine. In this way, every parent is aware of the possible risk that might happen if the infant is not immunized.

From the information received from a generalist, we found out that the vaccine has the capability to immunize the infant's system in 90% of cases. The rest of 10% is caused simply because the infant's immunity system does not immunize naturally.

Concerning our debate, from a qualitative point of view, the only things that a healthcare system and its staff could offer the patients are a safety environment, an adequate consult, a well prepared generalist that has the ability to explain the meaning of each vaccine and an error rate as low as possible.

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MOTIVATION, VALUES, AND CAREER RESEARCH AMONG UNIVERSITY STUDENTS

Eva Gergely, Anita Pierog
University of Debrecen, Faculty of Economics, Institute of Management and Organization, Debrecen, Hungary
gergely.eva@econ.unideb.hu
pierog.anita@econ.unideb.hu

Abstract: *Career and motivation examinations are an interesting point to consider at all times. This is not only the company leaders need to find and hire the adequate employee but they have to be capable of keeping them. However, what motivates the individual? What is necessary for employees to stay at the organization? What kind of carrier expectation they have? These questions are not only important when somebody is in the system but when somebody is at the beginning of their work. Due to these questions, we have considered important to carry out examinations on motivation, value, and career among the employees and students. The research has been conducted among the students at the University of Debrecen Faculty of Economics. These students will be the fresh enterers of the labor market and may become talented employees of organizations. In the research joint surveys have been applied. The questionnaires were related to working values, values, motivation and career. The sample contains 235 full-time students. One of the positive results of the examination is sampled students are strongly performance motivated. Regarding their performances, the pursuit of success and the need for execution tasks are important, and the high level of effort-performance is outstanding. The results are closely aligned with the sampled students because personal development is important to them and this is a typical age characteristic. The appearance for fulfilling basic needs such as safety, material and physical environment and self-assertion also have a key role. Regarding their career orientation security is in the center of attention. They do not want reputation with all their hearts. Furthermore, management and leadership are not the most important for them. The career anchor analysis has also proved this because leader competence was the lowest career anchor. In the future it would be worth extending the research to the other faculties of the University of Debrecen or other Hungarian Universities. The extended research may result in a representative sample and it would be appropriate to explore gender and professional differences. Furthermore, differences between MA and BA programs may be unrevealed*.

Keywords: motivation; career; value; education; work values inventory; career anchor

JEL Classification: M12

1. Heading:

"Youth is no longer interested in collective solidarity, and they do not feel enthusiastic about community issues. Their real chance is in the capability for change and the joy in revved up. In this risk generation, only those have a

reputation, who can react quickly and make quick decisions. The boundary between professional and private life has completely disappeared. This group has pleasure only by itself or with some close friends. They trust in none but itself. Their passwords: money, power, the world is ours!" (Kövesdi, 2006, 54. old.) Reading these thoughts, the questions may arise if young people think that way and what motivates them. Students at higher education institutions supposed to be successful groups of the Hungarian society. Exploring their value-system and what career means for them would be in considering interest.

The trajectory of a career is thought to be determined by three factors. The first of those is what we call self-perceived talent and abilities, aptitude and family resources. The second one is motives and needs represented by the social and economic environment with their potential possibilities and/or limitations. The third group of factors involves the intentions and aspirations of the individual toward the achievement of set goals and desires that rule their everyday activities (Bodnár, Kovács and Sass, 2011). This one is the strongest of the factors examined. The individual would never give this up, not even in the face of a very hard and complicated decision. The chance of an individual to achieve success is very heavily influenced by the career self-concept and career orientation of that individual, and of the vision by which they organize their career plan. This is what generally is called a career model (Schein, 1978; Schein, 1986, cited by Custodio, 2004). The analysis of the elements of the third group of factors could lead us closer to the understanding of the career concepts and career goals young people may have. Career anchors are important for the influence they have on career choices, on decisions concerning changing jobs; career anchors shape the expectations of life young people may have, they determine their future outlooks, they influence their decisions on selecting a job or a working environment, and they influence the responses young people would give to their job experiences.

It is easy to recognize that peoples' career aims may have a relationship with the standards of their values and work values, and motivations. Tertiary level students have a variety of preferences of values. The differences may originate from many sources; one of those could be the difference of their career socialization which begins even before they enter the higher education, and whose importance will heavily grow during the years of their study for the simple reason that they enter the job market right form the lecture halls (Sőrés, 2012).

This study introduces the results of our research in career, motivation, value and work value analysis. The research was carried out among students at a higher education institution.

2. Literature review

The new career concept does not mean the progression from lower to higher levels on the career ladder it means personal enrichment and competence development Extension of professional, methodological, social and human competencies can be subsumed under this term. By understanding career, improvement and development necessity can be more widely found. (Dienesné és Berde, 2003). A career can be divided into series of stages and characterized by generalized experience. Following Hall (1976) four career stages are identified: exploration, establishment, maintenance and decline. The exploration stage is worth characterizing because the individuals of our research, by the distribution of ages, belong to this group. In this stage the focus is on self-concept and implementing

career choice. This stage refers to the period when individuals are 15-24 years old, young people are success-oriented and able to develop themselves to achieve their goals. From the employee's points of view, it is determining to have a realistic view of their competencies and talent, to discover their values and motivations to choose an adequate career. Super (1973) in his career model integrated the elements of determining personal and social factors about career building. Super links the determination of certain career stages to the personality development. The individuals in the research belong to the groups of 18-21 and 21-24 years old determined by Super's model. In this stage career aspirations and value systems will be defined and work expectations will become clear.

The chance of an individual to achieve success is very heavily influenced by the career self-concept and career orientation of that individual, and of the vision by which they organize their career plan. This is what we call a career model (Schein, 1978; Schein, 1986,cited by Custodio, 2004).

"Career anchors are those skills, competencies and conditions of which utilization and exercise an individual does not intend to give up. Career-concepts are centered around them, and this is our self-concept that leads or limits our career decisions" (Langer, 2001, 41.p). According to Shein people differ from each other in which part of their self-concept is dominant in decision making. There are people whom the most important is to satisfy certain needs in their work or to their professional skill be recognized. Others think that they are successful if they can live in the line with their values. The career anchor is an inside self-concept and formed on the basis of an individual career. It is called anchor because it pulls backward an individual from directions which are not in the line with their self-concept. A lot of experience have to be accumulated in order to build a developed self-concept (Schein, 1974). Value is the personal beliefs about what is the right life-style. "The value-system of an individual is his or her values by importance, relatively durable, sorted by hierarchy and in accordance with their relative importance determines an individual behavior" (Mérei és Szakács, 1988, 404. p.). Values have motivation tasks also, that is to motivate the achievement of adequate goals. McClelland (1985) differentiates five dimensions: general achievement motivation, goal-oriented achievement motivation, avoidance achievement motivation, power motivation, and affiliation motivation.

3. Material and Methodology

The formula of the questioners used in the survey were compiled by the synthesis of a varied body of literature (Karcsics, 2006; Márton, 1992; Münnich, 2002) and on the basis of our experience. They were supplemented by the brief versions of Super's work value (Dienes and Simon, 1987) and of the Motivation and career anchor inventories (Iványiné, 2011).

The survey was also dealing with the analysis of the motivation. We used the motivation questioner developed by Csukonyi and Münich (2002) on the basis of McClelland's (1985) basic motivation theory. McClelland differentiates five dimensions: general achievement motivation, goal-oriented achievement motivation, avoidance achievement motivation, power motivation, and affiliation motivation. Individuals with general achievement motivation are motivated to achieve better performance than others. Those with goal-oriented achievement motivation are driven by the desire to achieve in order to succeed. A person with avoidance achievement motivation is driven by the desire to avoid failures and

negative outcomes. For individuals with power motivation it is very important that they have influence on others, and that they have prestigious positions. Affiliation motivation involves a need for friendly relationships and interaction with other people (cited by Csukonyi and Münnich, 2002, 20-24. pp.).
The questioner to assess the students' preferences of values relies on relevant research by Csukonyi and Münnich (2002). The series of questions are based on Schwartz's (1995) theory of values comprising 12 dimensions of values: recognition, dominance, self-direction, conformity, security, support, independence, achievement, hedonism, self-enhancement, liberalism, conservatism. The dominance dimension of values means appreciation and recognition. Those individuals who seek to control others and resources recognize dominance as a priority. The achievement dimension of values covers the effort for personal achievement. This is expressed through the personal competencies with regard to social standards. Hedonism includes delights and seeking happiness. The fourth value dimension subsumes challenges and seeking excitement. Self-direction as a value is characterized by independent thinking and autonomous decision making and for this creative thinking and researcher attitude are necessary. Conformity means understanding and accepting others. The value dimension of support suggests that for an individual is important to create prosperity for family and intimate friends. Traditionalism means that an individual respects traditional and religious rites related to given culture. Those to whom conformity as a value is important likely to avoid such activities, which may hurt others. Security is the last value, and it includes seeking harmony in relations and for individuals. These values serve the fundamental operations of the individual and the society. Seeking for value can be in line with each other, but it may also be reverse. (cited by Csukonyi és Münnich, 2002, 38-39. pg.).
The next larger block of questions comprises Super's work values inventory. Work values are measured against the following properties: spirituality, achievement, integrity, material reward, altruism, creativity, social relations, prestige, control, diversity, aesthetics, independence, hierarchy, security, and physical environment (Dienes and Simon, 1987). Spirituality as a value related to work which is spiritually challenging for the employee. At work independent thinking and using intellectual competencies are important. Those who prefer achievement higher, are characterized by task-orientation, need for task-execution and achievement efforts. Self-assertion is related to the work that enables an individual to choose a lifestyle in accordance with their expectation. Super states that lifestyle is not present at young ages. Those, to whom the material reward is an important value, chose a well-paying job and that is secure them a proper living. Altruism is related to the work which enables others prosperity. Those, for whom creativity is important, seek a job where new things, new products can be introduced. Social relations are connected to the work which enables forming a good relationship with colleagues. Prestige as a value is related to the work which is respected by others. Those, who recognizes control and leading as a priority, gladly have control under others. Diversity enables work pleasure but task-orientation doesn't. For the young people, diversity is more important value than for the elderly. Aesthetics enables to create nice things and helps for making the world better. The value called independence is related to the work where an individual can define work in their own way and has independent behavior. Work as quickly or slowly as he wants. Hierarchy as a value related to the work which enables treating working tasks equally. People need to

get information about how and what extent they are evaluated. Security is related to the work stability. An individual would like to have a job which ensures long-term employment. Those, who recognize physical environment as a great value, working in the adequate material environment is important (cited by Dienes és Simon, 1987, 6-9. pg.).
The last section of the questioner is dealing with the career anchors. The career anchors make it easier for people to select those of their needs that are of top priority for their work. The following groups of needs can be differentiated: security, stability, loyalty, autonomy/independence, technical/functional competence, general managerial competence, entrepreneurial creativity, service or dedication to a cause, pure challenge, and life style/harmony. Individuals with the career anchors of security and stability are characterized by a strong sense of loyalty to the company, they value the security provided by long term employment and regular earnings, but they are ready to change their jobs if this serves the interest of the company. Also, such individuals are strongly tied to the geographical location they live in; they would rather give up some of their life standards than move place. Individuals having career anchors autonomy/independence want to define their work in their own way, they need jobs that allow them flexibility regarding when and how to work, and they like to do their work with a high degree of independence irrespective of others. Individuals with career anchors technical/functional value knowledge and outstanding achievement in a special area very high. If a person has general managerial competence, they will take every opportunity to climb to a level high enough to ensure them long term possibility of money-making and wealth accumulation. Individuals having entrepreneurial creativity will take every opportunity to create an organization or enterprise of their own; they are motivated to take risk and overcome obstacles. People having career anchors service/dedication to a cause pursue jobs that serve the benefit of others even by scarifying their own interests. If an individual has career anchors of pure challenge, they would value nothing but big challenges. Individuals valuing lifestyle/harmony do not prioritize jobs that require self-assertion; they would rather work to achieve a balance between different values like family, friends, hobbies, relaxation, leisure or off-job learning etc. (Iványiné, 2011).
To evaluate items, we applied 7 points Likert scale in every group of questions. The survey was conducted among the students at University of Debrecen Faculty of Economics. The sample contains 235 full-time students, 161 of them are at Bsc/BA and 74 of them are at Msc/Ma programs. The female to male ratio is 67% to 33%. Distribution of ages shows that most of the sampled students belong to 19-24 age group however some students belong to 25-30 age group. 62% of the sampled students live together with their parents in the same household.

4. Results

4.1 Motivation analysis

The motivation survey includes five scales: general achievement motivation, goal-oriented achievement motivation, avoidance achievement motivation, affiliation motivation and power motivation. Figure 1. shows the average values of motivation forms in the sample

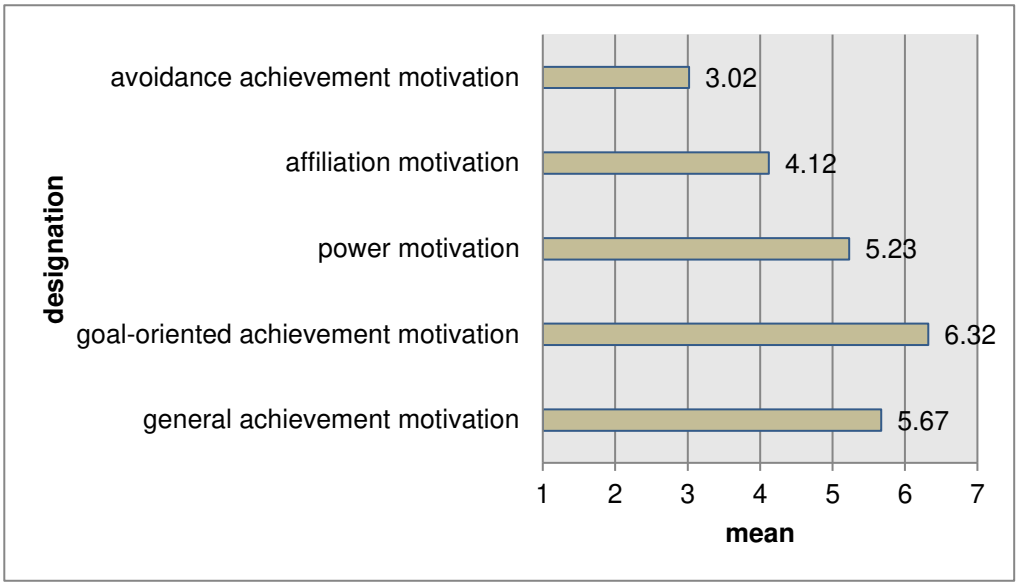


Figure 1: Average values of motivation forms
Source: Own data collection, 2015-2016

The sample is mostly characterized by the goal-oriented achievement motivation that is, to realize their achievement in the line with success and to keep in mind the execution of given tasks. Affiliation motivation has one of the lowest scores it means that building and caring relationships are beaten by the other motivation factors. If they consider relations necessary to achieve progress the affiliation motivation would become more important and more emphasized. Avoidance achievement motivation has the lowest score among the sampled students so avoiding failure is not their main motivator and not in the focus.

4.2 Exploring values

The applied survey to explore values and important factors contains 12 scales (Figure 2.). The respondents think that personality development is the most important factor, regarding their ages it seems normally. Achievement, support, security and recognition are also important factors to them. Independence, dominance, and conformity do not have outstanding scores.

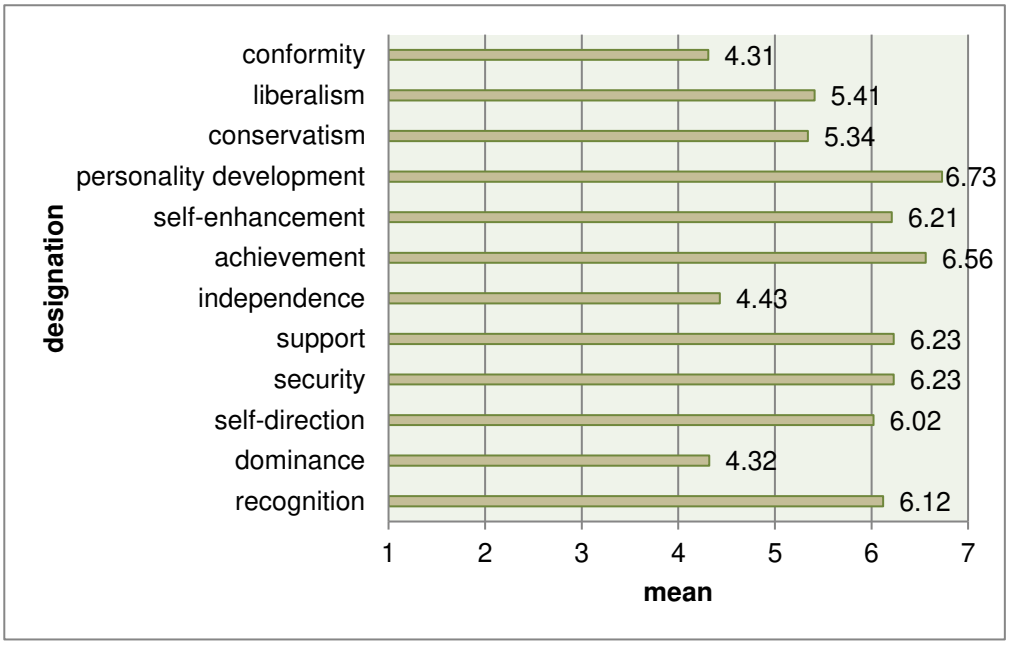


Figure 2: Average of values
Source: Own data collection, 2015-2016

Based on these it can be concluded that for the sampled students significantly important to understand their own personality and to start their own development. For them seeking higher achievement, securing prosperity for close ones and creating harmony are important. However, they do not want recognition with all their hearts and as students they consider conformity as a less important factor.

4.3 Work-value analysis

To explore work-values we applied Super's work-value questionnaire. Figure 3. demonstrates the results. Among the work-values according to the sampled students the most important are the material reward, the assertiveness and the physical environment. Although all the factors have higher average scores than four so none of the groups got low scores. We would stress that control as work-value got 4,87 average score. We expected a higher score for this factor because most of the sampled students would like to work as leaders.

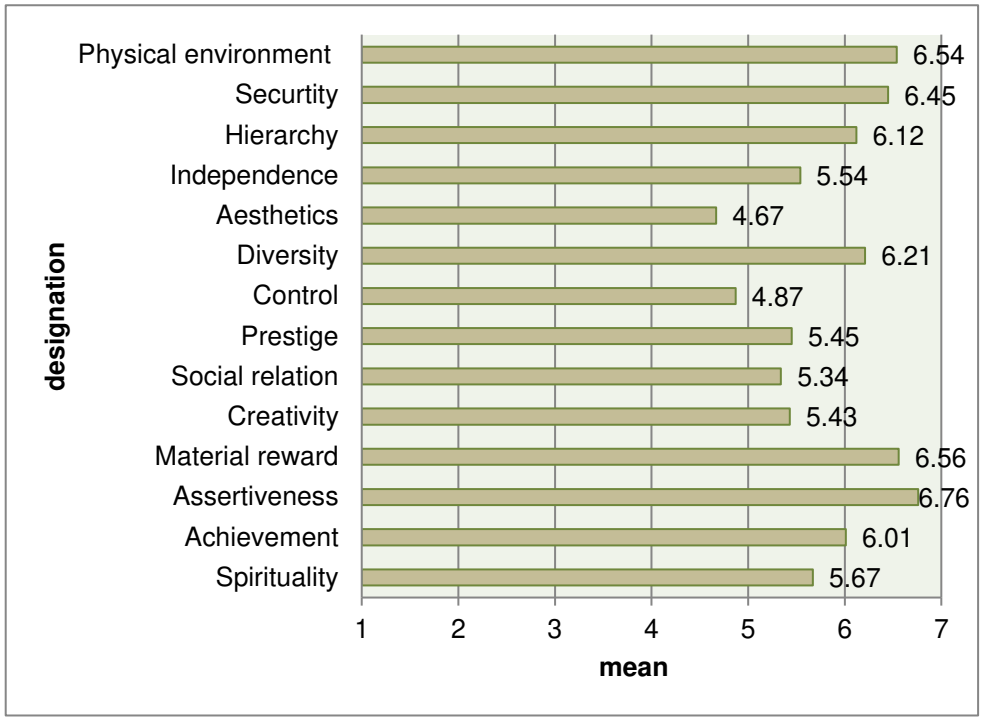


Figure 3: Average values of work-values inventory
Source: Own data collection, 2015-2016

The 6,45 average score of security is outstanding and have to be highlighted this high level of needs. Regarding creativity and social relations we concluded that more attention should be paid to these factors in the future. These two factors can play a key role in professional development.

4.4 Career anchors evaluation

Figure 4. demonstrates the average scores of career anchor items. The anchor "Security, stability, loyalty" produced the highest average scores, thus we can consider it to be the primary anchor. The respondents value loyalty to the company very high, and they prioritize the security provided by long term employment, regular earnings and a modest career advancement. Success for the individuals with the security anchors involves long term affiliation to the company irrespective the level of their employment.

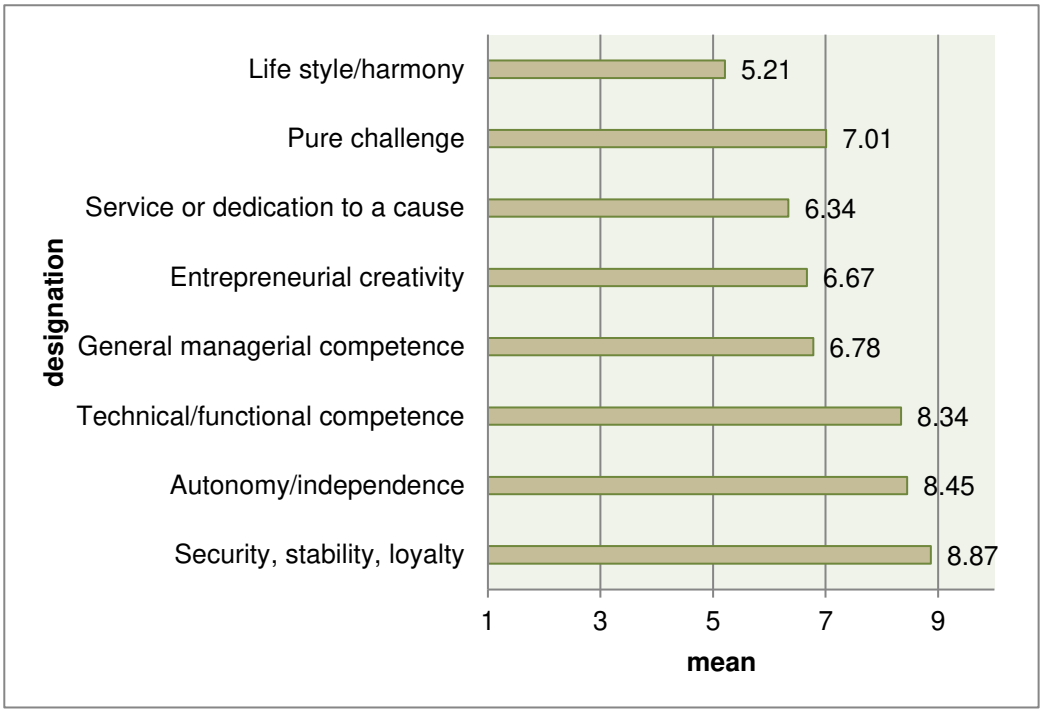


Figure 4: Average values of the career anchors
Source: Own data collection, 2015-2016

The anchors "Technical/Functional" and "Autonomy/Independence" turn out to be the secondary anchors. Individuals with career anchors technical/functional are motivated to bring their knowledge to perfection and to produce outstanding achievement in a special area. Their self-concept is highly influenced by their achievement of success and recognition in their special fields. Technical/functional competence may yield managerial positions, but the individual will only be satisfied if they take this position in their special field of knowledge. Individuals having career anchors autonomy/independence want to define their work in their own way; they need a high degree of flexibility. Quite often, such people earn high qualifications in order to secure their autonomy and independence. It is interesting that in the case of basic values independence got low scores but among work values respondents scored this factor outstanding important. The respondents scored "Managerial competences" the lowest of the anchors. Individuals with general managerial competence will take every opportunity to climb to a level of high responsibility so they can contribute to the achievements of the company, and ensure long term potentials of money-making and wealth accumulation for themselves. The previously introduced value analysis has shown similar results.

Conclusion

There is increasing pressure on company leaders to hire and keep talented employees. The sample includes students at higher education, who will be the fresh enterers of the labor market and may become the talented employees of the organizations. This leads to the conclusion that one of the positive results of the

research is the strong presence of goal-oriented achievement motivation of the sampled students. Regarding their achievement, the pursuit of success and the need for execution tasks are important and the high level of effort-performance is outstanding. In the process of realizing higher level abilities creativity and social relations are key factors. However sampled students did not score them high. The motivation analysis also proved the underestimation of social relations. The respondents think that building and caring relationships do not have a significant impact on their career development. In the future it would be worth paying more attention to these factors. The results are closely aligned with the sampled students because personal development is important to them and this is a typical age characteristic. The appearance for fulfilling basic needs such as security, material and physical environment and self-assertion also have key roles. Regarding their career orientation safety is in the center of attention. We expected the result that respondents have leader ambitions but none of the surveys succeed to prove our premise. They do not want recognition with all their hearts. Furthermore, management and leadership are not the most important for them. The career anchor analysis has also proved this because leader competence was the lowest career anchor. It may be worth spreading the research to the other faculties of the University of Debrecen, or even to several universities in Hungary, on which basis a representative sample may be compiled. Such a sample may be suitable for revealing differences in gender and special fields as well as to discover the differences between MA and BA training. As a suggestion, it can be concluded that organizing career-related training for students at higher education would be worthy. During these training students would have the opportunity to get information about career options and get feedback about their possibilities. Training would enable them to gain personal experience, and that would be useful in making career-related decisions. Training aimed to support students to become talented employees could be supplemented with team-building training, creativity developing tasks and leader training. Gaining these competencies would have a contribution in realizing high achievement at future workplaces.

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QUALITATIVE STUDY ON THE FOUNDATIONS OF THE EXISTANCE OF THE EMPLOYEES' PSYCHOLOGICAL CONTRACT. THE CASE OF THE ROMANIAN AUTOMOTIVE INDUSTRY

Doina Muresanu
Management department, Université du Québec en Abitibi-Témiscamingue, Rouyn-Noranda, CANADA
doina.muresanu@uqat.ca

Abstract:
The concept of psychological contract (PC), which describes the promises that play the role of obligations within the employment relation, has become during the last thirty years a major analysis tool in the organizational behaviour field. However, it has been mainly used, almost exclusively, in North-American or British organizational contexts. Only recently the researches on the psychological contracts have turned towards other parts of the world such as China, Southern America or India. Despite this opening towards new horizons, the Eastern European countries mainly remain unexplored from the psychological contract perspective. Certain well-known researchers (for example Rousseau and Coyle-Shapiro) have even stated that the psychological contract simply doesn't exist in this part of Europe. The present study which represents a part of the author's doctoral thesis, demonstrates the opposite. Thus, our field research carried out in 2010 in two companies of the automotive industry in Romania on a sample of 31 participants, led us to conclude that the psychological contract is present in this country, too. By using a qualitative methodological approach inspired from the grounded theory, we have been able to notice that the foundations of the existence of the psychological contract are present in the analyzed sample. First of all, the employees benefit from contractual freedom, which allows them to negotiate the terms of their psychological contract and to begin or get out of an employment relation if it becomes unsatisfactory. Secondly, the employers benefit from a lot of flexibility when presenting the terms of the psychological contract to their employees. These two elements are derived from the market economy which is now being built in Eastern Europe and represent a significant change as compared to the employment relation characteristic to the centralized economy. Finally, our survey allowed us to seize, in the analyzed employment relation, the presence of two other elements sine qua non of the existence of the psychological contract in Romania, respectively the mutuality and the reciprocity. Anyway, our study led us to the conclusion that the psychological contract theory is relevant when it comes to analyzing the employment relation in this country. However, if the psychological contract principles can be applied and function properly in this context, other profound analyses are necessary in order to understand the characteristic features of the employer-employee relation in Romania.

Keywords: psychological contract, social exchange theory, contractual freedom, mutuality, reciprocity, Romanian automotive industry

JEL classification: M12

1. Introduction

The psychological contract has been defined in the literature of organizational behaviour as « the set of promises which play the role of obligations between the employer and the employee» (Rousseau, 1995, p. 5). During the last thirty years, it became an essential tool for analyzing the relationship between the employer and the employee.

The majority of the studies that focuses on the psychological contract, especially at the beginning of its conceptualization, have analyzed it in a stable North-American or British context (e.g. Coyle-Shapiro, 2002; Morrison et Robinson, 2000; Rousseau, 1989; Robinson et Rousseau, 1994). Because of the market globalization and the occupational mobility, the researchers have subsequently started to become interested in the perception of the psychological contract in other social and cultural areas, such as China, Mexico, Israel, Australia, Greece, France or India (e. g. Davila et Elvira, 2007; Jensmon, 2013).

The researches that deal with the psychological contracts at the international level have revealed significant differences from one country to another in point of setting up, carrying out, content or perception of the employees' psychological contract. However, these studies remain predominantly descriptive without being able to explain in a satisfactory manner the source of the identified differences.

Within our doctoral thesis defended in a Canadian university, which represents the source of the present communication, we set as a goal the carrying out of an analysis of the psychological contract shaped by a significant change, which is the one of a social contract transformed by changes which have affected its economic and cultural basis.

In order to carry it out, we have chosen a study field other than the North-American or Western European ones, more specifically to certain companies from Romania, an Eastern European country, formerly a part of the communist economic bloc. This part of the world is hardly known and investigated by the researchers dealing with the psychological contract (the study of Kase and Zupan elaborated in 2007 in Slovenia being among these few studies up until today). Nevertheless, Eastern Europe represents a rich study field for the respective researchers due to its dynamism (Pandelica *et al.* 2010). As a matter of fact, it represents an environment marked by several significant or minor changes with inevitable consequences on the relations created at the work place. The research that we present in this communication has been carried out in the Romanian automotive industry, an industry which was in the forefront among the economically developed branches in Romania.

More specifically, we have asked the following question:

« How is the psychological contract perceived by the employees and the employers in the Romanian automotive industry and which are the mechanisms that underpin the present perceptions of the psychological contract as a consequence of the changes which occurred within the Romanian economy and society during the last two decades? »

Before answering this research question, we set as a goal to prove the existence of the psychological contract in the sample we chose for analysis, since the existence of the PC in the Eastern European countries has been put into question by certain researchers (Rousseau and Schalk, 2000).

The following provides a return to the theories around the existence of the

psychological contract, which have grown over time into an organisational behaviour field. Afterwards, we shall describe the methodology and the results concerning the analysis of the existence of the psychological contract in a certain country that is Romania. In the end, we shall present discussions and the conclusions of the research.

2. A theoretical approach to the bases of the psychological contract theory

Before being able to measure it and adopting a specific position in point of its perception in one country or another, it is vital to ask questions concerning several elements whose presence is a condition *sine qua non* for the psychological contract assessment.

2.1. The social exchange theory

Generally speaking, the various theories concerning the social exchange state that it can be seized at the level of the individual – organization dyad and that it can sustain personal and collective goals (Cole *et al.,* 2002). According to Blau (1964), we know two types of exchanges: the economic exchange and the social exchange. The economic exchange relies upon the formal contract which is explicit and more specific. As a consequence, it can be measured and quantified, therefore it can be negotiated. Moreover, in point of duration, it is a short-term one since it does not need any time to get consolidated. On the other hand, the social exchange involves « favours which create vague future obligations, not clearly mentioned, whose compensation nature can not be negotiated, but has to be left at its author's disposal » (Blau, 1964, p.93).

The psychological contract represents a method for seizing the nature of the economic and social exchange (Guerrero, 2004). In the conceptualization of the psychological contract, the researches have kept the differentiation between the « economic » kind of promises or obligations and the « social » ones in order to assign them to the « transactional » psychological contract and to the « relational » psychological contract (Dabos and Rousseau, 2004; Rousseau, 1989).

2.2. The reciprocity and mutuality norm

The idea that individuals feel obliged to give back if they receive anything is the central point of the social exchange theory. It is based upon Gouldner's approach (1960), who says that a social reciprocity norm exists if i) people help those who have helped them and if ii) people do not harm those who have helped them.

As Dabos and Rousseau (2004) emphasize, in the case of the psychological contract, the employees and the employers try to maintain a balance between the contributions and the payments exchanged within the boundaries of their relation. Thus, whenever one party's contribution creates an unbalance, the other party gets involved in a contribution process which restores the balance of the exchange. Thus, according to Dabos and Rousseau (2004), reciprocity can be defined as the level of agreement between the employer and the employee on the fact that one party's contribution forces the other party to respond in an appropriate reciprocal manner.

As Pepur et al. (2010) underline, one of the functions which play a major role in creating and maintaining the psychological contract is to reduce the uncertainty within the employer – employee relation concerning the future exchanges. Therefore, if the parties reach an agreement concerning the contract terms, the

reciprocal exchanges will be predictable, facilitating thus the planning, the coordination and the performance (Rousseau, 1995). As far as the psychological contract is concerned, the level of agreement concerning the interpretation of the promises and of the engagement that each party has assumed (which is the agreement concerning whatever each party owes the other) represents the notion of mutuality (Dabos and Rousseau, 2004).

2.3. Contractual freedom

The creation of the psychological contract involves the existence of the « *personal freedom* » (Rousseau and Schalk (2000), underlined in the text). Thus, in the absence of the individual choice, people do not have the chance to give or to receive willingly anything within their work relation. In addition to this, they do not have the freedom to enter or to get out of the relation with the employer, according to their free will.

A certain type of relation (for example a very autocratic) can limit the freedom of the individual to choose the relation terms at the work place. If the employer has absolute power to take decisions for his subordinates (as it is the case in certain organizations in countries submitted to dictatorships) they will not be allowed to communicate their demands, nor to negotiate the employment relation (Rousseau and Schalk, 2000).

3. Methodological approach of the study

So as to answer the research question, a qualitative methodological approach has been favoured. According to Creswell (2007), this approach is relevant when a subject must be explored, whenever we aim at obtaining a profound comprehension of a complex subject or if we want to understand the context in which the participants have lived the analyzed phenomenon. This vision is similar to the most recent research current which appeals to qualitative studies in order to analyze the psychological contract (e.g. Pihel, 2009; Dick, 2010).

Several approaches have been carried out as qualitative researches. We have chosen a methodological strategy inspired by the grounded theory in order to carry out our research.

In the positivist approach, the sample is set randomly. The data collection aims thus at an uncompromised sample, coming from a population as extended as possible (Bernard and Ryan, 2010). On the contrary, in the interpretative research, sampling is rather « theoretical » (Miles and Huberman, 2010; Charmaz, 2006). The theoretical sample is chosen in direct connection with the data which will be collected, so that the researchers may deal with the respondents which have actually experimented the analyzed phenomenon (Creswell, 2013).

As for the sample of our study, it was made up of 31 employers and employees (executives and management) of two companies operating in the Romanian automotive industry. The main sampling criteria to select the participants were the age, the level of education and the hierarchic level.

The companies that participate to the research are located in Romania, in Sibiu area and operate in the automotive parts production field.

4. Research results

4.1. The flexibility when negotiating the psychological contract

The flexibility that is at the Romanian automotive industry companies' disposal when negotiating the terms of the psychological contract with the employees is shaped by their past experiences. For example, when it became operating in the automotive industry in Romania, in 2007, the company A, a branch of a multinational company, arrived on a ground where the market economy was already solid and the terms of the employment relation related to the automotive field had already been set. Therefore, it was able to discuss the terms of the psychological contract with its future employees without any restrictions « inherited» from a common history. The bases of the psychological contract were laid in an open and pragmatic manner since none of the parties (neither the employer nor the employee) had debts towards the other, related to former collaborations. The reciprocity process started thus from zero.

On the contrary, the company B, a former State company submitted to a painful restructuring after the communism fell in 1989, was forced to permanently carry out adjustments of the employees' psychological contract, as the change was in progress. Its flexibility in point of negotiating the terms of the psychological contract diminished a lot because of the employment contracts concluded in the past, which were mainly collective ones, which had to be maintained as time passed.

> « Researcher: […] do you think there is any difference, for example, between the attitude towards the employees in foreign capital companies as compared to the companies having a Romanian capital? Do they treat their employees in a different manner, do they got them involved in a different manner? What do you think about it?
>
> Participant: There must be a difference since there are different cultures. The Romanian companies, even if they have, let's say, a business that comply with a certain pattern… we can no longer be creative, the rules are already set, at least in the automotive industry, I can not refer to other branches as I do not know them. Some of the practices in the automotive industry are well known all over the place, we have translated books in Romania, even universities refer to them, as for example to Kaisen, which is a continuous improvement, a management philosophy and concept to apply in any company and, as a consequence, the differences are not significant, yet the types of equipment which are used can vary. Generally speaking, the multinational companies have a more diversified salary package or system which they probably use in a more efficient manner as compared to the Romanian companies. It is obvious that we pay the price for all those years marked by social disturbances when the unions were very active and unruly and not in the wrong way… but the multinational companies arrived and they started a business… and this Greenfield-type business is set up in a different manner. We only hire young people, and we clearly express both parties' expectations since the beginning. While at us, let's admit it, the past influences us, people still keep ancient beliefs, they are not willing to give up what they have acquired in the past so that,

for example, one difference between B and the similar multinational companies which operate in the same field is that managers receive smaller salaries in our company as compared to the multinational companies, yet the operators are better paid by us. So, these differences …I don't know whether this is right or wrong, but it's due to these differences that we obtained social peace. The differences in point of wages between the two categories of personnel are less significant, considerably less significant in B as compared to the multinational companies. And there is another aspect: in our company, operators obtained better wages through the union force, as the company existed even before 1990. As for the multinational companies, the multinational companies did nothing else than to impose its own rules…» (Manager, company B).

4.2. The existence of the contractual freedom

According to Pesqueux (2012), so that the psychological contract exists, it is necessary that « the individuals be able to act independently and freely make their own choices » (quoted work, p. 16). This is what we call « contractual freedom » (Rousseau, 1995; Rousseau and Schalk, 2000). As for ours sample, we noticed the absence of hesitation of the employees of all ages, when it came to changing the company if the employment relation became unsatisfactory. This represents a major change as compared to the past, when people preferred to keep their job for an unlimited period and work mobility was almost nonexistent. (Boruz, 2008).

> « We saw the things differently before 1989. We had a work place; fluctuations were quite rare since everybody received approximately the same salary, except for the management staff, of course …So everybody was living in some sort of inertia […]. Nowadays the offer is much bigger and people are permanently dissatisfied since the salary quite small …. They would like to receive more money, so the consequence is that ... 90 % of the employers – with all levels of education – are permanently looking for a new job… » (Manager, company B).

At present, the employee does not feel forced to stay within the company. He/she is free to interrupt his relation with the employer but if he stays, he needs to be reassured in this relation in which the rules of the game are continuously changing, in an unstable economic context.

4.3. The reciprocity and mutuality of the psychological contract of the analyzed companies in the Romanian automotive field

While elaborating the plan for the present study, we wanted to see whether the employees and the employers within the analyzed companies have similar perceptions regarding the terms of the psychological contract, which has been identified in the literature as the mutuality of the psychological contract.

The results of the survey lead us to believe, in the absence of a survey including questionnaires which could confirm it, that the terms of the psychological contract of the analyzed companies' employers are interpreted in the same way by the two parties of the work relation. As far as we are concerned, this is partly due to the clarification of the psychological contract terms which is made through an open and pragmatic hiring process « with all the cards on the table ». *In extremis*, we felt a

slight wave of restriction regarding the work relation imposed by the companies, which present to the candidates their conditions by means of an informal communication. This observation is mainly valid for the less qualified candidates. Through the survey design, we planned to take a closer look to the exchange of contributions and rewards within the psychological contract, in other words to reciprocity. The analysis of the psychological contract reciprocity within the two companies included in our survey allowed us to notice that it represents the element sine *qua non* for seizing the specific nature of the analyzed work relation and psychological contract.

5. Discussions and conclusions

In the work « Psychological contracts in employment, Cross-National perspectives », published in 2000, Rousseau et Schalk expressed their scepticism regarding the application of the psychological contract theory in the Eastern European countries. In the present survey, we demonstrated that the foundations of the psychological contract existence are present in the automotive industry in Romania.

The field research led us to the conclusion that the employees in the automotive field in Romania are free at present to enter and get out of the employment relation according to the opportunities which may present on the labour market, a situation which was not possible before the '90s, when the economy was centralized. Moreover, the Romanian employers have nowadays a lot of flexibility to negotiate the psychological contract terms with their employees, which was rather unusual for the countries of the former communist bloc.

We showed in paragraph 4.3. that the other conditions which were considered vital for the existence of the psychological contract in a certain country, respectively reciprocity and mutuality, are equally present in the Romanian automotive industry.

Following the elaboration of our doctoral thesis on the example of Romania, the present communication being a part thereof, we have concluded that the psychological contract theory is relevant for analyzing the employment relation in this country. Nevertheless, if the psychological contract principles can be successfully applied in this context, other more profound analyses are necessary in order to understand the specific features of the employer-employee relation in Romania.

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FROM FAMILY-OWNED BUSINESS TO LOGISTICS CENTERS – THE CASE OF FMCG CHAINS

Alexandru Constantin Petrache, Mădălina Maticiuc
Ec. PhD student, Management department, Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, Romania
Ec. PhD, Management department, Faculty of Economics and Business Administration, West University of Timisoara, Timisoara, Romania
alex.petrache15@gmail.com
madalina.maticiuc@yahoo.com

Abstract: *A global industry estimated at over 7,000 billion US dollars comes always to meet customers with innovative products and solutions in order to have a pleasant experience in the stores. Small family businesses, with a tradition of over 50 years in retail, have come to be seen as milestones in the FMCG (Fast Moving Consumer Goods) industry. The two cases presented in the article provide insight into how the logistical activities are related to the supply of the store, as well as their evolution in the retail market. The different strategies adopted by their leadership provided the opportunity to compete in a dynamic field, with high competition. The issue of supply is treated differently due to the different vision of the business. It is more important to focus over the entire business and all activities or is it okay to externalize particular services? Retailers listed within this work provide information through annual activity reports, or through various documents and communication channels. The plus that this work brings the literature consists of a description of the arrangements for the supply of a food market retailer offering a perspective that can be analyzed and improved in future research.*

Keywords: logistics, retail, FMCG, strategy

JEL classification: L1, L9, M1, N7, O18, R41

1. Introduction

The present research focuses on identifying the strategies that companies report them through annual reports and on the measures undertaken for business development, and on the other side on the way of the business.

Thus, in the field of food retail, many retail chains of shops were starting from a small family business, which in many cases has been extended globally.

Most of the times, both the production and trade in food products have seen a steady evolution over time, fixing and developing a well-defined chain of value, which on the one hand shows the key competencies of players in the retail market, and on the other hand offers its clients the best solutions for purchasing goods.

If in the past, the global food industry was estimated at 5,700 billion dollars; in 2014 it has reached a value of over 7,000 billion dollars. However, this increase could curb, in the absence of optimal solutions on production of goods and the excessive acquisition of them, and a large portion is bought but not consumed and should be discarded.

Retailers are using different methods of supply to offer customers the products they need. Various studies aimed at the satisfaction of the customers and efficient ways to quantify this satisfaction (Garrouch, et al., 2011), but very few studies are showing how products end up on store shelves. Through this work, we would like to present an objective method of supply through logistical platform, to create a framework to conduct quantitative studies concerning the effectiveness of this type of supply, and the dynamics of this sector.

2. Literature review

Globalization of world industry and trade has had a significant impact on the theory and practice in the field of logistics and supply chain management. Trade barriers have been reduced, but the requirements for logistics services and the costs have risen steadily, so that different business, especially in international companies and have changed their attitude with regard to the storage of materials, production and distribution of products (Rimiene & Grundey, 2007). Most of the countries have potential for establishment and development of logistic centers necessary in competitive transport networks.

The conquest of markets, by retailers, it has been done due to territorial coverage by opening new stores, improving the image created in the market and not least the strengthening of the retail concept (Cliquet & Guillo, 2013).

At the same time the current economic framework allowed the development of the 3PL (third party logistics) companies and strategies practiced by them (Jiang, et al., 2014) in order to obtain a competitive advantage.

Logistics strategies in the field of retail (Afshari & Benam, 2011) vary from retailer to retailer, depending on the specific issues they are focused to offer customers an experience as enjoyable shopping (Teller, et al., 2012), but most of the time, the performance of the logistics is closely connected with the image of the store, the satisfaction of customers and their loyalty (Bouzaâbia & Boumaiza, 2013).

With regard to the information transmitted to the public, big companies draw up annual activity reports, in order to reduce the information asymmetry and to provide correct information about the work carried out (Li, 2008).

Annual activity reports contain in addition the information of a financial nature; interviews with various people in the management board, to see their vision on what was done, what is on progress and what would be possible; various projects at the company, and last but not least the social responsibility projects undertaken by the company in question (Dainelli, et al., 2013).

3. Methodology

The present study is based on the scanning of the literature, but also informative documents issued by the two players on the retail food market in order to present the manner by which they carry on their business and what is the vision of the logistics platform, being a qualitative research. Some of the information provided the basis for preparation of the progress report required in doctoral research.

The following will present the Belgian company Colruyt case, but also that of a chain of French stores, which, as a result of the agreement concerning the provision of information required for the research, does not wish to reveal the name.

Following a brief presentation of the work carried out by the two retailers will present the logistics activity, to emphasize the retail strategy adopted.

4. Findings

The Belgian company Colruyt has a tradition of more than 80 years in the retail industry, founded by Franz Colruyt in 1928. At the beginning, he supplied stores in the wholesale system. Then he continued with the supply of over 800 independent retailers, and when the work became too costly, in 1964, were put up discount stores in Belgium. In 1997 opens its first store in the second country that extends, France. The group currently has over 25,000 employees and in addition to the main field of activity is very active on the market of renewable energy, being considered eco-friendly.

In Belgium, the Colruyt stores are appreciated by clients and are perceived by them as being cheap and having quality products. But what worked in this concept store? The answer is simple; the way how close it is to customers, and how the supply is done in these stores.

Whether with regard to the appearance of the stores they seem true depots, behind this decision is one of an economic nature. On the one hand the customers choose their own products and at the same time they have the opportunity to see all the operations carried out by employees, the store offering vast storage spaces, and on the other hand is taken into consideration to reduce environmental impact, by the way that the interior of the stores is lightened, storing frozen products in freezers, using freezer cabinets sealed in detriment of the opened cabinets, also relating to staff - during the work program no more than four hours, employees are going to be cashiers and in the rest of the program, they will restock shelves while avoiding in this way the dead times pending customers for collection.

In respect of the supply, Colruyt has opted for the use of a logistics center. The suppliers deliver goods at the logistics centers, and employees prepare necessary merchandise for stores.

The quantities sold in a day are well managed by a computer system. This system centralizes information that is sent to the Logistics Centre, and the merchandise is prepared on the basis of this information, thus ensuring optimal stock for the shelves not to be empty.

Logistic center, information systems and industrial robots work side by side to sort stuff and to collect the necessary amount to be transported. Depot handlers are guided to the places specified by these systems, through voice commands, to optimize their routes within the Logistics Centre, thus shortening the length of preparation of purchase orders.

Instead of having each vendor to deliver each store individually, all freight is centralized at the logistic center. So they can keep track and check on the quality of the products delivered and save hundreds of kilometers, this having a considerable impact on the environment. At the same time, from the Logistics Centre, the trucks depart to their final destination - the shops - using the full capacity of their transport (Philippe Toussaint – responsible of sustainable development at Colruyt).

At the same time, the success of the Colruyt stores on the market, a determining factor is represented by the head of the group. The family behaves according to their own values. Simplicity - The want to be responsible vis-à-vis the company and

these issues will create a family atmosphere for both clients and for employees who are working in this company. At the same time stability in long-term goals, giving companies a competitive edge in the face of companies listed on the stock exchange, which is pressed to obtain positive results in each quarter (Gino van Ossel - Professor of marketing of Vlerick Business School).
Colruyt stores seem great, but the choices of products are limited. A prime reason would be a rotation of stocks, transport of goods and the costs of storage. And the second reason is client-oriented, i.e., a limited range of products makes the client's choice easier (Claude Romain - Sales Director at Colruyt).
The second case has a tradition of over 50 years in the retail sector, being founded by Gerard Mulliez, in 1961 in Roubaix. Internationalization debut takes place in 1981, with the opening of stores in Spain, then Italy. As of 1999 they are present on the Asian continent, with hypermarkets in China. 2004 brings a legal reorganization of the business; the company is structured in four main business areas, hypermarkets, supermarkets, Bank Accord and real estate Division, which manages the spaces in which they carried out the commercial activity. Work of the group is diversified; the company is present in e-commerce, or in the distribution of fuel.
In 2009, at the Lyon open a warehouse to create stocks for the countries of the E.U., and in Budapest, is established a logistic hub for ware-house, fruit and vegetables.
In Romania, together with the significant number of stores, after the rebranding, the competition and the development of a logistic system based on a logistic platform were needed.
In the logistic platform are used different systems of supply, but in the following will be presented only two of them, stock flow and transit flow.
Thus, the stock flow implies two stages in the process of purchasing, the first stage (fig. 1), now the team placed orders to supply to each supplier embedded into the stock, and each supplier delivers the orders to the platform provider where they will store the merchandise.



Figure 5: Stock flow – stage 1
Source: retailer's supply chain

Subsequently, orders from the stores are placed to the logistics platform. The ordered articles are prepared in the platform, loaded into logistics services provider trucks and distributed the stores (Figure 2).

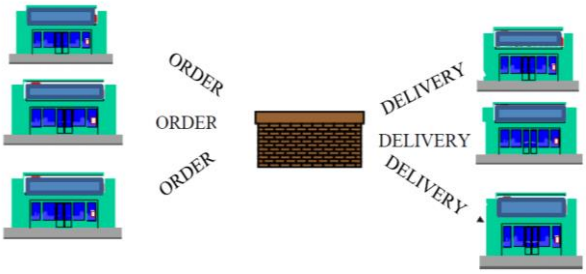


Figure 6: Stock flow – stage 2
Source: retailer's supply chain

The second method of supply of logistics platform-based is the transit flow.
The method of work, for the transit flow is as follows: the shops placed orders, subsequently consolidated by the team of supply in a single command, which is subsequently transmitted to the vendor. The supplier delivers a consolidated command at the logistics platform. At the platform, the merchandise is distributed according to the orders of the stores and then is loaded into the trucks of logistics services provider and delivered to stores (Figure 3).



Figure 7: Transit flow
Source: retailer's supply chain

The main advantage of the use of these methods is the sheer volume of goods ordered by the supplier, which shall be negotiated a certain commercial advantages. Also, this method of supply can be effective only as a result of measurements of the amount of sale, providing the ability to store goods in its own storage space, with a view to future sales, but within a given time and under certain conditions.
Another advantage is the priority for trucks coming from the platform and reduced waiting time for reception of the goods.
The disadvantage of this method is represented by a deadline until which they can send the order to strengthen negotiation and subsequent terms and quantities ordered.
Also, once the reception is done at the level of the logistics platform, after the storage of the products and future orders from the stores, the order preparation assumes a certain picking circuit of the locations where the products are stored. In

this way there is the risk that at the store where the order will arrive, different products needed by different departments to be on the same pallet, being necessary a product separation.
The main advantage in case of stock flow supplies consists of the storage capacity in the stores own storage areas, thus allowing the segment manager to identify and implement solutions to run the store merchandise in the store.
If it manages to organize storage space, may order again to the logistics platform, the quantity of goods required for subsequent sale, to be able to store in the stores depot to avoid stock ruptures, subject to the availability of the product in the platform.
The main disadvantage when there is used the stock flow supply lies in the difficulty to estimate the necessary quantity in relation to the period within which it will sell (the period of promotions within the store stretches over two weeks). Thus, the segment manager, based on the information provided by the internal management system, must size the quantities of goods to cover that period and to avoid an over dimension of the order, which will lead to difficulties in storing and handling of the goods, but at the same time to avoid an under dimension of the order, which will lead to the rupture of stocks within the store.

5. Conclusions

Thus, while the Colruyt focused only on trade in the country of origin and a slight expansion in France, the second retailer presented is operating in 16 countries on three continents.
So we can talk about different retail strategy, but both players considers that being close to the client is vital to the pursuit of the activity in the future, broad alleys and crowded bookshelves, offers to clients a family shopping experience. Also, the category of "discounter", allows them to offer customers low prices on a wide range of products, and last but not least its own branded products offers to customers the guarantee of quality and loyalty to the retailer concerned.
The difference between the two companies is different on how vision of supply is. While the logistic center operated by Colruyt and the carry out done to supply the businesses through its own fleet of trucks, the second retailers stores uses third party logistics for logistics storage and transport.
Also, we find differences and in the business of supply. Colruyt replenishes their stores with the quantity sold previously, in order to maintain the optimum stock of products in the shop without making over stocks of goods at the store, using the maximum space available. Instead, the French retailer let managers' freedom to order the goods at the platform, based on the results obtained, or which are intended to be obtained. At the same time, they must take into account the promotion period, seasonality, demand or certain key indicators. But often the storage space at the store level is not sufficient, so the logistics platform, proving to be a real support in the pursuit.
Future studies should concern the dynamics of this supply systems using a logistics platform, by calculating key indicators to assess the performance of the system. Also, new ways of flows can be proposed or the presented ones can be improved.

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THE REASONS WHY SOMETIMES THE ROMANIAN PROCESSES OF ORGANIZATIONAL CHANGE FAIL

Mariana Predișcan[1], Roxana Nadina Roiban[2] and Simona Biriescu[3]
[1]Management Department, Faculty of Economics and Business Administration, West University of Timișoara, Timișoara, România
[2]East-European Center for Research in Economics and Business (ECREB), Faculty of Economics and Business Administration, West University of Timișoara, România
[3]Business Information Systems Department, Faculty of Economics and Business Administration, West University of Timișoara, Timișoara, România

mariana.prediscan@e-uvt.ro
roxana.roiban@e-uvt.ro
simona.biriescu@e-uvt.ro

Abstract: *In our today's reality change can no longer be ignored, because a lack of response to the influences manifested by the environment can have disastrous effects. The concern for implementing innovative changes becomes an imperative for those organizations that want to develop themselves and be efficient, change being the only way to achieve these goals. The pace of change in the business environment has become more and more accelerated and sometimes even the survival of the organization is threatened by the lack of orientation towards change. Managers need to identify appropriate change ideas according to the organization's particularities, which have to be correlated with specific influences exerted by the businesses environment. Even if the idea of change was very well chosen, its success depends on many actions that have to be undertaken during the implementation process. This paper aims to present a series of mistakes that can be made during the first stage of the change process and thus can contribute to the failure of the organizational change processes. The errors made during the implementation of change can be made according to several criteria, this paper presenting the mistakes that can lead to the failure of change from the perspective of the stages of the change process. This paper presents not only the mistakes that can be made in the process of change but also the actions that should be carried out by both managers and employees in order to ensure that these mistakes will no longer occur in the future. Our study was conducted on more than 150 Romanian organizations, mostly Small and Medium Sized Enterprises (SME's) based on a qualitative research methodology. The interviews included both top management and employees in order to identify the specifics of the processes of change initiated by Romanian organizations and to understand why these processes of change did not have the desired results*

Keywords: organizational change; the process of change; change implementation; mistakes of the change process.

JEL classification: M10, M12, M19

1. Introduction

The issues of organizational change and organizational development have been the subject of concern for numerous specialists, these topics being of great interest even today. In order to understand organizational change researchers borrowed a number of concepts, metaphors and theories from other disciplines, from child development to evolutionary biology. These concepts include: stages of growth, decay and death, development and change models and chaos theory.

The identification of the most appropriated changes and the initiation of change processes is still a very big challenge for most managers due to the fact that the outside environment where organizations operate is becoming more and more unpredictable and the influences manifested by external factors are difficult to be estimated. Moreover, due to a lack of resources and limited time, managers have delayed reactions and the changes chosen to be implemented do not have the desired results.

Members that have the power to make decisions in an organization can identify changes as a result of a rational process of analyzing the forces of change, or by appealing to their creative and innovative capacity, as well as by using the ideas of other employees in order to identify proactive changes. It is important to underline the fact that proactive changes are not a solution for all the activities carried out by organizations. For most organizations the understanding of the business environment as well as finding adaptive changes can lead to performance. The lack of interest for understanding how does the business environment work and the acknowledge of the changes that occur outside the organization can be considered one of the biggest mistakes that managers could make and this attitude can have devastating consequences for the organization, possibly leading to its disappearance.

The purpose of any change process is to ensure the transition to a better state characterized by higher long-term results, but the reality is that in many cases managers have deled with unpleasant situations in which the results obtained after the processes of change were far below inferior to those obtained before initiating the change. Some possible reasons for the fact that change effects were negative are numerous and are mainly based on a series of explanations and causes that can be classified according to the stages and phases of a change process.

In this context, our research is focused on identifying the mistakes and errors that owners, managers and employees can make during the process of change, starting from the three stages of the change process. Thus the stage of the awareness of the need for change was analyzed in order to identify the main problems that may occur, because without a proper identification of the changes that will be implemented, the whole process of change will be affected.

This paper presents not only the mistakes that can be made during the process of change but also the actions that should be carried out by employees and managers in order to ensure that these mistakes will not occur in the future.

The empirical research analyzes the processes of change initiated by Romanian organizations as a result of the information gathered from interviews held with various owners, managers and employees with the aim to identify the mistakes they have made in the processes of change.

Accordingly, the paper is structured as follows: Section 2 presents the literature review in the field of change management regarding the mistakes made in the process of change, in order to underline the context of the research; Section 3

reveals the methodology and results of the research and section 4 presents the conclusions, the research limitations and future research directions.

2. Literature review

Organizational change is inevitable and although this is a certainty for most managers, the question to which more and more are trying to find a response is which are the factors for successful change processes.

The pressure to change is generally generated by the outside events such as the process of globalization, the fast development of new technologies, the economic crisis, phenomena that often create confusion to those who work in such environment (Brisson - Banks, 2010). However elements from the inside of an organization can also generate changes and in order to be successful, organizations need to make considerable efforts to find answers to questions regarding the changes that should be implemented (Westover, 2010).

The most relevant study in the field of change management belongs to Kurt Lewin, who identified three phases of change as follows: unfreezing, changing and refreezing, this study being the basis on which a solid theory of change can be built (Schein, 1995). During the first phase the organization's members are preparing for change, in the second phase the change is implemented and the last phase implies the institutionalization of change (Armenakis, Harris, 2002).

Starting from the three phases of the change process Lewin has developed the Field force theory that states that the failure of change occurs when the equilibrium between the forces that generate change and the forces that resist change does not exist, so the change cannot happen (Lewin, 1939).

The research of the authors Van de Ven and Pool concluded that processes of development and change within organizations are explained by four types of theories (Van de Ven and Pool, 1995):

- life cycle theory;
- teleological theory;
- dialectical theory;
- evolutionary theory.

Each of these theories shows that change happened after a certain sequence of phases (different sequences), in which the mechanisms are customized. According to the authors, the success of change is conditioned by the existence of engines that generate change, so the failure of change interventions initiated by organizations are based on choosing an inappropriate engine of change (Weick, Quinn, 1999).

Although managers efforts to identify changes that provide an improved performance and increased results are very strong, more than 75 % of the change initiatives fail because the organization is not ready for change, and the number of those that support change is very small (Kotter, 2007; Beer, Nohria, 2000). Moreover, the organizational culture does not support change, the number of people involved in the change process is very low and employees cannot adapt to organizational change (Carnall, 2003; Cohen, 2005; Weiner, 2009; Petrou et al., 2016).

When strategies for change are set, managers assume that they will share their vision throughout the organization, but in the end they often encounter resistance to change from employees and the failure to support the significant processes of

changes can lead to a large-scale crisis very difficult to control (Senge, 1994; Stanleigh, 2008).
Key factors for successful change are (Smith, 2006):
- creating a sense, a need and urgency for change;
- communicating the change message and ensuring participation and involvement in the change process at all levels;
- providing anchoring points and a base for the achievement of change.
According to Armenakis and Bernerth some factors common to all change efforts that influence the organizational success are (Armenakis, Bernerth, 2007):
- content issues that refer to changes specific to each organization starting from the attempt to meet environmental demands;
- process issues that include the actions taken by change agents during the introduction and implementation of change;
- contextual issues like the pre-existing forces in an organization's external and internal environment.
There are many factors for successful organizational change and for those large-scale changes the steps that have to be followed are: the acknowledgement of change, the planning of change and the implementation of change (Prediș can, 2000).

3. Research framework and results

In order to identify the main errors in the stage of awareness of the need for change and therefore to make recommendations regarding the actions that must be taken to avoid future occurrence of these errors, we opted for a qualitative research, using the interview method. The respondents included in our study were both managers and employees and their answers allowed us to identify the specifics of the processes of change initiated by Romanian organizations and to understand why these processes did not have the desired results.
Forces that generate organizational change are located both inside and outside the company. Their intensity and how they manifest themselves is significant differently from one organization to another. A very good understanding of the environment in which the company operates has led to better identification of the forces of change and the changes correlated with them.
Our study was conducted on more than 150 Romanian companies, mostly SME's and presents some mistakes that can be made for each category of external factors, but also actions that can be undertaken so that these mistakes won't occur anymore.
The biggest mistake common for the stage of awareness of the need for change is owners' or managers' lack of interest for change. If the deciders within an organization do not consider change as an absolutely necessary positive force and if they won't show any interest at all in promoting it, it is obvious that the change will not occur. Such organizations have extremely low chances for survival in the current market, especially due to the increasingly complex business environment and dynamic that we face today. Avoiding change is a mistake that may lead to the disappearance of that company from the market.
A common mistake in this first stage of the change process is having erroneous perceptions on the business environment. Many ideas for change are generated as a response to external forces so the knowledge and understanding of the mechanism by which they exert their influence on the organization is essential.

In the following we present several mistakes that can be made correlated with each external factor.

3.1. Economic factors

The main errors that may appear in the processes of change regarding economic factors are:

- *Ignoring the competitors*; the ideal situation for any company is a lack of competition, but in a market economy this is impossible. Competition exists and manifests itself even though it is ignored by managers, it creates tension among companies and leads to progress and innovation.

It is recommended to study the changes made by competitors and anticipate their future steps in order to identify changes that will successfully make organizations to increase their market share.

- *Misunderstanding competitors' policies and strategies*; the simple awareness of the fact that competition exists won't solve the company's problems. Managers need to study very carefully the actions of their competitors, to identify and understand their intentions, strategies, so they can find those change ideas that will lead to achieve a competitive advantage over the competition.

- *Lack of interest on identifying appropriate changes correlated with consumer's behaviour*; the pace is experiencing changes in business environment is increasingly accelerated. Just as the life of the products is reduced over time, so are changes in consumer behaviour, generated by the avalanche of new, innovative products that create new demands on the market and also by trends related to healthy eating, lifestyle, clothing or leisure. Performant companies run proactive changes in this creating demand for their products. If a company is unable to generate changes in consumer behaviour, at least it should try to understand these trends and adapt their products to new consumer requirements.

- *Life stage of the business no longer sustains the company's development*; businesses, as well as companies have certain stages of life. It is not recommended for managers resign as the sales volume decreases dramatically without trying to look for new market opportunities. It is to late to think about change only when the company starts to loose. Small companies can move very easy from one business to another if entrance barriers are not very high.

Today we are witnessing expansion in the virtual environment of more and more publications, radios and even televisions. There is a possibility that more traditional businesses change significantly as a result of the achievements of science and technology and some even disappear while new ones appear.

- *Disinterest in new business ideas*; findings in science and technology create new products, technologies and new business ideas. Having an interest for identifying new business ideas can lead to potential changes extremely beneficial for the organization.

- *Correlate the supply of goods and services only with the average purchasing power of citizens*; the purchasing power of citizens determines how companies grow and prosper and it is mandatory for managers to have it in mind as they decide to enter a new market. Managers should however be aware that in economies where the purchasing power of the majority is small, they can develop highly successful business in the field of luxury products. If we take Romania as an example, even if the purchasing power of the people is low, there are many citizens demanding for expensive and extravagant products and the increased

sales in the luxury field prove it.

- *Ignoring the growth rate of the economy*; it is known that the pace of development of the economy has positive effects on companies. The higher it is the chances of creating new companies and developing the existing ones are higher. On the other hand, a low pace of development of the economy or an economic recession will generate adverse effects, many companies reducing their sales volume. Managers should be aware that in times of crisis there are businesses that thrive. Initiating such businesses can ensure success during the crisis.

3.2. Technological factors

Some mistakes that may arise during the processes of change regarding to technical and technological factors are:

- *The acquisition of technologies without analysing their effects on company's revenues and costs*; in general, new technologies are designed to reduce costs when the volume of production is very high and their cost of depreciation can be divided on a long period of time. If, however, extremely costly new technologies are not used to getting a high volume of production, their costs of depreciation will cause significant losses for the company. Similarly if companies purchase a high-performance system that will allow them to obtain results faster, but those systems are not perfectly customized with the company's characteristics, some employees won't understand it and thus their departments will continue to work in the traditional way. Like this costs arising from the purchase of that information system that will not demonstrate its usefulness will be in vain.

- *Disinterest for new technical solutions*; innovations in recent years managed to reduce the working time needed to perform certain processes and also to minimize costs related with communication and information. If managers are not interested to implement in their companies such products, technologies or information systems they will not achieve the productivity and performance of companies using such solutions.

3.3. Political and legal factors

Regarding policymakers, the main errors that may appear in the processes of change are:

- *Disinterest in EU development strategies*; the main goals for development in the EU area, along with the main objectives set for the future were outlined in the Europe 2020 strategy Based on these development guidelines, each Member State has its own custom development strategy. Not knowing nor understanding this information will restrict the access to European funding grants as an important source of funding for many existing European business, and will lead to miss important opportunities to develop new businesses.

- *Misunderstanding the influences of certain international bodies*; many decisions, policies and strategies developed by some international bodies have an influence on our economy, especially on the companies operating here. Understanding the mechanism by which these influences are felt in the economy may lead to ideas for change to exploit the favourable effects of the policies and strategies created by the international organizations.

- *Ignoring legislative changes*; each company must acknowledge and obey all

legal regulations that affect it directly or indirectly. Changes in the legal field happen very often and sometimes those changes are very fast. Ignorance of the law by not changing some rules in the company (new documents, new activities, new forms, and new obligations of taxes that have to be declared) may lead to penalties.

- *Missing business opportunities or tax facilities due to ignorance of legislative stipulations*; The Romanian legislation offers certain facilities for some companies such as: smaller income tax for certain businesses, exemptions from taxes for businesses from a certain disadvantaged area, special facilities for hiring staff such as unemployed graduates, people with disabilities, tax exemption on income from wages for those working in IT etc. Managers must know, understand and then apply the changes needed in order to benefit from such facilities.

- *Failure to comply with legislation*; intentional failure or ignorance of legal regulations may lead to penalties with adverse effects on the companies' profitability.

3.4. Ecological factors

- *Higher costs arising from the use of limited materials whose prices have increased*; some natural resources are rare and with all the climatic changes or natural disasters, in some periods the prices of raw materials increase. If those materials have a significant percentage in the total material requirement, the production costs will increase. Extremely unfavourable influences on production of goods may occur if certain materials may not be purchased as necessary and in time. Effective change solutions can be found by managers and employees who are concerned about replacing deficient materials with others more easily to be achieved and at a lower price without significantly affect the quality of the products.
- *The risk of being sanctioned for not protecting the environment*; legislation on environmental protection in our country has become more strict after Romania was integrated in the European Union as a result of the need to align to the EU regulations. Thus, companies, and citizens are sometimes forced to make changes that lead to better protection of the environment (performant wastewater treatment systems to reduce pollutants released into the air, selective waste collection and recovery of electrical, electronic waste, etc.).

3.5. Socio-cultural factors

Socio-cultural factors are related to mentality, traditions, tastes and habits, and the main mistake that could be made in the processes of change is *misunderstanding and ignoring local customs*.

To be successful, companies must thoroughly understand how the business environment forces influence them and be able to exploit the opportunities that arise, and to avoid threats from the outside. In this respect, a better understanding of the habits of citizens in one region and their culture, can lead to identifying solutions to change the company's products. Although in the past many companies had perfectly standardized and identical products all over the world, now they have introduced new products that would better adapt to the national and regional specific.

4. Conclusions

The environment in which organizations operate is becoming increasingly turbulent and the change becomes stringent for organizations that want to be competitive in a global economy characterized by a high degree of innovation and through a strong rivalry between competitors.

The forces of change can be both external and internal an unfortunately often managers' change initiatives have not the desired results. The main mistakes in the change processes initiated by managers start with an misunderstanding of how all external forces act on organizations, and many times managers act too late.

There are different ways to identify the changes that will be implemented within the organization, some managers being rational and acting according to their perceptions on the pressures from the outside environment while other are being proactive, identifying changes based on the creative and innovative capacity of their employees or on their own without any connection to the signals of business environment.

Even if the identified changes may be numerous, not always the organization has the needed resources to implement them, so managers should choose only changes considered to be vital for which they have the necessary resources.

Some mistakes can be made when managers choose the changes they want to implement especially when those changes are not the most suitable for the organization. Managers can often have a wrong perception on the signals transmitted by the environment so the results from the change processes implemented falls their expectations and even affect the organization's performance.

Changes should be identified after a comprehensive analysis of internal and external environment, using existing scientific instruments in the science of management. Like this, the chances of success are very high. Also it is recommended for managers to stimulate the creativity of their employees in order to identify proactive changes.

Any process of change requires a certain period of time, and the stage of awareness of change is extremely important for the change agents that should correlate the results obtained after an analysis of the external environment with the organization's particularities making sure that the change process will be successful.

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NEURO-FUZZY MODELING APPLIED IN PROGRAM MANAGEMENT TO INCREASE LOCAL PUBLIC ADMINISTRATION PERFORMANCE

Adrian-Mihai Zaharia-Rădulescu
PhD Student, Bucharest University of Economic Studies, Bucharest, Romania
Ioan Radu
PhD, Professor, Bucharest University of Economic Studies, Bucharest, Romania
Mihai.zaharia@gmail.com
Iradu13@gmail.com

Abstract: *One of the challenges in local public administration is dealing with an increasing number of competing requests coming from the communities they serve. The traditional approach would be to handle each request as a standalone project and be prioritized according to benefits and budget available. More and more nowadays program management is becoming a standard approach in managing the initiatives of local public administration. Program management approach is itself an enabler for performance in public sector organizations by allowing an organization to better coordinate its efforts and resources in managing a portfolio of projects. This paper aims to present how neuro-fuzzy modeling applied in program management can help an organization to increase its performance. Neuro-fuzzy modeling would lead organizations one step further by allowing them to simulate different scenarios and manage better the risks accompanying their initiatives. The research done by the authors is theoretical and combines knowledge from different areas and a neuro-fuzzy model is proposed and discussed.*

Keywords: Program management, performance management, neuro-fuzzy modeling

JEL Classification Numbers: C61, C63, H83, M29

1. From project to program management

A project is typically defined as the unique set of activities executed according to a plan to accomplish a specific objective in a given budget and time frame complying with certain qualitative and satisfaction indicators set by the project stakeholders. In nowadays context an organization needs to run multiple projects at once. As one can see the traditional project management does not offer a clear visibility on the resource usage across an organization and does not quantify the contribution of a specific project to the overall performance of an organization. Program management is a relatively new practice that is gaining more traction these days in the corporate and public sector environment. Program management forces the organization to manage the mix of resources and methodologies used to run the projects so that one can say in a timely manner up to what degree a specific resource is used and the contribution to the organization's performance towards fulfilling its strategy. A program is a collection of projects that address a strategic objective of an organization. Given the associated costs and impact of such a collection of projects and also considering the benefits and the complexity of the process of balancing workload, the techniques and methods used for program

management are different and need a more complex skillset. Considering the de facto environment in which an organization activates programs can be classified into: programs that allow the organization to continue running its operations, programs that allow the organization to improve its financial performance and programs that allow the organization to innovate and change its shape.
According to an PMI (Project Management Institute) study "62 percent of projects at organizations that described themselves as highly effective in portfolio management met or exceeded expected ROI" (PMI, 2012). While there are differences between portfolio and program management with the last one being focused on keeping aligned projects targeting mostly the strategic objectives of the organizations this is nevertheless an indirect indicator that program management is an important approach for organizations willing to increase their performance. The same study identifies several critical factors for a successful program management implementation. These are: top management support, portfolio governance plan, clear metrics and aligned strategic objectives. To manage a program one might proceed using a flow like the one presented in the graphic below.

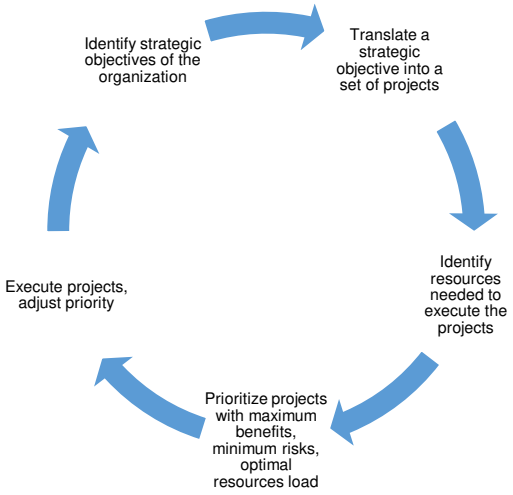


Figure 1: Program management simplified flow

First build the strategy of the organization and set the general objectives so that they:

- Maximize opportunities;
- Minimize threats impact;
- Improve and adjust operational plans to market changes;

While building the strategy the following tools are used: Porter analysis, SWOT analysis and balanced scorecard with an increasing adoption (Niven, 2002). Every line manager will then translate a general objective from the strategy into a set of specific objectives that can be achieved by running a number of projects. In the same stage of the lifecycle project managers are assigned to run projects. To assure consistency of the process and visibility across the organization creating a Program Management Office is desired. In the same stage project managers are assigned to run the projects.

In the third stage the resource pool for each project is established so that all projects from a program have the proper human and material resources to be executed successfully. To do that the program manager together with the line managers performs an analysis to identify operational, financial and human constraints.
In the fourth stage projects are prioritized trying to minimize risks, maximize benefits and maintain a healthy resource usage and workload level. Now is the time to put in place governance plans.
In the fifth stage projects are executed, risks and benefits are continously measured and based on their trends projects are reprioritized and additional resources are allocated. Then the process repeats for the next programs ran by the organization.

2. Performance management in public administration

The performance term is used to describe remarkable results at all levels of an organization achieved inside the environment the organization is operating in and compared to its objectives (Minculete and Olar, 2015). While traditionally the economists focused on measuring performance reffering to efficiency and financial indicators more recent research has focused on assessing the performance of the human resources that run all the activities that make the organization reach its objectives. Measuring and managing performance is a fundamental contributor to the reform of any organization. Highly skilled and up-to-date employees lead to better performed jobs, less complaints, competitive advantage and an increased level of satisfaction for the customers. For public administration the customers are the members of the community, either be it citizens or businesses that pay taxes and use local public services. Performance management in public administration makes no difference for the researchers and can be analyzed from a multidimensional perspective considering economic factors, human resources and even environmental impact and social equity. New public management approach pushed this multidimensional perspective further through its principles by shifting the focus to descentralization in the public sector and focus on the outcomes (Yamamoto, 2003). Descentralization in here means that decision making is delegated to lower levels (units responsible in delivering specific services to the community), bureaucracy is significantly decreased and plans are executed faster. Focusing on the outcomes is the principle that states that what the organizational units deliver and its associated perceived value is what matters, so performance becomes while maintaining and improving economic efficiency.

In this context the public administration traditionally running isolated initiatives, either be it local public services improvements projects or new public services development projects would benefit from moving to program management. Through program management the public administration would be able to better control its resources usage, without scattering them or run into overload situations leading to negative reactions from the community, and maximize the cummulated outcomes of its different initiatives by managing better the correlation between all the factors involved.

3. A neuro-fuzzy model proposal for program management

Fuzzy sets theory has been introduced back in 1965 by Lotfi Zadeh. The challenge raised by this theory is that logic is not purely binary (true and false) and that we can have a set of values representing different degrees of truth and uncertainty. The scope of the fuzzy theory can be applied to solve 2 distinct types of problems: the problems and complex systems for which exact mathematical modeling is not possible and for the problems for which complete evaluation of all solutions is too expensive and the consumer can be satisfied with an approximate solution obtained with a lower cost.

Neural networks have been developed since early 1950, starting from the simple perceptron up to the Widrow & Hoff supervised learning neural network. All of them come in place to help us solve complex problems that need to handle noisy and nonlinear data involving classification, pattern recognition and prediction. The last point is of special interest for this paper as modeling with the help of neuro-fuzzy models allows us to simulate the decision making process in various scenarios. Why we would like to simulate different scenarios? In order to analyze multiple decision paths and their outcome without jeopardizing an entire organization.

For this paper we will consider a program that is made of multiple projects competing for the same resources so not all of them can be executed but only those for which the triad (risks, benefits, resources) is optimal. We will model this into the following objective function:

$$O_p:\{R_p,B_p,W_p\}\text{->}[0,10]$$

Where R_p are the risks associated to a project that is part of a program, B_p are its associated benefits, W_p is the resources usage and [0,10] is apriori established as the output of the function, with 10 as the best solution that can be achieved and 0 as the worst solution.
The aim of this objective function is to minimize risks R_p, maximize benefits B_p and minimize resources usage W_p.

The following fuzzy statements can be presented to describe the desired behavior of the objective function:

- if R_p is low, B_p is high and W_p is low then the project from the program will continue to be executed;
- if R_p is low, B_p is average and W_p is low then the project from the program will continue to be executed;
- if if R_p is low, B_p is low and W_p is low then the project from the program will be stopped from execution;
- if R_p is average, B_p is high and W_p is low then the project from the program will continue to be executed;

- if R_p is average, B_p is average and W_p is low then the project from the program will continue to be executed;
- if if R_p is average, B_p is low and W_p is low then the project from the program will be stopped from execution;
- if R_p is high, B_p is high and W_p is low then the project from the program will continue to be executed;
- if R_p is high, B_p is average and W_p is low then the project from the program will be stopped from execution;
- if R_p is high, B_p is low and W_p is low then the project from the program will be stopped from execution;
- if R_p is low, B_p is average and W_p is high then the project from the program will be stopped from execution;
- if R_p is average, B_p is average and W_p is high then the project from the program will continue to be executed;
- if R_p is low, B_p is high and W_p is average then the project from the program will continue to be executed;

Each of the variables of the objective function needs to be described through a membership function. The perception of these variables and their outcomes by the human brain is nonlinear. According to studies the perception of risks is not linear and once it grows the degree of interest and acceptance towards the risk is decreasing by a potentially polynomial rule (Glimcher et al.,2009). We will use the following membership functions that can be further modeled with the help of Matlab:

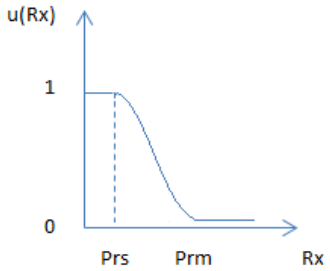


Figure 2: Membership function describing the acceptance of risks

The mathematical representation of this membership function is presented below:

$$\mu(Rx) = \begin{cases} 1, & 0 \le Rx \le Prs \\ 1 - 2\left(\dfrac{Rx - Prs}{Prm - Prs}\right)^2, & Prs \le Rx < \dfrac{Prs + Prm}{2} \\ 2\left(\dfrac{Rx - Prm}{Prm - Prs}\right)^2, & \dfrac{Prs + Prm}{2} \le Rx \le Prm \\ 0, & Rx > Prm. \end{cases}$$

Where Prs is the level of risk from which the risk is actually perceived as a risk and

starts to influence the decision and Prm is the maximum level of risk from which the decident will not continue considerring an analyzed project for execution.

The next one is the membership function describing the acceptance of benefits.

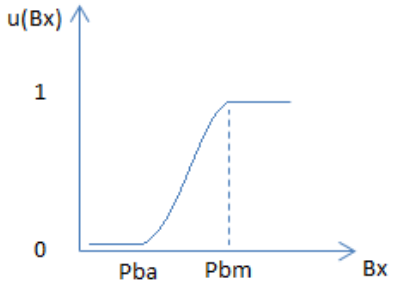


Figure 3: Membership function describing the acceptance of benefits

$$\mu(Bx) = \begin{cases} 0, & Bx < Pba \\ 2\left(\frac{Bx - Pba}{Pbm - Pba}\right)^2, & Pba \leq Bx \leq \frac{Pba + Pbm}{2} \\ 1 - 2\left(\frac{Bx - Pbm}{Pbm - Pba}\right)^2, & \frac{Pba + Pbm}{2} \leq Bx < Pbm \\ 1, & Bx \geq Pbm \end{cases}$$

Where Pba is the minimum level of benefits from which an analyzed project starts to be considerred for execution by a decident and Pbm is the maximum level of benefits perceived by a decident.

The last membership function is the one describing the acceptance of workload level.

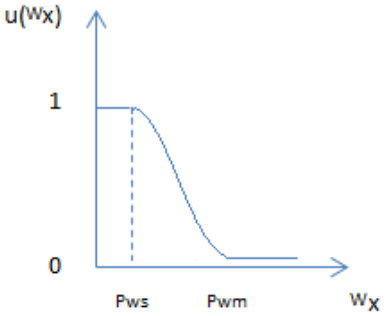


Figure 4: Membership function describing the acceptance of workload level

$$\mu(Wx) = \begin{cases} 1, & 0 \le Wx \le Pws \\ 1 - 2\left(\dfrac{Wx - Pws}{Pwm - Pws}\right)^2, & Pws \le Wx < \dfrac{Pws + Pwm}{2} \\ 2\left(\dfrac{Wx - Pwm}{Pwm - Pws}\right)^2, & \dfrac{Pws + Pwm}{2} \le Wx \le Pwm \\ 0, & Wx > Pwm. \end{cases}$$

This model can be further implemented in Matlab using the Adaptive Neuro Fuzzy Inference System (ANFIS) toolbox and what we will obtain will be the neuro-fuzzy model from the next figure.

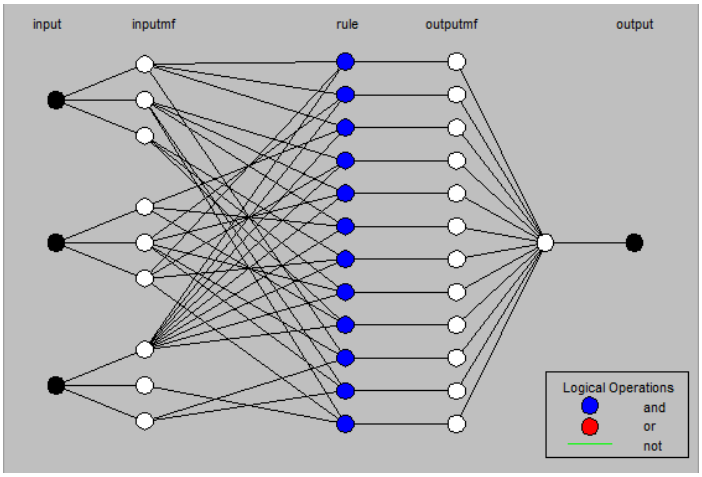


Figure 5: Proposed neuro-fuzzy model architecture

Simulations can then be performed by transforming decisions taken by senior management based on the 3 input variables in approximate numerical thresholds that conduct to a positive or negative decision towards the execution of the projects composing a program.

4. Conclusions

We plan to continue develop this model within future research studies. The model has several limitations as the membership functions used to model the variables are simplified to facilitate implementation and testing into Matlab and not generated through large quantitative analysis and modeling. Still this model is useful to show the utility of neuro-fuzzy models in decision making process when a complex scenario is in place. An advantage of the proposed neuro-fuzzy model is that it can easily be adjusted through training with different sets of data based on the professional expertise of the decision makers.

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SUB-SECTION: MARKETING

ANALYSIS OF THE EFFECT OF QUALITY COMPONENTS OF WEB 2.0 ENABLED E-COMMERCE WEBSITES ON ELECTRONIC WORD-OF-MOUTH MARKETING (EWOM) AND ON CUSTOMER LOYALTY

Harun Gümüş [1], Vedat Bal[2]
[1]Department of Management and Organization, Ahmetli VHS, Celal Bayar University, Manisa, Turkey
[2]School of Applied Sciences, Celal Bayar University, Manisa, Turkey
harun.gumus@cbu.edu.tr
vedatbal@hotmail.com

Abstract: : *Electronic Word-of-Mouth Marketing (eWOM) has begun to play a more important role in customers' purchasing decisions (Cheung and Thadani, 2012, Jones and Taylor, 2007). Previous studies reveal that eWOM increases the purchasing behavior of customers (Chevalier and Mayzlin, 2006). Nevertheless, despite its increasing importance, having limited literature on eWOM makes this subject attractive. Businesses want to bring customer behaviors under control by trying to give the meaning of eWOM messages. In this regard, businesses should observe the eWOM relationship by developing factors such as; aesthetics, content, orientability, system quality, information and content quality and service quality of websites. The aim of this study is to offer a model analyzing the relationship among the quality aspects of website, website loyalty and electronic word-of-mouth communication (eWOM) and to test this model*

Key Words: eWOM, Web 2.0, Website Quality, Customer Loyalty

JEL classification: M15, M30, M31, L80, L84, L86,

1. INTRODUCTION

Today, the digital world has evolved to different dimensions as individually and socially alongside of business life due to the rapid development of internet infrastructure and internet technology. The advancing social media environment and its subsystems enabled consumers to form several new opportunities such as, creating, editing, sharing and displaying online information with the development of Web 2.0 technologies (Cormode and Krishnamurthy, 2008). Different sharing platforms (as is eWOM) were formed with usage of these innovations in e-commerce. WOM concept evolved to e-WOM concept, which is a new structure, via sharing platforms which were developed by dynamic encoding internet infrastructure and Web 2.0 accompanied by Web 2.0 innovations. "amazon.com", world's first e-commerce website enhanced the qualifications of design, information, system and service with the innovations coming alongside of Web 2.0 technologies and set up online consumer comment system on this structure. This situation helped "amazon.com" to stand out among the rival e-commerce websites in terms of quality customer satisfaction.

Harrison-Walker (2001) define eWOM as "the informal communication about a brand, a product, an organization or a service, set on non-commercial communicator serving as a message receptor among individuals". The number of people sharing opinions and experiences or searching for information about the product to be purchased on internet by using Web 2.0 technologies (such as; online forums, websites for consumer comments, blogs, and social network websites) has increased day by day (Gupta and Harris, 2010, Parameswaran and Whinston, 2007). Pervious researches has shown that the customers trust the comments made by people sharing experiences online whom they do not know more and that the comments made by users especially with the title of customer reviews have an effect on customers in terms of the intention and decision of purchasing the product (Cheung and Thadani, 2012). In the light of enhancing internet usage and growing in importance of e-commerce websites, Lee et al. (2008) emphasize that the

phenomenon of eWOM has become a significant element that affects human behaviors and decisions. The researchers underlines that customers share comments and information about products, brands and services online because they are continuously online due to the popularity of smart phones, tablets and internet usage (Allsop et al., 2007). The importance of loyalty in creating customer equity has been certified in the literature (Tek, 1999)and especially, today, electronic commercial enterprises are laying importance on this concept. Chen and Cheng (2009) lay stress on the effect of website quality on the success of website in the electronic commercial websites. Several complex and practical applications developed in day-to-day basis for Web 2.0 technologies that are used in e-commerce websites provide companies with competitive capacity. These infrastructures play an important role in providing with user satisfaction and customer loyalty by increasing quality of e-commerce websites.

2. CONCEPTUAL FRAMEWORK

It is accepted in the consumer literature that word-of-mouth is highly influential among individuals (Herr et al., 1991). Previous research shows that WOM is more confidential and persuasive when compared to traditional media, flyers, personal selling and Radio-TV commercials. WOM, which has a positive effect on purchasing intention and decision, evolved to eWOM on which Web 2.0 technologies have catalyst effect with the internet's becoming widespread and it had the chance to reach out a wider consumer group. The consumers can share their ideas, comments and reviews about product, brand and services on forums (donanimhaber), social network sites (twitter and facebook), commentary websites (şikayetvar) and internet newsgroups. The eWOM communication has become a significant source for many consumers. Realizing the importance of the situations, the companies start to think that websites should provide with enough and high-class content (Chan and Ngai, 2011) and that the loyalty to the websites will increase with the widespread and strategic usage of Web 2.0 technologies. Customers play the crucial role in brand equity. Jones and Taylor (2007) accept WOM as a component of loyalty factor in their study. Gruen et al. (2006) emphasize that WOM and loyalty are different structures and WOM is used as a pioneer in forming customer loyalty in their study.

H1: Loyalty has a positive effect on eWOM

In this study, the relationship between eWOM and website quality dimensions' components (Information Quality, System Quality and Service Quality), which were used by Delone and McLean (2003) in their study and emphasized as effective in the success of an information system, are revealed. It is revealed that not only perception of service quality in websites affects attitudes of consumers towards the company, but also perceived service quality directly affects the loyalty factor (Carrillat et al., 2009). In their study, Ho and Lee (2007) revealed that perceived website quality directly affects the intention of online client retention. Accordingly;

H2: Loyalty affects the relationship between website quality and eWOM in a positive direction.

3. RESEARCH METHODOLOGY

3.1. Universe and Sample

The researches show that majority of social network sites and e-commerce sites active users consists of educated, young and university students (Ellison et al., 2007). Thus, the groundmass of the study is formed by university students who have habits of being online during the day and have a lot of experiences in social networks. Also, these students prefer to make researches on internet about the product that they want to buy. The groundmass of the study consists of the 1857 students (the total number of formal, evening and distant education) from Celal Bayar University, Vocational School of Higher Education in 2015-2016 academic year (Anonim, 2015). 48,03% of these students are from formal education, 44,16% of them are from evening education and 7,8% of them are

from distant education. The departments in the Vocational School of Higher Education are Office Management and Executive Assistance, Accounting and Tax Application, Banking and Insurance, and Human Resources Management. Simple Random Sampling method is used for the sample choice. Simple random sampling assumes that both the probability of each element consisting groundmass to get into the sample, and the weight to be given to the each element in the statistical calculation are equal *(Arıkan, 2004).* The equation below is used for the sample to be surveyed (Baş, 2008)

$$n = \frac{\mathrm{N} * t^2 * \mathrm{p} * \mathrm{q}}{d^2 * (N-1) + t^2 * p * q}$$

In the equation, n= the number of individuals to participate in the sample (the number of persons surveyed), N= the number of individuals in the target audience (1857 students), p= the accrual probability of analyzed event (0,50), q= the probability of nonoccurrence of analyzed event (0,50), t= the value of standard normal distribution (1,65) and d= sampling error (0,05).

As a result of the calculation of sampling equation, the number of students participating in the sample is found 237.

3.2. Data Collection Method

The data were collected via online survey method in the research. Randomly chosen 1300 students were sent e-mails containing online survey forms designed via Google Drive©. The e-mail addresses of the students were obtained from the enrolled student e-mails in the database of Vocational School of Higher Education with the permission of Management of Higher Education. The online survey questions were answered in the frame of shopping site "n11.com" which is one of the pioneers of electronic commercial websites in Turkey. In the first question, the students were asked if they have ever visited the website of "n11.com" and about their shopping experiences. The study applies to the 252 people who experienced shopping on the shopping website "n11.com" at least once in the last two years. As a result of elimination of missing and wrong filled surveys, 242 surveys were evaluated.

The conducted online survey is formed by two parts:

- In the first part, there are five close-ended questions aiming to determine the demographic features of the individuals
- In the second part, there 18 questions about the quality and components of "n11.com" shopping website in the style of five point Likert scale (5: Totally Agree, 1: Totally Disagree) in the frame of loyalty and eWOM

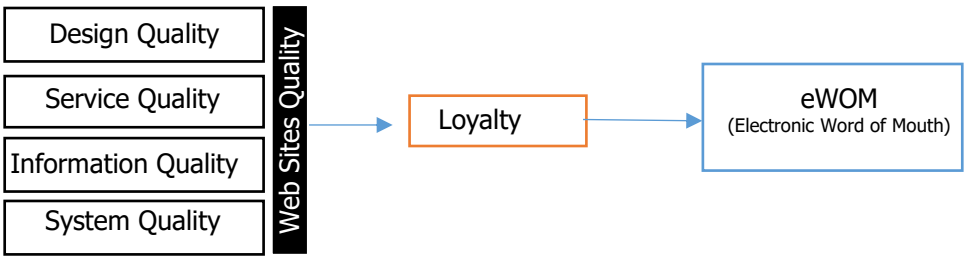
In this study, the effect of the loyalty factor in "n11.com" e-commerce website on eWOM factor is analyzed. The research model formed in Figure 1 is tested by using online survey data. In this study, the scale questions used in measuring loyalty factor were formed by adopting from Anderson and Srinivasan (2003), Roy et al. (2014). The questions forming system quality, information quality and service quality, which take place in the scope of website quality dimensions, [from Chang and Chen (2009), Roy et al. (2014)] and design quality factor questions (Roy et al., 2014) were adapted. The scales used in order to measure eWOM factor were formed with the help of the scales of Roy et al. (2014) and Yang et al. (2012). The details of the scales are shown in Table 1.

Table 1 Scale Questions

Design Quality	D1	I like the overall design of this website
	D2	All in all, I find this website very attractive
	D3	I like the profile and the system of this website
eWOM	eW1	I often share my positive ideas about this website

		with my friends and relatives
	eW2	I often recommend this website to the others
	eW3	I will continue to recommend this website to the other people
Information Quality	I1	This website has the latest information in the product descriptions
	I2	The information of the product description in this website are true
	I3	This website generally provides me with high-quality product information
Loyalty	L1	I will prefer this website when I want to buy something
	L2	I prefer purchasing from this website rather than looking for a new website
	L3	I continue using this website even if more attractive offers are sent from other websites
Service Quality	Se1	This website answers quickly when I query a product
	Se2	This website provides with real-time customer support
	Se3	The service quality given in this website is very high
System Quality	S1	This website executes transactions without an error
	S2	This website provides with a simple and fast way when I want to buy the product
	S3	This website has a very sensible infrastructure in meeting my various needs

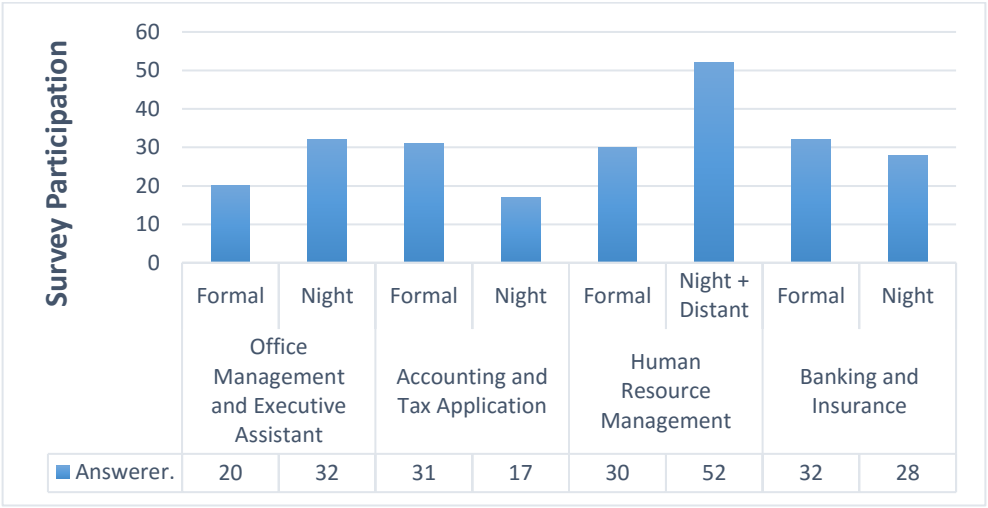
Figure 1 Research Model



4. DATA ANALYSIS AND FINDINGS

There are basically six variables used in the research. They are Design Quality, Information Quality, System Quality, Service Quality, Loyalty and eWOM. The agreeability degree to the statements in the survey have been measured with five points Likert scale (5= Totally Agree, 1=Totally Disagree). IBM SPSS 20 pack statistics program has been used in the analysis of the data. Descriptive statistics, frequency distribution, factor analysis and t-test have been used in the research. The distribution in terms of departments of 242 students participating in the online survey is given in Graphic 1.

Graphic 1. Distribution of Students Participating in Online Survey



The factor load of each item and the AVE and Cronbach Alpha values belonging to each factor are shown in detail in Table 2. These values reveal the reliability of the model.

Table 2. The Scale Results of the Model

Definitions	**Scale Items**	**Factor**	**AVE**	**Cronbach Alpha**
	D1	0,82	0,72	0,84
Design Quality	D2	0,76		
	D3	0,83		
	I1	0,71	0,64	0,76
Information Quality	I2	0,74		
	I3	0,79		
	S1	0,77	0,63	0,73
System Quality	S2	0,82		
	S3	0,84		
	Se1	0,67	0,74	0,85
Service Quality	Se2	0,81		
	Se3	0,87		
	Ld1	0,76	0,71	
Loyalty	Ld2	0,88		
	Ld3	0,72		
	eW1	0,9	0,62	
eWOM	eW2	0,91		
	eW3	0,77		

In the Table 3, each factor's correlation within each other and their declared average variance have been observed. The results reliability has been supported by the values higher than 0,607 and by having a correlation above the average.

Table 3. Factors and Declared Average Variance Values

	1	2	3	4	5	6
Design Quality	**0,72**					

Information Quality	0,22	**0,64**				
System Quality	0,09	0,26	**0,63**			
Service Quality	0,17	0,21	0,13	**0,74**		
Loyalty	0,32	0,14	0,37	0,21	**0,71**	
eWOM	0,21	0,06	0,06	0,35	0,32	**0,62**

The hypotheses and findings tested as a result of statistic measurements are given in Table 4.

Table 4. Hypothesis Test and Findings

				t-values	***Hypothesis***
Direct Effect: Loyalty-eWOM					
H1	Loyalty	→	eWOM	6.18	Accepted
Indirect Effect: Website Quality via Loyalty - eWOM					
H2	Website Quality	→	eWOM	5,43	Accepted
	Design Quality	→	eWOM	3.76	With Indirect Effect
	Service Quality	→	eWOM	3.97	With Indirect Effect
	System Quality	→	eWOM	2.25	With Partial Indirect Effect
	Information Quality	→	eWOM	1.19	No Indirect Effect

According to Table 4., loyalty factor directly affects eWOM. Design quality, service quality and system quality, which are the components of website quality, affect eWOM indirectly through loyalty. Information quality, which is another component of website quality, does not have any effect on eWOM indirectly through loyalty.

5. RESULTS AND SUGGESTIONS

The fundamental aim of this study is to reveal the relationship among website quality dimensions, loyalty and eWOM concepts in the e-commerce websites from the perspective of university students. As a result of the statistical measurements that are made, it is revealed that loyalty factor affect eWOM directly; besides, design quality, service quality and system quality affect eWOM indirectly through loyalty; and, information quality does not have any effect on eWOM indirectly. The literature reviews show that the findings of the research are also supported by previous studies (Roy et al., 2014, Harrison-Walker, 2001, Harris and Goode, 2010). de Matos and Rossi (2008) suggest in their study on an e-retailer website that the quality of website directly affects eWOM. In the light of these information, e-commerce businesses should be able to develop permanent strategies with the support of various interactive tools by understanding the website quality dimensions properly with the eWOM messages of visitors. One of the best e-commerce websites, “amazon.com”, has also integrated design quality, information quality, system quality and service quality successfully with Web 2.0 technologies. It is revealed that eWOM platform in the “n11.com” website and e-commerce design components are influential in customer loyalty. This study can be extended with a different customer group of “n11.com”. At the same time, the same factors can be studied in other websites having eWOM platform or it can be repeated with different perspectives.

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AN OVERVIEW OF THE DIRECT SELLING INDUSTRY

Alina-Maria Neațu[1], Cosmin-Ionuț Imbrișcă[2]
[1]Ph.D. Student, The Bucharest University of Economic Studies, Bucharest, Romania
[2]The Faculty of Administration and Business, University of Bucharest, Bucharest, Romania
[1]alina_neatu@yahoo.com,
[2]imbrisca.c@gmail.com

Abstract: *Trade is at the heart of any economic system and, as such, the method through which it is accomplished is of paramount importance. Easily one of the oldest, if not the oldest, method to accomplish this is through the means of direct selling. However, even if it hides behind and apparent simplicity, direct sales remains one of the most important methods of distribution used by companies even to this day. In this paper we attempt to provide an overview of this industry, as it stands at the moment. We accomplish this objective by first presenting the concept, as it has evolved in the past and the shape it has taken in the present. This is followed up by an overview of the industry, at the global level, which is achieved by focusing on the current level of sales achieved annually, the number of employees currently working in this industry and the year on year growth which has been achieved during the past years. A slightly more detailed approach was used when describing the direct selling industry in Germany, due to the fact that it is one of the largest and fastest developing markets in the whole of Europe. The data that we use for this study has been obtained from the annual report published by the World Federation of Direct Selling Associations.*

Keywords: direct selling; statistic indicators; European market

JEL classification: L81

1. Introduction

Direct selling is one of the oldest and most established methods of selling and distributing goods, which appeared almost alongside the development of civilizations. The early roots of direct selling date back to the time when hunter-gatherers began farming and settling down and the first sellers began to wander across Europe, Africa and Asia (Plattner, 1989).

Modern direct selling origins back to the Middle Ages, when hawkers journeyed from town to town advertising their merchandises (Merrilees and Miller, 1999). In the twentieth century, large brands like Hoover and Tupperware were still using direct selling. So why has direct selling never disappeared? Most probably because the advantages of demonstrating a new product in person could not yet be surpassed by any other sales method known up to date.

1.1. Theoretical and Conceptual Frame

The method of bringing goods and services to market and selling them directly to consumers, at a non-fixed point of sale constitutes the mere definition of direct selling (Grayson, 2007; Peterson and Wotruba, 1996). Specifically, the sale of a product or service takes place face-to-face succeeding a real-time demonstration of its features. The demonstration is completed either individually or a larger groups of prospects. In certain conditions, orders can also be placed later based on a individual price agreement or based on a catalog offer. In comparison to other marketing channels, direct selling is formed on personal contact with the customer.

Presently, direct selling signifies a growing market segment, precisely because it offers a foremost cost-effective advantage of marketing products and services without relying on the traditional marketing circuit or an existing retail channel.
Defined as the “face-to-face selling of consumer goods” minus the premises of a fixed retail location, direct selling differentiates greatly from direct marketing. Peterson and Wotruba (1996) describe direct marketing as a causal process through which products are retailed to the consumer using direct mailing, telemarketing and direct response instruments such as radio spots, banners, infomercials and/or television advertising etc. In contrast, direct selling favors individual one-to-one sales presentations rather than an indirect course of selling events.
Crittenden and Crittenden (2004) identify the key distinguishing factor between the two of them as personal focus or face-to-face interactions through which personal relationships with consumers are created. According to Blech (2006) "the direct personal presentation, demonstration, and sale of products and services to consumers, usually in their homes or at their jobs” enables the seller to display wider product expertise and convenience for the prospect (Sanan, 1997).

The importance of the direct non-store retailing approach has increased in the previous years, ranking up within traditional marketing techniques for selling and distributing products and services (Darian, 1987; Granfield and Nicols, 1975). This is signaled also by the significant amount of research generated in the literature.
According to John Naisbitt there are four key stages in the evolution of direct selling:

- pioneer stage (1945-1977) defined by the effective development of American direct selling companies such as Amway or Nutrilite and the foundation of direct selling within Europe and Asia;
- professional stage (1977-1990) indicating not only an accelerated expansion of the sales, but also the employment of particular prevailing strategies for building up networks of suppliers;
- information stage (1990-2000) characterized by the employment of IT controlling tools for supervising the network of distributors and usage of modern techniques for in-home promoting and delivering of products;
- globalization stage (2000-present) which occurs nowadays and it is characterized by an unstable increase of direct selling revenues, mostly due to the sizeable range of products and services and the growing number of direct sellers which are able to penetrate international markets through online media.

In the following sections we will present various statistical indicators that reveal the constant evolution and current status of the direct selling industry worldwide, respectively indicators specific to the European direct selling market.

2. Research Focus and Methodology

This article explores most recent direct selling statistical indicators and aims to provide an integrated overview of the European direct selling market in context with the Global development of the industry. It also means to describe how absorbing such findings may help us better understand and improve economical efforts and rejuvenate businesses on a global scale.
The primary purpose of the paper is to describe general concepts of direct selling and to demonstrate the practical use and advantages of direct selling channels.
The introductory and theoretical parts briefly present research and proof of relevance. The wide-ranging literature review containing representative concepts of the field is carried out in a short and illustrative manner. The third part sketches the global overview of direct selling using data made available by the WFDSA. In the following sections, based on recent indicators and the latest available reports, a summary of the statistical indicators and European market structure of direct selling is framed.

The focal point of the research is on Germany, which represents the European leader for direct selling. Conclusions and opinions of the authors concerning the direct selling industry are summed up in closing section.

3. Global Overview of the Direct Selling Industry

It can be noted that direct selling continues to gain strength as a strategic marketing alternative for many companies across the World. According to WFDSA, in 2014 alone the global industry summed up sales of $182,823 (USD millions), with up to 6.4% increase in 2014. Over a three-year period (2011-2014) the direct selling industry register a 6.4 % growth in sales and total of 99,724,641 direct sellers (WFDSA, 2014).

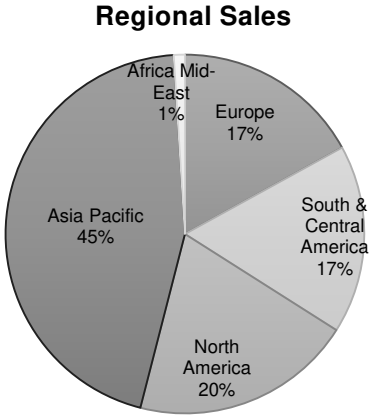


Figure 1: Global direct selling in 2014
Source: WFDSA Global Report, Published May 29, 2015

The most important markets at the moment in terms of sales are those in the Asian region, followed by the North American, South American and European regions, all three having close figures but lagging far behind Asia.

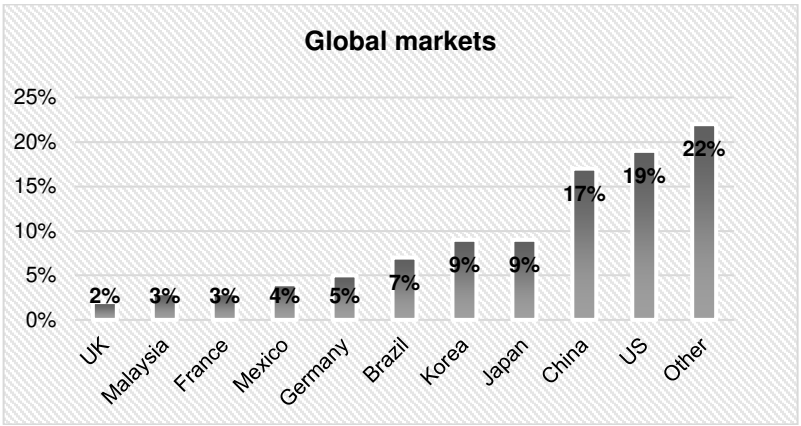


Figure 2: Top direct selling markets in 2014
Source: WFDSA Global Report, Published May 29, 2015

Even though direct selling commenced originally in the USA, several countries are now to be found in the global top 100 direct selling organizations: China, Japan, South Korea,

Brazil Germany, Mexico, France, Malaysia, Luxembourg, Peru, Canada, Switzerland, Thailand, Cyprus, India, the UK, and the USA.

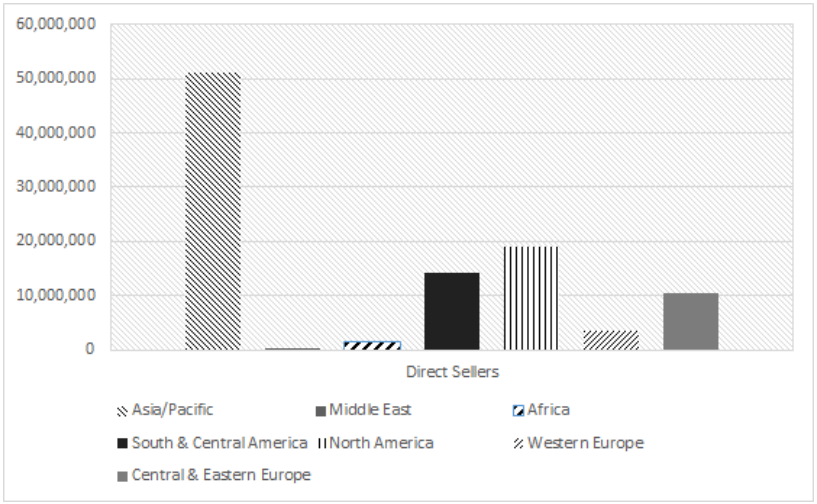


Figure 3: Number of direct sellers
Source: WFDSA Global Report, Published May 29, 2015

In terms of nuber of actual employees, not surprisingly, most of them are in the Asian region, with the other areas taken into consideration lagging far behind them.

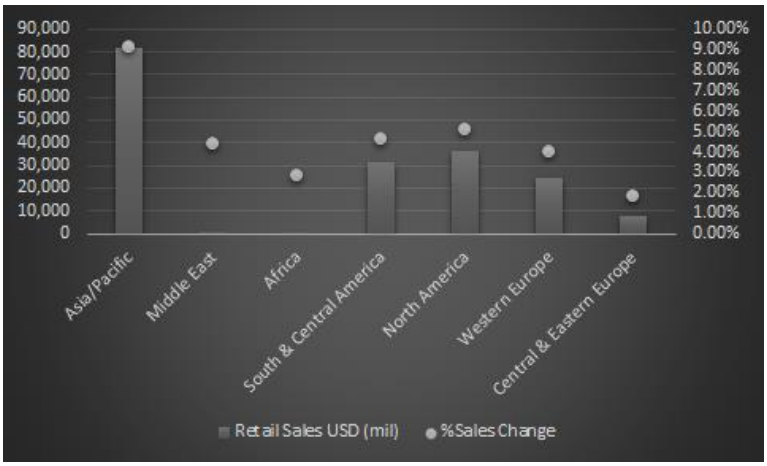


Figure 4: Development of retail direct sales per regions
Source: WFDSA Global Report, Published May 29, 2015

The above figure shows the level of sales and of growth for direct sales across different regions of the globe. Perhaps the most interesting finding of the data is that, even if the Asian region is by far the largest, it is also the one with the highest annual growth. The next regions in terms of growth are, again, North and South America, followed by Western and Eastern Europe.
The lines sold of goods encompass a broad range of products and services. The four dominant product types comprise of 35% cosmetics and personal care, 25% wellness, 14% household produces and 9% fashion and accessories (WFDSA, 2014).
Accordingly, the direct selling industry encloses numerous companies with annual sales

over 1 billion USD, not only American and South American entities like Tupperware Brands Corp., Amway Corp., Avon Products, Nu Skin Enterprises, Inc Herbalife, Mary Kay Inc. Ltd, Natura Cosmeticos SA in Brazil, Belcorp in Peru, but also significant Asian players like Pola in Japan and European companies like Vorwerk in Germany, Oriflame Kosmetiek B.V. in Luxembourg etc.

4. The European Market

Despite performance shortcomings and systems incontinences registered lately in the European economy, revenues in the industry of direct selling were characterized by growth. With a total business of 32,609 millions USD in 2014, Europe retained the third position in the worldwide ranking by volume in direct selling industry.

Figures 5 and 6 from below show the evolution of the direct selling industry in Europe. The data has been split into Eastern and Western Europe in order to make it easier to read.

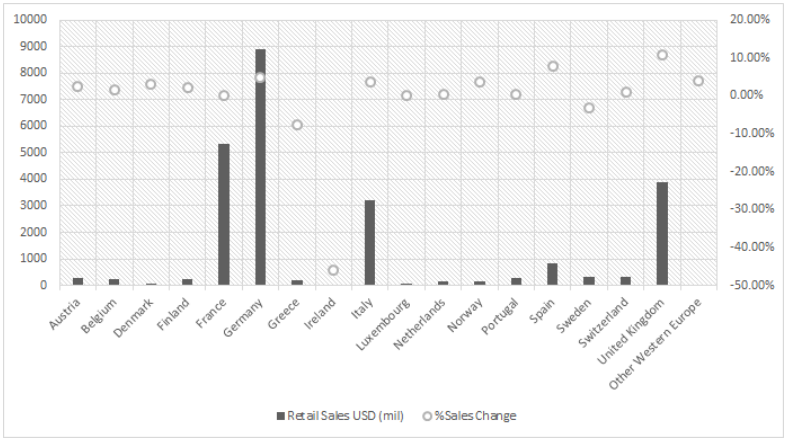
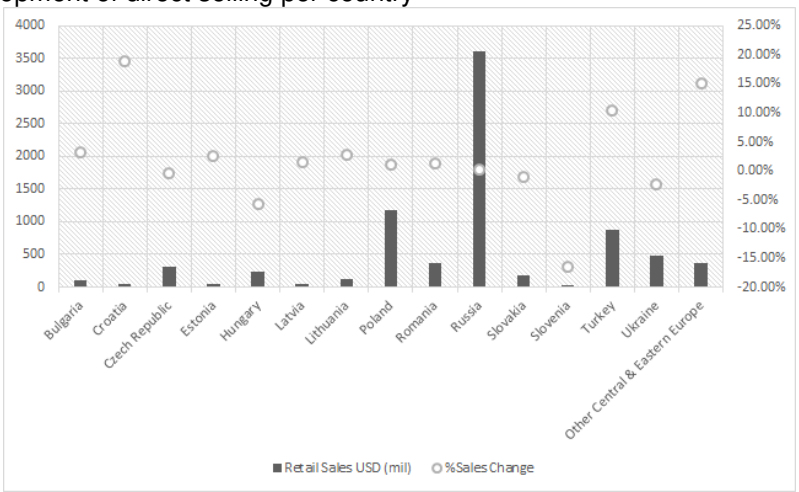


Figure 5: Global Direct Selling in 2014
Source: WFDSA Global Report, Published May 29, 2015

Figure 6: Development of direct selling per country



Source: WFDSA Global Report, Published May 29, 2015

The three leading players in the European direct selling sector remained Germany with revenues of 8,915 millions USD, France with more than 5,335 millions USD (growth

influence by the parties sector, whwre consumers are able to test out products on the spot) and Russia with 3,604 millions USD (especially due to lower penetration of other retail channels in the countryside territories).

A visible expansion in direct selling industry could be witnessed also for the UK and Italy, countries summing up revenues of 3,880 and 3,225 millions USD. Furthermore, a perceivable gap was observed between the five European forerunners and other European countries, for example the sixth largest market, Poland, with a turnover of 1,187million USD.

The largest direct-seller in Europe, and worldwide, constitutes Amway, followed by Avon and Herbalife. The largest European-based company is the German entity, Vorwerk. The next largest European direct selling company is Oriflame, a well-known Luxembourg-based cosmetic player. The third place, as a major direct selling company on the European market is also a cosmetic manufacturer, the Russian brand Faberlic.

4.1 Germany – Largest European player in direct selling

Among the largest direct selling companies in Germany in 2015 we can account Vorwerk Deutschland Stiftung, Tupperware Deutschland and LR Health & Beauty Systems. In order to remain competitive many companies switch from traditional marketing to e-commerce, in contrast to a still significant number of companies that continue to invest and relay on direct selling for marketing their products.

In a study prepared in cooperation with The University of Manheim in 2015, the German leading organization of direct sales, BDD (Bundesverband Direktvertrieb Deutschland) issued an overview of the current statistic indicators in the direct selling industry in Germany.

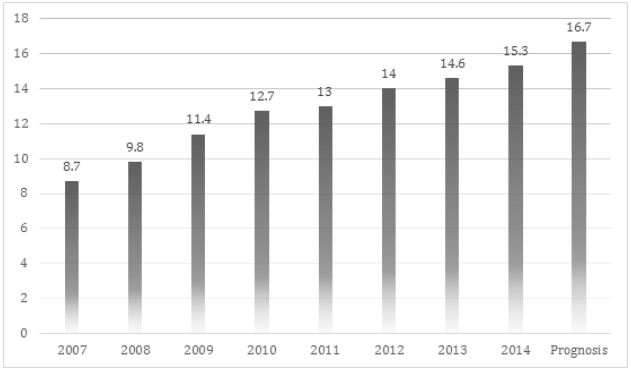


Figure 7: Direct selling revenues in billions since 2007, results of The Manheim University Research, February/March 2015
Source: BDD - Bundesverband Direktvertrieb Deutschland

In the study, direct sales firms from across Germany were examined via an online survey that took place during the period of February / March 2015. The number of participants was 211 companies from a total number of 541 companies invited to complete the survey. The response rate was roughly 40%.

The definition of direct sales used in this research was “face-to-face presentation, demonstration and sale of products or services outside the usual business or in-store premises”. Whereas, direct sales includes but is not restricted to selling products in the home or workplace of the customers but also at fairs, markets or in pedestrian areas.

The study revealed further annual growth of the industry with a total turnover from direct selling estimated at 15.3 billion euros, corresponding to an increase in sales of

approximately 5% in comparison to 2013 (14.600 Million UDS). The study forcasted a further 9.4% increase of the turnover for year 2015.
Challenges revealed by the BBDV study in the direct selling industry were noteworthy. The surveyed companies regarded goods and distribution channels as the most significant driver of growth and at the same time as the main challenge. Products and distribution channels were of particular importance and took first place - both as growth drivers as well as shortfalls.

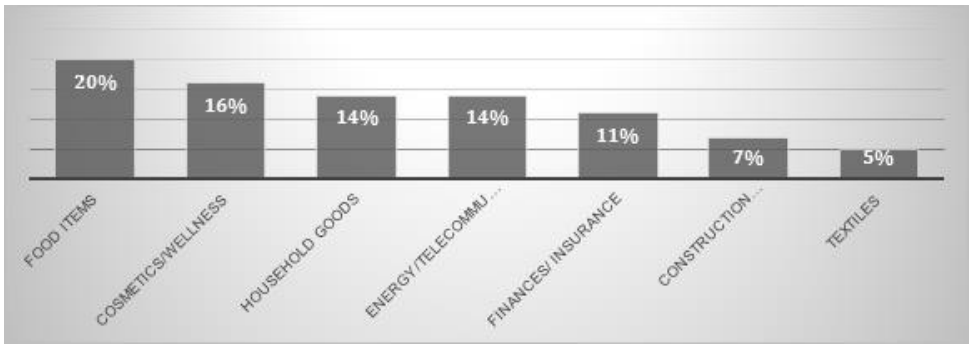


Figure 8: Types of goods and services traded in German direct selling companies, 2014
Source: BDD - Bundesverband Direktvertrieb Deutschland

Just as disclosed in the chart above, food and cosmetic products seize the top rankings on the German market, with more than one third of the total revenue coming from these products. However, according to Direct Selling Europe (2014), this changes within other areas. For example, in Sweden, the largest direct selling retailers are in the wellness sector, while in Ukraine and Turkey, beauty and personal care products account for more than two thirds of the local direct selling market.

The BDD study in Germany also revealed a massive improvement in 2014 in regards to the image that direct selling companies hold. Furthermore, the number of sales representatives working in 2014 in the direct sales industry increased from 724.000 in 2013 to 823.188 in 2014. Based on the forecasts made by The University of Manheim in 2015, it is estimated that the number of direct sellers will rise to more than 1,025,414 in 2019.
Among others reasons, the direct selling companies, which participated in the study, assess bureaucracy and the tax burden as the most disruptive factors across the industry. Nevertheless, financing issues and the economic environment are not necessarily considered disruptive.
In 2014, similarly to 2012 and 2013, the party sector in Germany ranked first among the entire pool of direct sales channels in use. After this sector, the next most widespread alternative as distribution channel is accounted to e-stores. Nevertheless, the companies participating in the survey found that proprietary sales offices and retailers continue to demonstrate their potential. The majority of the companies participating in the study estimated the most their investments resulted in marketing and sales, with are the IT and HR as next sectors of investments.

5. Conclusion
In the European Union, the work force tied to the direct selling industry sum up roughly 5 million people, withanother 12 million throughout the entire continent. Direct-selling companies engage circa 25,000 employees in Europe. Moreover, between 2015 and

2020, direct selling is expected to continue manifesting a rising development from the previous years. Nevertheless, despite the recent decent increase and the growing consumer demand for personal selling, the forecasted results are expected to be slightly smaller than so far, due to the strong shift towards Internet retailing. Despite the fact that in rural areas store-based retailers are disappearing, direct sellers simply do not have the manpower to reach all these areas, which by contrast e-commerce is able to accomplish.

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VOLUNTEERS TRUST IN ORGANIZATIONAL MISSION, LEADERSHIP AND ACTIVITIES EFFIECIENCY

Nemțeanu (Sana) Marcela Sefora
Babeș Bolyai University, Faculty of Economic Sciences and Business Administration, Marketing Department, Cluj-Napoca, Romania
seforasana@gmail.com
Tarcza Teodora Mihaela
University of Oradea, Faculty of Economic Sciences, Management and Marketing department, Oradea, Romania
ttarcza@uoradea.ro

Abstract: *Sustained volunteering represents an aim difficult to achieve in the context of non-profit organizations at a global level. Limited financial and human resources and lack of activity continuity results in high rates of turnovers among volunteers. Definitions given to volunteering underline it s non-obligatory nature. Volunteers offer their service freely with no monetary return in exchange fact that leads to lack of commitment and need for complex and interdisciplinary approaches in determining principal factors influencing sustained volunteering. Literature reviews results show that organizational commitment is one important predictor of sustained volunteering. In order to achieve organizational commitment we consider trust as an important factor of influence. Trust is a concept that did not gain much attention in non-profit marketing research, but still different researchers attract the attention on the importance of the positive image, of the value fit between Volunteer's personal values and values incorporated in organizational mission and identification. Trust in organizational leadership is also important in long term volunteer involvement. Negative experiences with supervisors and board of administration have been found as leading to low satisfaction, low commitment and turnover. On the other side positive experiences with leadership leads to high levels of satisfaction and commitment to deliver qualitative services to the beneficiaries. Also studies show the importance of the perceived efficiency of the activities that volunteers do. Most of the time volunteers need to know they brought real contribution to disadvantaged categories, or they added value to the organizational success. Volunteers evaluate the opportunity of involvement and cost opportunity from the perspective of the real benefit resulted by their activities. When volunteers do not trust their activities were effective they will manifest reduced organizational commitment. Statistical analysis was made using Correlation Analysis, conducted through SPSS21 program. Results reveal that trust in the mission is influenced in a greater measure by trust in the activities effectiveness than trust in the leadership but both variables are correlated direct and positive to the trust in the mission. Theoretical implications of this study brings in the light the salience of trust influence analysis in determining sustained volunteering but also it underlines the importance of internal marketing orientation on building trust in three major directions.*

Keywords: Mission Trust, Organizational Commitment, Internal marketing, Activity Efficiency, Volunteers, Leadership.
JEL Codes: M31, L30.

1. Introduction

Volunteers are a valuable resource of non-profit organizations activity and an important part of civil society development (Coita, 2008). Volunteer's retention is a necessary condition to non-profit organization sustainability. Volunteering is defined as a work that a person performs without expecting to a reward and that creates social results that in other conditions would demand the work of an employee (Freeman, 2014). Other authors (Wilson and Janoski, 1995) see volunteering as a set of activities to which people engage, in general, without expecting to a payment in exchange, in order to meet the needs of other persons.

According to GHK Consulting (2010) Report, Romania presents a low participation rate in voluntary activities. Still non-profit has an increasing trend and were this category of organizations are, real social improvement is known. The percent of volunteer participation in 12,7, with a number of 1,7 mil. of citizens. Volunteerism is an important category in Romanian non-profit sector, but still more steps are to be made for improving processes of information collecting (Topor and Boroiu, 2011).

Sustained involvement of the volunteers demand favourable involvement opportunity (Săveanu, 2014) and cost opportunity (Perrino, 1998) but also it demands an approach of the volunteer as a consumer (Andreasen and Kotler, 2003; Randle and Dolnicar, 2009). A problem non-profit management often encounters is the lack of commitment of the volunteers (Coita, 2008). Between volunteer and organization a social exchange takes place (Arnett et al., 2003). The object of exchange is the volunteer activity itself. As the consumer have to trust to buy a product so the volunteer have to trust the organization mission, leadership and effectiveness of activities in order to offer the times that could be used in other ways. With other words volunteer must trust that the purpose he is involved for brings a real contribution to a cause and it is worth time, money and energy spending.

Mitchell and Taylor (2004) underline the importance of maintaining volunteers on long term not only of the recruitment. Authors mention the important role of organizational mission and internal marketing in volunteer retention. Recruiting new volunteers results in higher costs than maintaining active volunteers. Omoto and Snyder (2000) built the model o Volunteer Process which underlines the importance of antecedents with organizations effect on volunteer experience and later on, on the intention to stay with or to leave organization.

A predictor of intention to remain in the organizations is organizational commitment determined by trust of the volunteers in the mission, leadership and activities effectiveness. This predictor is considered vital by non-profit management that is in search of different methods to supplement their human resource in conditions of financial constraints (Salas 2008).

2. Theorethical Framework

Trust in the mission of the organization influences sustained volunteerism based needs fulfilment and values fit. Edgel (2001) analyse volunteers in a religious congregation. Author gives an example of a person volunteering for an activity that brings benefits to her children. This person may be a long term volunteer given to an emotional attachment to people with same values, members whom she trusts to make a real commitment but also because her needs are fulfilled.

According to Rozenboom (2006, p.28) the "source of power available to a leader is the trust that derives from faithfully serving followers". German (1997) underlines the importance of the respect for organizational leadership among stakeholders no matter the

category they belong to: volunteers, donators, members or other kind. According to Doyle (2006) leaders can build trust and their actions may impact the attachment of the volunteers. Lack of support from leadership (MacNeela, 2008) or different ethical and moral values (Wymer, 1996) may lead to a lack of trust in the mission, of organizational commitment or to turnover.

Activities of the organization influence positively or negatively sustained volunteerism. A greater attachment is built when person identifies with the activities of the organization (a person who has a member of the family having a certain disability is helped effectively by organization- s activities, feel he or she owns to be committed to the organization on long term) (Doyle, 2006). Negative employees attitude towards volunteers leads to reduced satisfaction and finally to turnover of the volunteers (MacNeela, 2008). Also negative experiences with beneficiaries (Bennett and Barkensjo, 2005), difficulty or discrepancies between expectances and the real tasks have a negative influence on trust on the mission. Wymer and Starnes (2001) mention an important variable in negative influence of sustained volunteering the discrepancy between expectations regarding organization s activities and reality of the tasks. Most of the times volunteers want to be involve in direct contact with beneficiaries, or they are motivated by seeing immediate results. The practice show that simple tasks are given to volunteers in order to diminish lack of instruction and the cost coming with trainings.

Mowday, Steers and Porter (1978) defined organizational commitment "as the relative strength of an individual's identification with and involvement in a particular organization". Doyle (2006) considers that volunteer work is an expression of agreement and trust in mission of an organization. Given to the fact that volunteer work is not constrained, a person who decides to work with no reward for achieving a purpose trusts and believe the purpose of the organization who benefits of that worked time.

High organizational commitment has a direct and positive influence on intention to remain among the volunteers but also it has a direct influence on intention to offer qualitative services to the beneficiaries (Bennett and Barkensjo, 2005). Mowday Steers and Porter (1978) consider organizational commitment of a great interest among organizations given to the fact it results in retention of the personnel, on loyalty, and a desirable behaviour with organization's clients.

Organizational commitment can be manifested in three ways as an: affective attachment, normative attachment or continuance attachment (Mowday et al., 1978, Kanning and Hill, 2012, Ţânculescu, 2015). The level of attachment towards organizations is most times determined by the level of trust and identification the volunteer manifests toward the mission of organization. But also this feeling can grow given to a feeling of gratitude volunteer feels toward the benefit he had from the organization (Doyle, 2006).

The highest level of commitment is found to personnel who express affective attachment. They feel integrated into organizations and they identify with the values and trust mission, the effectiveness of activities and the leadership (Mowday et al., 1978; Doyle, 2006; Kanning and Hill, 2012). There are three aspects that results in affective attachments:

1. A high level of trust in the purpose and values of the organization and acceptance from all the members of the organization;
2. Good determination to offer support to organization;
3. Strong need to remain part of the organization (Mowday et al., 1982; Kanning and Hill, 2012).

Normative attachment in contrast does not correspond to the commitment felt at individual

level of the members of the organization, but it is rather a result of moral and ethical obligations (Meyer et al., 2002, Kanning and Hill, 2012).
Continuance attachment results from the motivation of avoiding costs regarding changing the place of activity (Meyer et al., 2002).

Given the nature of voluntary work we believe that normative and continuance attachment are not usually met in this activity, but rather are exceptions and should be considered specific to the context this kind of attachments developed. Only affective attachment could be considered suitable for volunteer activity. In consequence, trust is a main condition that results in organizational commitment.

Figure 1. Model of trust at the level of mission, leadership and activities efficiency
Source: Figure made by author.

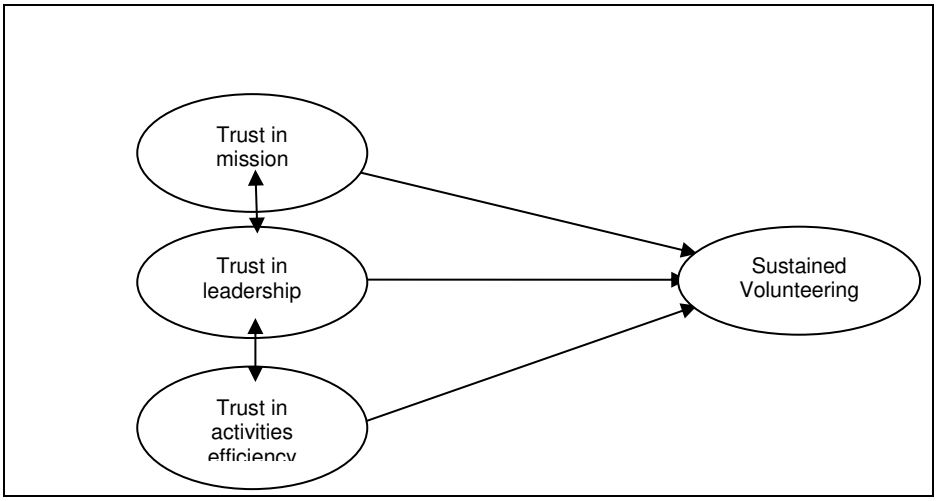


Figure 1 represents a model of trust influence on sustained volunteering among volunteers. Trust regarding organizational mission leads to better service delivery satisfaction and organizational commitment among volunteers which lead to intention to remain into organization according to Bennett and Barkensjo (2005). Constant support from leadership leads to trust in organizational management and also to perceived commitment and no intention to leave according to the same authors. Also a leadership that deserves respect and reflects the organizational values have positive influence in increasing support from volunteers, donors, members and other kind of stakeholders (German, 1997).

Rewarding according to performance and contribution is motivating volunteers. Even if in the case of voluntaries no monetary reward is expected, perceived social benefit brought to a cause moderating perceived cost opportunity (Handy, et al., 2000). Trust in the activity efficiency is a result of reward based on performance and contribution.

3.Research design

The objective of research is to identifiy the level of correlation between the tree types of trust. Correlation Analyse is used based on Kandhall s tau B coefficient using SPSS21 program.
Items were constructed based on 7 point Likert Scale and data was collected using online and face to face surveys.
The character of research is exploratory and quantitative. Data was collected from

volunteers active in non-profit organizations from 79 localities in Romania. Database limitation is that it does not represent proportional geographical, age, sex and occupational distribution.

3.a. Database features

Data for analyse was collected from volunteers in 112 non-profit social organizations with activities in child protection, disabilities treatments, elders assistance, migrants, prison convicted and disadvantaged communities social integration. Data was collected online and face to face on a period of five months between December 2015 - April 2016. A number of 200 volunteers responded to the questionnaire with ages between 14 and 65 years. The majority of 80,5 percent are women. A percent of 70,5 of the volunteers have bachelor studies or are in course of studying.
Data collected for trust analysis contained three items: one for trust in the mission, one for trust in the activities utility and one for trust in the leadership.

3.b. Results

Table 1 presents the results of Correlation Analysis between trust in the mission, activities and leadership. We find direct and positive correlations between the tree categories.
According to the results trust in activities efficiency is more correlated to trust in the organizational mission than trust in the leadership. The results comes to confirm Wymer and Starnes (2001), Doyle (2006), Bennett and Barkensjo (2005). The nature of activities, the measure volunteers interact directly to the beneficiaries, the manner they are able to see results of their involvement influences their trust in the mission they support.

Table1. Correlations between trust of volunteers in mission, activities and leadership

			Trust Mission	Trust Activities	Trust Leadership
Kendall's tau_b	Trust Mission	Correlation Coefficient	1,000	,700**	,636**
		Sig. (2-tailed)	.	,000	,000
		N	200	200	200
	Trust activities	Correlation Coefficient	,700**	1,000	,685**
		Sig. (2-tailed)	,000	.	,000
		N	200	200	200
	Trust Leadership	Correlation Coefficient	,636**	,685**	1,000
		Sig. (2-tailed)	,000	,000	.
		N	200	200	200
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: Table made by author as a result of Correlation Analysis completed throgh SPSS21 program

The impact of trust in the leadership is also important and direct. Supervisors or organizational management may influent positive or negative volunteers intention to remain with the organization (MacNeela, 2008).

4.Theoretical and managerial implications

Theoretical main value of this research is in the fact it proposes tree trust variables to be tested in volunteering analysis. Trust has gain little interest in volunteerism research. Empirical results that trust in mission is more tided to trust in activities effectiveness, than to trust in leadership.
The second theoretical value is adapting trust concepts to social non-profit volunteering Romanian context.
Managerial implications underline the necessity to improve activities efficiency in order to increase mission trust. Values and purpose as components of the mission are mandatory in establishing every organizational marketing strategy. A consistent internal promoting policy has to align activities to accomplish in an efficient manner the organizational objectives in order to increase trust in such a way volunteers would be able to measure and to quantify results of their activity. Perceived good results, good responses from the beneficiaries have a positive and direct influence on mission trust. On the other side, negative experiences with beneficiaries, or lack of abilities in conducting efficient activities lead volunteers to lack of commitment and finally to turnover.
Another responsibility of non-profit management is promoting activities in a way volunteers should perceive it as effective, diminish discrepancies between expectations and the main tasks.
Leadership approach to volunteers is also direct influencing trust in the mission. Negative experiences may lead to turnover and lack of trust, on the other side support and personal example, performance and respectable values of the leaders lead to increased commitment and sustained volunteering.
Non-profit organizations have a valuable and specific human resource: volunteers. In order to maintain sustained volunteering non-profit management has to maintain an internal marketing policy oriented on consolidating a trustable mission, trustable leadership and effective activities.

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THE IMPACT OF SOCIAL MEDIA CONVERSATIONS ON BRAND IMAGE OF CLOUD COMPUTING PROVIDERS

Gheorghe Orzan, Ioana Burghelea, Luana-Diana Stupu, Andreea-Larisa Boboc
Marketing Department, Faculty of Marketing, The Bucharest University of Economic Studies, Bucharest, Romania
orzang@ase.ro
ioana.burghelea@yahoo.com
luana.stupu@yahoo.com
boboclarisa17@gmail.com

Abstract: *The way that companies are doing marketing has changed dramatically over the years, vividly encouraged by the new channels of communications that have been developed, the social communities here included. This paper focuses on the IT industry and aims to analyse the impact of social media conversations on the brand image of cloud computing providers, with special focus on three social networks like Facebook, LinkedIn and Twitter. Through using netnography as main method of research, the paper aims to do a comparative analysis both from the point of view of different IT brands and from the point of view of different social communities, leveraging the use of specific hashtags. The research focuses on different aspects, such as number of conversations around a specific hashtag, type of topics, type of promoters, timeframe, geography, as well as the way these link and influence brand perception. The findings aim to help marketers better understand how and to what extent the conversations going on in social media can impact the perception and image of a brand and how they can leverage this to their advantage, with specific focus on the IT industry. As the below study shows, online marketing, especially through social media, can help shape the image of a brand in certain ways according to the different social network used. Due to the extensive reach that these online communities have, with the right tools, messages and influencers, marketers from the IT industry can benefit from a very useful and cost effective branding strategy which can help position their IT solutions in both a reliable and rapid way. On the other side, special care still needs to be taken regarding the messages that are being sent across these platforms, as once being launched it is very difficult to erase them and change the perception already in place. Also, overall, the brand perception of the companies analysed proved to be more or less consistent all over the different social networks, however this is again a very sensitive aspect to which marketers need to pay special consideration.*

Keywords: social media; brand image; netnography research; cloud computing; online marketing;

JEL classification: M310;

1. Generally Introduction

Online marketing has been continuously expanding its area of reach through more and more means of communications and throughout different industries as well. Leveraging their wide reach in terms of target audience and high speed of delivering the messages, social platforms have quickly transformed from being just a social networking environment to becoming a highly appreciated marketing channel. IT companies, even in the business to business area, have quickly acknowledged these benefits and started building

communities and leveraging influencers and hashtags with the purpose of increasing awareness and building a positive and strong brand image.
Each day, more conversations are bound to happen in social media than in any other channel of communication. The velocity at which these are being transmitted and also their high reach make them a big source of unstructured data that can be analysed in order to provide valuable information regarding brand positioning.
Given all the above, taking a deep dive in the social communities proves to be essential for accurately weighing the status of brand perception in the minds of followers and influencers. Due to the nature of the information and online channels, netnography proves in this case to be the best choice to investigate the impact of social conversations on a brand image.
By analysing the number of conversations surrounding a specific hashtag, their geography, topics, the type of accounts that have shared specific information, marketers can get a better understanding on how a brand image is perceived and also, focus on developing its key strengths in the customers/influencers minds and acting with more caution to diminish the less positive messages.
Another important aspect that marketers need to take into consideration while leveraging these online channels is to make sure that the marketing communications are being conducted in an integrated manner, so that the image of a brand will be perceived in a consistent way across different social platforms.
For the purpose of this research, we have chosen 4 specific hashtags from the IT industry surrounding the cloud solutions and providers and ran a comparative analysis in terms of brand perception throughout the 3 main social platforms: Facebook, LinkedIn and Twitter.

2. Literature Review

In the few past years the growth of digitalization in general have reached heights and the rapidity of its evolution offer the possibility of a new era of doing business in the online environment.
Big companies tries to develop tools and services that can help not only improving their customer relationship but also have greater results concerning the business.
First of all, cloud computing is a solution that it comes in hand for large companies and which enables fast processing, a large capacity of data-storage, and allowes to share resources. It can offer flexibility, easier way to work with data management, research repeatability, and not to mention collaboration while minimizing maintenance requirements. The advantages offered by the solution are more advantageous than the challenges introduced by using this technological solution/resource (James and Weber, 2016).
As was mentioned (Ratten, 2016), cloud computing is an important technological innovation in the area of information systems development that provides the benefits of resource pooling, broad network access and self-service applications.
However, Cloud computing being a relatively recent phenomenon, the research on issues concerning the adoption of cloud computing by both organizations and individuals is still in a nascent stage. Among the research studies on the adoption of CC technologies conducted so far, quite a few have approached the problem from the perspective of organizations and not from individual user's perspective (Sharma et al., 2016).
The end users – who might have in certain cases the role of the client – have at their disposal the social networks – where either being involved in one of the big company's digital campaign or just to be informed at all times regarding a certain subject they are more and more using these channels. To be proactive and to make all the difference to a company - an application should detect interesting situations a long time before they happen in order to be able to handle situations in a automatically way, without a human supervision (Albuquerque et al., 2016).

The use of social media (e.g., Facebook, LinkedIn, Youtube, Twitter) has grown exponentially among consumers. People are spending more of their time on social platforms than others sites (Guesalaga, 2016).
Security, trust, and privacy are key points for organizations that want to adopt cloud computing and big data in general. However there are request for companies to move their data to the cloud (to take advantages of the benefits that this solution offers) and to centralize management for data centers this is why services and applications are designed and build in order to reduce cost and increase operational efficiency (Chang et al., 2016).
Cloud computing has become the influencing IT landscape and gained amplified attention in recent years as benefits of reduced IT costs and is management (Ramachandran, 2016).
Facebook is a corporation and online social networking service, its website was launched on February 4, 2004, by Mark Zuckerberg. The network have over 1.59 billion monthly active users and became the fastest company in the Standard & Poor's 500 Index to reach a market cap of $250 billion, according to (Carlson*, 2010).*
Twitter is an online social networking service wich allowes users to send and read short messages called "tweets" the lenght of one message is 140 characters. As a user you can read and post tweets, however if you are not registered can only read them. The social media channel was created in March 2006 and launched four mounth later. As of May 2015, Twitter has more than 500 million users, out of which more than 332 million are active according to (Wang et. al, 2016).
LinkedIn is a business-oriented social networking service was founded in 2002 and launched one year later, it is mainly used for professional networking. As of 2015, most of the site's revenue came from selling access to information about its users to recruiters and sales professionals according (Lemann, 2015).
LinkedIn is a particularly interesting target, given the professional nature of its audience. By analyzing LinkedIn network information, we can learn a lot about individuals and the people that they know (Bradbury, 2011).
Using online communities via social media to accelerate innovation is not without its challenges, however. Most business executives remain skeptical about the power of social media, especially regarding whether investing in social media can increase sales or discover valuable customers (Wang et al., 2016).
Social media has been defined in several ways in the literature however the most emphasized is: ”the production, consumption and exchange of information through online social interactions and platforms”. In practice, social media refers to specific platforms through which people communicate, such as forums where topics can be discussed, blogs, wikis with more information on a certain subject, social networks, and multi-media sites. And the big companies are adoptiong this method in their daily work with the customers but also internally with their employees (Guesalaga, 2016).
There are a lot of studies over the issue of branding in social media. For example Facebook is a a hallmark of social media - with over 900 million users that log in at least once every 30 days. There were run several analysis and was descovered that on average, consumers spend almost one third of their time to consumption of online social media. Because of the universality and capability of online communities to connect different people and businesses some industry and researchers support businesses to be present in social media and to take advantage of it if they want to be up to date. On the other hand, there are others indicate that social media exists to interract with people not brands. (Laroche et al., 2013).
Netnography as a written account resulting from studying the cultures and communities that emerge from Internet-based communications, where both the fieldwork and the textual interpretation are methodologically informed by the traditions and techniques of cultural anthropology (Mkono and Markwell, 2014).

In an early treatment of netnography, was suggests that the researcher should do this by first identifying potential communities and then carefully selecting either one or several communities for data gathering based on predetermined criteria. The researcher then enters the community (with or without introducing his presence), gathers data by observing and participating in the community's interaction, and develops an insider's understanding of the community's culture.
However, due to some profound technological and (cyber) cultural changes, online communities have gone through a process of fragmentation, proliferation, and maturation into an age of interconnected on-line communities such as YouTube, Facebook, and blogs (Weijo et al., 2014).

3. Research Methodology

Currently, many people are using online communities such as blogs, forums, event groups, news groups, social networking sites, photosharing communities and virtual worlds, so the internet became an important virtual space for research. In the mean time, our paper tries to present the perspectives and the impact of cloud computing on the marketplace. Therefore, the perfect way to express and analyse them, the paper purpose as marketing research method conducted into this study, netnography. Netnography explores the cultures and communities over internet, a method specially designed to analyze contents from social network sites, blogging, micro blogging, video blogging, forums (Kosinets, 2010).
Netnography follows the next six steps: research planning, entrée, data collection, interpretation, ensuring ethical standards, and research representation.
*Research planning.*The main purpose of this netnography research is to realize a comparative analysis of brand image for cloud computing in terms of the three social networks.
*Entrée.*The main objectives of netnography research refer to:

- Identifying topics of conversations regarding #cloud on Facebook, LinkedIn and Twitter.
- Identification of promoters and #cloud areas they belong on Facebook, LinkedIn and Twitter.
- Establishing the country of origin of messages tagged #cloud.
- Describe the usefulness of the service by followers of opinions about the messages tagged with #cloud.
- Discover the brand preference on the service - cloud, identified on social networks.

*Research representation.*The participants of this study were users from Facebook, LinkedIn and Twitter who included in their text messages #cloud, #cloud computing, also followers of them who replied to this issue.
*Ensuring ethical standards.*The netnography study did not share the users' private information and the data collected has been used only for statistics and interpretation.

4. Results

According to the objectives proposed, the results of netnography study are compared between 3 social platforms: Facebook, LinkedIn and Twitter.

4.1 Facebook

As being one of the leading social networks currently, Facebook proves to be an important source of unstructured data that can offer valuable information in regards to the image of a brand.
The current research was conducted by analyzing around 40 of the top most recent social

posts surrounding the hashtags of #cloudcomputing, #IBMCloud, #Oraclecloud and #Microsoftcloud.
On Facebook, there are more than 95000 people and companies using the hashtag #cloudcomputing and around 90000 #IBMcloud, which seem to be the leaders out of the four in terms of number of interactions generate.

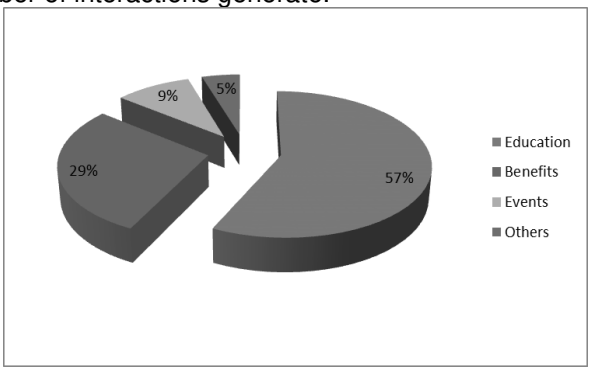
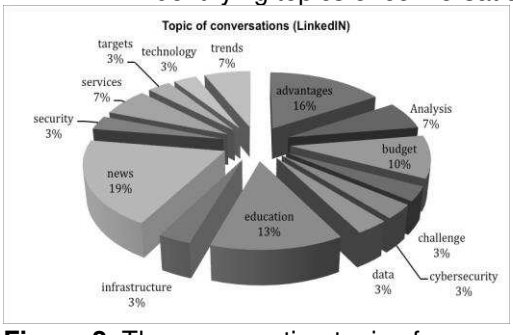


Figure 1. Distribution of topics surrounding #cloudcomputing
Source: Excel data analysis of netnography study

The top topics revolve around promoting education for working on cloud and also stating the benefits and events which surround cloud computing.
Although Facebook conversations are mainly known to be generated by individuals, given the fact that the analysis was made for the business to business IT industry, the findings proved that most of the entities sharing the posts were in fact coming from companies. From a branding perspective this also shows that IT companies have realized the importance of influencers on social networks and have also chosen to leverage their networks and credibility.
From a geographical perspective, top most recent conversations around the 4 hashtags are found to be generated in the USA.
Overall, the brand perspective is even a positive even a neutral one for each of the 3 companies analysed, with most of the conversations being led in a PR approach by other IT companies, associations or communities.

4.2 LinkedIn & Twitter

- Identifying topics of conversations regarding #cloud on LinkedIn and Twitter.



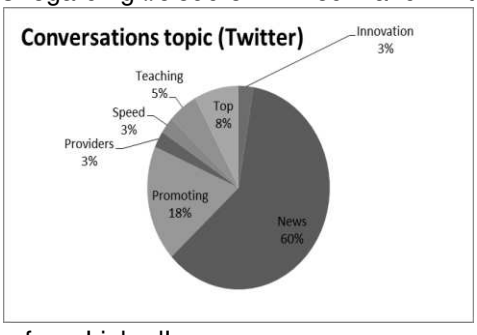


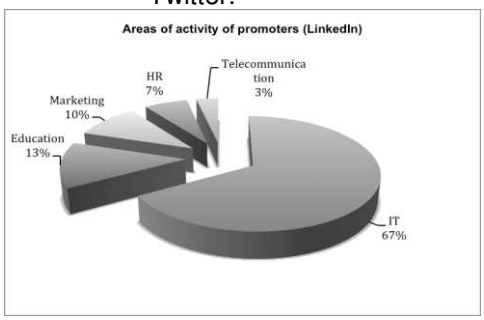
Figure 2. The conversation topic of messages from LinkedIn.
Figure 3. The conversations topic of messages from Twitter
Source: Excel data analysis of netnography study

It can be observed from the Figure 1. that a big percentage of the discussions goes in area such as the news about cloud computing topic with a percentage of 19%, followed by the advantages that cloud computing bring in a company once is implemented – with a

16%. Education steps in with a percentage of 13%, the budget is the fourth with a total of 10%. Topic such as analysis, services and trends are mentioned in a percent of 7. Last but not least are topics such as targets, technology, data, security, challenges, infrastructure and cybersecurity in a percentage of only 3%.What can be concluded from the above results are the following aspects: the users engaged in the discussions are first interested regarding what is new about could computing then the advantages that the cloud is bringing to the company. When they are facing issues or questions they are interesting in extending their knowledge about the topic so they open topics regarding education. The budget remains a strong subject – being an important criteria in chose the best cloud solution for their personal or professional storage needs. What kind of analysis where conducted previous by similar user profile to see if their needs match other in the same situation are important – so discussion are always open on this topic. What services are available and what are the trends in cloud computing matter are areas that show interest to the participants. Although they don`t show an evident interest in topics like data, security, targets, challenge, infrastructure and cybersecurity – they are open once in a while.

In Figure 3. The conversations topic of messages from Twitter, it can be observed that 60% of topics are related to *News* about cloud. The 2nd place is reserved for *promoting* this service – cloud (18%). An 8% are allocated to realise *top* of something like top of cloud companies, cloud services, etc. At the last, 5% of conversations topic is regarding *teaching* about cloud, 3% about *cloud providers* and 3% for *cloud speed*.

- Identification of promoters and #cloud areas they belong on LinkedIn and Twitter.



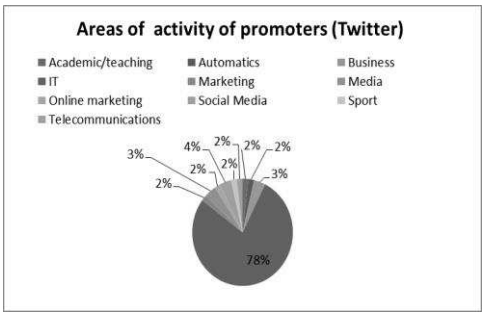
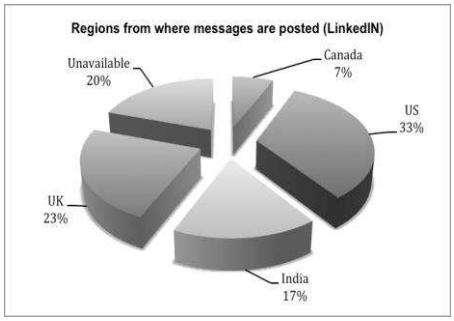


Figure 4. The areas of activity of promoters' message (LinkedIn)
Figure 5. The areas of activity of promoters' message (Twitter)
Sources: Excel data analysis of netnography study

LinkedIn being a professional social media network the active participants of the discussions taking in consideration in this research are part of the IT environment – they are also called – the influencers; most of them are CEO, CIO, IT leaders – based on their profile. However there are also other active areas such as Education, Marketing and HR.

Figure 5. The areas of activity of promoter's message on Twitter, shows that mostly of them (promoters) are from *IT* field – 78% of total message analysed. 4% of messages come from *social media* specialists, 3% are occupied by *business* field as promoters of cloud messages, and the rest of them: *academic, telecommunications, media, sport, marketing* each of them represents 2%. As a conclusion, messages with #cloud, are related with IT field, without using this word as a metaphor in a totally different context.

- Establishing the country/regions of origin of messages tagged #cloud.



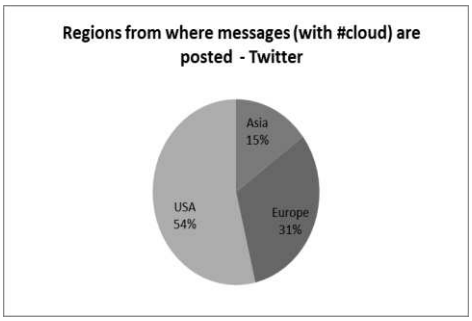


Figure 6. Regions from where messages are posted (LinkedIn)
Figure 7. The regions from where messages (with #cloud) are posted on Twitter
Source: Excel data analysis of netnography study

The majority of the users are cross US, few based in Europe and some from India – based on the availability of the information the their profile.
According to *Figure 7. The regions from where messages (with #cloud) are posted on Twitter, USA* (54%), is the region with the most posts regarding #Cloud, followed by *Europe* with 31% and *Asia* with 15%.

- Describe the usefulness of the service by followers of opinions about the messages tagged with #cloud.

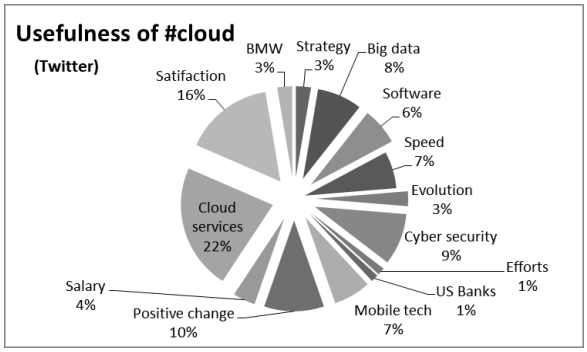
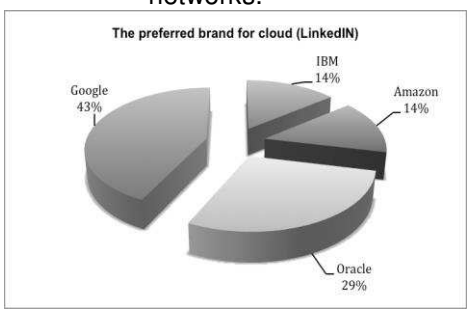


Figure 8. The usefulness of #Cloud through users posts (Twitter)
Source: Excel data analysis of netnography study

According to *Figure 8. The usefulness of #Cloud through users posts*, it can be observed that usefulness of cloud is defined by *services* that cloud offers (22%), *satisfaction* (16%), with *positive change* (10%), *cyber security* (9%), *Big data* (8%), *mobile tech&speed* (7%), *salary* (4%), *evolution* (3%), *strategy* (3%), *BMW* (3%), *US Banks* (1%), and *efforts* (1%). Generally, users associated usefulness of cloud with a large wide of attributes.

- Discover the brand preference on the service - cloud, identified on social networks.



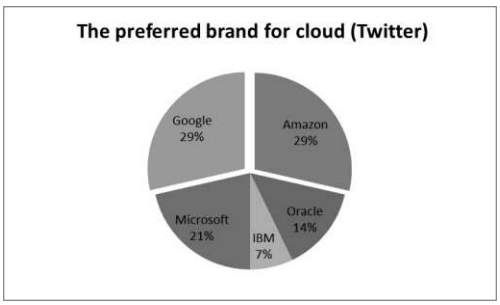


Figure 9. The prefered brand for cloud (LinkedIn)

Figure 10. The preferred brand for using cloud (Twitter)
Source: Excel data analysis of netnography study

Some of the discussion might refereed to brands such as IBM, Oracle, Google – however the low amount of the reference to a brand in particular doesn`t allow us achieve the objective for LinkedIN social media platform.
In *Figure 10. The preferred brand for using cloud (Twitter),* it can be observed that *Google and Amazon* with 24% each, are the most preferred brands of using cloud. The 2nd brand preferred is *Microsoft* with 21%, *Oracle* is placed on 3rd place with 14% and *IBM* (7%)

5. Conclusions

This paper focused on the IT industry and analysed the impact of social media conversations on the brand image of cloud computing providers, with special focus on three social networks like Facebook, LinkedIn and Twitter. Through using netnography as main method of research, the paper did a comparative analysis both from the point of view of different IT brands and from the point of view of different social communities, leveraging the use of specific hashtags. The research focuses on different aspects, such as type of topics, type of promoters, timeframe, geography, as well as the way these link and influence brand perception.
The top topics revolve around promoting education for working on cloud and also stating the benefits and events which surround cloud computing. Although Facebook conversations are mainly known to be generated by individuals, given the fact that the analysis was made for the business to business IT industry, the findings proved that most of the entities sharing the posts were in fact coming from companies. From a branding perspective this also shows that IT companies have realized the importance of influencers on social networks and have also chosen to leverage their networks and credibility. Some of the discussion might refereed to brands such as IBM, Oracle, Google – however the low amount of the reference to a brand in particular doesn`t allow us achieve the objective for LinkedIN social media platform. Regarding Twitter it can be observed that *Google and Amazon* with 24% each, are the most preferred brands of using cloud. The 2nd brand preferred is *Microsoft* with 21%, *Oracle* is placed on 3rd place with 14% and *IBM* (7%). From a geographical perspective, top most recent conversations around the 4 hashtags are found to be generated in the USA.
Overall, the brand perspective is even a positive even a neutral one for each of the 3 companies analysed, with most of the conversations being led in a PR approach by other IT companies, associations or communities.

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BRAND SIGNIFICANCE IN THE MARKETING OF LUXURY WATCHMAKING. QUALITATIVE RESEARCH ON THE BUCHAREST MARKET

Nicolae Al. Pop
Monica Zottu-Z
The Bucharest University of Economic Studies
nicolae_al_pop@yahoo.com
monica.zottu@gmail.com

Abstract
In a globalized socio-economic environment, where the "citizen-consumer" is disillusioned, luxury is a societal response that sociologist Robert Ebguy calls the "society of consolation". In an elitist universe, the luxury world is experiencing an impressive transformation, with a constant annual growth rate and continued development aided by the arrival of internet and marketing. The definition of luxury perceptions have changed in a short time. New professions, new markets shaped by evolving needs and cultures come into play, imposing irreversibly different strategies, new reflexes and most importantly, new skills. The association between luxury and mass consumption is no longer a taboo. In this industry, the brand substitutes the product. The brand helps to attract new customers with a persuasive power of attraction. Moreover, a brand is now one of the few assets of a company that can provide long-term competitive advantage. Luxury brands require and trigger an emotional component more powerful than any other consumer good. The need to survive in a competitive environment prompted strong luxury brands to realize the connection between what they represents, in terms of values and characteristics, and how they are perceived. Unlike a large part of luxury brands on the market, especially automotive, cosmetics or clothing, watchmaking is a sector which excels in the manufactural nature of its products. Luxury watchmaking constitute a distinct and relatively clear-shaped area for research on prestigious brands. From the onset of the third millennium without suffering significantly from the financial crisis triggered in 2008, the luxury horology market has seen a continuous upward trend. Enthusiasts and collectors, amateur hoarding or VIPs from media and sport, are moving toward acquiring legendary watches, including Omega, Rolex, Piaget, Cartier, Vacheron Constantin, Patek Philippe, Tag Heurer or Bvlgari, to name some of the most popular brands. This article presents the results of an exploratory qualitative research, which aims at discovering luxury watchmaking customer profiling and testing hypotheses about the motivation of acquisition according to genre.

Keywords: brand, luxury watchmaking, motivational qualitative research, competitive advantage, customer profile, loyalty

JEL Classification: M31

Developing the theory of comparative advantage in the competitive economy, Khanty Shelby and Robert Morgan [Hunt Morgan, April 1995 1-15] oppose this approach to the neoclassical theory of perfect competition, which strengthens arguments - both at micro and macro - fundamentally opposed to market orientation of any business. This guidance represents the way to incorporate the concept of marketing in a company and measures the level in which the marketing philosophy [Kohli, Jaworski, 1990 pp.1-18] is reflected in the actions that it undertakes on the market. That guidance appeared in multiple facets [Feder, 2012, pp. 62-64], which took shape over decades, and treating this problem from different perspectives (decisional, cultural, strategic, relational, based on capabilities, based on systems). The last decade of the last century and the first two of the current millennium led to the crystallization of a new paradigm in marketing, which summarizes

these guidelines. It is relational marketing. Approaching marketing in a holistic way, implemented in this area by Philip Kotler [Kotler et al. 2002, pp.50-53] the relational paradigm manages to synthetically bring together the prospects listed before. It opens a new perspective in which comparative advantage is valued in the benefit of all stakeholders trained in running a business. In fact, understanding marketing as an investment [Pop, 2/2008, pp.57-66] he engages through consensual actions all stakeholders involved in successfully completing a sale. The most famous specialist in relational marketing briefly defines this area as interaction in building relationships [Gummesson, 2008, p.5].

Managing under a common interest (business success), all those involved in carrying it (suppliers, manufacturers, carriers, insurers, financiers, traders, buyers, public bodies, agencies market research and advertising, interest groups and pressure etc. .), relational marketing offers a systemic vision of all processes and market phenomena driven by the business [Pop, Dabija, 4/2014, pp.22-32]. This vision is developed over the medium and long term, providing fundamental process of customer attachment towards the product, service, brand or even to the company. The attachment is an action that is carried out in stages, the customer successively passing through the stage of fidelity, loyalty, up to the highest level - the exclusivity [Pop, 3/2006, pp.33-44]. This process does not have the same configuration in all market situations, its features - represented by the length, structure and intensity - differ in relation to the need of the performance (good, service, brand), type of customer, the complexity of the commercial act or other characteristics of the market. Customer attachment towards a brand of daily use (eg. a mineral water brand) differs significantly in comparison with a luxury product (eg. A brand of a luxury watch).

2. The Brand- an essential element in achieving competitive advantage

In a globalized world, defined by extremely high competition, developed network connections –a world defined by its digital economy– it is increasingly difficult to differentiate yourself. More and more ground is gained by standing out from other competitors through intangible defining elements (logo, brand, service-before, during and post-sale).

While the economy of the last century was characterized by promoting and differentiating products through trade mark, the last two decades led to the importance of highlighting the product, the service performance or the represented company. This process is called branding, which is more than a trade mark. Aneta Bogdan provided a plea in which she argued the distinction between brand and trademark. [Bogdan, 2010]. Major concerns regarding the definition, content, significance, classification about brands and brand strategies, were studied, in Anglo-Saxon literature, by the teacher K.L.Keller [Keller, Jan.1993, pp 1-22] and in the German area by F.R. Esch [Esch et al.2007].

The brand of a product, service or company covers more than its functional dimensions and having a strong emotional connotation. The latter is the result of the subjective evaluations provided by the client. Nowadays, the brand is evaluated in a holistic perspective because its functional elements no longer represent a strong enough differentiation component [Rosca,2014,pp.24-32]. The association of the brand not only with the representative product, but also with the manufacturer of which it owns, opened a new perspective on the analysis of its meaning – the relational one. Today, through its power to influence customer behavior, a brand is invaluable for the entrepreneur capital that it possesses. Brand equity is defined by Farquhar as "… the added value attached to the product that the brand represents" [Farquhar,1989,pp.24-33]. The ranking of the most valuable global brands of 2015, puts Apple (170,2 billion USD) at number one and Amazon at number 10 (37.9 billion USD) [interbrand.com]

Analyzed through the brand's role in creating a comparative advantage for the product or the company that it covers, we will consider that it constitutes a synthesis of value judgments that stakeholders - in general-and its customers - in principal- made against

them regarding the benefit performance they are involved or whose beneficiaries they are. That's why the brand has to be positioned at the forefront of marketing research related to business performance and its promotion on the market.

3. Brand and luxury – an association of performance in the promotion of luxury products
The concept of luxury has multiple definitions and perceptions, both in terms of the assessed content and the analyzed space, as well as the population groups in reference. Literature [Bastien, Kapferer, 2008, pp. 22-40] presents the concept in the relationship between the individual and society. From this point of view, we can define the luxury as a social marker or luxury for himself or dehotomia analysis luxury -equity. Undoubtedly, luxury in the contemporary society is required to be analyzed in relation to their object or their beneficiary and/or his wishes and, as well as the overall development level of society. Therefore, the luxury perceived by a rich Moldovan is different from that of a German or that of a French person. Of particular importance for the research that we perform is the luxury empirical evaluation as well as the expertise. The latter is the preserve of experts while luxury evaluated empirically is circumscribed to luxury brands.
We consider suggesting the following relationship between luxury- fashion – premium products as the below figures shows.

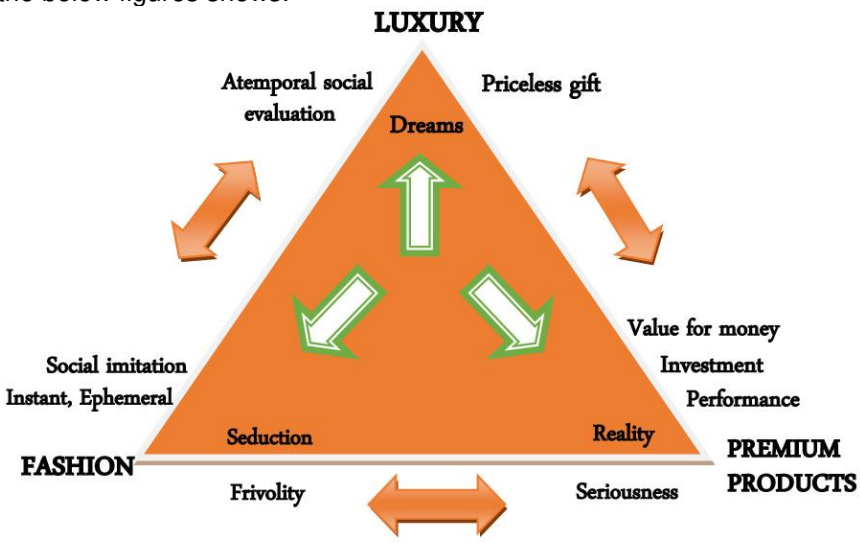


Figure 1. Triangle luxury positioning in relation to fashion and premium products Source: Bastien, Kapferer, 2008, p.49

In this triangle, a high quality product or brand is positioned allowing consumers to locate it in their decision-making universe and differentiate it from products or brands of the same type. Luxury brands require and trigger an emotional component more powerful than the other consumer goods. Hence the need for a deeper analysis of the emotions triggered by the acquisition of luxury brands [Mayer, Salovey quoted by Kidwel et al., 2011, p.79]. The sales staff for retail luxury brands holds an essential role in this endeavor. It is required to benefit from a high level of skill in the knowledge of psycho-sociology, negotiation, communication that need to be mixed with a high level of cognitive and emotional empathy. [Widmier, S., 2002, pp. 609 -]. Cognitive empathy opens the door to dialogue with the customer, which translates into the ability to understand and anticipate the interlocutor`s thoughts, feelings and actions and the emotional empathy (concern empathetic) means the endeavor to recognize and, to a certain extent, share the sentiments expressed by the client.

4. Luxury watchmaking brands - object of the present research

Luxury watchmaking constitute a distinct and relatively clearly shaped area for research on prestigious brands. From the onset of the third millennium without suffering significantly from the financial crisis triggered in 2008, the luxury horology market has seen a continuous upward trend. Enthusiasts and collectors, amateur hoarders or VIPs from media and sport, are moving toward acquiring legendary watches whether Omega, Rolex, Piaget, Cartier, Vacheron Constantin, Patek Philippe, Tag Heurer or Bvlgari, to name a few of the most popular brands. Unlike a large part of luxury brands on the market, especially automotive, cosmetics or clothing, watchmaking is a sector which excels in the manufactural nature of its products.

According to a recent study [Fuchs et al., 2/2015, pp. 98-110] the attractiveness of the manufacturing`s effect has risen in the last decade. Containing some symbolism with a strong emotional impact - they "contain Love" declare the authors cited above- manufactured goods have obvious characteristics of uniqueness and gives a sense of pride for their beneficiaries. Behind these feelings are the specificity and the superior performance of the respective brands. Luxury watchmaker brands are mostly analog clocks of different caliber, exclusively assembled manually, which gives them a remarkable added value. To keep them, when they are not worn, the watches need a "back box" device that moves them equal time interval so that their timekeeping is not stopped.

Bucharest market offers a relatively important network of retail units and the Horologivm Group has developed a Pre-Owned concept, purchasing the luxury brands from their owners, and after a careful examination reselling them. In this case, there are two types of customers: those who sell and those who buy. Networks of shops with luxury watchmaker are placed in major commercial centers of Bucharest (Feeria- Baneasa Shopping City Mall, AFI Controceni, Promenada etc.) and on the ground floor of luxury hotels (Marriott, Hilton, Intercontinental, Radisson etc.) taking advantage either to attract a very wide audience (mall), or very selective (luxury hotels). Usually stores that sell these products also sell jewelry, addressing to an exclusive market segment.

5. Research Methodology

We realized an exploratory qualitative research, which aims at discovering luxury watchmaking customer profiling and testing hypotheses about the motivation of acquisition according to genre. The selective investigation was realized in 19 retail shops for luxury watchmaking and was conducted among sales staff. It has started from the premise that personal training of the sales staff is complex, superior to those of other stores that unfold consumer goods and has accumulated rich experience in communicating with customers interested in luxury watchmaking. For these reasons we opted for semi structured open discussion method, using in-depth interview technique, and as a tool – the guide of conversation [Cătoiu, I (eds), 2009, pp. 212-220, PLĂIAŞ (eds.), 2008, pp. 186-188 Pop, 2001, p. 98]. In order to test the hypothesis, our study appealed at some observation methods and techniques of projective tests.[Cătoiu (eds.), 2009, pp. 228-236, PLĂIAŞ (coord.), 2008, pp. 186-188, Lefter, 2004 , pp.61-66, Pop, 2001, pp. 99-100]. In this way it was monitored using a wider range of methods, techniques and tools for collecting information to ensure consistency superior qualitative research undertaken. Gathering information was conducted in the months of March-April 2016.

Qualitative research objectives were:

a) outline the clients profile of luxury watchmaking stores;

b) capture the reasons which determine the purchase of luxury watches and structure them by gender (male / female);

c) outline the steps of the acquisition process of luxury watches;

d) determine the level of seller`s empathy of luxury watchmaking shops.

To achieve these objectives they were formulated the following hypothesis:

H1: The acquisition motivation of luxury watches is complex and diverse.
H2: The main motivation behind purchasing luxury watches differs significantly by gender.
H3: We can outline, with relative clarity, the customer`s profile who purchases luxury watches in terms of awareness and understanding of the major quality facets of a luxury watch in terms of: action mode, characteristics of accuracy, focus on a particular brand, request certain accessories, availability of purchasing a pre-owned watch etc.
H4: The most acquisitions in luxury watchmaking involve repeated visits at the stores, prior consultation (magazines, virtual environment, chat with friends, acquaintances, specialists, etc.), negotiating on price.
H5: The majority of the sales staff of luxury watchmaking shops, have done a complex and a technical training, psychological art of verbal and nonverbal communication, and are characterized by a high level of empathy.
For testing hypothesis H5 we observed the sales behavior in shops, the authors paying attention for quite some time, discreetly, to the sales conduct. In order to test the hypothesis H4, information gathered from the in-depth interview was combined with the use of a projective test of filling image. In the latter case, the sales staff was asked to place in a clockwise order the various moments of the buying process. The picture, which brought together the majority of votes went to the drawing figure no. 2
For this research customers visiting the watch shops in Bucharest were analyzed, such as: B&B Collection, Splend`or, Be in Time, Cellini, Mont Blanc, Kultho, Michael Kors, Galt, Helvetia, Rolex, Horologivm, The Time. There could be fine luxury brand watches with prices between 1000 euro and 8000 euro. From this point of view such products were classified into three groups depending on their price. In the top category, high-end luxury, brands classified as such included Patek Philip, Franck Muller, Audemars Piguet, Piaget, Vacheron Constantin. In the mid-range luxury came watches from brands Rolex, Cartier, Omega, Breitling, Bvlgari, Chanel, Hermes, Louis Vuitton, Mont Blanc, Swarovski and Dior, and in the entry-level luxury category were brands such as: Festina, Timex, Atlantic, Doxa, DKNY, Cacharel, Moschino, Guess, Marc Jacobs, Michael Kors, etc.
Research conducted among the sales staff revealed that the purchase of such a product is truly a relatively long process with complex motivation. The reasons differ depending on gender, social class affiliation, family type and level of education. The research cataloged a wide range of responses, opinions and reasons for and against luxury watches. An article in the famous English newspaper Telegraph [telegraph.co.uk] seemingly judged people who invest in luxury watches, stating that "... it is very strange and rather offensive the highly expensive watches price," calling those who wear them "barbaric consumerist". Similar to assessing the functionality and prestige of a car, we can do the same thing with watches: If you want a watch that shows you strictly what time is you can choose any cheap watch, no matter if it is analog or digital, manual or automatic. Its primary purpose is the same: to indicate the time. When you appreciate a certain brand, admire the design, the exceptional chronograph smoothness, it begins to look more like jewelry than a watch in the true sense. In addition, while watches with a low price are usually mass produced by workers with modest skill, often in poorer countries where the production process has very little to no quality controls in place, companies like Audemars Piguet, Patek Philippe or Rolex use watchmakers, specialists in the art of assembling jewelry, accessorizing them with special chronographs or even gemstones. Patek Philippe chronographs are so complex that their production lasts 10 months (for base models) and two years (for highly complex models) [realmenrealstyle.com]. This higher level of quality production and materials assures that luxury watches have a lifespan of at least 10 years, with periodic checks. Precisely for this reason we can justify the prices for these luxury products for which not everyone can afford to pay thousands of euro to wear them.
The results of the research show that both men and women prefer analog watches with quartz movement, which has an ever-so-slight deviation, without special accessories, but prevails the brand, design and price. Also, many of the fans of jewel-watches, prefer

mechanical watches with the self-winding fast loading option. Mechanical watches, relative to the quartz models, with both the manual and the automatic return, show a special design of the casing, which is often left visible inside the elegant mechanism. The display is particularly due to secondary forefinger movement fluidity, unlike the quartz movement. From a durability standpoint, these timepieces can easily last 10 years or more, but visits to the specialists are required. All these advantages are overshadowed by the high price, because they are difficult to make, requiring more expensive material; its strength, being more sensitive to shocks and the accuracy with which it shows the correct time. Based on all these considerations we can say that hypothesis H1 is confirmed.

The research revealed that the hierarchy of reasons differs by gender in particular. Although in the last century, attached to a bracelet, watches were considered a feminine accessory, now it is the most precious male jewelry. They came into our mental horizon as objects of passion and not as simple practical tools for reading time. In particular it is distinguishable that most buyers but also visitors from horology stores are men. Among the motivational "secrets" revealed by specialists interviewed on the reasons that leads men to purchase such a luxury item we note: the watch is the only jewelry a man can wear (except for the wedding ring and possibly a ring with certain symbolism (academic, family, etc.)). For most of them, a nice watch is a sign of belonging to a certain social class. However, for others, the watch is an investment, a product designed to be kept for generations, perhaps becoming a family heirloom that eventually becomes a valuable vintage timepiece as its passed down to future generations. There are men who love history, love fashion, who like to be in trend or even collectors of watches. The reasons are multiple and vary also depending on age. Most luxury watch buyers are men between 35-50 years, with an average income or above average income, something predictable, considering the market prices for these products. The reasons why men buy watches are multiple, but they love in particular, the mechanical aspect, technological, reasons that are not available in women`s cases.

Wearing a luxury watch for men in particular - research showed - is a sign of a personality that values appearance on punctuality, style and elegance. It is said that a watch has the power to perfectly express the personality without the need for words. It can be matched to an outfit or an occasion. This was also noted at the political leaders such as Nicolas Sarkozy and his Rolex Daytona, Barack Obama's Vulcain Cricket, Vlamidir Putin with his Patek Philippe Calatrava, Ernesto Che Guevara with his Rolex, De Gaulle's famous Lip, Napoleon Bonaparte with Breguet's or [parismatch.com], which were characterized in some situations, depending on the watches they wore at public events. In business, a watch can provide a topic of conversation, a common interest and a rank of equality between partners. Thus, a watch with a simple design, but impressive by its elegance and quality materials with which it is made is chosen by men who adopt the classic, elegant style, for which the self-esteem is very important. On the other hand, there are special watches for pilots, drivers or watches that are designed specifically for intense sports activities or other extreme sports. They will always communicate a glimpse of the personality of the owner. For example, Rolex, an indicator of high-class quality and good taste today, in the 50s and 60s was used only by pilots and racing drivers; they were the ones who truly benefited from its functions

Whereas ladies choose jewelry in terms of aesthetics, matching the watch with other jewelry worn and with the outfit. Also, both for men and for women, an important reason for buying a watch is the sentimental value and the memories that it marks. For example Andreea Esca, TV presenter, wears a Cartier Tank Francaise watch that she says holds sentimental value, given to her by her husband after the birth of their first child. On the other hand another public figure, Andreea Raicu, collector of watches says her favorite one is a Rolex Daytona, chosen for its design and sentimental value, not the value or trends. It is not a rule, but it was noted in the ladies category, both locally and abroad, as opting for jewelry watches created by famous fashion houses. Some examples are

actresses Marion Cotillard and Charlize Theron fans of Dior house, Audrey Tautou of Chanel and Cate Blanchett of Givenchy. [elenastanescu.weebly.com]. All these reasons support the confirmation of hypothesis H2, which highlights a significant gender difference in the primary motivator of purchasing a luxury watch.

The buyer profile of luxury watchmaking was more difficult to outline because of the complexity involved in the decision to purchase (see confirmation of the hypothesis H1). However they have outlined some specific traits. Buying a luxury watch has also become a trend in Romania. from the watch has evolved in today's day and age, from purely functional to become a landmark creation, a social totem, but always an expression of personal orientations loaded with multiple meanings. The customer intending to purchase a luxury watch is more informed in terms of distinctions analog/digital , manual/mechanical, the main characteristics of accuracy of a manually watch, request certain accessories (ex. reversal box) , orientation towards a particular brand and not to a certain price level, availability of purchasing a pre-owned watch. Most research subjects are men aged between 35-50, who usually come accompanied in the stores. The results showed that female presence in watch stores is higher than that of men only in stores like Michael Kors and Splend`or, they fit in the category of 18-40 years. What should be noted is that unanimously, all require and are interested in a particular brand of watches, with the exception of the Rolex store, inside the complex Marriott the Grand Hotel, where the tendency is to seek promotional offers and then the desired characteristics of the watch. Consequently drawing a profile of a client with a very clear outline calls for new market investigations and deepening, so the H3 hypothesis cannot be confirmed.

The purchase of luxury watchmaking has been analyzed, both in direct communication with the sales staff and skilled watchmakers, and by involving them in research methodology signaled projective test. The approach taken was designed in Fig. 2. Most acquisitions of luxury watches involves repeated visits in stores, prior consultation (magazines, virtual environment, discussions with friends, acquaintances, professional, etc.), negotiating on the price (in case of pre-owned watches). Thus, we shared the acquisition in three main stages: pre-purchase, purchase itself and post-purchase. Each stage consists of a series of buyer's actions and interaction with sales staff. One of the most important of these is the pre-acquisition not only for its essence but also for the time allotted to it. The process begins with awareness of the need to have a luxury watch. Then comes the phase of consulting, most customers preferring to consult the existing offer on the local market, but also a large number of potential buyers research online about all the details and features you want from the watch. The moment a customer enters a store is when the purchasing process begins. Thus, arrived in stores, watch lovers know what features they want for their watch and more importantly, know the brand they want. Precisely for this reason, the purchasing process is simplified. The buyer knows what to ask, while sales specialists know what he can offer to satisfy the customer's needs at the highest level. Being aware and informed of the characteristics he wants for the product, he will consider only some of the advantages of models, depending on the desired brand, design and, ultimately, price. For people with high incomes, a luxury watch is first a business card, and then a financial investment. Specialist watchmaker from Helvetia store (located on Calea Victoriei) characterizes the buyer, saying: "People come into the store and at least know what brand they want to buy. Each model holds a story, the price is the final detail that the customer discovers. » He also said: "They are well informed, they travel a lot, and for these reasons, they have the opportunity to discover their preferences in terms of watch. For them, the luxury measure is the measure of power." [capital.ro].

The post-purchase stage may be the nucleus of an act of purchase. The most important indicator is the satisfaction with which the customer leaves the store. The notion of satisfaction refers, in this case, to the buyer`s feeling of contentment regarding the services received in store, detailed information provided by sales specialist in horology and of course, the luxury product chosen. The importance and the necessity of the buyer`s

satisfaction makes him return for maintenance and maybe for adding a new product to his collection, when finally we can talk about the development of customer loyalty. We believe, for the reasons indicated that H4 hypothesis is confirmed.



Figure 2. Decisional acquisition process of a luxury watch
Source: Author`s own research

Analyzing customer satisfaction and careful observation of the act of purchase we conclude that most of the sales have a complex training on technical, psychological art of verbal and nonverbal communication and they are characterized by a high level of empathy. Our results highlight the evolution of the sales multilateral thinking. Whether we refer to a store of a particular brand (Mont Blanc) or one of a variety of brands (Kultho) with no less than 24 brands of watches, each with its multitude of collections of diversified features.. This particular example confirms the excellent preparation of the sales staff, both in technical and psychological terms. Even though not much emphasis has been put on it, non-verbal communication plays an essential role in the act of buying, a more important role than words, especially when the message involves attitudes and emotions. These nonverbal cues include facial expressions, eye contact, gestures, posture, tone and even clothing and ambience setting. Therefore, one of the most important tasks of sales is represented by the art of non-verbal communication. Eye contact, calm and relaxed attitude, proper attire and attention of the sales offers to the potential client trust, credibility and professionalism, all with a defining function on a purchasing decision[businessdays.ro]. Confirmation of hypothesis H5 is reinforced by the example of "Ancient Horologivm" the largest and best equipped laboratory of horology in the country, the first "preowned" concept store in Romania, the only place that performs repairs and restorations for luxury accessories at Swiss level, where luxury Swiss watches “haut-gamme” are sold.

6. Conclusions

The research undertaken has certain limitations. It took part in the capitol, Bucharest, and the findings cannot be extrapolated nationally. However the capitol is the center that polarizes the most important part of the customers of these products. The investigation is qualitative in nature and aimed only to indicate the existence of certain states of fact and not to quantify them.

The field of luxury watchmaking deserves deeper motivational marketing research. With a multitude of factors that interact in the grounds of the application – the subject may be the land of marketing experiments and space researches - school, with significant meanings operation. At the same time further research is required on the customer`s attachment mechanism to a particular brand, by outlining more clearly the factors which determine the consumer shift to the highest level of attachment – the exclusivity.

The high level of training required of luxury watchmaking marketing branches provides specific possibility of developing a commercial concept, the store is integrated with the laboratory of horology. Such benefit packages extend over some services that can develop through complementarity, such as repairs, checks, pre-owned, custom consulting and procurement. All these aspects are taken into account by the authors in future research.

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DETERMINANTS OF THE DEMAND FOR EDUCATIONAL SERVICES OFFERED BY THE MILITARY HIGHER EDUCATION INSTITUTIONS

Laurenţiu Florentin Stoenică[1], Călin Petrică Vegheş2
1The Faculty of Marketing, Bucharest University of Economic Studies
2The Faculty of Marketing, Bucharest University of Economic Studies
laurentiustoenica@yahoo.com
c_veghes@yahoo.com

Abstract: *The specific character of the military education depending on social command and the necessities for qualified superior personnel of the military higher education institutions, limits the direct influence of the demand for the educational products and services offered by the military higher education institutions on the Romanian market. Analysis of the associations between determinant factors of the demand for educational services in the military higher education system reveals that the evolution of the population enrolled in the secondary education in addition to the evolution of the overall Romanian population exert an influence over the amount of candidates to be accepted in the military higher education institutions. A favorable demographic growth, especially on the 15-19 years segment of population, may generate a growth in the demand for educational products and services offered by the military higher education institutions. Analysis of the connections between the factors which influence the dimension and evolution of the demand for educational products and services offered by the military higher education institutions leads to the conclusion that the marketing efforts of the military higher education institutions should approach the higher quality segment of the Romanian educational market.*

Keywords: military; higher education; educational products and services; educational demand; Romania

JELclassification: *B23; C34; I21; I23; M31*

Introduction

The complexity of the educational domain and of the educational politics promoted since ancient times through the modern era can be revealed through philosophical approaches, but also socio-historical, influenced by philosophical figures (Creţu et al., 2011). Since the dawn of mankind, education represented the main engine of development, societies which have understood the importance of education becoming prosperous in time, capable not only of securing their existence, but also bringing important contributions in the universal science and culture (Enache, 2012a).
Active participants on the education market, education institutions are mediators between individuals, school population, generating demand for instruction and education, whom are offered such services, and the offerers of jobs, those who create the workforce demand, of a certain kind of qualification (Nedelea, 2002).
In the marketing approach of some authors (Grigoruţ et al., 2011), the educational services' market encloses in an ensemble educational components which assure the consumers the satisfaction of some needs, interests, wishes, individual or collective searches, except for demand and offer, the educational market assuming the existence of at least two other defining elements, price and competition, to which attach the domain regulations, traditions and biases.

Characterised as being a complex system (Enache, 2012b), educational services' market contains both public institutions which provide educational services and particular ones, more and more visible, which makes necessary a rethinking of the marketing perspective of the educational services in the public sector (Răbontu and Bălăcescu, 2013), the impact of the demographic, social, political factors leading to changes in the consumers' attitude, in the structure and the evolution of the market (Enache, 2012b).
An efficient marketing activity of the institutions existent on the educational services market imposes a full connection with the customers, consumers of the services, adopting a marketing orientation assuming the understanding of consumers, reaching a circular vision both of their everyday existence and of the changes which appear over their lives so that the products/services offered should correspond to those necessities (Kotler and Keller, 2008).
The educational services' market may be defined as an ensemble of educational components which contribute to the satisfaction of some needs, wishes, individual or collective searches of the members of society (Ciobanu, 2003).
Starting from the premise that every activity must be oriented in the direction of satisfacting with maximum efficiency the demands of the customers, effective and potential, in education it is necessary that the education institutions, both military and civil, put in the center of their attention the knowledge and the anticipation of the market's demands, satisfacting actual and perspective needs of the consumers of the offered educational services (Cătoiu and Teodorescu, 2004).
Education is acquired, firstly, through the consumption of educational services, which means that an analysis of the education market should be made by referring to the demand and offer terms of educational services. On the educational services' market, the demand for education expresses the need for knowledge and competence which can be asked for both by education consumers, future clients of the education institutions, and by the beneficiaries of the final product, economic agents, institutions (Ciobanu, 2003).
The total market demand for a product or service is the total volume that would be bought by a defined consumer group in a defined geographic area in a defined time period in a defined marketing environment under a defined level and mix of industry marketing effort (Kotler and Armstrong, 2014). The demand for a product exists only when on the market are satisfied three conditions: the desire of consuming certain products, the capacity and disposition of consumers to buy (Rao, 2011).
The demand for education can be placed in the interference zone of the factors which determine the demand for educational services: the needs of the educational products' consumers, the level of earnings they have, the price of the educational programs as study taxes, the demographic evolution, the need on the labour market for specialists with higher education (Ciobanu, 2003; Grigoruţ et al., 2011), the demand in the educational field being determined both by the changes in the economic, politic and social space and also by the individual educational needs of the consumers (Ciobanu, 2003).
In the approach of certain authors, the existing demand for educational services at a moment in time on the market for this kind of services represents the ensemble of the needs manifested in the context of the market by all the education consumers from a specific area and is expressed through the total volume of the service options requested by all the education institutions, during a certain period of time and in certain environment conditions (Epure, 2007).
In the higher education, the demand for education expresses the need for knowledge, competence, which can be requested both by the economic agents, and by people who take the courses at this study level, the students, the demand receiving this way a diverse character, the marketing approach of the education needing the identification, description and dimensioning of the market segments to which the higher education institution relates and connects to (Petrică, 2014).
In the special literature exist numerous studies which investigate the relations between

education in general, higher education especially and the variables which influence one way or another domain. Drăgoescu (2015) starting from the viewpoints formulated by Mankiw et al. (1992), Kui (2006), Barro (2013), Dănăcică (2011), examined existant relations between economic growth and education, the variables introducted in the case of Romania being the Gross Domestic Product per capita, the number of students enrolled in the higher education and the public spending for education.
The demand on the educational services market is determined by the influence of many factors: demographic, economic, technological, political, natural, cultural. The demographic tendencies model the educational services market and they influence the demand for this kind of services/products (Kotler and Keller, 2008).
Both military higher education institutions and their customers, potential students, employees, concurents, all operate in an environment rich in tendencies and influence factors, which configure opportunities and risks for each one, their identification and analysis permitting an answer which can satisfy the manifested demands (Kotler, 2005).

Methodological notes

The research approach aims to evaluate the manner in which the demand for education in the military higher education system is influenced by demographical, economical, technological, cultural, political or natural factors, which act upon the educational market on which activate the military higher education institutions. A multiple regression model which permits the prediction of a dependent variable based on more independent variables was constructed and used to predict the education demand based on the evolution of the demographical, economical, technological, political factors. To determine the association degree between the variables mentioned as influence factors of the demand on the educational market services offered by the military higher education institutions, the Pearson correlation coefficient was utilized, indicator of the intensity of the links between variables. The independent variables considered in the framework of this research endeavour were: the population of Romania, the population aged 15-19 years old, the population aged 18 years old, the school population, the number of military high school graduates, the total number of high school graduates, the number of high school students, the number of military high school students, the number of students, the number of students in the military system, the number of high school graduates who passed the baccalaureate exam, the number of universities, the number of faculties, higher education graduates, technical higher education graduates, economical higher education graduates, the number of admission places in the military higher education institutions, GDP per capita, the ratio of education expenditure in the GDP, the average monthly net salary, the number of mobile customers, the ratio of research expenditure in the GDP, the number of households with internet access, the number of PCs in the higher education system, the number of internet connections, the ratio of defense expenditure in the GDP, defense expenditure, military personnel.

Main findings of the research

In Romania, after the December 1989 Revolution, the demand for higher education has shown an upward trend, occurring the phenomenon of market expansion and of diversification of the education products offered by universities. Getting a higher education degree has become almost naturally a target for many secondary education graduates in Romania, who wanted to have access to a safe and well paid workplace.
Demographic decline manifested in Romania since 1990 has only served to intensify competition in education, the higher education institutions addressing the offer of educational products /services to fewer potential consumers. The evolution of the school age population for high school and university studies shows the same trend as the one shown by the total population of Romania. In the 2004-2014 timeframe there was recorded a decrease in the Romanian population with 1,573,831 people, representing 7.3% of total registered in 2004, the annual average rate of change being of -0.75%, which means that during 2004-2014 the population decreased on average by 0.75% per year. At European level (EU 28) there was registred an increased of 13,748,733 people in 2014 compared to 2004 (Eurostat), the demographic current throughout the analysed period being characterised by continued population growth across the continent. The trend of population decrease maintained on segments of the school population aged 14 and 18, the decrease being 37.7% in 2014 compared to 2004 for the first category of population and 30.1% for the second category.
During 2004-2014, the number of students in Romania follows the upward trend registred across Europe, this indicator having a negative evolution since 2009, the same trend with the evolution of the population, in 2014 being recorded a total of 411,229 students, with 50% less than in 2007-2009. The number of students enrolled in high school, carriers of the demand for higher education,recorded a slight upward trend in the last 10 years, from 773,843 students in 2004 to 888,768 in 2011, while in 2013 to decrease by 55.194 pupils to the previous year.
The number of secondary education graduates in Romania increased in the period after 1990 from 188,732 graduates to 217,743 in 1991, then during the next evolution period to be characterized by decreases followed by increases, the maximum number of secondary education graduates being 218,205 in 2006. During the following period the number of high school graduates dropped to 172,000 in 2014.
The number of students and graduates of military colleges has experienced reductions in the period under review although they constitute a solid basis for the selection of candidates for admission to military higher education, considering that during undergraduate training in the military education system provides a strong motivation for the continuation of military studies at university level, while familiarizing young people with the military and the specific institutions in this field. The number of secondary education graduates who have passed the baccalaureate exam is a factor influencing demand on the market of educational services provided by military higher education institutions. Between 2004-2014 there is an upward movement of those who have passed the baccalaureate exam during the first part of the timeframe, until 2008, and then to decline significantly, with about 50% in 2014 from the maximum of the analysed period.
According to the National Education Law, the state higher education institutions obtain financiary resources from allocations from the budget of the Ministry of Education and Scientific Research, based on a contract during one study cycle, and also from their own income. Military higher education institutions are largely dependent on the budget of the Ministry of National Defence, the amounts allocated ensuring the organization and progress of the educational process, expenditure on accommodation, feeding, equipment and other rights due to military students according to normative acts. Between 2004-2014, there was an increase in education spending, with 2,500 mil.lei in 2014 compared to 2004,

and those of defense, with over 2,000 mil.lei in 2014 compared to 2004.
The number of students enrolled in military higher education institutions since 2004 has recorded an upward trend even as the population aged over 18, secondary school graduates and number of students nationally recorded reductions. A maximum number of students was registered in 2010, the debut year of the economic crisis and wage cuts in Romania. Between 2007-2014, the evolution of the demand for education in the military higher education system, described by the number of applicants to the entrance examination for graduate cycle, recorded decreasing values, the year 2014 recorded 985 less candidates than in 2010, the growth during the following period could have been attributed to the politico-military context that prompted an additional number of places, required both by the Ministry of National Defence and by the other structures in the system of public order and national security.
The behavior of consumers of educational services, potential candidates to the admission exam in the military higher education institutions, is influenced by cultural, social, personal and psychological factors. The cultural factors, the subculture (the cultural subsystem) highly influence the consumers' behavior, culture being the fundamental determinant factor of the demands and behaviors of a certain individual (Kotler and Keller, 2008). In regard to the military higher education institutions, the market on which it operates and the education offered to answer a social command which they offer limit significantly the impact of cultural factors, which were not taken into account for this research endeavour.
Regarding the impact of technological factors, those contribute to the development of the technological environment where military higher education institutions operate, their implication being both that of a beneficiary and a provider of technology.
In order to represent, define and size the technological environment, the evolution of access to online information for potential candidates for military higher education institutions was analyzed. It was noticed that the internet generates an accelerated dynamics of the environment where military higher education institutions place their offers, the information being permanently available to the consumer public interested of the educational offer.
Data provided by the National Institute of Statistics show that, in 2014, more than half of Romanian households (54.4%) have access to the internet, most of them (70.9%) in the urban area, 1 out of 3 households using portable computers (laptop, notebook, tablet) and fixed broadband connections (88.2%), the proportion of other devices, such as mobile phones and smartphones being 20%. Thus, between 2004 and 2014 an increase in public interest and acces to information was observed, the number of broadband internet connections growing from 0.38 million in 2004 to 4 milion connections in 2014. Also, during the same time-span, the number of PCs per 100 students grew from 6.4 to 19.2. The development of the internet permits keeping clients and potential clients on the educational services market, collecting and analyzing data from market research and, last but not least, the dissemination of results in educational and research fields.
An initial analysis of the correlations between the dependent variable and the independent variables, using a 5 year interval, reveals that the evolution of the population of Romania and the school population in the secondary education influence up to 95%, respectively 98%, the evolution of the demand for education in the military higher education institutions. By extending the interval to 8 years, by analyzing the data from Table 1 it can be observed that in most cases the relations between variables have low or medium intensity, the strongest influence being manifested by the number of high school graduates, who can determine up to 67% the evolution of the admission candidates in the military higher education institutions.

Table 1. Relations between the number of candidates at the admission exam in military higher education institutions and demographic, economic, technological, cultural, political factors

Variables	2007	2008	2009	2010	2011	2012	2013	2014	Correl. coef.R
Entrance exam candidates military HE institutions (dependent variable)	1,919	1,610	2,037	2,536	2,077	1,876	1,558	1,551	
Population of Romania	21,130,503	20,635,460	20,440,290	20,294,683	20,199,059	20,095,996	20,020,074	19,947,311	**0.156**
Population of Romania aged 15-19	1,651,290	1,542,308	1,424,342	1,313,974	1,241,199	1,197,738	1,170,241	1,158,055	**0.129**
Population of Romania aged 18	283,448	258,239	231,644	224,078	221,770	221,128	225,947	215,785	**-0.099**
School population	4,345,581	4,404,581	4,324,992	4,401,070	4,228,067	3,988,996	3,887,891	3,796,404	**0.605**
Number of military high school graduates	360	435	318	280	273	272	344	315	**-0.556**
Number of high school graduates	185,255	187,576	218,205	204,863	202,160	187,521	200,004	172,613	**0.571**
Number of high school students	791,348	784,361	837,728	866,543	888,768	831,810	776,616	727,072	**0.816**
Number of military high school students	1,358	1,202	1,227	1,289	1,319	1,363	1,332	1,337	**-0.067**
Number of students	907,353	891,098	775,319	673,001	539,852	464,592	433,234	411,229	**0.229**
Number of military institution students	2,315	2,631	2,640	3,406	2,895	2,898	2,690	2,588	**0.706**
Baccalaureate exam graduates	188,123	204,883	204,854	163,541	111,932	104,751	114,652	104,229	**0.220**
Graduates technical universities	24,758	23,949	49,342	30,287	27,946	29,689	27,713	24,668	**0.352**
Graduates economical universities	37,211	91,884	67,420	72,641	62,685	34,415	25,724	21,922	**0.426**
Total admissions places military higher education insititutions	1,370	1,384	1,342	1,426	1,061	1,284	1,239	1,315	**0.138**
GDP per capita	19,315.4	23,934.6	25,065.6	26,368.7	28,047.8	29,679.1	31,895.4	33,532.2	**-0.350**
Ratio of education expenditure in GDP	3.7	4.25	4.24	3.53	3.07	3.03	2.50	3.20	**0.201**
Average monthly net salary	1,042	1,309	1,361	1,391	1,444	1,507	1,579	1,697	**-0.329**
Mobile customers to 1000 citizens	1,063.6	1,145.4	1,193.9	1,146.8	1,073.9	1,049.9	1,055.8	1,059.1	**0.426**
Ratio of research expenditure in GDP	0.52	0.58	0.46	0.45	0.49	0.48	0.39	0.38	**0.111**
Ratio of total households with internet access	35	36	38	42	47	54	58	61	**-0.431**
Number of PCs to 100 students	7.90	9.40	13	15.6	18.9	21.8	24.2	19.2	**-0.180**
Internet broadband connections (mil.)	1.95	2.51	2.82	3.0	3.3	3.5	3.8	4.0	**-0.302**
Ratio of defence expenditure in GDP	1.5	1.5	1.4	1.3	1.3	1.4	1.3	1.3	**-0.194**
Defence expenditure	6,358	7,558	6,785	6,630	7,255	7,282	8,160	9,014	**-0.732**
Military personnel(thousands)	75	68	67	67	66	66	66	65	**0.104**
Number of Romanian universities	106	106	108	108	108	107	103	101	**0.769**

Source: Ministry of National Defence, National Institute of Statistics, Eurostat, Ministry of Education and Scientific Research

Using the multiple regression model in SPSS – the backward method, the variables that best explain the variation of the dependent variable were identified, taking into account all the independent variables introduced in the analysis and eliminating one by one those which do not bring anything new for the adjusted determining coefficient and have low partial correlations with the dependent variable (Labăr, 2008). It was observed that a significant part of the independent variables were excluded as they were weakly connected to the dependent variable: Romania's total population, the population between 15 and 19 years old, the 18 years old population, the school population, the number of high school graduates, high school students, military high school students, the total number of students, the total number of students in the military system, the number of high school graduates who passed the baccalaureate exam, the number of universities, the number of faculties, higher education graduates, GDP per capita, the average monthly net salary, the number of mobile customers, the ratio of research expenditure in the GDP, the number of households with internet access, the number of PCs in the higher education, the number of internet connections, defense expenditure. The order of eliminating variables was determined by the weakest influence on the demand for education in the military higher education system, even though links exists, but not significant ones. Somehow surprisingly, on the list of eliminated variables there are also some which would

have been expected to influence significantly the evolution of the demand for educational services offered by the higher education institutions. Among the most representative from this point of view are: the population aged 15-19 years old, the number of military high school students or the defense expenditure. The deeper analysis of the influence of those variables as of other variables which were not taken into account (for example, cultural variables) will make the object of a future research endeavour.
After using the multiple regression, with the help of SPSS, a regression model was built containing one dependent variable and seven independent variables, whose parameters are presented in the table below:

Table 2. Parameters of the regression model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	**-915.564**	**.000**		**.**	**.**		
	Military high school graduates	**-5.117**	**.000**	**-.848**	**.**	**.**	**.413**	**2.422**
	Technical higher education graduates	**.004**	**.000**	**.096**	**.**	**.**	**.491**	**2.038**
	Economical higher education graduates	**.012**	**.000**	**.875**	**.**	**.**	**.337**	**2.967**
	Admissions places in military higher education institutions	**1.024**	**.000**	**.350**	**.**	**.**	**.549**	**1.820**
	Ratio of education expenditure in GDP	**-155.612**	**.000**	**-.285**	**.**	**.**	**.132**	**7.596**
	Ratio of defence expenditure in GDP	**-1218.285**	**.000**	**-.324**	**.**	**.**	**.218**	**4.595**
	Military personnel	**68.686**	**.000**	**.651**	**.**	**.**	**.410**	**2.437**

For the estimation of the evolution of the demand for education in the military higher education, expressed through the number of candidates at the admission contests organized by the military higher education institutions, were determined the average evolution indices of the independent variables which remained in the analysis and then was predicted the evolution of the variables for the 2016-2018 period, using the model:
$Y = - 915.564 – 5.117X1 + 0.004X2 + 0.012X3 + 1.024X4 - 155.612X5 - 1218.285X6 + 68.686X7$
where:
Y – Demand for education in the military higher education
X_1 – Number of military high school graduates
X_2 – Number of technical higher education graduates
X_3 – Number of economical higher education graduates
X_4 –Admissions places in the military higher education institutions
X_5 – Ratio of education expenditure in GDP
X_6 – Ratio of defense expenditure in GDP
X_7 – Military personnel

Table3. Estimation for the demand for the educational services of the military higher education institutions during the 2016-2018 period

Independent variable	Average evolution indices	2016 estimation	2017 estimation	2018 estimation
Military high school graduates	0,98110	303	297	291
Number graduates tech. HE	0.99947	24,640	24,625	24,610
Number graduates econ. HE	0.92769	18,846	17,473	16,202
Number admission places in military HEI	0.99416	1,299	1,291	1,283
Ratio education expenditure in GDP	0.97947	3,069	3,006	2,944
Ratio defense expenditure in GDP	0.97947	1,247	1,221	1,197
Military personnel (thousands)	0.97976	63	62	61

Using the regression model presented above, in the context of maintaining the dynamics of the military high school graduates, technical and economical higher education graduates, the ratio of education and defense expenditure in the GDP, the number of the military personnel, the levels of demand for the educational services of the military higher education institutions have been estimated to 1519 candidates (2016), 1498 candidates (2017) and 1475 (2018). The negative dynamics of the demand for education can be observed, the determined levels could be, although, influenced by changes in the evolution of the independent variables used in the analysis and also by other variables which can influence the behavior of potential clients of the educational services offered by the military higher education institution, in the sense of adopting the decision to opt for one of these institutions for the universitary preparation.

Conclusions

The analysis of the factors determining the demand for educational services in the military higher education system reveals that the evolution of military high school graduates, the number of graduates from technical and economic higher education institutions, the educational offer of the military higher education system, the ratio of education and defense expenditure in the GDP, as well as the evolution of military personnel significantly influence the number of candidates enrolled for the admission in the military higher education institutions. Given the result of the evaluation of the association between the dependent variable and the determining factors, it may be concluded that it would be expected that a positive demographic increase, the increase of the number of universities, faculties, students, the technological, economical progress, the increase of welfare on a national level, would not generate an increase in the demand for education offered by the military higher education institutions, which is easy to explain, taking into account that this type of economico-social are specific to periods characterised rather by a lower need for both the services offered by the military structures and their preparation, inclusive through the military higher educationinstitutions. The specific of military education, as well as the scholarization according to social demands, and the necessities of highly qualified personnel in institutions concerned with national defense, public order and national security explains why the demands on the educational market do not directly influence the educational offer of military higher education institutions. The present analysis and the correlations between the selected variables further support this idea, but, in order to have a basis for making appropriate decisions, we consider that further research may focus on other variables, as well as data collected in a lengthier time-span. We may say that educational marketing strategies employed by the military higher education institutions are more likely focused on the competition for the qualitatively superior segment of the educational services' consumer public. The main limit of the research is given by the lack of data regarding the education demand in the military higher education for a longer period

of time, which affected to a certain degree the development of a more consistent regression model, which would have included more independent variables or which would have approximated better the influence of each independent variable over the demand for education specific to the military higher education institutions. All in all, this endeavour allowed the identification of new opportunities and future research directions, through the extension of the analysis of determinant factors of the demand for education and also the evaluation of the consequences and impact of this process over the military higher education institutions.

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SUB-SECTION: ECONOMIC INFORMATICS AND CYBERNETICS

STUDY ON THE EVOLUTION OF SOME FINANCIAL PRODUCTS BASED ON MARKOV CHAINS METHOD

Marta Kovacs (Kiss)
PhD. Student, The Bucharest University of Economic Studies, Faculty of Cybernetics, Statistics and Economic Informatics, Romania
kovacs_marta@yahoo.com

Abstract: *In probability theory it is known that Markov chain is frequently used in order to predict the future situations. Moreover, Markov chain theory is used to study the change rules of the economic phenomenons, to describe consumers' brand loyalty, in marketing for dynamic forecasts of market share, etc. In this study we introduced a Markov process model to track the evolution of some financial products for a commercial bank. At the same time we proposed a brief theory on related properties of Markov process based on which we continued the empirical research. Also, we used the mean first passage times, an another interesting and important long-term property of the Markov chain because they inform us about the steps that must be taken on average to move from one state to another.*

Keywords: Markov chains; transition probability matrix; the mean first passage times; financial products.

JEL classification: C22, G21

1. Introduction

Markov chain model has been widely studied and applied in order to predict the future situations. Moreover, Markov chain theory is used to study the change rules of the economic phenomenons, to describe consumers' brand loyalty (Uslu and Cam, 2000; Buciuman, 2011), in marketing for dynamic forecasts of market share (Armstrong and Farley, 1969; Dura, 2006; Zhang and Zhang, 2009; Lihong et al., 2014; Chan, 2015; Kovacs, 2015), etc.

In this study we introduced a Markov process model to track the evolution of some financial products for a commercial bank. Also, we proposed a brief theory on related properties of Markov process based on which we continued the empirical research, and we used the mean first passage times, an another interesting and important long-term property of the Markov chain.

2. Review of basic mathematical concepts

Markov chain is a special kind of stochastic process named after Russian mathematician, Andrei Andreevich Markov, where the outcome of an experiment depends only on the outcome of the previous experiment.

A sequence of random variables $\{X_t\} = X_1, X_2, \ldots$ is called Markov chain if the following equality holds:

$$P(X_{t+1} = j / X_1 = k_1, X_2 = k_2, \ldots, X_t = i) = P(X_{t+1} = j / X_t = i) \qquad \forall t = 0,1,\ldots \quad \text{and} \quad k_1, k_2, \ldots, i, j \in S,$$

where S is named the state space of the chain. S can be finite or countable. In other words this means that the future state j at time $t+1$ only depends on state i in which the system was in the previous time t, and this probability does not depend on the states in which it was before. We also can say that the Markov chain "memory" is very short: in every

moment it only "remembers" the previous period. This intuitive explanation is that the current state of the system includes any information relating to past states, which are needed to determine the following period of the state.
The following formulation, if the probability does not change with time

$$P(X_{t+1} = j / X_t = i) = P(X_1 = j / X_0 = i) \quad \forall t = 0,1,... \text{ and for all } i, j \in S$$

assumes that the Markov chain is stationary. This probability is known as an one-step transition probability, denoted by p_{ij}, and describes the probability of movement from state *i* to state *j*,

$$P(X_{t+1} = j / X_t = i) \overset{not}{=} p_{ij}$$

and has the following properties:

$$p_{ij} \in [0,1], \ \sum_{j=1}^{n} p_{ij} = 1 \text{ for } i = 1,...,n.$$

The process can remain in the state it is in, and this occurs with probability p_{ii}.
The matrix notation facilitates modelling and subsequent calculations and it is considered to be a key component of a Markov chain.
An one-step transition probability matrix (say *P*) with *n* states can be written:

$$P = \begin{pmatrix} p_{11} & p_{12} & . & . & . & p_{1n} \\ p_{21} & p_{22} & . & . & . & p_{2n} \\ . & . & . & & & . \\ . & . & & . & & . \\ . & . & & & . & . \\ p_{n1} & p_{n2} & . & . & . & p_{nn} \end{pmatrix}$$

Chapman-Kolmogorov equations allow the calculation of n-step transition probabilities by means of the matrix product; namely, to calculate the two-step transition probabilities, we generate the following product:

$$P^{(2)} = P \bullet P$$

The n-step transition probabilities can be determined based on the one-step transition probabilities:

$$P^{(n)} = P^n \quad \text{for} \quad n \geq 1$$

$$P^{(n)} = \{ p_{ij}^{(n)} \} \text{ where } p_{ij}^{(n)} = P(X_{t+n} = j / X_t = i)$$

and the *ij*th entry of the matrix P^n gives the probability that the Markov chain, starting in state *i*, will be in state *j* after *n* steps.
We now consider the long-term behavior of a Markov chain when it starts in a state chosen by a probability distribution on the set of states, which we will call a probability vector, denoted by *v*. This probability vector with *r* components is a row vector whose entries are non-negative and the sum of the components is equal to 1.
If *v* is a probability vector which represents the initial state of a Markov chain, then we think of the *i*th component of *v* as representing the probability that the chain starts in state *i*. This is usually given as an initial probability vector.
It is easy to see that the probability that the chain is in state *i* after *n* steps is the *i*th entry in the vector

$$v^{(n)} = vP^n.$$

When *n* is large enough, the transition probabilities stabilize, so that the probability that the system is found in a given state after many steps does not depend on the state in which it began. These probabilities are called stationary probabilities:

$$\pi_j = \lim_{n\to\infty} p_{ij}^{(n)}$$

The vector π_j is a strictly positive probability vector (the components are all positive and their sum is equal to 1).

We can find the limiting vector π_j (also called steady state vector) from the following equations system:

$$\pi_j = \sum_{i=1}^{r} \pi_i p_{ij} \ , \ j = 1,...,r$$

$$\sum_{j=1}^{r} \pi_j = 1$$

where *r* is the total number of Markov chain states. If the equations are solved, we obtain unique solution. Stationary probabilities are an interesting characteristic of a system which can be modelled by a Markov chain because it allows us to know the percentage of time that the system is in each state.

Should be considered that the Markov chains model is a probabilistic technique, it does not provide a recommended decision.

The mean first passage times are another interesting long-term property in a Markov chain because they inform us about the steps that must be taken on average to move from one state to another.

Consider the mean first passage time from *i* to *j* and assume that $i \neq j$, $i, j \in S$. This may be computed as follows: take the expected number of steps required given the outcome of the first step, multiply by the probability that this outcome occurs, and then add them up. If the first step is to *j*, the expected number of steps required is 1; if it is to some other state *k* ($k \in S \setminus \{j\}$), the expected number of steps required is μ_{kj} plus 1 for the step already taken. Thus, the μ_{ij} value can be determined as follows:

$$\mu_{ij} = p_{ij} + \sum_{k\neq j} p_{ik}(\mu_{kj} + 1)$$

and if we used that $p_{ij} + \sum_{k\neq j} p_{ik} = 1$, then

$$\mu_{ij} = 1 + \sum_{k\neq j} p_{ik}\mu_{kj} = 1 + \sum_{k\in S} p_{ik}\mu_{kj} - p_{ij}\mu_{jj} \ , \ \forall i, j \in S .$$

To calculate μ_{ij} we realise that it is necessary to know μ_{kj}, so equations are added up until an equations system is formed which suffices to calculate the first passage time from *i* to *j*, and some others. Usually these calculations are made with the help of computer programs. The theory presented above was adopted in the empirical study of this paper.

3. Research Methodology

Our research is an empirical one, based on the experience of some financial economic analysts of a commercial bank, considering that the data was provided by them. In this study we used Matlab for calculations, which is an interactive program for numerical computation and data visualization. Also, for calculations, was used Microsoft Excel.

4. The empirical research

Further on we tried to model the annual evolution of a set of 10 financial products by means of a Markov chain. The 10 financial products which the bank offers to individuals

and companies are: personal loan, car loan, mortgage / real estate loan, refinancing credit, deposits, credit card, debit card, business card, Gold card, current account and attached services. We have classified these financial products into three categories:

- 1 product is considered appealing: highly profitable in the short term, but uncertain in the mid and long terms.
- 7 products are considered secure: mean estimated profitability for the short, mid and long terms.
- 2 products are considered insecure: their profitability varies, even in the short term.

We estimates that an appealing product still has the same probability of remaining appealing the next year or becomes a secure or an insecure product. Conversely, the secure product becomes an appealing one with a 0.25 probability, while its probability of remaining secure is 0.5. Insecure products have a 0.1 probability of being considered secure products and of 0.8 of still being considered insecure products.
Knowing the dates we can establish the initial transition probability matrix. The state space of the chain is $S = \{S_1, S_2, S_3\}$, where S_1 represents appealing products, S_2 represents secure products, S_3 represents insecure products.

Table 1: The transition probability matrix

	S_1	S_2	S_3
S_1	1/3	1/3	1/3
S_2	0.25	0.5	0.25
S_3	0.1	0.1	0.8

First we want to find the mean recurrence times for each state of the Markov chain.
Using Matlab, the expected first passage times are:

Table 2: The expected first passage time

	S_1	S_2	S_3
S_1	5.67	5.33	3.33
S_2	6	4.25	3.67
S_3	8	7.67	1.7

Source: author's calculation

After calculations, we find that a mean of 5.67 years is expected for an appealing product to be once again considered appealing, 4.25 years is needed for a secure product to be once again considered secure, and a time of 1.7 years is required for an insecure product to be once again considered insecure. The average time that must pass for an appealing product to become a secure product is 5.33 years, and to become an insecure product is 3.33 years.
As the Markov chain is finite and ergodic, it can be concluded that a stationary distribution exists. To calculate it, the following equations system is considered:

$$\pi_1 = \frac{1}{3}\pi_1 + \frac{1}{3}\pi_2 + \frac{1}{3}\pi_3$$

$$\pi_2 = 0.25\pi_1 + 0.5\pi_2 + 0.25\pi_3$$

$$\pi_3 = 0.1\pi_1 + 0.1\pi_2 + 0.8\pi_3$$

$$\pi_1 + \pi_2 + \pi_3 = 1$$

By solving the linear equations system, the following stationary transition probabilities are obtained:

$$\pi_1 = 0.1765$$

$$\pi_2 = 0.2353$$

$$\pi_3 = 0.5882$$

The probability of an appealing product in the long term is 17.65%, and for a secure product it is 23.53%. If we want to know how many products will be in the long term, by considering the initial distribution, then we found the following:

$$\pi_1 = 0.1765 \rightarrow 10 \bullet \pi_1 = 1.765$$

$$\pi_2 = 0.2353 \rightarrow 10 \bullet \pi_2 = 2.353$$

$$\pi_3 = 0.5882 \rightarrow 10 \bullet \pi_3 = 5.882$$

In the long term, there are less secure products, but on the other hand there are more insecure ones. The number of appealing products almost remained unchanged.
Next, we consider the two-step transition probability matrix.

Table 3: The two-step transition probability matrix

	S_1	S_2	S_3
S_1	0.2278	0.3111	0.4611
S_2	0.2333	0.3583	0.4083
S_3	0.1383	0.1633	0.6983

Source: author's calculation

From the two-step transition probability matrix we can observe the probabilities after 2 years. The probability that an appealing product continues to be appealing after 2 years is 22.78%. After 2 years the probability that an appealing product, respectively a secure product becomes an insecure product show an increasing tendency, 46.11%, respectively 40.83%. After 2 years the probability that an appealing product becomes a secure product show a decreasing tendency, 31.11%, respectively an insecure product becomes a secure product show an increasing tendency, 16.33%.
We present below the evolution of the three financial products for 14 years.

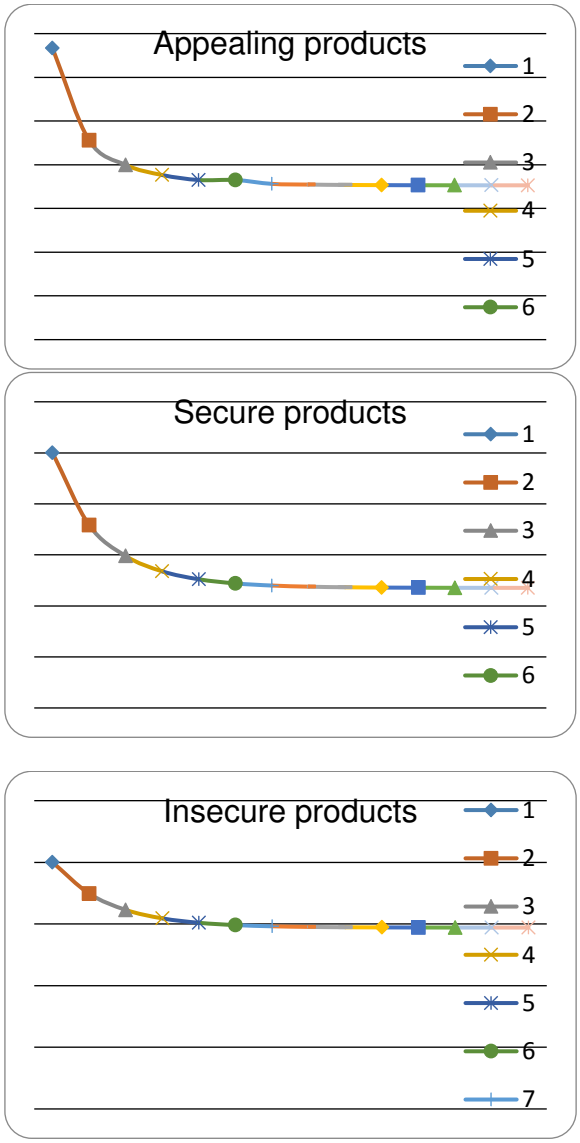


Figure 1: The evolution of the three financial products (for 14 years)
Source: made by the author

The probability of an appealing product in the long term decreases from 33.33% to 17.65%, and for a secure product it decreases from 50% to 23.53%, and for an insecure product it decreases from 80% to 58.82%.

5. Conclusions

In this study we showed that the Markov chain model can be used to model the annual evolution of some financial products. We answered a few important questions by finding the expected first passage times, the stationary transition probabilities, the two-step transition probability matrix.

The process what we modeled in this study was stationary. In case of stationary time series the use of Markov chain is simpler, furthermore, is more accurate and efficient as well. We also supposed that the transition probabilities do not change over time and the number of states is stable over time.

Markov chain model provides probabilistic information about a decision situation that can aid the decision maker in making a decision.

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