

A THEORETICAL APPROACH OF THE CONCEPT OF INNOVATION

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Abstract

The definition of innovation has been an area of interest both for researchers and for different industries. It is considered that the way the innovation has been defined within an organization will further determine which activities will take place within the company and which will be outsourced. Scientists and different industries used a different approach from many perspectives regarding the definition of innovation, including radical or incremental changes in products, processes and markets. Defining innovation determines the degree and nature of innovation in a particular organization. Innovation, as a result of the innovation process is strongly influenced by how organizations define the concept of innovation. This fact highlights a number of critical implications for organizations and creates a new order for the management of innovation.

In order to build an organization able to carry on its activity on long term, it is important to understand the key role of soft part (defining and measuring) of the organization within the innovation process. The

innovation process is very complex and multidimensional since many factors interact to make possible the emergence of this process.

Generally, organizations which dispose of the necessary resources, a strong motivation to innovate and an organizational climate that allows and encourages the emergence of innovative ideas, are exactly those which will innovate quickly and successfully.

The ability to innovate is represented by the ability to continuously transform knowledge and ideas into new products, processes and systems, to the benefit of both the organization and the shareholders.

This paper is intended to offer an analysis of the concept of innovation, considering it as sole alternative regarding the organizations' survival and maintenance of competitiveness.

Key words: innovation, competition, technological development, know-how

1. The concept of innovation

The ability to innovate was always one factor that contributed to the success of an organization. Organizations that dispose of the necessary resources, of a powerful motivation to innovate and of an organizational climate that would allow and encourage innovative ideas, are exactly those which will innovate quickly and successfully. The capacity to innovate represents therefore the ability of continuously making knowledge and ideas

into new products, processes and systems, both in the benefit of the organization and of the shareholders.

1.1 Defining innovation

The ability to develop new ideas and innovation has become a priority for many organizations. Intense global competition and technological development have made innovation be a source of competitive advantage.

Research on innovation has addressed a number of ways, such as using levels of innovation in individuals, teams / projects or organizations (Drucker, 1999), or by the intensity of innovation (Hollenstein, 1996).

Table 1: Defining innovation

Author	Definition
Joseph Schumpeter (1930)	• Introducing a new product or modifications brought to an existing product; • A new process of innovation in an industry; • The discovery of a new market; • Developing new sources of supply with raw materials; • Other changes in the organization.
Peter Druker (1954)	One of the two basic functions of an organization.
Howard and Sheth (1969)	Any new element brought to the buyer, whether or not new to the organization.

Mohr (1969)	The degree to which specific new changes are implemented in an organization.
Damanpour and Evan (1984)	Broad utility concept defined in various ways to reflect a specific requirement and characteristic of a particular study.
Kenneth Simmonds (1986)	Innovations are new ideas that consist of: new products and services, new use of existing products, new markets for existing products or new marketing methods.
Kenneth Simmonds (1986)	Basic creative process.
Damanpour (1991)	Development and adoption of new ideas by a firm.
Davenport (1991)	Complete a task development in a radically new way.
Evans (1991)	The ability to discover new relationships, of seeing things from new perspectives and to form new combinations from existing concepts.
Covin și Slevin (1991), Lumpkin and Dess (1996), Knox (2002)	Innovation can be defined as a process that provides added value and a degree of novelty to the organization, suppliers and customers, developing new procedures, solutions, products and services and new ways of marketing.
Business Council Australia (1993)	Adoption of new or significantly improved elements to create added value to the organization directly or indirectly for its customers.
Henderson and Lentz (1995)	Implementation of innovative ideas.
Nohria and Gulati (1996)	Any policy, structure, method, process, product or market opportunity that the manager of a working business unit should perceive as new.
Rogers (1998)	Involves both knowledge creation and diffusion of existing knowledge.
The European Commission Green (1999)	Successful production, assimilation and exploitation of novelty in the economic or social environment.
Boer and During (2001)	Creating a new association (combination) product-market-technology-organization.

The definition of innovation has been an area of interest both for researchers and for different industries. It is considered that the way the innovation has been defined within an organization will determine what activities will take place within the company and those that will be outsourced. Scientists and industry used a different approach from many perspectives regarding the definition of innovation, including radical or incremental changes in products, processes and markets.

The definition given to innovation determines the degree and nature of innovation in a particular organization. Innovation, as a result of the innovation process is strongly affected by how organizations define the concept of innovation. This highlights a number of critical implications for organizations and creates a new order for management innovation.

The terms "revolutionary", "disruptive", "irregular" or "discovery" (Freeman 1974, Garcia and Calantone 2002, Tushman and Anderson 1986) define innovation in terms of effects rather than in terms of its attributes.

1.2. Characteristics of innovation

Some features of innovation vary according to the organization considered, as some organizational characteristics vary depending on the type of innovation considered. These features are called secondary characteristics of innovation (Downs and Mohr, 1976).

Compatibility is a great example because the same innovation may vary significantly in terms of suitability for different organizations (Meyer and Goes, 1988; Ramiller, 1994). Complexity, the relative advantage or the costs are a few characteristics that can vary significantly from one organization to another.

Primary characteristics of innovation are those that do not change from one organization to another and are closely related to the industrial context in which innovation occurs.

Other authors (Damanpour, 1991; Dewar and Dutton, 1986) have defined other features of innovation such as: the magnitude and its effects on firms' competencies, seeking to explore the differences between incremental and radical innovation.

Tushman and Anderson (1986) identify another characteristic of innovation, namely to be the factor intensifying or destroying the competence. An innovation that stimulates organizational skills leads towards improving these skills and the know-how of the organization. Moreover, an innovation that inhibits the manifestation of skills has a negative effect on these items. This feature is rooted in the particularities of each organization. Any innovation can therefore be an incentive for a company and a hindrance for another.

1.3. Innovation typology

In the literature on innovation Daft (1978), Kimberly and Evanisko (1981) and Damanpour (1987) made the distinction between administrative and technical innovations. Dewar and Dutton (1986), Ettlie, Bridges and O'Keefe (1984), and North and Tucker (1987) highlight the difference between radical and incremental innovation. Marino (1982) and Zmud (1982) separated the initiation and implementation stages of innovation adoption process.

As regards the typology of innovations, Damanpour (1991) shows three pairs of types of innovation: administrative innovation - technical innovation, process innovation - product innovation and radical innovation - incremental innovation. **The technical innovations** refer to products, services and technologies in the production process. They relate to basic activities of an organization and focus on product or process (Damanpour and Evan, 1984, Knight, 1967). This type of innovation is facilitated by a high level of professionalism, low formalization and low centralization. **The administrative innovations** involve organizational structure and administrative processes. These innovations are indirectly related to basic activities of the organization and more directly to the management of those activities (Damanpour and Evan, 1984, Kimberly and Evanisko, 1981, Knight, 1967). Administrative innovations are facilitated by low levels of professionalism, high formalization and high centralization. **Product innovations** are represented by the new products or services introduced to meet the needs of the market. Such innovations are reflected in new products or services on the market to the benefit of customers (Knight, 1967, Utterback and Abernathy, 1975). **Process innovations** are new elements introduced in the various processes carried out at the level of the organization. The adoption of product innovations and the process are different in various stages of the organization development (Knight, 1967, Utterback and Abernathy, 1975). **Radical innovations** are represented by the fundamental re-conceptualizing of a business (Markides, 1998). This type of innovation can be approached on three levels: product (new ideas or technology), process (new methods of product and services delivery to consumers) and the combination of the two levels mentioned above (Tushman and Nadler, 1986). **The incremental**

innovation refers to improving products, services and the existing processes (Leonard and Rayport, 1997).

The architectural innovation (Henderson, Clark, 1990) is the kind of innovation that changes only the architecture of a product without influencing its components. The distinction between the product as a system and the product as a set of components challenges the idea that successful development of a product requires the use of two types of knowledge: about the components of a product and the product architecture, i.e. how those components are integrated and linked to form a coherent whole (Henderson, Clark, 1990). The essence of the architectural innovation is the reconfiguration of the existing system by integrating existing components in a new way so that to form a coherent whole.

Another classification of innovation is given by Thompson (2004): creative innovation – adoptive innovation. **Creative innovation** refers to the ability of the organization to implement and carry out technological innovation through its own system, usually materializing in new products or services. **Adoptive innovation**, on the other hand, refers to the ability to use new ideas from outside the organization, adapting those ideas to implement change in the management system of the organization or in the relationship between the system's components. An adoptive approach to innovation is addressed mainly to areas such as strategy or management by processes leading to new strategies, to a new company image or to new organizational structures.

2. Organizational innovation

Many existing research on the determinants of innovation aimed at identifying specific characteristics of the firm that might have impact on the process of innovation and / or environmental impact (Capon et al., 1992, Fritz, 1989; Kraft, 1989, Wolfe, 1994). Studies have revealed structural factors specific to large firms (Damanpour, 1988, 1991, Kim, 1980, Kimberly and Evanisko, 1981). Few studies have considered the effects of strategic orientation, learning and flexibility (perceived as advantages of SMEs).

The internal and external factors can have a direct impact on the organizational innovation by the number of innovations adopted. Internal factors - market orientation, learning and technology policy - are designed to enhance a firm's innovative behavior. External factors (industry concentration and barriers to entry) directly affect the organization's attitude towards innovation or by inhibiting or stimulating related work (Salavou, Baltas, Lioucas, 2004).

The organizational innovation is a one-dimensional phenomenon. It highlights the trend of companies to initiate and / or implement various types of innovation: technological, administrative, product and process. This

concept can be viewed from different perspectives within the organizational framework - technological perspective, behavioral perspective and in the light of the product (Salavou, Baltas, Lioucas, 2004).

In the literature in the field on innovation has shown the link between strategic orientation - market orientation, orientation towards learning and towards technology policy - and organizational innovation.

According to Kohli and Jaworski's (1996), innovation has been lacking from the models related to market orientation. Han et al. (1998) argues that the literature on market orientation has relatively recently begun to acknowledge the effects on innovation. Market-oriented firms are more innovative because they are more responsive to changes occurring in customers' needs (Narver and Slater, 1990). A strong intensity of market orientation reflects a thorough understanding of customers' needs and of the competitive situation (Tsai and Wensley, 2000). In the same way, Nerver and Slater (1994) show that a company led by the market can anticipate the developing needs and may respond by marketing innovative products. Persistence in meeting the

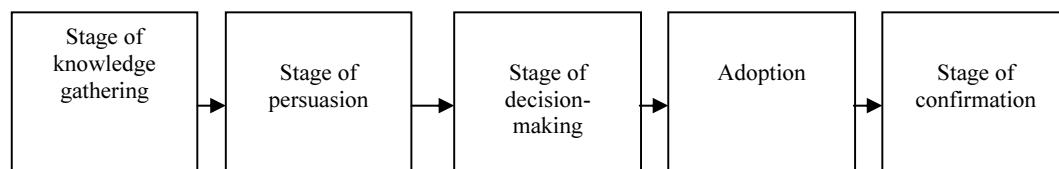
needs and desires of consumers, which are in constant change, is a source of innovation.

Economic progress continues to be strongly influenced by the development and adoption of innovations by organizations. Research on the implementation and diffusion of innovations is done at the macroeconomic level, being based on links established between various entities. Some authors support the idea that the diffusion and implementation of an innovation are strongly interconnected (Hislop, 1997).

"The process of diffusion involves the spread of innovation among its prospective followers" (Drury and Farhoomand, 1999). The way in which the respective innovation is initially perceived influences the achievement of diffusion, the search for information and the training for innovation. The organizational structure also contains dimensions that affect the likelihood of innovation.

Different stages of adoption are prior to the adoption itself and the subsequent acceptance requires other steps as well, such as testing and modification / adaptation. These phases are influenced by different sets of variables.

Figure no.1: The stages of the process of adopting innovation



Adaptation after Drury and Farhoomand (1999)

In the initial stage of the process of adoption, beliefs and perceptions are formed which can then lead to a favorable or unfavorable attitude in the persuasion stage, respectively to a behavioral intention in the stage of decision-making. In the confirmation stage, the decision-taker adopts a conduct that could be followed by changes in attitude due to trying to reduce the cognitive dissonance effect caused by the adoption of innovation (Drury and Farhoomand, 1999).

In the confirmation stage, if earlier expectations do not match the economic, organizational and behavioral level of the actual outcomes of innovation, the decision-maker will try to eliminate the dissonance by changing his/her attitude, actions or even knowledge. Also in this stage innovation may be slightly amended to comply with the needs and with the organizational structure, respectively, the organization's structure may change depending on the innovation adopted (Drury and Farhoomand, 1999).

The process of adopting innovations, with its five stages, was an important element in the studies regarding innovation diffusion and implementation. The chronological order of the innovation process is also important.

3. Marketing as innovation

"A paradigm is a set of concepts and constructions that emerge from the focus on a fundamental attribute of a discipline and around which a significant body of theory is elaborated, with proposals subject to testing, assumptions and may laws, which are not covered by another paradigm" (Harvey, 1982).

Marketing can be viewed as an organized rational innovation, a function concerned with identifying opportunities for change, inducing the action required and monitoring the change once induced (Simmonds, 1986). This point of view establishes innovation as the eighth paradigm of marketing, the only paradigm that focuses on the marketing function, what exactly the marketer does to undergo changes. The seven paradigms summarized by Kenneth Simmonds (1986) are: market, system, customer satisfaction, choice, exchange, conflict and influence. Without a paradigm of innovation, marketing will appear as a function separated from innovation (Drucker, 1985).

The central role of innovation in marketing has been recognized since 1965 by Wroe Alderson. He considered that innovation in marketing is the direct expression of competition on the market: to turn out improved products and improve the methods to market them.

To accept innovation as a paradigm, there are three basic arguments, namely:

a. Marketing is a multi-paradigm discipline, made up of theories and concepts bounded by a collection of

paradigms, none of them covering all the concepts included in marketing.

b. Each basic paradigm describes marketing, starting from a concern for an attribute. The understanding achieved is derived from the power of concepts and of theory gained by focusing on that attribute.

c. While innovation is not recognized as a paradigm in the marketing theory, the understanding that it can give to the process of creating continuous change is not given by any of the other seven known paradigms (Simmonds, 1986).

The innovation paradigm brings together knowledge of significant implications on marketing management.

Conclusions

The field of innovation is very broad. The ability to develop new ideas and innovations has become a priority for many organizations. Intense global competition and technological development have made innovation be a source of competitive advantage.

The ability of a company to put forward an idea of a higher value can be a source of competitive advantage and represents the reason for which a customer may opt for one company to the disadvantage of another.

The companies that can create competitive advantage are able to improve their activity by the gained experience, by the acquired knowledge that, over time, may be the sources of distinctive competences on the market.

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