



A report on articles that study the impacts of
companies' ownership structure

Xialiang Yao 2000533 | Applied Quantitative Business Research | 4th December 2020

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Abstract

Ownership structure is the foundation of business operating. How the share of each corporation distributed directly affects the way how the business is managed. Therefore, it is becoming a popular topic in corporate governance. The purpose of this report is to do a comparison analysis on the quantitative research methods that two articles used to research on ownership structure. This report will critically evaluate the context of the two articles focusing on research designs and methodologies were used. It will be include how the two articles propose their hypothesis, sampling, identifying variables, and the specific research methods they used to test hypothesis and get their results. The report finds that even though the issues that the two articles addressed were quite similar, researchers can get to their results by designing different research approach and adapting different methods, and finally get consistent result.

1.Introduction

The ownership of a business indicates the relationship between that business and its investors, also in many cases, its creators. Ownership structure is a very hot topic in corporate governance that attracts interests from many scholars, business owners, and even professional investors to do research. They are trying to find out that can ownership structure be used as a characteristic of a company, so that they can predict the future performance and avoid potential risks. The aim of this report is to compare the quantitative methods that are used by these two articles on ownership structure:

1. *'The Impact of Ownership Structure and Dividends on Firm's Performance: Evidence from Manufacturing Companies Listed on the Amman Stock Exchange';*
2. *'A Note on Board Characteristics, Ownership Structure and Default Risk in Taiwan'.*

The first article was written by Al Sa'eed and Mo'taz Amin, and published on 'Australasian Accounting Business & Finance Journal' in 2018. The second research was done by Shu-Mei Chiang, Huimin Chung, Chien-Ming Huang and Robert Faff, and published on 'Accounting and Finance' in 2015. After a contrast on the research design and methodologies of the two research, this report will also evaluate them from the philosophical underpinnings of two different sets of research steps. Further more, the strengths and limitations of the quantitative researches will be discussed by the report, and to see if there is any alternative can be suggested to make any difference.

2.rationale for choice of articles

The ownership of a business is a crucial aspect of every company. It has direct influence on the way how the business are being managed. Therefore, ownership structure is a very hot research topic of corporate governance. As listed companies on the security market are being required to provide more standardized financial

information to the public regularly, there are a number of researchers are willing to do study on the impacts of ownership structure on public companies' performance. Moreover, because of the share of listed firms are holding by general public, and these public investors are usually in a weak position in obtaining the information of companies that they invested, according to Garkaz and Nakhodchari (2014). This makes the research on impacts of shareholding structure necessary and even more valuable.

In the latest years, the main direction of studies on the impact of ownership structure is that if there is any relationship between ownership structure choice and company performances. In these researches ownership structures are classified by different ways, depending on the diverse purposes of researches. For example, there are concentrated ownership structure according to Singal and Singal (2011); balanced ownership structure (Gunasekarage, Hess and Hu, 2007). And there are stock ownership incentive if the managerial ownership is the one being studied (Quinn, 2018). As the concept of these two articles concerned, they divided ownership structure by the shareholding party, i.e. they are looking at who is holding the share, and what will be the influence, if they hold a bigger share. Therefore, they have variables like management ownership, institutional ownership, and director ownership etc.

However, shareholding structure will not be the only thing that this report discuss. The reason is that ownership structure cannot be exist alone. For instance, It might have impact on how the board is going to compensate themselves and the company's investors. Thus dividend payment would also be discussed and examined by both articles as an important variable.

The phrase '*company's performance*' is an overall and comprehensive indicator that describes the whole operating result of a business in a period of time. Therefore, it difficult to be measured by using a single number or an established standard measurement. Different ways are used by different people to serve different purposes.

For instance, managers might watch the growth of the business and market share closely as the performance of firm; but the potential investors that outside of the firm may follow stock price and the net profit of each fiscal period, when they trying to assess the company's performance. For financial practitioners, they might use a series of numbers like return on assets (ROA), return on equity (ROE), net profit after-tax margin (NPM) etc. to have an overview on the performance of a company, which are the indicators these two studies used.

3. Discussion on research design and methodology

Both of these two researches are relatively new. As it indicated in the titles, the objects of the two studies are both the listed companies on security market in two different regions, Amman and Taiwan. Other than the markets that they do researches in, there are still a few differences in the two studies that need to be pointed out ahead to have a better serve to the purpose of this report.

3.1 Eliminate Disturbing Terms - Before Discussion

Firstly, although both of the research subjects are mainly about the impact of ownership structure, the affected objects of Sa'eed and Amin's research is companies performance, while the other group studied on the impact on default risk.

Secondly, Sa'eed and Amin's study is focused on manufacturing companies that listed on Amman Stock Exchange. Their study was based on tracking and observing these 67 companies' financial data from 2011 to 2015. On the other hand, the research conducted by Chiang, Chung, Huang and Faff, did not limit its research objects into one specific industry. In contrast, they selected the sample from the whole Taiwan Stock Exchange in between 2001 and 2009. However, the article did mention the criterion that the samples were being chosen, which will be mentioned in the later part

of this report.

With all these differences, it might affect the result that the two researches get. However, considering every market has its own specialties and limitations in different times, this report will only focus on the quantitative research itself.

3.2 Research Design

Although the subjects that the two articles studied are similar in general, the research design and the methodologies that they used to prove their hypothesis are quite different from each other. As research design is the foundation of a modern quantitative study, it shows the comprehensive understanding that the research group has on the fundamental theory of their subject. The research design of the two articles will be discussed first from the following three aspects:

3.2.1 Proposing Hypothesis

Article 1:

After a short introduction of the research subject, Sa'eed and Amin defined four problems that need to be addressed in the study. From these problems, they developed four null hypotheses correspondingly:

H01: There is no any impact of ownership structure on the performance of Jordanian manufacturing companies listed on the Amman Stock Exchange

H02: There is no any impact of Dividends on the performance of Jordanian manufacturing companies listed on the Amman Stock Exchange

H03: There aren't any performance measures defined as a proxy for a firm's performance.

H04: There is no any impact of control variables on the performance of Jordanian manufacturing companies listed on the Amman Stock Exchange."

It can be seen clearly that Sa'eed and Amin have proposed a set of typical Null hypothesis. If the test result prove to be consistent with their assumptions, these four null hypothesis would be rejected.

Article 2:

Regarding the specialty of Taiwanese companies, many companies have their majority share holding by their original families and they associates. Chiang *et al.* had classified the ownership structure of listed companies into four categories: *institutional ownership, large shareholder ownership, director ownership, and managerial ownership*. As in the percentage that are holding by these four different parties in one firm. To examine the impact of these four different kind of ownership have on default risk, they developed four hypothesis accordingly:

"H1: There is a negative relation between institutional ownership and the probability of a firm defaulting.

H2: There is a positive relation between large stock holdings and the probability of a firm defaulting.

H3: There is a positive relation between director ownership and the probability of a firm defaulting.

H4: There is a negative relationship between managerial ownership and the probability of a firm defaulting."

The article also have tested the impact of board size and board compensation have on default. Which are:

"H5: There is a positive relation between board size and the probability of a firm defaulting.

H6: There is a positive relationship between board compensation and the probability of a firm defaulting."

In this step, it can be identified that there are three major differences that the two studies have. Firstly, compare with the first article, it can be seen that the way of these six hypothesis being proposed is different. These are not null hypothesis are wait to be rejected, instead, they are original hypothesis are expected to be proved correct. These

two different ways of hypothesis proposing would affect the later proving processes.

Secondly, the two groups have different ways to look at the shareholding structure. One just simply divided shareholding structure into concentrated and management ownership, yet the other group has identified more types like institutional ownership and director ownership. This would be discussed further in the part 3.2.3.

Finally, not like Chiang *et al.* focusing on the impacts on default risk of ownership structure and board characteristic have, Sa'eed and Amin also keen to test if there is a proxy for firm performance.

3.2.2 Sampling

After hypothesis have been proposed, the next step that cannot be neglected is sampling. To some extent, this step is simpler if the companies that are being studied are listed on security market. While the financial information and important events are required to released to the public, researchers only need to make decisions on which firm they want to choose, and most of the data can be found on the internet. If there is no special requirement, the steps of questionnaire design and feedback collecting can be skipped.

As it has been mentioned, Sa'eed and Amin were focusing on all 67 listed firms in manufacturing industry in Jordan, to have a more accurate result that reflect on the influences. They collected relevant operating and financial data of these firms from 2011 to 2015.

While Chiang *et al.* did not just focus their research on firms that in one specific area. Instead, they selected companies from the whole Taiwan Security Exchange which listed on Taiwan Economic Journal, in the years between 1998 and 2009. To meet their goal with a better study, they set up a series criterion to make the data more comparable. The first one is that companies that selected should have a fiscal year that

ends in December. Secondly, to have better observation on the volatility of business performance, they applied a four year rolling window method to calculate the standard deviation of ROA. Thus the valid data they can use should at least start from 2001, and end in 2009. Finally, corporations with missing figures in their annual financial reports should not be selected. This also means that firms that had their IPO in between 2001 and 2009 were not met this standard. Therefore, 438 companies were preserved in the research. The size of the sample were above 55 percent of the whole population.

Even though there is less information on how did Sa'eed and Amin selecte their samples, with the information that has already provided, it seems that the second group do have a well-considered and larger sample pool.

Even though most of the data that these two researches need were provided on annual financial reports, there is still one thing should be bearing in mind, which is to consider the authenticity of the financial statements of each firm. It would be considered to be more objective by readers to acknowledge the limitation of the data in the paper.

3.2.3 Identifying Variables

To exam the relationship between ownership structure and companies' performance, the variables in the study must be identified.

Aritle 1:

As it has mentioned earlier in the report, the performance of business might be measured in different ways. In Sa'eed and Amin's work, Tobin's Q, ROA, ROE and NPM were used to represent the performance of companies, as four dependable variables.

As for independent variables, the ownership structure has been divided into two

variables, management ownership (MO) and concentrated ownership (CO). Because of the unique of the Jordanian security market, the definition of CO according to the authors, was shares held by the five largest shareholders.

Besides of dependent and independent variables, Sa'eed and Amin has also identified four control variables. They are debt ratio, assets turnover, firm size and earnings per share. The reason that they are taken as control variables is that there were researches showed that these four aspects are affected by independent variables, i.e. ownership structure and dividend payment. However, there are also articles showing that debt ratio, assets turnover, firm size and EPS can be easily affected by other factors. Therefore, they are classified as control variables in experiment, and would be taken to do coefficient analysis with MO and CO.

Article 2:

As the predictability of business default was tested, this would be the most important variables. A KMV model was the one that used to estimate the default risk. Which was developed by Vassalou and Xing in 2004. This method measures the expected default frequency (EDF), and use it to represent the risk. There are three numbers would be used in the calculation: capital structure of the business, volatility of ROA, and value of current assets in the company.

Besides EDF, to test the impact of different kinds of ownership structures, there are INSTU, GOV, BIG, DIR and MAN. Which indicate the percentage of share that are holding by each party, namely, institutional investors, government, top 10 shareholders in the company, directors and managers. They were calculated by using these share of each party hold and divided by the total number of outstanding share.

To reflect the impact of board characteristics, directors' seats and salary (*DIR-Seat* and *DIR-Salary*) to represent board size and compensation.

Although Chiang *et al.* has identified only four different share holding parties that

might have impact on default risk when in the step of developing hypothesis. On an average level, the share hold by government are not extremely significant, less than 1.5 percent. Considering the impact of the government shareholders cannot be neglected, it needs to be identified as a control variable to have an overall test. Besides of government shareholding, there are other factors are in similar situation that should categorized as control variables according to Chiang *et al.*. They are the ratio of stock that pledged by directors (DIR-pledge), CEO duality (CEO-Dual), business annual performance (TOBINQ), ratio of interest and cash dividend payment on total assets (*CASH-Exp*), debt ratio (DEBT), firm risk (DEV), research and development expenditures (R&D), and finally the annual total assets (SIZE).

3.3 Methodology

3.3.1 Methodology of Article 1

The empirical analysis that sa'eed and Amin used to prove its hypothesis includes regression, ANOVA and coefficient analysis.

Before conducting the regression analysis, a multicollinearity test was taken, and the VIF indicated that there were no multicollinearity signs between independent variables. However, the process of and results of the multicollinearity test did not posted in the article. It is only described briefly in a short paragraph by the authors.

Later, the R square in regression analysis and the F value in ANOVA analysis had shown matching results that all the three independent variables have the highest correlation with ROA. This result means that when the performance of the company is measured by return on assets, both management ownership and concentrated ownership have positive affect on firm's performance.

Finally, the coefficient analysis of control variables with each dependent variables have done separately under management ownership structure and concentrated ownership structure. However, when choosing Tobin's Q to represent the performance, the results have shown that there were negative relation with management ownership, but a positive relation with concentrated ownership. As the evidence was clear, so the null hypothesis about ownership structure (H_{01} and H_{02}) have been rejected. As for H_{03} , among the four indicators that the research choose, the test before did show that ROA is a more relevant and stable with the companies performance. This result has been accepted by the authors, thus H_{03} has been rejected. The earlier test shows that there are significant negative relation between the control variables like debt ratio and return on assets, return on equity and net profit after-tax margin, which are the indicators that were selected to represent corporation performance. Therefore, eventually the last hypothesis H_{04} has been also rejected.

3.3.2 Methodology of Article 2

Before conducting empirical research, the article showed a summarized descriptive statistic analysis of the full sample and sub-samples of. Apparently, the full sample included all the firms that meet the sampling criterion. In the sub-samples Chiang *et al.* have all these firms divided into high technology (high-tech) companies and conventional companies, so that the differences of these two kinds of firms' data can be told clearer. It can be seen clearly that the average default risk in the full sample is 0.01. The figures showed in two sub-samples are 0.012 and 0.015, with conventional firms' risk is 0.003 higher than it of high-tech firms.

The researchers also did a Wilcoxon test that are showing in the p value raw in the same table. Which also indicated that the possible risk of default and ownership structure for conventional companies in Taiwan were significantly higher than high-tech companies.

Considering that there was a possible existence of endogeneity among the three elements. Chiang *et al.* decided to dynamic panel data with generalized method of moments (GMM) to deal with the issue. Similarly, the authors also have done the test with full sample and sub-sample on this stage, so that the differences in between could be observed.

As the results showed in the full sample test, there are five out of six hypothesis can be proved to be correct. That is there are negative relation between institutional and managerial shareholding and default risk; and the top ten shareholders' ownership, director ownership and board size do have positive impacts on firm defaulting. However, the result in the DIR-salary variable shows a significant negative impact. This result is not consistent with hypothesis 6. As for the other variables, the results in full sample suggest that there is no explanatory power of government, stock pledge ratio, CEO duality and board compensation have on firm defaulting.

On the sub-sample level, statistics shows that with a higher external investors participation (institutional and government shareholder), compare to conventional firms, high-tech companies might have more efficient corporate governance. Hence, the default risk of high-tech firms would be lower. Also there are signs of coefficients of large shareholders and directors indicate that there might be information asymmetry in both high-tech and conventional companies. But it may be solved by increasing the managerial shareholding for conventional companies, as suggested by the MAN variable. Finally, the significant negative relation might indicate that a higher default risk may caused by director compensation in those conventional firms.

3.3.3 Comparison on Methodologies

From the two sets of methodologies that used to prove their hypothesis, it can be seen that the two group have different ways to understand ownership structure and the ecosystem around it.

First of all, it is a standard procedure that Sa'eed and Amin has follow. Before doing a regression analysis, the issue of multicollinearity needs to be addressed (Alin, 2010). However, the other group have consider the endogeneity to use dynamic panel data with GMM (Wintoki, Linck and Netter, 2012). It seems two very different methods, but it reflects how the variables are treated by the researchers. If the variables are treated same way as explanatory variables, then the first method that Sa'eed and Amin applied can be used. However, if there are random error term are might be identified in the variables, then there is an endogeneity issue that needs to be addressed.

4. Conclusion and Recommendations

The purpose of this report is to contrast two quantitative research on ownership structure. One has examined the impacts of ownership structure had on companies' performance, and the other one had studied the relationship between ownership structure and default risk. In spite of the two articles are both about shareholding structures of public companies, and the sample they have chosen from are both listed companies in stock market of two region, two sets of entire different frameworks and research methods were applied to get to their results.

In conclusion, although the two articles started with different stiles to propose their hypothesis. They have both successfully address their problems by adapting different methods . However, there are some points of the two studies can be improved.

First, as the researched companies are public firms that listed on security market, the most of financial and operating data can be obtained from the companies financial statements and the internet. Therefore, the authenticity of the data can be discussed and analyzed to show the objectivity of the article.

Secondly, considering that Sa'eed and Amin has selected all 67 manufacturing corporations in Amman Security Exchange, as a sample pool, the size might be too

small. As the researchers and authors of the article, they might need to consider that if the sample can represent its population, the whole listed companies in Jordan or every manufacturing company in the country.

Finally, in the test running procedure, Sa'eed and Amin have done a test to detect signs of multicollinearity. However, the process of the test did not show in the paper, this might raise questions about the validity and reliability of the research. It may look better by providing the test result in the appendices.

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Appendices

Article 1: ‘The Impact of Ownership Structure and Dividends on Firm’s Performance: Evidence from Manufacturing Companies Listed on the Amman Stock Exchange’;

<https://search-proquest-com.ezproxy.uwtsd.ac.uk/docview/2159201690?accountid=130472&pq-origsite=primo>

Article 2: ‘A Note on Board Characteristics, Ownership Structure and Default Risk in Taiwan’.

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