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Corporate performance and the governance of board structure in Manufacturing and Real Estate. ----The evidence from China.

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Declaration

I hereby declare that this thesis is my own work and effort and that it has not been submitted anywhere for any award. Where other sources of information have been used, they have been duly acknowledged.

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Abstract

With the economic globalization development, corporate governance has become a key factor to enhance firms' core competitiveness, the establishment of a standardized, independent, structured and efficient board is a critical part for improving company profits. In this paper, the relevant data of 162 listed companies from manufacturing industry and 126 listed companies from real estate industry in China from 2015 to 2017 are taken as research samples and data sources. Using SPSS software for descriptive statistical analysis, starting from the three variables of the board structure elements, a detailed descriptive analysis of board governance factor variables was conducted, and an empirical analysis of these elements and company performance was conducted. The conclusion was drawn that the governance of the board has different influences on the real estate industry and the manufacturing industry.

Keywords: Board of directors; Company performance; Manufacturing industry; Real estate industry.

Table of Contents

Ⅰ Introduction

1.0Introduction

The board of directors is the core of the company's internal governance structure. It is an institution that collectively determines the company's business execution intentions. It is based on legislation and the trusteeship of shareholders. As an extreme manifestation of its exercise of power, the board of directors may replace the incompetent chief executive and other members of the management team. A competent board of directors is a signal that the company has a strong competitive advantage (Brown, 2015). They can ensure the continuity of corporate leadership, ensure the implementation of strategies that enable the company to be successful and maximize the wealth of shareholders by supporting a strong team of managers. Excellent board of directors must have its own significant common characteristics. Finding these commonalities through empirical analysis and promoting it in practice will inevitably greatly accelerate the process of reform of Chinese companies.

In recent years, the continuously evolving international financial crisis has had a deepening influence on world politics, economy, and security. These has also had a profound impact on China. Various factors such as the external political and economic environment, market conditions, regulatory systems, and internal corporate reforms have undergone tremendous changes in China (Zhang, 2015).

Previous research results have failed to accurately reflect the key issues of corporate governance of Chinese companies for recent years. It is necessary to collect and analyze data for recent year. This study will choose tow industries, one is manufacturing and other one is real estate. To analysis empirical find the effect of board. The comparison of listed companies as a sample helps analysis the influence of board and draws conclusions and recommendations on the correlation of performance of different industrial companies.

1.1 Background of study

The modern corporate system assigns significant functions to the board of directors and determines the importance of its status. Melkumov, Breit and Khoreva (2014) believed that the board of directors is not only has impact on the selection, evaluation, replacement and compensation level of the company's senior management, but also for the planning, decision-making and coordination of the company's major matters, major transactions and investments. Also has influence on overseeing the company's business operations, reviewing, approving the company's financial objectives, financial statements, and the auditing and accounting standards used. In short, as the operating center of the listed company, the board of directors has a heavy responsibility; as the agent of the owner and the actual participant in the major decision of the public company, the responsibility of the board of directors is important.

Scholars have conducted a lot of research on the relationship between the governance structure of the board of directors and the company's performance. Grindle(2016) summarized these different characters in three aspects: First, the board size and company performance; second, the external directors (independent directors) and company performance; third, the CEO duality and company performance. The overall conclusions of the study are that there is a correlation between the performance of the company and the governance structure of the board of directors. However, the conclusion is not the same as how the various structural characteristics of the board of directors affect the performance of different industries (Wang and Chen, 2016).

1.2 Problem statement

In China, the research on board governance is deepening with the development of China's securities market. Since the establishment of the Shanghai and Shenzhen stock exchanges in 1990, China's securities market has made remarkable progress.

By the end of December 2017, there were 3158 listed companies in China's securities market, with a total market value of about 34.534357 trillion yuan and 132.1143 million investors (Dongfang, 2017). Tuo (2016) has proved that China's securities market has played a very important role in improving the financing structure, optimizing the allocation of resources, promoting economic development.

However, there are still many defects in China's securities market, such as numerous speculators, lack of confidence in the market, weak external supervision, many financial fraud scandals, and different rights in the same stock. The lack of restraint and incentive mechanism for the managers, which harm the interests of shareholders. Many companies' failure to disclose operating and financial information at specified times and standards. Then stakeholders have question about: have directors done their jobs? Is our listed company's board of directors functioning properly and efficiently? Is the governing mechanism of the board of directors scientific and perfect?

1.3 Why choice these tow industries.

Empiric evidence such as Grindle‘s (2016) suggests that the relevance of the governance structure of the board of directors on the company's performance will have different effects in different industries, so this article selects two industries for research. Gao (2015) find that the governance structure of the board of directors has a greater impact on the secondary and tertiary industries. Therefore, this paper chooses a representative industry from secondary industry which is manufacturing industry and real estate industry from tertiary industry in china respectively.

Lin (2017) concluded that the manufacturing industry and real estate industry are major economy in China. The important pillar industries in China are related to all aspects of the national economy and social development. The rapid development of the real estate industry and manufacturing industry in recent years has made an indelible contribution to China’s economic development and has driven the development of other industries while also promoting the growth of the national economy. The size of the real estate industry companies is relatively large, and corporate governance efficiency is also very important. The manufacturing industry is a physical industry and a basic industry. It is also being named the backbone industry of China as a “factory of the world”.

What's more, manufacturing and real estate companies have relatively complete modern corporate organizational structure, governance structure, staffing, job distribution, and industrial chain, and have a strong representation. Hence, this paper will discuss whether the size and structure of the board of directors will have different effects on the performance of the companies in manufacturing industry and real estate industry.

1.4 Research Questions

The research questions for this study consist of the flowing: How did the board of director's structure affect the firm's profitability about manufacturing industry and real estate industry in China from 2015 to 2017?

1- Is there any significant relation between board size and company's performance in manufacturing industry and real estate industry?

2- Is there any significant relation between CEO duality and company's performance in manufacturing industry and real estate industry?

3- Is there any significant relation between the proportion of independent directors and company in manufacturing industry and real estate industry?

1.5 Research Objectives

The main purpose of this research is to study the impact of board of directors' structure and features on the performance of company within listed companies in China stock exchange in real estate industry and manufacturing industry and its secondary purposes are:

1) To study the size of board of directors' structure and features on company's performance within the manufacturing industry and real estate industry in China.

2) To examine the relation among CEO duality and company's performance within listed companies in China stock exchange of manufacturing industry and real estate industry.

3) To investigate the relation among the proportion of independent directors and company's performance within listed companies in China stock exchange of manufacturing industry and real estate industry.

1.6 Significant of study

In previous study, most researchers only analyse one industry, such as Chen(2011) conducted an empirical study, based on the financial data and corporate governance data of domestic insurance companies; Bai(2015), taking

120 pharmaceutical listed companies in China as an empirical study. It is found that the largest shareholder has a U-shaped relationship with the value of the company, and the ownership concentration has a positive impact on corporate performance. Those research didn't show the difference influence of board in different industries. This study will analysis tow industries (manufacturing industry and real estate industry) and make a comparative study to find out the relationship and different influence of board of directors. This paper can help the managers and other investors to more understanding on the way of working board of directors influence the company performance.

1.7 Summary

The remainder of the paper proceeds as follows. Chapter two reviews the related literature and develops hypotheses. Chapter three explains briefly the research methodology, and chapter four reports the results of the analyses of performance measures for the each of the attributes of the board structure. Finally, Chapter five concludes the paper.

II Literature review

2.0 Introduction

This chapter focus on the literature review of board of directors, which will be analyzed the relationship with financial performance of enterprise. Meanwhile, the review summaries of previous scholars, and provide the direction for this study.

2.1 Fundamental theories

Modern companies are characterized by the separation of ownership and control rights. There is an entrusted agency relationship between shareholders and managers. According to the contract theory, enterprises are essentially a set of contracts, which can be regarded as the connection of contractual relations between individuals, and because of the information asymmetry and the existence of transaction cost, the contract cannot be completed. Creditors, shareholders and managers are essentially principal-agent relationships. Meanwhile, the recent development of stakeholder theory is to take corporate governance as a system of checks and balances. Those theory all related with board of directors and can help this study better explanation the relationship between board of directors and company performance.

2.1.1 Agency theory

As long as the operator is not the full owner, there will be agency costs (Misra and Chakrabarty,2009). Due to the existence of information asymmetry, operators will usually run against the wishes of shareholders to maximize their own interests. This undoubtedly increases agency costs. Therefore, shareholders must establish a set of systems that supervise and control the business management and performance of the company.

The agency theory was mainly proposed by Coase (1993), Jensen and Meckling (1976), Fama and Jensen (1983), and was later expanded and developed by numerous economists and corporate governance experts. The agency theory is mainly an analysis framework proposed for the actualities of most listed companies in the United Kingdom and the United States in particular (Tollefson, 2017).

The United States, Britain and other countries, especially the majority of listed companies in the United States, have a distinctive feature — the dispersion of shareholdings. The direct consequence of the dispersion of equity is the separation of ownership and control. In the case of decentralized shareholdings or high separation of powers, the most prominent issue faced by listed companies is the conflict of interests between all shareholders and operators (Misra and Chakrabarty, 2009).

However, the major feature of the ownership structure of most listed companies in many countries and regions, including China, is not the dispersion of equity, but relatively concentrated or highly concentrated. Faccio and Lang (2002) analyzed 232 companies in 13 Western European countries and found that in addition to the dispersed ownership of companies in the United Kingdom and Ireland, the shares of companies in continental European countries are generally more concentrated.

Claessens Djankow and Lang (2002) analyzed 2980 listed companies in 9 East Asian countries and regions and found that except for the relatively concentrated ownership of Japanese companies, two-thirds of the companies in other East Asian countries and regions have a single controlling shareholder.The fact that most of China’s listed companies have high concentration of equity and that state-owned shares are “only one big” is a well-known fact. The degree of dispersion and concentration of listed company's equity determines the outstanding issues to be solved by corporate governance.

Rajan (1992), Weinstein and Yafeh (1994), Franks and Mayer (1994) explained the situation of large shareholders of listed companies in Germany and Japan invading the interests of small and medium shareholders from both theoretical and empirical perspectives. The listed companies with relatively concentrated equity in the country obviously have conflicts of interests between large shareholders and small and medium shareholders. However, the conflicts of interest between controlling shareholders or major shareholders and small and medium shareholders in listed companies in developing countries or countries with unsound laws are even more serious.

2.1.2 Contract theory

The research from Hesselink (2015) conducted that corporate governance is essentially a contractual relationship. All parties of corporate governance are connected by contractual ties. The investor authorizes the board of directors to operate the enterprise, which is a form of trust and trust contract to conclude the responsibility of both parties and establish a contractual relationship. The agent shall exercise the legal person's power of agency within the scope authorized by the principal. The board of supervisors exercises the supervisory power according to the articles of association, the board of directors and the managers accept the supervision according to the relevant contract, and each side has a clear margin of power (Winterton, 2013). These contracts take the form of company law, articles of association and related employment contracts, letters of attorney, shares the decision of the East Council, the Board of Directors.

These contracts govern the transactions that companies make, making them less expensive than the transaction costs incurred by the market. Because these contracts cannot be complete contracts, that is, they can anticipate all kinds of possible circumstances in advance and make clear stipulations on the interests of the parties' behavior and the penalty of breach of contract under all kinds of circumstances. Lee (2014) argues that the corporate governance arrangement, based on the Company Law and the Company's Articles of Association, which is in essence the relationship between the various stakeholders of the company and governs. The transaction between the stakeholders and governs is to realize the comparative advantage of saving transaction cost.

2.1.3 Stakeholder theory

The modern enterprise theory holds that the company is actually a link formed by different stakeholders through contracts and forms different rights according to the contract (Cots, 2011). According to Eskerod, Huemann and Ringhofer (2015), stakeholder refers to a group or individual with an interest in the enterprise's production and operation behavior and consequences. Each stakeholder group wants organizations to give them priority in making strategic decisions in order to achieve their goals, but the interests of these stakeholders and the focus of their concerns vary considerably and often contradictory. Companies have to weigh their dependence on stakeholders, giving priority to certain types of stakeholders. The governance mode of "shareholder priority" is the result of this.

In order to reach agreement between social expectation and enterprise behavior, the most direct way is through government regulation or social regulation. However, Enyinna (2014) believes that the effect of this method is unsatisfactory, on the one hand because of the high cost of regulation, on the other hand, because of the feasibility or limited effect of regulation. In view of the invalidation of social regulation methods, it is proposed that government regulation or social regulation should be built into the corporate governance structure and that internal regulation should replace external regulation.

This kind of organization system method is to reorganize the enterprise's governance structure. It is precisely because of the further enrichment of the concept of corporate governance that the requirements have emerged stakeholders to participate in the voice of corporate governance (Rampling, 2012).

In some countries, stakeholder governance structure has been introduced in practice, which makes corporate behavior more in line with the requirements of social development.

2.2 Hypothesis and development

2.2.1 Hypothesis related board size

Foreign scholars have different views on this factor: First, the scale of the board of directors is positively related to company performance. According to the research shows that board size is positively correlated with company performance (Payne, 2004). They believe that the more board members there are, the wider the education, technology, and industry background, and therefore can provide diverse and high-quality opinions on company decisions.

Second, the scale of the board of directors is negatively related to corporate performance. This is also typical. It is the opinion of most researchers. Lipton and Lorsch（1992）pointed out that many of the board's efficiency and inefficiencies are due to the large size of the board. They recommend limiting the number of board members. Even if the board’s monitoring capabilities increase with the size of the board, the resulting costs will outweigh the benefits. Lipton and Lorsh pointed out that the optimal board size should be between 7-9; Yermack (2014) empirical results also indicate that the board size is negatively related to the company's value.

Dunn and Sainty（2009) believes that smaller board of directors is vulnerable to the control and influence of managers. When the size of the board becomes larger, its decision-making ability and efficiency become worse. Therefore, they believe that there is no correlation between the scale of the board of directors and the business performance of the company.

The views of Chinese scholars are basically the same as those mentioned above, but there are obviously more negative attitudes. This article argues that a relatively small board may be more likely to cope with a rapidly changing competitive environment. For example, a smaller board may be more likely to remove managers when performance is poor. Therefore, this study proposes the following hypotheses:

Hypothesis 1: There is a postive correlation between the size of the board of directors and company performance

2.2.2 Hypothesis relating to Duality CEO

Whether the separation of the chairman and the general manager reflects the independence of the company's board of directors and the freedom of executive innovation. Foreign scholars, such as Choi and Park（2014) pointed out that the roles of chief executive officer (CEO) and chairman should be separated so that other board members can effectively monitor the CEO. An extreme view even holds that in order to strengthen the supervisory capacity of the board as a whole, the chairman should be awarded to the person outside the company.

However, some other scholars who support the integration of the two jobs believe that the combination of the two positions can give the CEO more power and can respond more quickly to the rapidly changing environment. As with other internal directors, the chairman who serves as the general manager has more knowledge about the company and its related industries and has a greater sense of responsibility for the company than the external chairman (Knell, 2006).

At present, in many domestic normative discussions on governance issues, the concurrent appointment of both the chairman and the general manager is often considered to be an important factor hindering the improvement of the company's performance (The Impact of Director Board, 2016).

The China Securities Regulatory Commission also takes the position of the general CEO and the chairman of the board of directors as different employees. An important measure to improve the corporate governance structure. Does the effect of the two-in-one union and division on the efficiency of corporate governance as scholars and regulators have called for? This study proposes the following hypotheses to test the objectivity of this view:

Hypothesis 2: The duality of the two positions will help improve company performance.

2.2.3 Hypothesis relating to board independence

Vives and Xavier (2009) believe that the conflict between CEO and the directors is the most serious problem faced by the board of directors. The motive of the general manager is to “drive” the board of directors to ensure that he can retain his position and gain more benefits from his position. Directors need to maintain their independence to supervise the general manager and replace it when the company's long-term performance is poor (Capezio, Shields and O'Donnell, 2011). Since independent sensible people are not like internal directors, they are directly controlled by controlling shareholders and managers. Therefore, among the companies in some major market economy countries, the proportion and responsibilities of independent directors on the board of directors are highly valued.

Despite this, it is still the subject of the most debate on the board of directors regarding "who can better represent the interests of shareholders, both internal and external directors". Proponents of independent directors， such as Ramdani and Witteloostuijn (2010), believe that managers manage the board of directors by applying the factual rights of selecting and remunerating directors or using their personal relationships with directors. Therefore, it is not surprising that those who have doubts about the effectiveness of the governance of the board of directors will advocate the transfer of the vast majority of directorships to independent outsiders.

Fischer and Swan (2013) evidence shows that when the decision is more likely to be made by a board of directors with a predominant proportion of independent directors, the amount of abnormal auction proceeds around the date of the acquisition bid announcement is enormous; Rosenstein and Wyatt (2015) found that when the company issues an appointment or when news from outside directors, the company's stock price will rise.

Some studies also show that independent directors are more likely to take decisions to replace CEOs with poor performance. For example, Borokhovich, Parrino and Trapani (2010) found that independent directors are more willing to support important changes in company policy when circumstances warrant. Opponents argue that independent directors may not be able to play a more effective governance role than internal directors.

In the first few years of building the Chinese securities market, the independent director system has not been included on the agenda of the regulators（Wu, 2010）. In recent years, with the development of the securities market and the emergence of various corporate governance issues, the independent director system has begun to attract attention from all walks of life as a governance mechanism. According to Gao(2013), The academic community has begun to discuss its theoretical framework on a large scale, and listed companies are also establishing independent directors. The system has carried out some useful explorations. The China Securities Regulatory Commission vigorously implement and improve the system of independent directors in listed companies and fund companies. In order to verify whether an independent director has the desired effect, this article proposes the following assumptions:

Hypothesis 3: Independent board of directors has a significant positive effect on company performance.

2.3 Summary

Overall, chapter tow has referenced some relevant concepts and models, such as agency theory and stakeholder's theory, which explain why the board characters can influence the company performance. It also illustrated the relationship between board of directors and financial performance. Hence, data analysis will be done that can verify the lecture view in the next chapter.

III. Research methodology

3.0 Introduction

In this chapter, the focus will be on the research methodology of the study. This chapter will explain the research design. The data collection also will be discussed. In addition, this chapter will introduce different analyses test for offer lowest-error data.

3.1 Sample selection

According to the industry classification of CSRC, all A-share manufacturing listed companies and real estate listed companies in Shanghai Stock Exchange and Shenzhen Stock Exchange are selected as primary selection samples and meet the following condition: Firstly, the characteristic data of the board of director's governance structure of the sample listed companies are not abnormal. Secondly, the performance index ROE and EPS of the sample listed companies have no abnormal value. In this paper, 162 listed manufacturing companies are selected as samples and 126 real estate companies as samples, covering the relevant data of 2015,2016 and 2017.

The main sources of the annual report and variable related data collected in this paper are as follows: Tonghuashun data Service Center, Giant Tide Consulting Network and the Information Network Database of the Development Research Center of the State Council. The relevant data and information needed for the study have also been taken into account on the official websites of the Shanghai Stock Exchange and the Shenzhen Stock Exchange, the China Economic Information Network database. In order to make up for the deviation and shortcomings of the data and information and to check the consistency of the data. Make sure the data source is true and accurate. The process of data statistics and calculation is completed by the statistical software SPSS and excel.

3.2 Explanatory variables

This paper mainly studies the relationship between board structure and corporate performance of listed companies and selects the following three main variables as the factors that affect the structure of the board of directors on the basis of the reference of scholars at home and abroad.

First, the size of the board. Board size refers to the total number of directors who make up the board. The size of the board of directors is usually regarded as an important factor in the structure of the board of directors. Second, the proportion of independent directors. Independent directors are independent directors who are independent of the company's shareholders and do not serve in the company and have no important business contact or professional contact with the company or the company manager. Third, two-position setup. The two-position establishment refers to the separation of the two positions of chairman and CEO.

3.3 Explained variables

In this paper, the explained variable is the enterprise performance index, and the net asset income ratio (ROE) and the earnings per share (EPS) are selected as the explained variables.

The rate of return on net assets (ROE) is the ratio of profit to average stockholder's equity, which is an important index to measure the profitability of listed companies. The higher the index, the higher the return on investment, and the lower the return on net assets, the weaker the profitability of the owner's equity. This index reflects the ability of the private capital to obtain net income and is the core of the enterprise profitability index. The indicator adds a time scale at the beginning and end of the period to reflect financial information more accurately; is less likely to be manipulated and takes into account the leverage effect of the liability, allowing for horizontal and vertical comparisons. What's more, it is highly integrated with high information value and the degree of acceptance is high in China.Earnings per share (EPS) which refers to the ratio of after tax profit to the total number of shares. The index of earnings per share is often used to reflect the business performance of an enterprise and to measure the profit level of the common stock. Industry growth potential, thus making important financial indicators for economic decisions.

3.4 Control variables

The size of the company is selected as the control variable "f". According to international standards, the size of the company is generally divided by the number of employees. Generally, companies with less than 500 employees are small companies, medium-sized companies are 500-2000, and companies with more than 2,000 are large companies. Here, "1" represent small firm, "2" is used to represent medium firm, "3" is used to represent large companies.

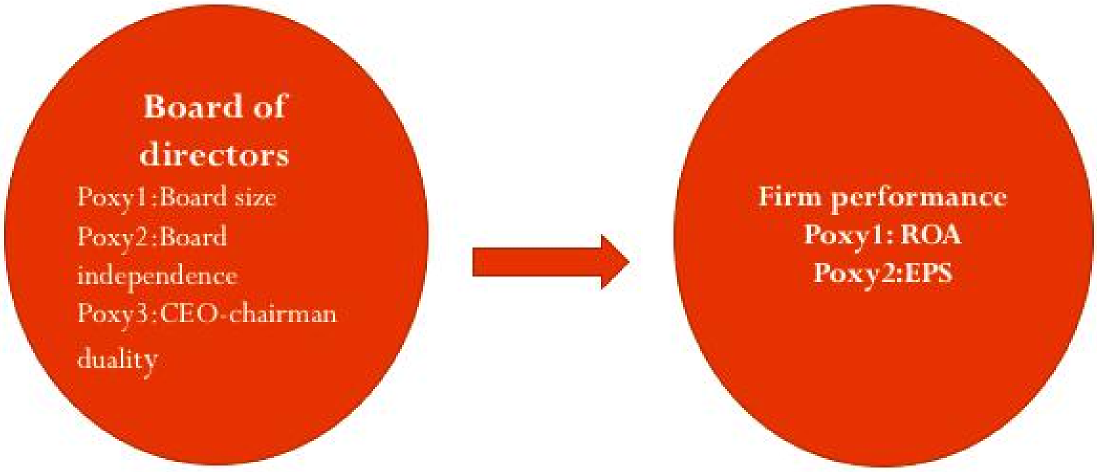
The ownership of the company is selected as the control variable "o", the state-owned enterprise is represented by 1, and the private enterprise is represented by 0.

3.5 Table for explanatory variables and explained variables

Table 1. Explanatory variables and explained variables

Type	Variable	Symbol	Definition
Dependent	Return on Asset	ROA	Net income/ [(initial total assets + final total assets)/2]
	Earnings per share	EPS	Net income / average outstanding common shares
Independent	Board size	Size	Total number of directors
	Board independence	Indep	Proportion of independent directors = number of independent Directors / total number of directors
	Dual CEO	duality	Two positions in one of the value of 1, or the value of 0;
Control variable	Firms size	f	"1" represent small firm, "2" is used to represent medium firm, "3" is used to represent large companies.
	ownership	e	The state-owned enterprise is represented by 1, and the private enterprise is represented by 0.

3.6 Framework



3.7 Model

According to the literature review, many scholars using a fixed effect analysis method. So, this study uses the basic model of application is

ROA(EPS) = C0 + C1Ln(Size) + C2Indep + C3 Dual + C4 DummyY1 + C5 DummyY2 + e + f + Error term

Where DummyY1 is 1 if the data is from year 2015 and 0 otherwise; DummyY2 is 1 if the data is from year 2016 and 0 otherwise.

3.8 Types of test

According to the research of (McCaston, 2018), this article mainly uses secondary data to calculate and analyze. Secondary data is public information that has been collected by others. It is typically free or inexpensive to obtain and can act as a strong foundation to any research project — provided you know where to find it and how to judge its worth and relevance (Mochmann, 2012). The first advantage of using secondary data (SD) has always been the saving of time (Ghauri, 2005). Not enough with this, in the so-called Internet Era, this fact is more than evident. In the past, secondary data collection used to require many hours of tracking on the long libraries corridors (Steinke, 2014). In addition, analysts of social and economic changes believe that Secondary data is indispensable, because some studies cannot conduct new investigations and cannot fully capture past changes and developments.

3.9 Summary

Overall, chapter three has explain the explanatory variables and explained variables and building a model for research. Meanwhile, this chapter also describe what type of test should be done in chapter four. Hence, data analysis can be done and analysis the reason and phenomenon in the next chapter.

IV Data analysis

4.0 Introduction

In this chapter, study focuses on introducing data analysis results to confirm the research hypothesis proposed in Chapter 2. It mainly includes descriptive statistics, correlation analysis and regression analysis.

4.1 Descriptive statistics

Table 2 shows the main descriptive statistics for the variables of the research model. board size of Real estate and manufacturing has a similar mean at 8.36members and 8.39members respectively. In addition, from the table, can be find that the maximum size of real estate industry is bigger than maximum size of manufacturing. Also, similar average can be seen at Independent of board and Duality of board, both around 0.38. It is also shows that average ROE in real estate is 7.6%, which slightly higher than average ROE in manufacturing, at 7.0%. It is note that the average EPS seen a significant difference between real estate industry and manufacturing industry. Obviously, mean EPS of manufacturing is higher than EPS of real estate industry, which is 2.94. While, mean real estate industry EPS only at 0.37. This means, overall speaking, in the past three years, manufacturing industry has a better performance than real estate industry. In addition, from the table, can be find that the maximum real estate industry board size is bigger than maximum size of manufacturing.

Table 2. Descriptive Statistics

		Minimum	Maximum	Mean	Std. Deviation
Real estate Industry	lnSize	1.61	2.89	2.0965	.23103
	Indep	.30	.60	.3884	.06703
	Dual	0	1	.37	.483
	Firm size	1	3	2.04	.625
	ownership	0	1	.29	.457
	ROE	-15.87%	29.23%	7.6179%	8.15631%
	EPS	-.35	2.03	.3764	.40605
Manufacturing Industry	lnSize	1.61	2.64	2.1080	.19939
	Indep	.33	.80	.3860	.07910
	Dual	0	1	.32	.471
	Firm size	1	3	2.10	.718
	ownership	0	1	.42	.497
	ROE	-38.97%	22.79%	7.0039%	8.91916%
	EPS	1.80	4.84	2.9477	.52564

4.2 Correlations test

Before the multiple linear regression, in order to avoid the existence of multiple collinear influences between the variables, the correlation analysis of each independent variable is performed here. Table3 are the Pearson correlation coefficient tables obtained by correlation analysis.

It can be seen from the table that the coefficients between the variables are not more than 0.6, and the relationship between the variables is not significant. Therefore, multiple linear regression can be performed for each variable.

Table 3: Correlation Test **for real estate industry**

		LNsize	Indep	Dual	firm size	ownership
LNsize	Pearson Correlation	1	-.521**	.029	.170	-.092
Indep	Pearson Correlation	-.521**	1	-.197*	-.153	-.047
Dual	Pearson Correlation	.029	-.197*	1	.031	-.018
firm size	Pearson Correlation	.170	-.153	.031	1	.015
ownership	Pearson Correlation	-.092	-.047	-.018	.015	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4: Correlation Test **for manufacturing industry**

		LNsize	indep	dual	firm size	ownership
LNsize	Pearson Correlation	1	-.521**	-.160	-.042	-.113
indep	Pearson Correlation	-.521**	1	-.110	.183	.052
dual	Pearson Correlation	-.160	-.110	1	.100	.183
firm size	Pearson Correlation	-.042	.183	.100	1	-.116
ownership	Pearson Correlation	-.113	.052	.183	-.116	1

**. Correlation is significant at the 0.01 level (2-tailed).

4.3 Regression model

The results of this study come from a balanced data panel with random effects. According to Vallelado (2013), the panel data analysis is an efficacious tool when the data are a mixture of series of time and transverse cut data, this technique is efficient since it considers constant heterogeneity and non- observable heterogeneity.

On Table5 and Table6 are shown the estimation results of the models for real estate industry and manufacturing industry, with ROA and EPS as dependent variables. Model includes ROA (EPS) in the regression as a dependent variable, BD size, participation of independent members on BD (Indep), Duality of as independent variables(Dual).

In regard to ROE variables, it was found that real estate size has a positive and significant effect over firm profitability, while in the variable manufacturing size the relation is positive. However, there has no proof to explain its meaningful. In regard to EPS, both industry shows strong positive relationship between Size and firm profitability. The participation of BD independent members presented more significant positive relation with firm profitability in real estate industry. From the model of ROE, can be find that real estate shows positive relations. In manufacturing industry, it shows strong negative relation in participation of BD independent members. These suggests that the relation between board independence and firm profitability has a different impact on different industry. In regard to the relationship between Dual and company performance is complicated than others. From the table, can be find that only real estate ROE and dual has a positive relationship in real estate industry. Other models cannot proof that there has a significant relation between the duality and firm profitability.

Table5.Regression model for real estate industry.

	ROE			EPS		
	B	t	Sig.	B	t	Sig.
LNSIZE	15.104	4.329	.000	.703	3.994	.000
INDEP	36.010	3.107	.002	2.291	3.880	.000
DUAL	3.735	2.649	.009	.042	.579	.563
FIRM SIZE	.435	.396	.693	-.032	-.580	.563
OWNERSHIP	.147	.098	.922	-.030	-.395	.693
DUMMYY1	2.069	4.783	.000	1.467	2.722	.000
DUMMYY2	3.507	5.513	.000	4.435	1.435	.158

Table6.Regression model for manufacturing industry.

	ROE			EPS		
	B	t	Sig.	B	t	Sig.
LNSIZE	2.106	.316	.753	2.75	41.56	.000
INDEP	-37.331	-2.35	.022	.209	3.958	. 000
DUAL	.898	.374	.710	.003	.374	.710
FIRM SIZE	2.292	1.45	.153	.018	1.134	.262
OWNERSHIP	.691	.306	.761	.035	1.540	.129
DUMMY1	2.124	3.16	.000	3.27	1.274	.006
DUMMY2	.926	1.22	.008	4.13	2.381	.000

4.4 Summary

This chapter elaborates on the three hypotheses proposed through data analysis in the form of tables, charts and graphs. In addition, this chapter also systematically describes the findings under the An Empirical Study Based on Listed Companies in China.

V Conclusion

5.1 Conclusion

(I) The size of the board of directors is an effective factor affecting the performance of the company

The best number of board members is generally 8 to 9 (Lipton, 1992). The descriptive statistics in this article show that the average size of the board of directors in the sample is 8.3, indicating that the majority of the sample companies are at the best size or More reasonable. Through the analysis of the company's ROE and EPS as the company's performance indicators, the conclusion confirms that the Hypothesis1 is established, and there is a positive correlation between board size and company performance.

Although this paper selects two control variables, ROE and EPS, as indicators to measure the size of the company, there are other factors that will affect the size of the board of directors. Companies of different natures, sizes, ownership systems, and different competitive environments are not suitable for direct comparison. Board size. It should be noted that other influencing factors, using the board size as an independent variable to directly analyse its relationship with performance, are not obvious. The size of the board of directors is an absolute value. The variable size of the board should be processed to establish a relative variable based on the size of the board of directors. This is also can be a research direction.

(2) Independent directors do not necessarily bring performance improvement to the company

Although the empirical results of the negative proportion of independent directors and company performance in this paper do not support the hypothesis of this paper, they should treat the independent director system in an objective manner and cannot completely negate this system. The reason for this empirical result is that this paper believes that there are mainly the following reasons:

First, most listed companies lack a fair and rigorous mechanism for screening and evaluating independent directors. Independent directors are not independent from the beginning, and the nomination method for independent directors is the crux of the problem. At the same time, the internal control of listed companies in China is relatively serious. Independent directors are at an information disadvantage. The information they receive may be handled selectively by management. The objectivity of information is difficult to guarantee. In many cases, they do not understand the true state of the company which can affecting the accuracy of its decision-making.

Second, China currently lacks a reasonable and effective incentive mechanism for independent directors. There are few rules and regulations on its rights and interests, resulting in a lack of protection of its rights and interests. The risks and pressures of practicing are relatively large. Independent directors have no enough power to perform duties with personal relationship and responsibility.

(3) The leadership structure of the board of directors has no significant impact on company performance

In the Chapter 2, the Agency theory holds that management is not fully trustworthy. The combination of two jobs is not conducive to company performance, which will weaken the independence of the board of directors and reduce its supervisory role to management. While Modern butler theory believes that management is trustworthy, management can become an effective trustee of shareholders, and the integration of the two jobs is conducive to corporate performance. More importantly, the duality improves the efficiency of corporate decision-making and reduces internal differences.

According the review of the previous literature, the academic community supports two separations. However, in China's listed companies, insider control is obvious. A large part of the number of directors still has internal directors. The chairman no longer serves as the general manager. It does not mean that the board is independent of the management. The management may still have control of the board. The mechanism by which the principal-agent theory works cannot be established, and the dual leadership structure does not necessarily significantly enhance the independence of the board.

5.2 Limitation of study

Due to the limitation of author's own ability, there are several deficiencies in this paper. Firstly, this research only choose three independent variables (board size, board independent , CEO duality that are defined as the characters of board of directors. There are some other factors can also defined as the characters of board and may also has influence on firm performance, such as board meeting and motivate policy of board. This study didn't analysis these possible factors, so the result of this paper may not very accuracy.

Secondly , since this study only choose tow dependent variables ,one is ROE and another one is EPS. Different industries may has different profits indictors for company performance. That's may can explain why we cannot see a better performance on ROE in real estate. In the future study, scholars may should choose present indictors for different industries.

And then, this paper only choose tow industries on real estate and manufacturing, it did not analyse other industry. Hence the conclusion is only can shows that board of directors has different impact on real estate industry and manufacturing industry.

Furthermore, due to the time constraint ,this study only focus on three years (2015.2016 and2017) data, and if want to know the current situation of real estate and manufacturing industry, it need to further to find long period figure out the real situation.

5.3 Personal reflection

I learned a lot during this process of doing this paper. I find that the characters of board is very important to a company. And governance company has becoming a critical issue for firms. Due to the time limit, I need to strictly do the task step by step, although it is difficult in the beginning, the result is worth. Besides, literature review in chapter tow, allowed me to broaden my horizons and improve my knowledge, as I need to real amounts journal or article form google scholar. What’s more, this study push me learn to use SPSS. I watched many video about how to analysis by SPSS and read journals. Finally, I can use SPSS to analysis my data. This paper really improve my SPSS skills and rich my knowledge about company governance and board of director.

Last but not least, my supervisor, Dr.Lee, is a very nice man. I asked him the question again and again ,he always has patient. Even when he take a semester break, out of office, he always reply my email as soon as possible. He helps me a lot and guide me to a right direction. I learned a lot from him. Without his guider, I won’t finish this paper in time. I am so graceful with him.

References

Areni, C. (2017). 'Turkeys Don't Vote for Thanksgiving!' Metaphors Used by Australian Company Directors to Describe Contradictions and Constraints on Optimal Board Performance. *SSRN Electronic Journal*.

Brown, J. (2015). The Demythification of the Board of Directors. American Business Law Journal, 52(1), pp.131-200.

Elyasiani, E. and Zhang, L. (2015). Bank holding company performance, risk, and "busy" board of directors. Journal of Banking & Finance, 60, pp.239-251.

Elyasiani, E. and Zhang, L. (2015). Bank holding company performance, risk, and "busy" board of directors. Journal of Banking & Finance, 60, pp.239-251.

Lutsenko, S. (2016). Features governance of the company from board of directors. Effective crisis management, (6), pp.66-70.

Melkumov, D., Breit, E. and Khoreva, V. (2014). Directors' Social Identifications and Board Tasks: Evidence from Finland. Corporate Governance: An International Review, 23(1), pp.42-59.

Capezio, A., Shields, J. and O'Donnell, M. (2011). Too Good to be True: Board Structural Independence as a Moderator of CEO Pay-for-Firm-Performance. Journal of Management Studies, 48(3), pp.487-513.

CHOI, E., CHOI, W., JANG, S. and PARK, S. (2014). DOES THE EFFECTIVENESS OF BOARD OF DIRECTORS AFFECT FIRM PERFORMANCE OF CONSUMER CO-OPERATIVES? THE CASE OF ICOOP KOREA. Annals of Public and Cooperative Economics, 85(3), pp.371-386.

Constantinides, G., Harris, M. and Stulz, R. (2003). Handbook of the Economics of Finance. Vol. 1A. Amsterdam: Elsevier Science.

Dunn, P. and Sainty, B. (2009). The relationship among board of director characteristics, corporate social performance and corporate financial performance. International Journal of Managerial Finance, 5(4), pp.407-423.

Fischer, M. and Swan, P. (2013). Does Board Independence Improve Firm Performance? Outcome of a Quasi-Natural Experiment. SSRN Electronic Journal.

Knell, A. (2006). Corporate governance. Amsterdam: Elsevier/CIMA.

Misra, P. and Chakrabarty, D. (2009). Clonal propagation of Rosa clinophylla Thory. through axillary bud culture. Scientia Horticulturae, 119(2), pp.212-216.

Payne, J. (2004). Company Contracts and Conundrums: when is a Board not a Board and when is a Director not a Person?. European Company and Financial Law Review, 1(2).

Ramdani, D. and Witteloostuijn, A. (2010). The Impact of Board Independence and CEO Duality on Firm Performance: A Quantile Regression Analysis for Indonesia, Malaysia, South Korea and Thailand. British Journal of Management, 21(3), pp.607-627.

The Impact of Director Board. (2016). International Journal of Science and Research (IJSR), 5(2), pp.646-650.

Tollefson, J. (2017). Weather-company chief is Trump's pick to lead climate agency. Nature.

Coase ,Ronald ,1937 ,The Nature of the Firm , Economics 4 , 386 —405.

Claessens,S. , S. Djankov and L. H. P. Lang , 2000 ,“The Separation of Ownership and Control in East Asian Corporations”, Journal of Financial Economics , 58 ,81 —112.

Faccio , M. and L. H. P. Lang , 2002 “, The Ultimate Ownership of Western European Corporations”,Journal of Financial Economics 65 , 365 —396.

Fama ,Eugence , and Michael Jensen ,1983a , Separation of Ownership and Control , Journal of Law and Economics 26 ,301 —325.

Franks , Julian ,and Colin Mayer ,1994 , The Ownership and Control of German Corporation ,Manuscript , London Business School.

OECD ,2001 ,Corporate Governance in Asia ,PP. 7 —10. Rajan ,Raghuram ,1992 , Insiders and Outsiders: the Choice between Relationship and Arms2length Debt , Journal of Finance 47 ,1367 —1400.

Shleifer , A. , &Vishy , R. W. ,1997 ,A Survey of Corporate Governance , Journal of Finance ,52 ,737 —783.

Vives ,Xavier ,2009 , Corporate Governance : Does It Matter ? In Vives , Xavier(Eds) , Corporate Governance , PP. 1 —22.

Weinstein ,David E. , and Yishay Yafeh , 1994 , On the Costs of a Bank2centered Financial System: Evidence from the Changing Main Bank Relations in Japan , Manuscript , Harvard University.

IFama··· Jensen．M—Separation of Ownership and Contr01．Journal of Law and Economics，1983，(26)：301-325

L1··· Denis D．J．．A．Sarin．Ownership and Board Structures in Publicly Traded Corporations．Journal of Finance,

Borokhovich , Parrino and Trapani , Outside Directors and CEO Selection. Journal of Financial and Quantitative Analysis , 2010, pp.337-355.

Lipton , Lorsch , A Modest Proposal for Improved Corporate Governance. Business Lawyer , 48. no. 1 , 1992 , pp. 59 — 77.

Wu , Yili , Honey , I Shrunk the Board , Working Paper , 2010 , University of Chicago.

Yermack , Higher Market Valuation of Companies with a Small Board of Directors. Journal of Financial Economics, 40

(1996) , pp.

Gao Minghua, Ma Shouli. Empirical analysis of the relationship between independent firefighting system and corporate performance. Nankai Economic Research, 2013, (2): 64-68

Cots, E. (2011). Stakeholder social capital: a new approach to stakeholder theory. Business Ethics: A European Review, 20(4), pp.328-341.

Enyinna, O. (2014). Is stakeholder theory really ethical?. African Journal of Business Ethics, 7(2).

Eskerod, P., Huemann, M. and Ringhofer, C. (2015). Stakeholder Inclusiveness: Enriching Project Management with General Stakeholder Theory. Project Management Journal, 46(6), pp.42-53.

Hesselink, M. (2015). Contract Theory and EU Contract Law. SSRN Electronic Journal.

Lee, P. (2014). A Contract Theory of Academic Freedom. SSRN Electronic Journal.

Rampling, P. (2012). From Agency to Stakeholder Theory: Realigning Executives Focus. SSRN Electronic Journal.

Winterton, D. (2013). Contract Theory and Gain-Based Recovery. The Modern Law Review, 76(6), pp.1129-1155.

Kaplan, Steven N., and Reishus, David, 1990, Outside directorships and corporate performance, Journal of Financial Economics 27, 389-410.

Byrd, John W., and Hickman, Kent A., 1992, Do outside director's monitor managers? Evidence form tender offer bids, Journal of Financial Economics 32, 195-222.

James A. Brickley, Jeffrey L. Coles, and Rory L. Terry，1994，Outside directors and the adoption of poison pills, Journal of Financial Economics, 35, 371-390.

Yermack, D. 1996， High market valuation of companies with small board of directors，Journal of Finance, 52, 449-476。

April Klein, 1998, Firm performance and board committee structure, Journal of Law and Economics, vol.XLI, 275-303.

Denis and Sarin, 1996, Ownership and board structure in publicly traded corporations, Journal of Financial Economics, 52, 187-223.

Vance S C.Boards of Directors:Structure and Performance[M].Eugene O R:University of Oregonres，1964.

Ticker R.Corporate Governance[M].Aldershot:Gower Publishing Company Limited, 1984.

Fama E Agency Problems and the Theory of the Firm[J].Journal of Political Economy, 1980(88).

Bhaga S, Black. The Uncertain Relationship between Board and Composition and Firm Performance[J].Busines Lawyer, 2002, 54(5).

Denis D K , McConnel J J.International Corporate Governance[J].Journal of Financial and Quantitative Analysis, 2003, 38(5).

Gilan S L.Recent Developments in Corporate Governance:An Overview[J].Journal of Corporate Finance, 2006(3). [3] Yermack D.Higher Market Valuation of Companies with a Smal Board of Directors[J].Journal of Financial Economics,

Financial Economics, 1998, 48(1). [5] Sanda A, Mikailu A S, Garba T.Corporate Governance Mechanisms and Firm Financial Performance in Nigeria[R].

Nairobi:AERC Research Paper 149 , 2005. [6] Bhagat S , Black B.The Non-Corelation betwen Board Independence and Long-Term Firm Performance[J].Journal of

Corporation Law, 2002, 27(2). [7] Coles J L, Daniel N D, Naven L.Boards:Does One Size Fit Al[J].Journal of Financial Economics, 2008, 87(2).

Appendixes

Appendix 1 Intial research paper proposal

INTI international University

Master of Administration MGT7999

Initial research paper proposal

STUDENT NAME &ID NO	WU FEIFEI & i17013750
BRODA AREA	Finance
CONCISE TITLE	Corporate performance and the governance of board structure in Manufacturing and Real Estate----The evidence from China.
PROBLEM DEFINITION	There are still many defects in China's securities market, such as numerous speculators, lack of confidence in the market, weak external supervision, many financial fraud scandals, and different rights in the same stock. The lack of restraint and incentive mechanism for the managers, which harm the

	interests of shareholders. Many companies’ failure to disclose operating and financial information at specified times and standards. Then stakeholders have question about: have directors done their jobs? Is our listed company's board of directors functioning properly and efficiently? Is the governing mechanism of the board of directors scientific and perfect?
RESEARCH QUESTIONS	The research questions for this study consist of the flowing: How did the board of director’s structure affect the firm's profitability about manufacturing industry and real estate industry in China from 2015 to 2017? 1- Is there any significant relation between board size and company’s performance in manufacturing industry and real estate industry? 2- Is there any significant relation between CEO duality and company’s performance in manufacturing industry and real estate industry? 3- Is there any significant relation between the proportion of independent directors and company in

	manufacturing industry and real estate industry?
RESEARCH OBJECTIVES	The main purpose of this research is to study the impact of board of directors' structure and features on the performance of company within listed companies in China stock exchange in real estate industry and manufacturing industry and its secondary purposes are: 1) To study the size of board of directors' structure and features on company's performance within the manufacturing industry and real estate industry in China. 2) To examine the relation among CEO duality and company's performance within listed companies in China stock exchange of manufacturing industry and real estate industry. 3) To investigate the relation among the proportion of independent directors and company's performance within listed companies in China stock exchange of manufacturing industry and real estate industry.
SCOPE OF STUDY	Due to the limitation of author's own ability, there are

	several deficiencies in this paper. Firstly, this research only choose three independent variables (board size, board independent , CEO duality) that are defined as the characters of board of directors. There are some other factors can also defined as the characters of board and may also has influence on firm performance, such as board meeting and motivate policy of board. This study didn't analysis these possible factors, so the result of this paper may not very accuracy. Secondly , since this study only choose tow dependent variables ,one is ROE and another one is EPS. Different industries may has different profits indictors for company performance. That's may can explain why we cannot see a better performance on ROE in real estate. In the future study, scholars may should choose present indictors for different industries. And then, this paper only choose tow industries on real estate and manufacturing, it did not analyse other industry. Hence the conclusion is only can shows that board of directors has different impact on real estate

	industry and manufacturing industry.
SIGNIFICANT OF THE RESEARCH	In previous study, most researchers only analyse one industry, such as Chen(2011) conducted an empirical study, based on the financial data and corporate governance data of domestic insurance companies; Bai(2015), taking 120 pharmaceutical listed companies in China as an empirical study. It is found that the largest shareholder has a U-shaped relationship with the value of the company, and the ownership concentration has a positive impact on corporate performance. Those research didn't show the difference influence of board in different industries. This study will analysis tow industries (manufacturing industry and real estate industry) and make a comparative study to find out the relationship and different influence of board of directors. This paper can help the managers and other investors to more understanding on the way of working board of directors influence the company performance.
LITERATUR REVIEW	The agency theory was mainly proposed by Coase (1993), Jensen and Meckling (1976), Fama and Jensen

	(1983), and was later expanded and developed by numerous economists and corporate governance experts. The agency theory is mainly an analysis framework proposed for the actualities of most listed companies in the United Kingdom and the United States in particular (Tollefson, 2017). However, the major feature of the ownership structure of most listed companies in many countries and regions, including China, is not the dispersion of equity, but relatively concentrated or highly concentrated. Faccio and Lang (2002) analyzed 232 companies in 13 Western European countries and found that in addition to the dispersed ownership of companies in the United Kingdom and Ireland, the shares of companies in continental European countries are generally more concentrated. Claessens Djankow and Lang (2002) analyzed 2980 listed companies in 9 East Asian countries and regions and found that except for the relatively concentrated

	ownership of Japanese companies, two-thirds of the companies in other East Asian countries and regions have a single controlling shareholder.The fact that most of China's listed companies have high concentration of equity and that state-owned shares are "only one big" is a well-known fact. The degree of dispersion and concentration of listed company's equity determines the outstanding issues to be solved by corporate governance. Rajan (1992), Weinstein and Yafeh (1994), Franks and Mayer (1994) explained the situation of large shareholders of listed companies in Germany and Japan invading the interests of small and medium shareholders from both theoretical and empirical perspectives. The listed companies with relatively concentrated equity in the country obviously have conflicts of interests between large shareholders and small and medium shareholders. However, the conflicts of interest between controlling shareholders or major shareholders and small and medium shareholders in listed companies in developing

	countries or countries with unsound laws are even more serious. The research from Hesselink (2015) conducted that corporate governance is essentially a contractual relationship. All parties of corporate governance are connected by contractual ties. The investor authorizes the board of directors to operate the enterprise, which is a form of trust and trust contract to conclude the responsibility of both parties and establish a contractual relationship. The agent shall exercise the legal person's power of agency within the scope authorized by the principal. The board of supervisors exercises the supervisory power according to the articles of association, the board of directors and the managers accept the supervision according to the relevant contract, and each side has a clear margin of power (Winterton, 2013). These contracts take the form of company law, articles of association and related employment contracts, letters of attorney, shares the decision of the East Council, the Board of Directors.

	These contracts govern the transactions that companies make, making them less expensive than the transaction costs incurred by the market. Because these contracts cannot be complete contracts, that is, they can anticipate all kinds of possible circumstances in advance and make clear stipulations on the interests of the parties' behavior and the penalty of breach of contract under all kinds of circumstances. Lee (2014) argues that the corporate governance arrangement, based on the Company Law and the Company's Articles of Association, which is in essence the relationship between the various stakeholders of the company and governs. The transaction between the stakeholders and governs is to realize the comparative advantage of saving transaction cost. The modern enterprise theory holds that the company is actually a link formed by different stakeholders through contracts and forms different rights according to the contract (Cots, 2011). According to Eskerod, Huemann and Ringhofer (2015), stakeholder refers to a group or individual with an interest in the

	enterprise's production and operation behavior and consequences. Each stakeholder group wants organizations to give them priority in making strategic decisions in order to achieve their goals, but the interests of these stakeholders and the focus of their concerns vary considerably and often contradictory. Companies have to weigh their dependence on stakeholders, giving priority to certain types of stakeholders. The governance mode of "shareholder priority" is the result of this.

Appendix2 Project Paper Log

This is an important document, which is to be handed in with your dissertation. This log will be taken into consideration when awarding the final mark for the dissertation

Student Name:	**WU FEIFEI**
Supervisor's Name:	**Dr.CHIN CHONG LEE**
Dissertation Topic: **Executive Compensation Structure and Company Performance in China's Retail and Automobile Industry**	

SECTION A. MONITORING STUDENT DISSERTATION PROCESS

The plan below is to be agreed between the student & supervisor and will be monitored against progress made at each session.

Activity	Milestone/Deliverable Date (Week)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frist Meeting and Introduction	√														
Discuss the Variables		√													
Research Objective and problem			√	√											
Literature Review				√											
Discuss Collected Data					√	√	√								
Analyze Data with SPSS						√	√	√	√						
Analysis Conclusion								√	√	√					
Variables Increase										√	√	√			
Draft Completion													√		
Project Completion														√	√

SECTION B. ETHICS

Ethics form protocol number: N/A

SECTION C. RECORD OF MEETINGS

The expectation is that students will meet their supervisors up to seven times and these meetings should be recorded.

Meeting1

Date of Meeting	11th May 2018
Progress made	**Frist Meeting and Introduction**
Agreed action	Discussion with supervisor and finalizing the topic of your project paper
Student Signature	
Supervisor's Signature	

Meeting2

Date of Meeting	18th May 2018
Progress made	**Discuss the Variables**
Agreed action	Discuss the independent and dependent variables of the paper and determine the overall framework of the paper.
Student Signature	
Supervisor's Signature	

Meeting3

Date of Meeting	23st May 2018
Progress made	Research Discuss the research objectives and research questions of the paper and design the form of the paper,objectives and problems
Agreed action	
Student Signature	
Supervisor's Signature	

Meeting 4

Date of Meeting	1st June 2018
Progress made	Literature Review
Agreed action	Add more detail for literature review, and amend the chapter two and three
Student Signature	
Supervisor's Signature	

Meeting 5

Date of Meeting	15th June 2018
Progress made	Discuss Collected Data
Agreed action	Adjust hypothesis and complete data collection
Student Signature	
Supervisor's Signature	

Meeting 6

Date of meeting	29^{th} June 2018
Progress made	Analyze Data with SPSS
Agreed action	Employed reasonable methods to analyse collected data
Student Signature	
Supervisor's Signature	

Meeting 7

Date of Meeting	17^{th} July 2018
Progress made	Analysis Conclusion
Agreed action	Analyze the results of the data analysis and summarize the conclusions, and finally make recommendations
Student Signature	
Supervisor's Signature	

Meeting 8

Date of Meeting	27^{th} July 2018
Progress made	Draft Completion
Agreed action	Modify and improve the draft and modify the slides for the presentation.
Student Signature	
Supervisor's Signature	

Meeting 9

Date of Meeting	1rd August 2018
Progress made	Control Variables Increase
Agreed action	Add the firm size and ownership as control variables
Student Signature	
Supervisor's Signature	

Meeting 10

Date of Meeting	13rd August 2018
Progress made	Project Completion
Agreed action	Confirm whole thesis
Student Signature	
Supervisor's Signature	

Section D. Comments on Management of Project

(to be completed at the end of the dissertation process)

Student Comments

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Supervisor Comments

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Signature of Student	Date
Signature of Supervisor	Date
Ethics Confirmed	Date

Appendix 3 SPSS Output

Table 1: Descriptive Statistics of real estate and manufacturing

Real estate industry

	N	Minimum	Maximum	Mean	Std. Deviation
LNsize	126	1.61	2.89	2.0965	.23103
Indep	126	.30	.60	.3884	.06703
Dual	126	0	1	.37	.483
firm size	126	1	3	2.04	.625
ownership	126	0	1	.29	.457
roe	126	-15.87%	29.23%	7.6179%	8.15631%
eps	126	-.35	2.03	.3764	.40605

Manufacturing industry

	N	Minimum	Maximum	Mean	Std. Deviation
LNsize	162	1.61	2.64	2.1080	.19939
indep	162	.33	.80	.3860	.07910
dual	162	0	1	.32	.471
firm size	162	1	3	2.10	.718
ownership	162	0	1	.42	.497
roe	162	-38.97%	22.79%	7.0039%	8.91916%
eps	162	1.80	4.84	2.9477	.52564

Table 2: Correlations for real estate and manufacturing

Real estate industry

		LNsize	Indep	Dual	firm size	ownership
LNsize	Pearson Correlation	1	-.521**	.029	.170	-.092
	Sig. (2-tailed)		.000	.745	.057	.307
	N	126	126	126	126	126
Indep	Pearson Correlation	-.521**	1	-.197*	-.153	-.047
	Sig. (2-tailed)	.000		.027	.087	.599
	N	126	126	126	126	126
Dual	Pearson Correlation	.029	-.197*	1	.031	-.018
	Sig. (2-tailed)	.745	.027		.729	.838
	N	126	126	126	126	126
firm size	Pearson Correlation	.170	-.153	.031	1	.015
	Sig. (2-tailed)	.057	.087	.729		.869
	N	126	126	126	126	126
ownership	Pearson Correlation	-.092	-.047	-.018	.015	1
	Sig. (2-tailed)	.307	.599	.838	.869	
	N	126	126	126	126	126

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

		LNsize	indep	dual	firm size	ownership
LNsize	Pearson Correlation	1	-.521**	-.160	-.042	-.113
	Sig. (2-tailed)		.000	.213	.746	.382
	N	162	162	162	162	162
indep	Pearson Correlation	-.521**	1	-.110	.183	.052
	Sig. (2-tailed)	.000		.396	.154	.688
	N	162	162	162	162	162
dual	Pearson Correlation	-.160	-.110	1	.100	.183
	Sig. (2-tailed)	.213	.396		.439	.155
	N	162	162	162	162	162
firm size	Pearson Correlation	-.042	.183	.100	1	-.116
	Sig. (2-tailed)	.746	.154	.439		.371
	N	162	162	162	162	162
ownership	Pearson Correlation	-.113	.052	.183	-.116	1
	Sig. (2-tailed)	.382	.688	.155	.371	
	N	162	162	162	162	162

**. Correlation is significant at the 0.01 level (2-tailed).

Table3: Regression analysis

Real estate industry

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	ownership, firm size, Dual, LNsize, Indep[b]	.	Enter

a. Dependent Variable: roe

b. All requested variables entered.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1485.286	5	297.057	5.219	.000[b]
	Residual	6830.380	120	56.920		
	Total	8315.666	125			

a. Dependent Variable: roe

b. Predictors: (Constant), ownership, firm size, Dual, LNsize, Indep

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	-41.669	10.902		-3.822	.000
	LNsize	15.104	3.489	.428	4.329	.000
	Indep	39.173	12.180	.322	3.216	.002
	Dual	4.043	1.431	.240	2.826	.006
	firm size	.435	1.100	.033	.396	.693
	ownership	.147	1.493	.008	.098	.922

a. Dependent Variable: roe

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	ownership, indep, dual, firm size, LNsize[b]	.	Enter

a. Dependent Variable: eps

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.988[a]	.976	.974	.08452

a. Predictors: (Constant), ownership, indep, dual, firm size, LNsize

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	16.454	5	3.291	460.625	.000[b]
	Residual	.400	56	.007		
	Total	16.854	61			

a. Dependent Variable: eps

b. Predictors: (Constant), ownership, indep, dual, firm size, LNsize

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.176	.185		-17.202	.000
	LNsize	2.750	.066	1.043	41.569	.000
	indep	.715	.169	.108	4.231	.000
	dual	-.002	.025	-.001	-.068	.946
	firm size	.018	.016	.024	1.134	.262
	ownership	.035	.022	.033	1.540	.129

a. Dependent Variable: eps

Manufacturing industry

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	ownership, firm size, Dual, LNsize, Indep[b]	.	Enter

a. Dependent Variable: roe

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.423[a]	.179	.144	7.54452%

a. Predictors: (Constant), ownership, firm size, Dual, LNsize, Indep

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1485.286	5	297.057	5.219	.000[b]
	Residual	6830.380	120	56.920		
	Total	8315.666	125			

a. Dependent Variable: roe

b. Predictors: (Constant), ownership, firm size, Dual, LNsize, Indep

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-41.669	10.902		-3.822	.000
	LNsize	15.104	3.489	.428	4.329	.000
	Indep	39.173	12.180	.322	3.216	.002
	Dual	4.043	1.431	.240	2.826	.006
	firm size	.435	1.100	.033	.396	.693
	ownership	.147	1.493	.008	.098	.922

a. Dependent Variable: roe

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	ownership, firm size, Dual, LNsize, Indep[b]	.	Enter

a. Dependent Variable: eps

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395[a]	.156	.120	.38081

a. Predictors: (Constant), ownership, firm size, Dual, LNsize, Indep

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.208	5	.642	4.424	.001[b]
	Residual	17.402	120	.145		
	Total	20.609	125			

a. Dependent Variable: eps

b. Predictors: (Constant), ownership, firm size, Dual, LNsize, Indep

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1.986	.550		-3.609	.000
	LNsize	.703	.176	.400	3.994	.000
	Indep	2.424	.615	.400	3.943	.000
	Dual	.056	.072	.066	.772	.442
	firm size	-.032	.056	-.050	-.580	.563
	ownership	-.030	.075	-.034	-.395	.693

a. Dependent Variable: eps

Appendix 4 Turnitin Report

Final project

ORIGINALITY REPORT

11%	8%	7%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of Leicester Student Paper	1%
2	www.virtusinterpress.org Internet Source	1%
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