

# Impact of Corporate Governance on Firm Value: Empirical Evidence from Vietnam

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**Abstract.** This research investigates the impact of corporate governance on firm value by using the panel data collected from non-financial listed firms on both Ho Chi Minh Stock Exchange (HOSE) and Ha Noi Stock Exchange in Vietnam. The research sample is included 200 non-financial listed companies over the period 7 years from 2012 to 2018. The research methodology used Feasible Generalized Least Squares (FGLS) estimator to address econometric issues and to improve the accuracy of the regression coefficients. The results show that corporate governance positively impacts on the firm value of listed firms in term of board independence, the presence of female member in board, large shareholders and foreign investors. Therefore, this paper provides a new insight to managers on how to improve the firm value with corporate governance.

**Keywords:** corporate governance  $\cdot$  firm value  $\cdot$  Tobin's Q  $\cdot$  Vietnam  $\cdot$  agency theory  $\cdot$  stewardship theory

## 1 Introduction

Firm's value is one of popular measurement to evaluate business performance. Thus, it becomes helpful tool for enterprises to build reputation and attract investors in capital market. This results the significant increase on firm's value concern from managers and regulators. Aiming to support enterprises in seeking useful solutions which improve value of firm, many factors affecting a firm's value have been taken in account in empirical studies. One of these is corporate governance. Empirical studies showed the presence of a link between corporate governance and firm's value, although there are differences in nature of relationship between emerging and developed financial markets.

Corporate governance refers to structures and processes including set of internal and external control mechanisms which assist in mangement of firm and minimize agency conflict. Vietnamese governent has been taking interest in this sector seen from improvement in the framework of corporate governance. Typical Example, Decree 71/2017/ND-CP issued on 1/8/2017 replaced for Circular 121/2012/TT-BTC, issued on 27/06/2012, which are guidlines for non-financial companies on stock markets. New regulations mentioning resposibilities of the board, disclosure and transparecy, and other detailed rules; are coherent with international law and principles. This change paints a picture of Vietnamese regulators' expectation in shaping an effective corporate governance

framework; targeted at creating transparent and efficient financial markets and attracting foreign investors. In academia, Corporate governance in Vietnam has been approached many angles, from law perspective to qualitative and quantitative consideration. The popular empirical studies was conducted by Vo and Phan (2013, a,b,c d); Duc Hong Vo and Tri Minh Nguyen (2014), Although these studies covered wide range of issues in term of corporate governance, there are always constrains on estimations, sample and variable.

As a results, the importance of corporate governance – firm's value, the necessary in reassessment the efficiency in change of principle and the relaxation of restriction are reasonable to conduct "The impact of corporate governance on firm's value: empirical study from Vietnam"; providing another empirical evidence on the issue for further debate and database for regulators. The paper chooses internal governance factors to investigate the impact on firm's value, including characteristics of director board (gender, duality, size of board and number of independent members), ownership structures relating to major shareholders and foreign investor. Data was collected from 200 non-financial listed companies on HOSE and HNX over 7 years from 2012 to 2018 and financial companies, such as: bank and financial institutions, are excluded; due to differences in law, regulations and accounting system.

This paper consists of 7 sections. Following this section, two next sections mention theoretical framework and empirical studies review which explore the acknowlege background of corporate governance and firm's value measurements, as well as the relationship between them. While Sect. 4 delivers author's hypothesis, Sect. 5 describes data collection, variables and regression model. Next section disscusses empirical results and the last one concludes main ideas, refers to implications for Vietnamese companies and government.

## 2 Theoretical framework

Corporate governance is the set of control mechanism, such as: process, policies, laws, customs and institutions with purpose of harmonising relationships between factions associated with companies – these might be owners (shareholders), managers, workers, consumers or suppliers and other business partners, and monitor performance in effective way. Organization may get problem when conflict of interest among members appears. Thus, to evaluate the role of governance corporate in improvement of firm's value, it is necessary to approach and review theories: Resource dependence theory and Strategic choice perspective theory, Agency theory, Stewardship theory, Stakeholder theory.

## 2.1 Resource Dependence Theory and Strategic Choice Perspective Theory

Within a theorical framework of corporate governance, board of directors being representative of owners, is considered as the most important factor, which affects to firm performance and interest of stewards. So, the influence of board's characteristics on firm's value has been conversial topic, attracting attention from academis. Theories that examine and explain the role of boards are seen as strategic choice perspective theories. It supposes that boards play a pro-active role as being strategy adivisors rather than

being legal advisors (Kreiken, 1985). Zahra (1989) also pointed out that board members actively participate in strategy formulation activities but did not replace CEO's in terms of their responsibilities. Another theory mentioned to role of board is Resource dependence theory developed by Pfeffer (1972). It assumes that companies can benefit from co-operation with external environment which can secure critical resource. Therefore, quality and wider experience of the board contribute to successful performance of the company.

# 2.2 Agency Theory

Instead of reviewing role of board, this theory revolves around the issue of the the relationship between owners and managers (company executives). This relationship could become a conflict of interest with owners(shareholders) as principlas and managers as agents (Jensen & Meckling, 1976; Ross, 1973). The presence of agency problem can be widely seen in different academic fields, like accounting, fiance and marketing, organization behaviour... According to theory, managers and shareholders are considered as two seperate entities and different from the goal. Owners (shareholders) delegate managers to operate companies in the best interest of the owners. The separation from benefit causes conflicts, for example, managers are ability to allocate less earning of companies and retain more (dividend retention problem) to invest for next period or take bonus incentives to stay with firms for a long- term, which could increase costs of firms. On the other hand, from the perspective of agency theory, a board has tendency to excercise strict control, and monitoring of the performance of the director (Hillman & Dalziel, 2003). To avoide these agent problem and minimize agent costs, number of independent member in board and audit committee need increase.

# 2.3 Stewardship Theory

Contrast to agency theory, Stewardship theory argues that both managers and shareholders share a common goal, from pschycological and social view (Davis, Schoorman, & Donaldson, 1997). Managers operate companies in the combination between benefit of individual and organization because the success of company is linked with individual performance. Therefore, a board should play supportive role in empowering managers rather than monitoring and controllling them (Ong and Lee, 2000). F, the topic "how effect of duality in CEO position and Chairman on firm's value" becomes research objective in empirical test.

## 2.4 Stakeholder Theory

Stakehholder theory assumes that the principles (owners) and agents (managers) is not the only relationship in a corporation. Customers, suppliers, all of business partners and surrounding communities also have association with a corporation, who are stakeholders, so they have right to receive a fair interest from their stake (Donaldson & Preston, 1995). This theory emphasises corporate social responsibility and ethical behaviours in a corporation, even thought it could trigger a reduction of long-term profit (Jones, Freeman, &Wicks, 2002). In that context, stakeholder concept considers and advocates the diversity and equality of gender in the board.

## 3 Literature Review

#### 3.1 Firm's Value

Firm's value can be viewed from the financial statements' company or the benefits stemming from the share of company by the shareholders (Rouf, 2011). Ebrahim, Abdullah, Faudziah (2014) reviewed and synthesized firm's value measurements used in empirical tests about investigating the relationship between corporate governance with firm's value-firm's performance, during period 2000–2012. Indicators could be classified into two catergories as follow: accounting -based measurement and market-based measurement.

# **Accounting Measurement**

"This measuarement is generally considered as an effective indicator of the company 's profitability" when comparing the profitability of firms on the short term in the past years such as ROA, ROE, ROS, (Ebrahim et all, 2014). This is consistent with previous view of Hu and Izumida (2008). Two most selected indicators in researches are ROA (Return on Assets) and ROE (Return on Equity). However, the usage of these criteria has certain limitations such as: ROE is easily distorted when enterprises seek solutions to grow ROE through financial strategies, in oder to attract investment. In addition, ROA will be better choice to compare among businesses in the same sector. Therefore, this paper does not select Accounting Value Measurements.

## **Market Value Measurement**

According to Ebrahim, Abdullah, Faudziah (2014), the most popular indicator is Tobin's O with 74 researches select. Tobin's O was firstly proposed by Brainard and Tobin(1968).

## 3.2 Firm's Value and Corporate Governance

Internal governance mechanism relates to shareholders, managers and employees. Therefore, internal corporate governance measures mainly selected in empirical tests might involve director board's characteristics, being on behalf of sharesholders and ownership structure's characteristics which directly stick to benefit of owners. Besides, research findings suggest that the impact of corporate governance on firm's value may differ for various type of firms between emerging and developed market. It is not impossible to paint any single applicable conclusions as to characteristics, independent or contribution of directors or independent in organisation context in New Zealand (P.Wells and J.Mueller, 2014).

## Firm's Value and Director Board's Characteristics

Ettore Croci et al. (2018) determined following characteristics which has been considered to evaluate the effect of board on firm's value: board size, diversity of gender, CEO duality, independence of board.

CEO duality, Boyld (1995) tested agency theory and stewardship theory by using contigency model. The research received different effect of chair directors on firm performance across various environment but dual role of CEO and chairman positively

affected performance in low munificient and high complex environment. This result is same with study of Duc Hong Vo and Tri Minh Nguyen (2014), which use the Feasible Generalized Least Squares (FGLS) on the dataset of 177 listed companies in Viet Nam from 2008 to 2012. Contrast conclusion comes from Bhagat and Bolton (2008) who supported agency theory view by providing that dual role had negative association with firm's value. Duong Trong Nhan and Vo Thi Quy (2014), collecting data from 101 non-financial companies listed on Ho Chi Minh Securities Exchange, Viet Nam, during period 2008–2011 also indicated the similar finding.

Board size; Board size can be measured as the total number of directors on a board. Shafie Mohamed Zabri et al. (2016) reviewed and synthesised some researches in term of optimal board size and concluded that no optimal and standard board zise among the firms over the world. For example, Lipton and Lorsch (1992) suggested the number of board members should be eight and nine while Leblance and Gillies (2003) claimed eight to eleven members. Ministry of Finance (2017), VietNam, propose listed companies have at least 3 members and maximum of 11 members. The study of Shafie Mohamed Zabri (2016) also investigated top 100 public listed companies in Malaysia and showed the larger size would trigger the lower performance. However, some researchers argue that board size has positive correlation with firm's value, such as: Duong Trong Nhan and Vo Thi Quy (2014); Vo Hong Duc and Phan Bui Gia Thuy (2013), J.Thomas Connelly et al. (2012) The difference in impact of board size may be due to the difference in the role and function of boards by country (Guest, 2009). Particularly, UK boards play a weak monitoring role, so this impact was negative in UK (Guest, 2009).

*Board independence*; Another traditional measures of corporate governance in term of board effectiveness is board independence. Board independence is defined as the presence of memebers in a board, who are not in executive system of companies. Previous studies has found the importance of independent directors (Klein, 2002; Gillan, Hartzell and Starks, 2007; Duong Trong Nhan and Vo Thi Quy, 2014; Duc Hong Vo and Tri Minh Nguyen, 2014; Fauver et al., 2017) while the others have opposite view (Roodposhti and Chasmi, 2011; Chen et al., 2006; Conger and Lawler, 2009).

Female directorship; Diversity of gender was supported by stakeholder theory. However, the research findings are inconsistent. Schimic and Urban (2018) investigated 3000 companies during period 1998 to 2016 and recognized the value of firms with presence of female directors are lower than the other. Contrastly, Erhardt et al. (2003) argued that more number of female member in board would increase firm's performance.

Some past studies implied the mixed results (Ramdani and Witteloostuijn,2009) or found no evidence in impact of internal corporate governance indicators on the value of firms. Shafie Mohamed Zabri (2015) found no relationship between board independence and fim performance. Duong Trong Nhan and Vo Thi Quy (2014) tested in Vietnam and claimed that female director indicator has no significant effect on firm's value. Umawadee Detthamrong et al. (2017) examined 493 non-financial firms in Thailand, an emerging

market, during the period of 2001–2014 and determined that for an average firm, corporate governance (including board size, CEO dualtiy, female directorship, ownership concentration, board independence) has no effect on performance.

# Firm's Value and Ownership Concentration

Next internal corporate governance indicators used in this test are Ownership of Large shareholders and ownership of foreign investors.

Large Shareholders Ownership; Large shareholder, who hold at least 5% stake of company, could effectively monitor the management to avoid opportunistic behaviour of the management (Roodposhti and Chasmi, 2011). Therfore, the presence of large shareholder will increase the value of firm (Hassan and Ahmed, 2012; Mconnell and Servaes, 1990). Nevertheless, Chaganti and Damanpour (1991) found less evidence of correlation between Large Shareholders and firm's Value. The difference could be explained by difference in the right of large shareholders among companies.

Foreign shareholders Ownership; Foreign shareholders are a vital characteristic of corporate governance mechanism. Archana Singh and Ruchi Kansil (2017) confirm to the role of foreign shareholder as intrusment in strenghthening corporate governance framework of the companies. This is in line with previous research in emerging market (Annanchotikul 2006). Furthermore foreign ownerships are correlated to there is correlation between foreign ownership and firm's value, reported in many studies, such as: Khanna (2003) Ananchotikul (2006), Marashdeh (2014). Nevertheless, Stulz (2005) claimed the negative effect on firm's value and no relationship in study of Cooper and Kaplains (1991).

# 4 Research Hypotheses

Ministry of Finance in Viet Nam (2017), does not allow board president to hold Chief Executive Office position at current listed company, but literately, there has been yet common conclusion about the efficiency of duality from academia and practioners. While stewardship theories advocate duality of CEO and Chairman, agency theories argue that businesses should separate this role. Furthermore, research findings are different across the various countries. Authors suppose that dual role of CEO would suitable for Vietnamese companies, due to decrease of agent cost and increase of executive quality, which are helpful for Small and Medium Enterprises (SMEs) while SMEs acount the majority with 98,1% (According to Result of the 2017 economic census, General Statistic Office). Besides, authors advocate stewardship theory view that Board members should play supportive role rather than monitoring role. Based on that, the first hypothesis is that:

H1: The dual role of CEO and Chairman has a positive impact on firm value

Board of Directors is representative of Shareholders, so it is considered as most important indicator of internal governance mechanism. Bigger size of Board means the greater number of board members. The expansion in number of board member results more support in monitoring and advisor, but conversely, cause to escalate administrative cost. Jensen (1993); Lipton and Lorsch (1992) claimed that bigger size would be obstacle in information connection and rise conflict of interest in board, which negatively has

effect on firm's value. Klein (1998) has opposite view, a greater number of members would be useful to collect information and control management. To enhance profitability of enterprises, it is necessary to save administrative cost, particularly, in the case of Vietnam SMEs take a major account. In addition, with being considered board members as advisors, it seems to need improve board quality rather than board size. So, authors propose second hypothesis following:

H2: The size of board negatively and significantly affects firm's value

As mentioned in theoretical framework, with support view for stakeholder theory researchers encourage diversity in governance mechanism including racial, national, and gender diversity. In which gender diversity is considered as the main research content. The participation of female members in the Board of Directors will contribute to balance conflict of benefit, increase the creativity, improve the reputation of businesses in the community and indirectly, enhance the value of businesses. In Vietnam, there is no mandatory regulation on the percentage of women participating in the Board of Directors, but with the tendency of gender diversity being encouraged in developed countries (Dutta, Bose 2006), Fourth Hypotheses is proposed as follow:

H3: The number of female members has a positive impact on the firm's value of non-financial companies listed on the Stock Exchange

Evaluating the relationship between board independence and firm's value has been consistent yet in previuos studies. Independent members are able to put pressure on executives to advance business performance (Rosentein et al., 1990) but with contrast finding, Bhagat and Black, 1999 argued that independent member has not enough knowledge about situation and environment of firm, correlation between board independence and firm's value is negative. Ministry of Finance, Vietnam, only requires at 1/3 independent member in a board of listed companies. So, thirth hypothesis is proposed following:

H4:The presence of independent members in board has a significant impact on firm's value

According to Vietnamese regulation, Large shareholders directly or indirectly possess a voting right stake of 5% or more. There often has stable tendency in long-term because large shareholders seek return and reward in long-term rather than short-term. Therefore, large shareholders will take interest in business performance for long term and become key indicators in monitoring management of business. Fifth hypothesis is proposed as follow.

H5: Ownership of Large Shareholders has a significant and positive on firm's value of non financial companies listed on the Stock Exchange

Foreign investors strongly affect listed companies, especially in emerging market. Vietnamese listed companies are not exceptional, these firms desire to attention from foreign investors due to they are experienced and knowledgeable about stock market. Foreign investors will have plan and attempt to stabilize and increase the value of company's share where they invest in. Equally important, presence of foreign shareholders will advance price of share on Stock Exchange. In 2009, VietNamese government restricted the room of foreign investors which being below 49% (Decision 55, 2009), but this rules was revoked in 2015 thanks to conversion of economic growth strategy aiming to appeal to foreign investors. Next, foreign investors trend towards purchaseing

and possessing in long-term in Vietnam stock market (Vo 2016). Thus, Last hypothesis is proposed would be:

H6: Ownership of foreign shareholders has a significant and positive on firm's value of non financial companies listed on the Stock Exchange

Firm size is a measure that desribe a large or small company and play a crucial role to determine the relationship between corporate governance and firm's value (Zahara and Peace, 1989) because management and board of director need to be suitable for firm size. Susanti et al. (2017) claimed that large companies tends to have more stable conditions so it will be more attractive to investors and then grow the firm value. In this study, we use firm size as a control variable and propose following hypothesis.

H7: Firm size has a positive effect on firm value.

# 5 Research Methodology

## 5.1 Data collection and variables

## **Data Collection**

Data used in the study is secondary data. The source is purchased from Vietstock. Established since 2002, Vietstock is a leading agency which experts in providing updated and real-time financial - security information. Database of Vietstock origins from the State Bank, General Statistics Office, Foreign Investment Department, State Securities Commission, Ho Chi Minh City Stock Exchange, Hanoi Stock Exchange and is suitable for the information demand of stock market. Research data used in empirical test include reports of non-financial enterprises listed on Vietnam's stock market in the period of 2012 - 2018:

- Prospectus of the enterprise. The prospectus provides general corporate governance information including industry information, shareholder information, the Board of Directors, the Supervisory Board, etc.
- Annual report is the annual report provided by the enterprise about the overall situation of the company, business sector, corporate governance characteristics, performance evaluation report of the Board of Directors, the Board of Directors Treatment.
- Financial statements are general reports on financial-economic situation and business performance of enterprises. The financial statements are prepared periodically (monthly, quarterly, half year, year). The data used will be taken in annual financial statements.

## Sampling

The test collects data of annual reports from non-financial enterprises listed on the Vietnam stock exchange from 2012 to 2018. Enterprises that have not enough desirable data will be removed. To select a sample of 200 companies, the study was based on the below formula. The study used multivariate regression analysis so the minimum sample size to be achieved calculated according to the formula of Tabachnick and Fidell (1996) is: n = 50 + 8 \* m.

(n is the sample size, the number of companies to be selected; m: number of independent variables). The study identified 6 independent variables, such a control variable according to the above formula, the number of companies used is at least 106 companies. To enhance the reliability of the study, the research team determined a sample size of 200 non-financial businesses listed for 7 years (2012 to 2018) with a total of 1400 observations.

## Variables

Dependent variable

Tobin's Q will be used in this paper because the ratio expresses benefit of share as well as availability of information in financial statements (Duc Hong Vo, Tri Minh Nguyen, 2014). The formula was proposed as follow.

Tobin's  $Q = (The \ year \ end \ closing \ share \ price \ x \ number \ of \ ordinary \ outstanding \ share + total \ liability)/Total \ asset$ 

# Independent variable

In this study, board characteristics and ownership characteristics are chosen as proxies. For characteristics of board, CEO Duality, size of board and board dependence, the presence of female member in board are used as proxies. CEO duality is a binary variable which equal to 1 if CEO is served as chairman of board and otherwise equal to 0. The independence level of board is measured as the number of independent members in a board who are non-executive members. Ministry of Finance in Viet Nam (2017) define "the non-executive member is not director, vice director, chief accountant or others who hold managerial positions which are appointed by board of directors"; " not member of board, director, vice director of subsidies, cooperative companies which are controlled by listed company" and " not large shareholders or representatives and relatives of large shareholders".

For characteristics of Ownership, this paper considered the effect of Large shareholder and foreign investor's ownership on firm's value. Large shareholders are considered as shareholders with at least 5% a voting right stake of share.

## Control variable

The size of an enterprise is determined based on one of two criteria: total asset or the average number of employees (Law 04/2017/QH14, Viet Nam). Selection of total assets being a dependence variable is well-matched in this study. However, to enhace stability of the research model, we use logarit of total asset as a proxy.

## 5.2 Research Models

Model:  $Qi,t = \beta 0 + \beta 1*DUALi,t + \beta 2*SIZEi,t + \beta 3*FEMALEi,t + \beta 4*INDEPi,t + \beta 5*OWNLARi,t + \beta 6*OWNINTERi,t + \beta 7*LOGFIRMii,t + \varepsilon i.$ 

## 6 Results and Discussion

## 6.1 Data Statistic

Dataset was collected from financial statements and other annual reports of 200 listed companies on Ho Chi Minh Stock exchange and Ha Noi Stock Exchange during period

2012–2018. Table 2 below summarize quantity of observations with totally 1400, mean, standard deviation, min and max value of variables. Authors use "firmsize" defined by total asset which replaces for "logfirm" in statistical desription, in oder to paint the real picture of selected companies (Table 1).

**Table 1.** Variables used in this study

Variable	Definition	Measurement
Dependent variable		
Q	Tobin's Q	(The year end closing share price x number of ordinary outstanding share + total liability)/ Total asset
Independent variable		
DUAL	CEO duality	Code "1" if CEO hold chairman position, and otherwise "0"
SIZE	Board size	Total number of members in board
FEMALE	The presence of female member in a board	Total number of female members in board
INDEP	Board independence	Total number of independent members in board
OWNLAR	Large shareholder's ownership	Proportion of Large shareholder's ownership
OWNINTER	Foreign investor's ownership	Proportion of Foreign investor's ownership
Control variable		
LOGFIRM	Firm size	Logarit of Total Asset.

Source: Synthesized by Authors

Table 2. Descriptive statistic of variables

Variable	Minimum	Maximum	Mean	Std.Deviation
DUAL	0	1	0.255	0.436
SIZE	3	11	5.654	.1238
FEMALE	0	6	0.866	1.000
INDEP	0	10	3.741	1.368
OWNLAR	5.02	99.51	54.454	20.574
OWNINTER	0.05	76.85	15.295	15.757
FIRMSIZE *	13,600	288,000,000	4,310,000	14,300,000
Q	0.094	9.044	1.133	0.618

Note: \* thousand VND is measure of firmsize

Variable	DUAL	SIZE	FEMALE	INDEP	OWNLAR	OWNINTER	LOGFIRM
DUAL	1						
SIZE	-0.036	1					
FEMALE	-0.011	0.192	1				
INDEP	-0.231	0.675	0.205	1			
OWNLAR	-0.167	-0.043	0.053	0.100	1		
OWNINTER	0.013	0.315	0.249	0.213	-0.000	1	
LOGFIRM	-0.052	0.376	0.125	0.265	0.030	0.294	1

Table 3. Correlation Test

Source: Caculated by Author

Tobin's Q Variable has a wide interval between min value (0.094) and max value (9.044) while mean is 1.133 and standard deviation of 61.88%. This presents low value of many listed companies. The fluctuation of board size being from 3 to 5 members is corresponding to rule issued by Ministry of Finance, Viet nam (2017). The table shows that females do not participate in board. The number of female in a director board averages about 1 person which is quite small compared with number of total member. Similarly, executive dualilty level of board member demonstrate high figure because the number of independence members was less while the mean is about 3 person and the highest number is 10 people on a board. In comparision, the room of large shareholders is bigger than one of foreign shareholders, with mean of 54.45% and 15.3% respectively. In descriptive statistic, we keep total assets variable to draw real picture about the dat aset. Size of selected companies is wide, investigating from various types of firms both large, medium and small one.

Next, Table 3 illustrate of correlation matrix of variables. The above table results show that no pair of variables has a correlation coefficient greater than 0.8, so these variables can be used for linear regression analysis. The correlation results are consistent with research in the world and in accordance with the research expectations of the authors.

Table 4 show that the Variance Inflation Factor (VIF) of independent variables is less than 5, so it can be concluded that there is no multi-collinear phenomenon. Thus, linear regression model is firmly reasonable to draw the relationship between independent and dependent variables.

Another test is autocorrelation test. The study used the xtserial command to implement test for serial correlation in the idiosyncratic errors of the linear panel-data model by Wooldridge (2002) and found that there is autocorrelation phenomenon in dataset of study.

Finally, the paper verifies the heteroskedasticity in oder to select appropriate estimator to evaluating the relationship between independent variale and dependent variales. The research using following commands: The estat hettest to perform the Breusch-Pagan / Cook - Weisberg test for the different variability, after regression of OLS by reg command; xttest3 to perform Modified Wald test in FEM model after running FEm

Variable	VIF	1/VIF
SIZE	2.16	0.463
INDEP	2.06	0.486
LOGFIRM	1.22	0.82
OWNINTER	1.20	0.83
DUAL	1.11	0.902
FEMALE	1.10	0.91
OWNLAR	1.06	0.947
Mean VIF	1.41	

Table 4. Multicollinearity test

Source: Caculated by Authors

**Table 5.** Test of estimator's heteroskedasticity

Estimator	Types of test	Chi2	Prob > Chi2	Results of test
OLS	Breusch- Pagan	980.31	0.0000	Existence of heteroskedasticity
FEM	Modified Wald	1.2e + 06	0.0000	Existence of heteroskedasticity
REM	Breusch Pagan Lagrangiam	1630.57	0.0000	Existence of heteroskedasticity y

estimator; xttest0 to perform Breusch - Pagan Lagrangiam multipier test in REM model after running REM estimator. The results are presented in Table 5.

From the results reported in Table 6, it is clearly seen that both estimators, consisting of OLS, FEM and REM encounter heteroskedasticity. To overcome the drawback of above estimators, FGLS estimator (feasible general least squares regression) with xtgls command will be optimal. Results of FGLS estimator are drawn in Table 6.

Variable	Predicted sign	Coefficient	t-statistic	Significant
DUAL	+	0.0334	0.92	0.360
SIZE	_	-0.007	-0.40	0.686
FEMALE	+	0.050	3.21	0.001
INDEP	+	0.792	4.99	0.000
OWNLAR	+	0.005	7.32	0.000
OWNINTER	+	0.007	7.36	0.000
LOGFIRM	+	0.616	2.79	0.005
No of observvation	on	1400		
No of groups		200		

Table 6. Results of estimating

Source: Caculated by authors

## 6.2 Results and Discussion

Research results reported at Table paint of picture that female member, independence of board members, major shareholders, foreign investors,, firm size positively have impact on business value with the significance lower 5%. Meanwhile, there is not evidence of the effect of other variables, in particular CEO duality and the size of the Board on firm's value.

H1: The dual role of CEO and Chairman has a positive impact on firm value

The study rejected the hypothesis. The result is similar to those of Baliga, Moyer and Rao (1996). Conversely, Vo Hong Duc and Phan Bui Gia Thuy (2013) that present the positive relationship while in thesis of Pham Thi Kieu Trang (2014), the negative relationship was indicated. The difference among studies can be explained by the variance of research period and samples: the authors Vo Hong Duc and Phan Bui Gia Thuy collected data with the period before 2011 and Pham Thi Kieu Trang picked up information from 2011–2014.

H2: The size of board negatively and significantly affect on firm's value

This hypothesis is rejected. The finding are not different with the previous tests in Vietnam such as those by Vo Hong Duc and Phan Bui Gia Thuy (2013) and Pham Thi Kieu Trang (2014) because of variance of period study and sample.

H3: The number of female members has a positive impact on the firm's value of non-financial companies listed on the Stock Exchange

This hypothesis is confirmed. Thus, the paper increases the number of evidence to advocate perspective of Stakeholder theory about diversity in internal governance mechanism, strikingly gender diversity in the Board of Directors because gender diversity creates harmonization in making strategic decisions. It is consistent with the finding of Vo Hong Duc and Phan Bui Gia Thuy (2013), and contrasts to the finding of Pham Thi Kieu Trang's thesis. Explanation for this difference comes from the variance of sample. Limitation of paper is that the number of female members in Board of Directors is from 0 to 7 members. It means that there are companies with 6 female out of 11 members

accounting for more than 50%. In contrast, in the thesis of Dr. Pham Thi Kieu Trang, the research sample has the highest number of 3 female members.

H4: The presence of independent members in board has a significant impact on firm's value

The independence members in a board has a positive impact on business value. This result is consistent with the results of the studies Gillan, Hartzell and Starks (2007), J. Thomas Connelly et al. (2012). The more independent members of the Board of Directors, the higher the value of the business because it will put pressure on the Board of Management better (Rosentein et al.). Beasley (1996) stated that independent members who do not serve executive positions faithfully will assess strategic decisions, and are representatives to protect the interests of shareholders (Fama and Jense, 1983). In Vietnam, Vo Hong Duc and Tri Minh Nguyen (2014) also provide similar finding.

H5: Ownership of Large Shareholders has a significant and positive on firm's value of non financial companies listed on the Stock Exchange

Major shareholders possessing more than 5% of company's stake strongly concern on corporate value due to direct individual benefit and then will have the biggest influence on the company. Therefore, major shareholders will make beneficial decisions to companies. The result of paper is consistent with one of the author Jensen and Meckling (1976) and other past author such as: Dao and Hoang (2014).

H6: Ownership of foreign shareholders has a significant and positive on firm's value of non financial companies listed on the Stock Exchange

This hypothesis is accepted. Foreign investors are considered to be knowledgeable about economic and financial markets. Therefore, the participation of foreign investors will enhance quality of business performance.

H6: Firm size has a positive effect on firm value

This hypothesis is confirmed. This research is in line with Susanti, L., Sudarma, Y.S., Nidar, S.R. and Mulyana, A. (2017).

## 7 Conclusion and Recommendations

The paper provided the evidence of the impact of internal corporate governance, in term of the characteristics of director board (board independence, female member) and ownership on firm value in Vietnam context. The finding suggested to regulators, managers and shareholders following:

Firstly, enhancing and clarifying the independence of members in a Board of Directors. Ministry of Finance Vietnam (2017) requires that at least one a third total members in Board are independent members; non-executive. However, rule also allows executive members so, it will not guarantee the objectivity as being representatives of shareholders in making decision process. The conflict of interest between owners and managers exists. Therefore dual role will distract board members in achieving main goal which is to ensure highest interests of Shareholders. Next, there should be clear regulations involving responsibilities, rights and obligations of board members. In addition, regulators and firms should particularly take into account gender diversity through incentive mechanism to support for female members.

Secondly, developing and expanding training programs on corporate governance to improve knowledge and awareness of managers is essential. Meanwhile, there should be a reward and penalty system to companies that do not implement corporate governance regulations..

Lastly shareholders and foreign investors have a certain influence on the performance of enterprises. Therefore, for major shareholders, it is necessary to monitor corporate governance activities in the reporting, recruitment of executive positions and appointment. For foreign investors, one of the most important attractions is the quality and transparency of business information. Enterprises should provide more reports in relating to both financial and non-financial information to attract attention from foreign investors.

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