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**CORPORATE GOVERNANCE, CAPITAL STRUCTURE
AND FIRM PERFORMANCE: EMPIRICAL STUDY
FROM COMPANIES LISTED ON THE STOCK
MARKET OF VIET NAM**

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CORPORATE GOVERNANCE, CAPITAL STRUCTURE AND FIRM PERFORMANCE: PRACTICAL RESEARCH FROM COMPANIES LISTED ON THE STOCK MARKET IN VIETNAM

1. Reason for choosing research topic:

From the perspective of agency theory, the supervisory role of the board of directors is of undeniable importance. Because the final decision rests with the top management, the board must closely monitor the decision making and performance of the company (Jensen and Meckling, 1976). According to Wen et al (2002), along with Berger and Bonaccorsi di Patti (2006), corporate governance has a significant influence on the performance of firms through strategic decision making. At the same time decisions regarding capital structure are an important part of strategy implementation (David, 2008).

Deciding on capital structure is one of the core tasks in running a business, because the goal of management in an organization is to increase efficiency. In particular, growing companies often need capital and can be financed through a combination of debt and equity (Matari, Swidi, and Fadzil, 2014). The job of the financial manager will be to find the optimal combination of capital that increases shareholder efficiency (Mak and Li, 2001). Many recent studies mainly focus on (1) corporate governance affects performance (Sanjai Bhagat and Brian Bolton (2008); Sabur Mollah et al. (2012); Jordi Paniaguaa et al. (2018);...), (2) Corporate governance affects financial leverage (Pornsit Jiraporn et al. (2012); Robert Kieschnick and RabihMoussawi (2018); Ya-Kai Chang et al (2014); S. Buvanendra et al (2017); ...) and (3) financial leverage affects performance (Mahfuzah Salim and Dr. Raj Yadav (2012); Chaiporn Vithessonthia and Jittima Tonguraib (2015); Erik Devos et al (2017); Víctor M. González (2013)). Only a few studies show an indirect impact of corporate governance on efficiency such as, the study of Umawadee Detthamronga et al. (2017) showed an indirect

impact of the size of the Supervisory Board on the performance of large firms in Thailand through through capital structure or Kassim et al (2013) capital structure mediates the impact of independent board members on firm performance.

Moreover, it can be seen that the governance model is not the same in countries around the world. For example, a one-tier board model is used in the US, whereas a two-tier board model is used in countries like Germany. In Vietnam, according to the 2005 Enterprise Law, the internal governance model of a JSC is not comprehensively considered a one-level governance model according to the Anglo-American corporate law model, nor is it a two-tier model. level of German law. It seems to be a hybrid structure between the two models mentioned above. Laws and regulations are said to play a role in shaping corporate behaviour. Unlike in the US where businesses are subject to different state and federal laws and regulations. Doing business in Vietnam is generally subject to national laws and regulations. As a result, Vietnamese companies will be less exposed to different laws and regulations than in the United States at any given time.

Vietnam is now moving closer to global corporate governance standards. This is reflected in the issuance of the first document on corporate governance regulations in 2007 applicable to listed companies in Vietnam. In 2019, the State Securities Commission of Vietnam also released a Code of Corporate Governance based on Best Practices. These Principles include a number of recommendations on best corporate governance standards from the Organization for Economic Cooperation and Development (OECD). Therefore, in order to promote the sustainable development of the economy, we need to get closer to international standards, especially after establishing a better governance system after the financial crisis. worldwide in 2007. It not only aims to make the country's economy more sustainable, but also supports the economy in the most difficult times through the right strategies.

Therefore, understanding the importance of corporate governance's impact on performance through strategic decisions, particularly capital structure decisions, is essential to effective companies. . Stemming from objective reality, the author chooses the research topic "Corporate governance, capital structure and firm performance: Empirical research from listed companies on Vietnam's stock market" to do research for my doctoral thesis.

2. Purpose of study:

The overall objective of the study is: to study the impact of corporate governance on capital structure and firm performance. On that basis, determine the capital structure that mediates the impact of corporate governance on the performance of companies listed on the Vietnamese stock market.

2. The gap in study

Corporate governance affects firm performance has been mentioned a lot in previous studies (Sabur Mollah, et al (2012); Jordi Paniaguaa et al (2018); Jianyun Tang (2017); Isabelle ...) . However, corporate governance affects firm performance through capital structure mediation has not received much attention in empirical studies. Especially in the research on corporate governance and firm performance in Vietnam according to the author's personal subjectivity, there has not been any research on capital structure that mediates the impact of corporate governance to firm performance and this is a big gap for companies listed on Vietnam stock market in the period 2009-2021. Because, previous studies only approached capital structure by individual segments such as: (1) corporate governance affects capital structure, (2) capital structure affects firm performance. Therefore, capital structure has not been clearly considered, and the novelty in this study is that capital structure mediates the impact of corporate governance on firm performance.

In addition, ownership concentration has a nonlinear effect on firm governance, which has not been paid much attention by many studies, previous studies mainly focused on managerial ownership affecting performance. Previous studies in the world and Vietnam have not mentioned the epidemic variable (Covid_19).

3. *Method of study:*

The thesis applies a mixed research method including qualitative and quantitative methods, a qualitative method based on the review of previous studies in the world and Vietnam on corporate governance, capital structure and firm governance. This helps to clarify gaps in research, develop research hypotheses and models, and apply appropriate estimation techniques to draw conclusions about the actual situation related to the object of study. and quantitative research method using dynamic panel data through GMM regression method, specifically Sys-GMM estimation.

4. **Study models:**

1.The impact of corporate governance on capital structure

Model test hypotheses 1.1 to 1.6 on predicting the impact of corporate governance on capital structure.

$$(1) LEV = \alpha + \beta_1 BD_Size + \beta_2 Indep + \beta_3 AD_Size + \beta_4 Women + \beta_5 Dual + \beta_6 Top + \beta_7 Age + \beta_8 F_Size + \beta_9 Fix_Ass + \beta_{10} Growth + \beta_{11} Covid_19 + \mu it$$

In which, LEV: Financial leverage, BD_Size: Board size, Indep: Independent board member, AD_Size: Supervisory board size, Women: Female CEO, Dual: Concurrent rights (Chairman and General Director), Top: Concentrated ownership, F_Size: Company size, Age: Company's age, Industry: Company's industry, Fix_Ass: Fixed asset ratio, Growth: Increase growth, Covid_19: Epidemic, α : is the origin coordinate term, μit : is the error with a normal distribution that varies with i and t.

2. The impact of corporate governance on firm performance

To test hypotheses 2.1 to 2.7 about predicting the impact of corporate governance on firm performance, the author estimates GMM regression of corporate governance on firm performance with the dependent variable given. used in the model are TobinQ and ROA

$$(2) \text{TobinQ} / \text{ROA} = \alpha + \beta_1 \text{BD_Size} + \beta_2 \text{Indep} + \beta_3 \text{AD_Size} + \beta_4 \text{Women} + \beta_5 \text{Dual} + \beta_6 \text{Top} + \beta_7 \text{Age} + \beta_8 \text{F_Size} + \beta_9 \text{Fix_Ass} + \beta_{10} \text{Growth} + \beta_{11} \text{Covid_19} + \mu it$$

In which: **TobinQ**, **ROA**: Firm performance

3. The impact of capital structure on firm performance

Model is given to test hypothesis 3 on predicting the impact of capital structure on firm performance, the author provides a quantitative research model to measure the impact of capital structure on firm performance with the method as follows:

$$(3) \text{TobinQ} / \text{ROA} = \alpha + \beta_1 \text{LEV} + \beta_2 \text{Age} + \beta_3 \text{F_Size} + \beta_4 \text{Fix_Ass} + \beta_5 \text{Growth} + \beta_6 \text{Covid_19} + \mu it$$

4. The impact of corporate governance and capital structure on business performance

To test hypotheses 4.1 to 4.7 on predicting the impact of corporate governance and capital structure on firm performance, the author estimates GMM regression as follows:

$$(4) \text{TobinQ} / \text{ROA} = \alpha + \beta_1 \text{BD_Size} + \beta_2 \text{Indep} + \beta_3 \text{AD_Size} + \beta_4 \text{Women} + \beta_5 \text{Dual} + \beta_6 \text{Top} + \beta_7 \text{Age} + \beta_8 \text{F_Size} + \beta_9 \text{Fix_Ass} + \beta_{10} \text{Growth} + \beta_{11} \text{Covid_19} + \beta_{12} \text{LEV} + \mu it$$

5. Nonlinear relationship between ownership concentration and firm performance

Base on many studies use quadratic function to test such as Miguel et al (2004); Gedajlovic and Shapiro (1998); Liu et al (2012).

$$(5) \text{Tobin}Q / \text{ROA} = \alpha + \beta_1 \text{BD_Size} + \beta_2 \text{Indep} + \beta_3 \text{AD_Size} + \beta_4 \text{Women} + \beta_5 \text{Dual} + \beta_6 \text{Top} + \beta_7 \text{Top}^2 + \beta_8 \text{Age} + \beta_9 \text{F_Size} + \beta_{10} \text{Fix_Ass} + \beta_{11} \text{Growth} + \beta_{12} \text{Covid_19} + \mu_{it}$$

Where: Top2 is the square of concentrated ownership

6. Results of study:

6.1. The results of the impact of corporate governance on capital structure:

Table 4.3.1. The results of the impact of corporate governance on capital structure:

LEV	(1)	(2)
L.LEV	0.9142*** (0.000)	0.7692*** (0.000)
Top		0.1065* (0.098)
Dual		-0.0047 (0.493)
Women		-0.0033 (0.954)
Indep		-0.0401 (0.228)
AD_Size		0.0878* (0.080)
BD_Size		-0.2956** (0.006)
Covid_19	-0.0151** (0.021)	-0.0334** (0.049)
Age	0.0129** (0.005)	-0.0548 (0.144)
F_Size	0.0019 (0.362)	0.0366** (0.036)
Fix_Ass	-0.0317** (0.010)	-0.0379** (0.050)
Growth	0.0819*** (0.001)	0.0968** (0.043)

Number of observations	: 4.850	4.850
Number of group	: 425	425
Number of variable tools	: 76	74
F test - P.value	: 0.000	0.000
AR(1) test - P.value	: 0.000	0.000
AR(2) test - P.value	: 0.400	0.488
Hansen test	: 0.544	0.314

Note: dépendent variable LEV (DBTC), ownership concentration (*Top*), Board size (*BD_Size*), Duality (*Dual*), board size control (*AD_Size*), Female CEO (Women), Independent board member (*Indep*), Firm size (*F_Size*), Growth (*Growth*), firm age (*Age*), Fixed assets (*Fix_Ass*), Diseases (*Covid_19*)

***, **, * Represent the 1%, 5% và 10%. Statistical significant levels. The value in parentheses is P.value

Corporate governance characteristics such as average ownership (*Top*) and Supervisory Board size (*AD_Size*) in column (2) of table 4.3.1 are positively correlated with capital structure ($\beta_{Top} = 0.1065$, P.value < 10% và $\beta_{AD_Size} = 0.0878$, P.value < 10%). This finding is proved by Wiwattanakantang (1999) S. Buvanendra et al (2017); Paligorova and Xu (2012 Umawadee Detthamronga et al. (2017), Anderson et al. (2004), Harris and Raviv (2008) While the board size variable in column (2) of table 4.3.1 is negatively correlated with capital structure and has statistical significance ($\beta_{BD_Size} = -0.2956$, P.value < 5%). Some control variables such as company size and growth in column (2) table 4.3.1 are positively correlated with capital structure. at the 5% level of statistical significance ($\beta_{F_Size} = 0.0366$, P.value < 5% và $\beta_{Growth} = 0.0968$, P.value < 5%).

6.2. Results of the impact of corporate governance and structure on firm performance

In this section, the author examines the impact of corporate governance and capital structure on firm performance. Table 4.4.2 presents the GMM regression with the dependent variable being firm performance (TobinQ and ROA). In the first column (1) and (2) are the regression results on the impact of corporate governance on firm performance with dependent variables TobinQ and ROA. Columns (3) and (4) are regression results on the impact of capital structure on corporate performance. Columns (5) and (6) are regression models of the impact of corporate governance and capital Structure on firm performance

Table 4.3.2. Regression GMM of the impact of corporate governance and capital structure on firm performance

Variable	<i>TobinQ</i>	<i>ROA</i>	<i>TobinQ</i>	<i>ROA</i>	<i>TobinQ</i>	<i>ROA</i>
	(1)	(2)	(3)	(4)	(5)	(6)
L.TobinQ	0.7369*** (0.000)		0.7577*** (0.000)		0.7686*** (0.000)	
L.ROA		0.5482*** (0.000)		0.6173*** (0.000)		0.5694*** (0.000)
Top	-0.7414*** (0.000)	0.0162 (0.101)			-0.5207** (0.017)	0.0190 (0.149)
Dual	0.0224 (0.258)	0.0088* (0.055)			0.0488** (0.013)	0.0091** (0.022)
Women	-0.1676 (0.154)	0.0049 (0.889)			-0.0475 (0.640)	-0.0136 (0.399)
Indep	-0.0754 (0.516)	0.3478** (0.030)			-0.0734 (0.472)	0.1102 (0.392)
AD_Size	1.3852* (0.063)	0.1316 (0.431)			0.9922* (0.069)	-0.1412 (0.170)
BD_Size	-0.0943 (0.648)	-0.0505 (0.253)			-0.1899 (0.359)	0.0258* (0.075)
Codid_19	0.3153*** (0.000)	-0.0070 (0.230)	0.2359*** (0.000)	-0.0079** (0.044)	0.2963*** (0.000)	-0.0049 (0.369)
Age	0.0267 (0.137)	0.0005 (0.985)	0.0119 (0.483)	-0.0153 (0.108)	0.0421* (0.064)	0.0014 (0.527)
F_Size	0.0054 (0.670)	0.0021 (0.308)	0.0123 (0.532)	0.0045 (0.410)	0.0438*** (0.009)	0.0021 (0.147)
Fix_Ass	0.0914 (0.778)	-0.0070 (0.861)	-0.1947 (0.736)	-0.0083 (0.899)	0.3248 (0.106)	0.0316 (0.260)
Growth	0.0159 (0.539)	0.0012 (0.897)	-0.0122 (0.591)	0.0102 (0.284)	0.0188 (0.435)	0.0011 (0.899)
LEV			0.1639 (0.756)	-0.0511* (0.055)	-0.7499** (0.014)	-0.0348* (0.087)
Number of observations	: 4.850	4.850	4.850	4.850	4.850	4.850
Number of group	: 425	425	425	425	425	425
Number of tool variable	: 118	83	22	65	176	171
F test - p-value	: 0.000	0.000	0.000	0.000	0.000	0.000
AR(1) test - p-value	: 0.000	0.000	0.000	0.000	0.000	0.000
AR(2) test - p-value	: 0.285	0.251	0.289	0.140	0.293	0.165
Hansen test	: 0.299	0.636	0.456	0.483	0.138	0.135

6.2.1. Impact of corporate governance on firm performance

Possession of concentration (Top) in column 1 of table 4.3.2 and TobinQ performance have a negative correlation and have statistical significance ($\beta_{Top} = -0.7414$, P.value = 1%). Meanwhile, the supervisory board size variable (AD_Size) in column 1 of Table 4.3.2 is positively correlated with TobinQ's performance ($\beta_{AD_Size} = 1.3852$, P.value < 10%). Two variables of dual rights (Dual) and independent board members (Indep) in column (2) of table 4.3.2 have statistical significance and have a positive correlation to ROA performance ($\beta_{Dual} = 0.0088$, P.value < 10% và $\beta_{Indep} = 0.3478$, P.value < 5%)

6.2.2. Impact of capital structure on firm performance

To test the direct impact of capital structure on firm performance, the author tests the GMM regression model with the dependent variable being performance (TobinQ and ROA). The independent variable is financial leverage (LEV) along with some control variables added to run GMM for the model. Columns (3) and (4) in table 4.3.2 are the regression results of the model testing the impact of capital structure on firm performance.

The results of column (4) of table 4.3.2 show that leverage (LEV) positively affects ROA performance ($\beta_{LEV} = -0.0511$, P.value < 10%) This finding is proved by Mahfuzah Salim and Dr.Raj Yadav (2012); Chaiporn Vithessonthia and Jittima Tonguraib (2015); Erik Devos et al (2017); Victor M. González (2013); Tristan Nguyen and Huy-Cuong Nguyen (2015).

6.2.3. The impact of corporate governance and capital structure on firm performance

To test the impact of corporate governance and capital structure on firm performance, the author tests the GMM regression model with the dependent variable as well as performance (TobinQ and ROA) after

experiencing it through GMM's fit tests. The independent variable includes corporate governance characteristics (Top, Dual, Indep, Women, AD_Size, BD_Size), the author also adds the independent variable financial leverage (LEV) along with some control variables to run GMM for model. Columns (5) and (6) in Table 4.3.2 are the regression results of the model examining the impact of corporate governance and capital structure on firm performance.

The results in columns (5) and (6) of table 4.3.2 show that corporate governance characteristics such as concentrated ownership (column 5) have a negative correlation with TobinQ and have statistical significance ($\beta_{Top} = -0.5207$, p-value < 5%) Meanwhile, the supervisory board size variable (column 5) has a positive correlation with TobinQ ($\beta_{AD_Size} = 0.9922$, p-value < 10%). Particularly, the duality variable (columns 5 and 6) is positively correlated with both TobinQ and ROA ($\beta_{Dual} = 0.0488$, p-value < 5% (TobinQ), $\beta_{Dual} = 0.0091$, p-value < 5% (ROA)). In addition, the board size variable in (column 6) is positively correlated with ROA and has statistical significance ($\beta_{BD_Size} = 0.0258$, p-value < 10%). And finally the leverage variable (columns 5 and 6) is negatively correlated with both TobinQ and ROA and is statistically significant ($\beta_{LEV} = -0.7499$, p-value < 5% (TobinQ), $\beta_{LEV} = -0.0348$, p-value < 10% (ROA)).

6.3. Capital structure mediates the impact of corporate governance on firm performance

Determining the capital structure mediating the impact of corporate governance on firm performance through the method of Baron and Kenny (1986), intermediate regression analysis needs to go through 3 steps: (1) Variable The independent variables (corporate governance variables) must affect the intermediate variable (capital structure) in the first model. (2) The independent variable (corporate governance variable) must affect the

dependent variable is firm performance (Tobin'Q or ROA) in the second model. (3) The intermediate variable (capital structure) added to the fourth model must have an impact on the dependent variable (Tobin'Q or ROA) when the independent variables are controlled. If all three conditions above occur step by step and the beta coefficient in the impact model of corporate governance and structure on firm performance in this 4th model is reduced (i.e. The beta “coefficient” of the corporate governance variable in the 4th model is weaker than the “coefficient” of the corporate governance variable in the 2nd model in the presence of the capital structure variable (financial leverage) then this is mediated evidence.

Through three steps to determine intermediate capital structure according to the method of Baron and Kenny (1986), in the first step on determining the impact of corporate governance on capital structure, it shows that concentrated ownership (Top) and size of the Supervisory Board (AD_Size) in column (2) of table 4.3.1 has a significant level and has a positive impact on capital structure ($\beta_{Top} = 0.1065$, P.value <10% và $\beta_{AD_Size} = 0.0878$, P.value < 10%). Meanwhile, the board size variable (BD_Size) has a negative impact on capital structure ($\beta_{BD_Size} = -0.2965$, P.value <5%). Thus, corporate governance has a significant impact on monitoring capital structure decisions. An effective board of directors can influence how financial instruments are best managed and used to ensure maximum efficiency for the company. With this result, the first requirement for determining capital structure intermediates has been met.

In the second step, the author directly tests the impact of corporate governance characteristics such as (Top, Dual, Women, Indep, BD_Size, AD_Size) on performance (TobinQ, ROA). The test results on the impact of corporate governance on performance in columns (1) and (2) of table 4.3.2 show that concentrated ownership (Top) in column 1 has a significant level

and has a negative impact on firm performance TobinQ ($\beta_{Top} = -0.7414$, P.value = 1%) Meanwhile, the control board size variable in column 1 has a positive impact on TobinQ ($\beta_{AD_Size} = 1.3852$, P.value < 10%). The variable duality (Dual) and independent board member (Indep) in column (2) of table 4.3.2 has a significant level and has a positive impact on ROA ($\beta_{Dual} = 0.0088$, P.value < 10%, $\beta_{Indep} = 0.3478$, P.value < 5%). With this result, the second requirement for determining intermediate structural capital has met the requirement.

In the third step, when the financial leverage variable is added, run the GMM model along with the corporate governance characteristics (Top, Dual, AD_Size, BD_Size, Indep, Women) and some control variables in columns (5) and (6) Table 4.3.2 (the model of the impact of corporate governance and capital structure on the operating performance of enterprises, the fourth model) shows that the leverage variable (LEV) has a statistically significant level and has a negative impact on TobinQ and ROA ($\beta_{LEV} = -0.7499$, p-value < 5% (TobinQ), $\beta_{LEV} = -0.0348$, p-value < 10% (ROA) With this result, the third requirement for determining intermediate capital structure has also met the requirement.

Finally, after going through three steps of determining intermediate capital structure according to Baron and Kenny (1986) was satisfactory and then the results showed that the coefficient of concentrated ownership (Top) decreased by 0.2207 from the coefficient. beta 0.7414 in column (1) table 4.3.2 of the second model (impact of corporate governance on firm performance) to 0.5207 in column (5) table 4.3.2 of the fourth model (Impact) of corporate governance and capital structure on firm performance) in the presence of capital structure variable. Specifically, a decrease of 29.77% [$(0.5207 - 0.7414) / 0.7414$]. Due to the mediating effect of capital structure, the coefficient on the efficiency of concentrated ownership (Top) changes when capital structure is controlled. The results indicate that there

is a partial mediating effect of financial leverage. Concentration of ownership still has an effect on a firm's performance even when the firm's leverage is excluded. Managers must always prioritize and focus on equity over liabilities when making capital structure decisions (Myer, 2001), therefore shareholders must rely on the board of directors to evaluate and manage the capital structure. handle challenging decisions. Debt is considered a fixed financial cost when the company uses financial leverage, no matter how the business operates, earns a lot or is even at a loss, the enterprise still has to ensure the payment of loan interest on time and repay the principal at maturity. This is the flip side of debt financing. According to the Pecking Order Theory of Myers and Majluf (1984), managers prefer to finance projects with their own capital over external capital. In addition, profitable businesses do not like to raise more equity capital to avoid spreading ownership. Therefore, the decisions on reducing the number of shares of major shareholders partly affect the efficiency of the company.

The control board size variable (AD_Size) decreased by 0.393 from 1.3852 in column (1) table 4.3.2 of the 2nd model (Impact of corporate governance on capital structure) to 0.9922 in column (5) table 4.3.2 of The fourth model (Impact of corporate governance and capital structure on corporate governance) in the presence of capital structure variable. Specifically, a decrease of 28.37% [$(0.9922 - 1.3852) / 1.3852$]. This is due to the partial mediating effect of capital structure. The efficiency coefficient of the board size changes when the capital structure variable is controlled. The research results support the view of Umawadee Detthamronga et al. (2017), indicating that capital structure mediates the impact of Supervisory Board size on firm performance. The Supervisory Board in the Board of Directors will pay more attention to the risks that are likely to occur when the capital structure is introduced by the managers (Murphy & Brown, 2009). Since too much leverage poses a lot of risk to the firm, it is advisable to use minimal debt

(Tam & Tan, 2007). Warren Buffet also argues that companies must consider avoiding debt in order to be successful (Izma, 2009). On the one hand, managers may avoid taking on debt because interest payments impose constraints on their control over free cash flow (Grossman and Hart, 1982). Furthermore, the use of debt financing increases the likelihood of bankruptcy and job loss. As a result, the supervisory board viewed debt adversely, and therefore would apply lower leverage, avoiding the use of debt to bring performance to the company.

Corporate governance variables such as duality (Dual) and board size (BD_Size) have an impact on performance when the capital structure variable is controlled in the 4th model. However, these corporate governance variables do not meet the requirements. intermediate determination conditions in step 1 and step 2. Therefore, there is no intermediate capital structure for these management variables.

Thus, after the author runs each model to determine intermediate capital structure and the results show that capital structure mediates the impact of concentrated ownership (Top) on firm performance (TobinQ) and capital structure mediates the impact of Supervisory Board size (AD_Size) on corporate performance (ROA). The results show that capital structure is mediated because after meeting 3 conditions (as described above) and the coefficient of concentrated ownership (Top) in the 4th model decreases compared to the coefficient in the 4th model. The second figure specifically decreased by 29.77% [$(0.5207 - 0.7414) / 0.7414$] and the size of the supervisory board decreased by 28.37% [$(0.9922 - 1.3852) / 1.3852$].

6.4. Nonlinear relationship between ownership concentration and firm performance

The threshold for transition from positive to negative relationship is 48.28%. That is, with the concentration of ownership below this threshold, an increase in the concentration of ownership will increase efficiency and will continue

to increase until a maximum of 48.28% is reached, beyond this threshold, , an increase in concentrated ownership will reduce the efficiency of business operations. This result supports the studies of Miguel et al. (2004); Gedajlovic and Shapiro (1998); Liu et al (2012); García-Olalla & García-Ramos (2010).

6.5. Nonlinear relationship of ownership concentration and performance in large and small firms

The threshold for transition from positive to negative relationship is 51.28% for large firms. That is, with the share of concentration below this threshold, an increase in centralized ownership will increase efficiency and will continue to increase until a maximum of 51.28% is reached, and past this threshold, an increase in concentrated ownership will reduce firm efficiency. The threshold for transition from positive to negative relationship is 41.43% for small firms. That is, with the concentration of ownership below this threshold, an increase in concentrated ownership will increase efficiency and will continue to increase until a peak of 41.34% is reached, and past this threshold, an increase in concentrated ownership will reduce firm efficiency.

6.6. Discuss the results on the impact of corporate governance on capital structure and corporate performance.

(1) The coefficient of concentrated ownership (Top) in column 2 of table 4.3.1 is significant and positively correlated with leverage. The ability to access external capital will increase when the business has a highly concentrated ownership structure. Similar to this result are studies by Nadeem Ahmed Sheikh and Zongjun Wang (2011), Wiwattanakantang (1999), S. Buvanendra et al. (2017), and Paligorova and Xu (2012). In a centralized ownership structure, companies are controlled and owned by people in the group, they tend to use borrowed funds instead of raising equity

capital. The results also show that firms with high capital concentration have higher leverage than firms with low capital concentration, and this finding suggests that ownership concentration can force managers to increase leverage to reduce management of opportunism (Paligorova and Xu, 2012). Major shareholders have a strong incentive to monitor and direct the company to protect their investments (Shleifer and Vishny, 1986).

(2) In Table 4.3.1, the board size coefficient in column 2 is significant and negatively correlated with capital structure. When the size of the Board of Directors is larger, the number of shareholders of the enterprise decreases. This view is corroborated by Robert Kieschnick and Rabih Moussawi (2018) as well as Berger et al (1997). In the process of performing its duties, the Board of Directors must strictly comply with the provisions of law, the Company's Charter and the resolutions of the General Meeting of Shareholders. If the decision of the Board of Directors violates the law or the Articles of Incorporation and causes damage to the company, the approved member must be responsible and compensate the company for the damage. Therefore, when making any decision regarding capital structure, the Board of Directors must consider carefully to ensure the safety of the company and its employees. Therefore, board size is negatively related to the firm's capital structure.

(3) The size of the supervisory board in column 2 in table 4.3.1 has a positive impact on capital structure and is significant. Agreeing with this view, there are previous studies by Umawadee Detthamronga et al. (2017), Anderson et al., 2004, Harris and Raviv, 2008. The Supervisory Board ensures to protect the interests of shareholders and ensures the trust of shareholders. disclosure information. Financial statement audits provide lenders with essential information about an institution's credit risks, which can affect a strict loan approval. The effectiveness of the Supervisory Board helps the company improve its access to external capital when needed. In

addition, the Supervisory Board can increase the company's leverage by providing better and reliable information.

(4) The coefficient of concentrated ownership (Top) in columns (1) and (5) of table 4.3.2 has statistical significance and has a negative effect on the business performance of the enterprise (TobinQ). The results found that ownership concentration affects firm performance through capital structure. That is, large shareholders decide to reduce leverage, which has an impact on firm performance. This view is corroborated by Jordi Paniagua et al (2018) as well as Umawadee Detthamronga et al (2017). When most of the capital is in the hands of a few large shareholders, it will cause obstacles for other shareholders to participate in management. If a group of investors own a majority of the shares, they can band together to control. However, it will cause conflicts and problems within the dominant group, especially regarding the interests and strategies of the company, as well as affect the decisions of the board of directors. Large shareholders with large voting rights influence decision-making and can impede company performance. Therefore, ownership concentration can have different consequences and must be managed carefully to protect the interests of all shareholders.

(5) In Table 4.3.2, the coefficients of Chairman of the Board of Directors concurrently with CEO (Dual) in columns (2), (5) and (6) have statistical significance and have a positive impact on corporate performance (TobinQ and ROA). Many studies support this view (U. Detthamrong et al. (2017); Jackling and Johl (2009); Muniandy and Hillier (2015); Jianyun Tang (2017); Daniela Di Berardino (2015); Sanjai Bhagat and Brian Bolton (2008); Colin Green and Swarnodeep Homroy (2017); Haiyan Zhoua et al (2018); Huynh Quang Linh (2016); Tran Thi Tu Anh (2017). may hold the title of CEO (concurrently) or may simply be a member of the Board of Directors or hold no position. According to Donaldson and Davis (1991), CEOs are managers and their leadership role is maximized. maximized when

the company establishes a governance structure that gives the CEO greater authority and autonomy maximizes value when achieving organizational goals rather than self-interest (Davis and Schoorman, 1997). The power duality between CEO and Chairman will create a strong leadership style and decisive in defining and executing the company's strategy. This can increase efficiency for the company

(6) In column (2) of table 4.3.2, the coefficient of independent BOD member (Indep) is statistically significant and has a positive correlation with corporate performance (ROA). This finding supports the views of U. Detthamrong et al. (2017), Agrawal and Knoeber (1996), Jordi Paniagua et al (2018). In Vietnam, independent members of the Board of Directors are usually elected by major shareholders or bosses to ensure their common interests and must ensure at least one third of the total number of members of the Board of Directors according to Decree 71/2017/ND-CP . These independent members are often experts in the field, can contribute ideas and promote professional strengths to help shareholders or owners in making the right decisions for the company (Fama and Jansen (1983).

(7) The coefficients of the Supervisory Board scale in columns (1) and (5) of table 4.3.2 have statistical significance and have a positive impact on efficiency (TobinQ). The results also show that the size of the Supervisory Board affects the efficiency of the enterprise through the intermediary of capital structure. This view is proved by U. Detthamrong et al (2017); Anderson et al (2004); Harris and Raviv (2008). According to Article 102 of the 2014 Enterprise Law, depending on the size of the company, the agency representing the owner shall decide to appoint one controller or establish a Control Board consisting of three to five controllers. The Supervisory Board has extensive expertise and experience in the fields of financial supervision, risk management, accounting and compliance management. The Supervisory Board meets the requirements of appraisal and evaluation of the audit report

in order to protect shareholders' interests as well as ensure that information is disclosed honestly. As an audit partner, the Supervisory Board provides investors with necessary information about the company's credit risks. This information helps in a rigorous credit assessment, minimizing unnecessary credit or risk, and increasing efficiency for the business.

(8) The information in column (6) of table 4.3.2 shows that the size coefficient of the Board of Directors is statistically significant and has a positive correlation to efficiency (ROA). This finding is consistent with the studies of Robert Kieschnick and Rabih Moussawi (2018), Berger et al. (1997), and supports the human resource dependency theory, which suggests that large boards are likely to have easier access to resources than small councils and play an important role in monitoring and control. According to Circular 121/2012/TT-BTC, a large Board of Directors will bring benefits to the company such as consulting support, reducing the autocracy of managers, and taking advantage of many relationships of the board members to improve the efficiency of the company. enterprise efficiency.

(9) The results in Table 4.3.2 show that the leverage ratio (LEV) in columns (4), (5) and (6) is statistically significant and has a negative correlation with firm performance (TobinQ and ROA). This finding is confirmed by the studies of Mahfuzah Salim and Dr. Raj Yadav (2012), Chaiporn Vithessonthia and Jittima Tonguraib (2015), Erik Devos et al (2017), Víctor M. González (2013), and Tristan Nguyen and Huy-Cuong Nguyen (2015). Increasing capital structure means pressure on debt repayment and interest. According to pecking order theory, the relationship between capital structure and firm performance is negative. The reason for this relationship is due to asymmetric information between the parties involved in the business. Businesses with poor performance and low profits will have to borrow external capital to meet their operating needs.

Control variables:

(10) The coefficient of disease (Covid_19) in column (1), (3) and column (5) of table 4.3.2 has statistical significance and is positively correlated to firm performance (TobinQ). That is, the epidemic in 2020 and 2021 increases firm performance (TobinQ), when the epidemic occurs, investors' idle cash flow tends to flow more into the stock market with the desire to make a profit from the price. Stocks go up when other investment channels tend to decrease. When demand increases, the stock prices of companies on the stock market also increase and this helps companies achieve high efficiency. However, the Covid_19 coefficient in column (4) in table 4.3.2 has a significant and negative impact on ROA. This is in contrast to TobinQ's efficiency because when the epidemic occurs, it not only affects the world, but Vietnam is also affected by the disruption of the supply chain, the high cost of pushing, the shortage of supplies and manpower. Production volume was affected due to the implementation of blockade orders. Declining demand for goods affects the performance of companies.

(11) The size of the company (F_Size) in column (5) of table 4.3.2 has a coefficient of 0.0438 with a statistical significance level of 1% and has a positive impact on firm performance (TobinQ). Large companies with high credibility in the market have easier access to capital from outside than small companies. They have experience, as well as good access to not only domestic but also foreign markets to continue to expand production to bring efficiency to the company.

(12) The age coefficient in column (5) of table 4.3.2 has statistical significance and is positively correlated with operational efficiency (TobinQ). Businesses that have been operating for a long time will create a reputation, as well as a reputation in the market, it will be easier to access many different sources of capital, especially when investors see the potential of the company for a long time. With the positions they have established in

the market, they will tend to invest more capital as well as modern equipment and have better orientations for the company to bring efficiency to the company.

7. Management Implications

First, centralized ownership (Top) reduces the efficiency of the business. Especially, concentrated ownership affects corporate governance through capital structure intermediaries. Majority ownership by a small number of shareholders can further increase their power and control over management, allowing them to control decisions related to shareholders. In the capital structure decision-making process, managers must always adopt their priorities, focusing on debt instead of equity (Myer, 2001). In addition, large shareholders do not like to raise more equity capital to avoid spreading ownership. Therefore, decisions on reducing capital structure of shareholders partly affect the business performance of enterprises. Therefore, to see the possibility of manipulation in the companies in which they invest, investors need to know information about the percentage of shares in the company. The law in Vietnam stipulates that companies listed on the stock market must disclose information about major shareholders (holding more than 5% of the shares). However, large shareholders often divide shares among family members and friends to avoid disclosure. In addition to disclosing major shareholders owning more than 5%, information on ownership links or ownership among related parties should also be disclosed to reflect the degree of capital concentration and control of the owners. Final.

Second, the size of the Supervisory Board (AD_Size) increases the efficiency of the business and the size of the Supervisory Board affects the efficiency of the enterprise through the intermediary of capital structure. efficiency for the company. The Supervisory Board was established to ensure the interests of shareholders and ensure the truthfulness of disclosed

information. However, in many companies today, the control board is not effective. The members of the Supervisory Board are elected by shareholders, but because the shareholders only meet once a year, there is a lack of interaction and no regular and continuous support. Moreover, according to Vietnamese law, the Supervisory Board is not only supervisory, but also has to conduct detailed checks and perform appraisal tasks, which creates difficulties for the members of the Supervisory Board. The number of members of the Supervisory Board is limited, including those from very high positions to direct operating positions, making the tasks complicated and difficult. The survey sample shows that companies tend to gradually reduce the number of members in the supervisory board (from 5 members to 3 members making up the majority) in the period 2009-2021. Therefore, the leaders of companies should pay attention to increasing the number of supervisory boards to the maximum extent possible (according to the provisions of law) to ensure that the supervisory board operates more effectively.

The Board of Supervisors in the company plays a key role to protect the interests of shareholders and ensure reliable disclosure of information. The Supervisory Board needs to notify the general meeting of shareholders about issues of inappropriateness, fraud, mistakes and bad practices so that the company can come up with policies/tools to overcome. However, in some enterprises, the Supervisory Board still faces difficulties in terms of operating mechanism, unclear power, limited resources, lack of strong motivation and specific instructions for information exchange and handling. physical. The law regulates the role of the Supervisory Board, but the mechanism for effective operation of the Supervisory Board is still unclear. Therefore, shareholders need to clearly define the role of the supervisory board to invest seriously.

Third, Independent Board members (Indep) increase business efficiency. The survey sample shows that companies with the number of independent board members account for one-third of the total number of members in the Board of Directors, accounting for the majority. Therefore, in order for the company to achieve high efficiency, the company's leadership should consider increasing the number of independent board members to the maximum extent possible, but must ensure that according to Decree 71/2017/ND-CP. Besides, to ensure the best business performance, the company needs to set higher professional standards. Independent members of the Board of Directors need to be reputable, have appropriate skills as well as professionalism in the field of management.

There is currently no policy on monitoring the appointment of independent directors. Therefore, in order to have objectivity in management activities, these members must ensure that they do not have an ownership relationship with the company. In addition, there should be specific regulations to ensure independence in the election of independent board members. Minority shareholders need to participate in the process of nominating and electing independent members of the Board of Directors to ensure the legitimacy and objectivity.

To ensure the role of representing the responsibilities and interests of minority shareholders, it is necessary to develop a standard framework for independent board members. This member needs to have high expertise in the field of corporate governance. However, the law only stipulates the general principles, basic conditions or standards of independent members of the Board of Directors. Therefore, each enterprise must take the initiative and specify the functions, duties and powers of independent board members in its internal regulations, in accordance with the characteristics of the company.

Fourth, Board size (BD_Size) increases the operational efficiency of the enterprise. Therefore, in order for the Board of Directors to operate effectively, the management board of the company needs to consider to increase the number of members in the Board of Directors to the maximum, but must ensure regulations 121/2012/TT-BTC to ensure ensure the effectiveness of management activities. A large board has better access to resources and better oversight and management. In addition, a large board of directors can also provide advisory support, reduce the power of managers, and leverage the relationship of board members to improve the operation of the business. Building the right board structure is very important to achieve corporate efficiency and ensure the company's sustainable development. In addition, a complete corporate governance framework helps guide the company's operations and ensures transparency and accountability of members in the decision-making process. It also enhances stakeholders' understanding of the company's operations and enhances shareholder and investor confidence. Therefore, the management of companies should pay attention to perfecting the rules of corporate governance so that their activities are managed effectively and sustainably.

Fifth, scaling up and borrowing capital to invest in fixed assets is an important decision and should be carefully evaluated. The company should carefully calculate the costs and risks involved in borrowing and investing, and carefully evaluate the potential return on investment to ensure that the company's investment decisions are sound and sound. bring profit.

