# State Ownership and Firm Performance in Vietnam: The Role of State-owned Holding Company

Thong Tien Nguyen* and Hien Thu Nguyen

## ABSTRACT

**Manuscript type**: Research paper
**Research aims**: Ownership structure is crucial to corporate governance as it explains sources of the agency conflicts. Despite the studies performed on the roles and impacts of diverse corporate ownership on corporate performance and corporate governance, the role of state-owned holding company (SOH), as a particular type of state ownership, has not been duly explored. This study addresses the gap by examining the relationship between SOH ownership in listed companies, and how they perform.
**Design/Methodology/Approach**: This quantitative study applies empirical models which test the impact of the different ownerships of firms on firm performance by controlling board characteristics. Regression models are used to test the explanatory power of the variables of interest. Data are collected from all the non-financial firms listed on the Ho Chi Minh Stock Exchange (HOSE), and the Hanoi Stock Exchange (HNX), prior to 31 December, 2009. The selected period equals to a balanced panel dataset of 242 firms for a period of 9 years, ranging from 2009 to 2017.
**Research findings**: The results show that firms with SOH ownership, or SOH-linked companies (SLCs), tend to deliver superior returns. They also enjoy higher valuations than government-linked companies

* Corresponding author: Thong Tien Nguyen is a Lecturer at the Department of International Business Administration, Ho Chi Minh City University of Foreign Languages – Information Technologies, 828 Su Van Hanh Street, HCMC, Vietnam. Email: thong.nt@huflit.edu.vn
Hien Thu Nguyen is Head of Finance Department and MSM MBA Program Director, School of Industrial Management, Ho Chi Minh City University of Technology, 268 Ly Thuong Kiet Street, HCMC, Vietnam. Email: nthuhien@hcmut.edu.vn

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(GLCs), and non-GLCs. There is evidence to show that when the SOH holds a dominant ownership, it exercises positive control over firms, thereby resulting in better market performance.
**Theoretical contribution/Originality**: The evidence of this study focusses on Vietnam. It is also consistent with the findings of other countries. This study confirms that the SOH model mitigates the agency problems that exist in companies with state capital. This study also provides empirical evidence which support that SOH is a mechanism that resolves the various problems noted in state-linked companies caused by conflicting objectives, political influences, and poor management and governance.
**Practitioner/Policy implications**: This study offers regulators a reference which can be used when making policies that would suit the environment of Vietnam. In that regard, it offers an in-depth look into the SOH model which is further encouraged for replication. The outcome derived from this study can help managers to make adjustments and improvements in company's corporate governance so as to achieve better firm performance. This study also helps investors and other stakeholders to better understand the problems arising from corporate governance in Vietnam. In that regard, the outcome can be used to help them make better decisions such as investments, choosing board directors, or making corporate governance policies.
**Research limitation/Implications**: : This study faces some limitations, among which is that it focusses solely on firm performance.

**Keywords**: Corporate Governance, State-owned Holding Company, Ownership Structure, Board Characteristics, Firm Performance
**JEL Classification**: G32

## 1. Introduction

Besides other influential ownerships such as families, and institutional investors, government owned organisations also carry a lot of weight. State-owned enterprises (SOEs), in this regard, represent an important aspect of the world's economy (Lin, Lu, Zhang, & Zheng, 2020), generating about 10 per cent of the global gross domestic product (GDP) (Bruton, Peng, Ahlstrom, Stan & Xu, 2015) and contributing more than 20 per cent of the entire number of firms and their revenue, as noted in *Fortune Global 500* (Lin et al., 2020). Studies (e.g. Budiman, Lin, & Singham, 2009) also showed that SOEs contribute to 15 per cent of the GDP in Asian economies. Despite their great impact on the world

economy, the uniqueness of SOEs have not been addressed in literature (Peng, Bruton, Stan, & Huang, 2016; Xie & Redding, 2018). In fact, SOEs have been regularly criticised as ineffective. Yet, there is a lack of well-defined solutions to help solve their problems (Xie & Redding, 2018). Firms with state capital face serious agency problem (Peng et al., 2016; Chen, El Ghoul, Guedhami, & Nash, 2018; Lin et al., 2020) since they pursue various objectives, besides profitability. In its operations, they may be affected by political interference, or influenced by their pursuit of social objectives, all of which costs its professionalism. These practices can make SOEs ineffective and inconsistent in strategies. Moreover, under weak governance control, they also operate with low transparency and accountability (Wong, 2004; Lin, 2011; Chen, 2014; Peng et al., 2016; Nurgozhayeva, 2017; Kim & Chung, 2018). Such a problem is exacerbated in developing economies where the interests of minority shareholders can be sacrificed for the advancement of state ownership (Young, Peng, Ahlstrom, Bruton, & Jiang, 2008; Peng et al., 2016). As a result of these occurrences, countries around the world are looking for a model which can be used to mitigate the agency problems existing in firms with state capitals. Among these, privatisation has been widely accepted as the solution to improve firms' performance (Bortolotti, Fantini, & Scarpa, 2002). However, it appears that most governments are still retaining a large proportion of the ownership in privatised firms (Bortolotti & Faccio, 2009), hence more agency problems prevail. All of these issues, therefore, need to be clearly resolved (Wang & Judge, 2012).

There is a current need to form an intermediary agent that can pursue profitability as its foremost objective, thereby eliminating other conflicting objectives, and in this regard, a state-owned holding (SOH) company serves the purpose. A SOH is an intermediary agent; it acts like a direct investment holding arm of a country' government (Sam, 2007; Kim & Chung, 2018; Pei, Yang, & Yang 2019; Yu, 2019). Above all its mandates, the SOH is a strategic investor oriented towards profit maximisation (Kuznetsov & Murav'ev, 2001; Sam, 2010; Kim & Chung, 2018). The SOH, first of all, has a role that is similar to an institutional investor. Theoretically, it also has stronger incentives to maximize firms' values. As a result, agency problems due to conflict of interests could be overcome (Sam, 2013). Besides its pursuit for profitability, the SOH is accountable for monitoring firms and their performance. Based on this, the SOH is expected to implement better governance mechanisms in subsidiaries other than state entities not under the SOH. Further to acting as an institutional investor with large enough ownership, the SOH

could place pressure on managers to improve corporate governance and transparency, thereby leading to lower agency problems (Sam, 2013). All of these make the SOH a potential mechanism for improving the quality of corporate governance and firm performance.

Several countries have established SOHs. They include Singapore with Temasek Holdings (Temasek) in 1974, Malaysia with Khazanah Nasional Berhad (KNB) in 1994, and Vietnam with State Capital Investment Corporation (SCIC) in 2006 (Kim & Chung, 2018; Pei et al., 2019). Studies (Ang & Ding, 2006; Cheng-Han, Puchniak & Varottil, 2014) have shown that Temasek-linked companies exhibited higher valuations than other companies. However, there was a concern that the Temasek model could only function properly in a system where there is good and clean governance, a system which is not easy to replicate (Chen, 2014). The different contextual factors of national economies may affect the inconsistency of SOH's roles and powers at different stages of its economic development across countries. Whether SOH's effectiveness could be realized depends on the legal framework and the extent of the government's interventions (Kim & Chung, 2018). The effectiveness of the SOH can be measured through the performance of its invested companies, called SOH-linked companies (SLCs). The SLCs' performance may be better than their peers in advanced economies, like Singapore, but that may not be the case in less developed countries, like Vietnam. This study thus aims to examine the effectiveness of the SOH model in Vietnam, by comparing the performance of SLCs relative to that of companies with state capital, but not under the SOH ownership, called government-linked companies (GLCs). The effectiveness of the SOH model in Vietnam is also examined by comparing its performance with that of non-GLCs, or all other firms that do not have state capital. Market capitalisation of firms in VNX Allshare index, an index that represents all listed companies in the stock market of Vietnam, at the end of 2019, had shown the representations of the SLCs, GLCs, non-GLCs to be, respectively – 9 per cent, 33 per cent, and 58 per cent[1]. Like most emerging economies, Vietnamese listed companies are characterised by a highly concentrated ownership structure, with more than 25 per cent of the ownership belonging to the state (Phung & Mishra, 2016; Kubo & Phan, 2019). The market capitalisation of all Vietnamese listed

[1] Data is provided by FiinPro for the ownership of SLCs, GLCs and non-GLCs; and by the Ho Chi Minh stock exchange and the Hanoi stock exchange for the market capitalisation of these respective firms.

companies was reported by the World Bank to be 31 per cent of the GDP in 2009, and 54 per cent of the GDP in 2018.

Both the SLCs and GLCs are operated under the oversight of their ultimate shareholder, the government. However, the GLCs of Vietnam showed that the government plays a direct and dual role – both as a major shareholder, and the regulator of the industry sector. Therefore, the GLCs tend to pursue conflicting objectives which are non-commercial and profit-maximisation, when compared to the SLCs. In this regard, SLCs are expected to be more effective than GLCs since they have to pursue profitability, as a holding company.

As Jensen and Meckling (1976) had admitted, type-II conflict of interest exists if there is a conflict of objectives among different individuals who own the firm, "when the costs of reducing the dispersion of ownership are lower than the benefits to be obtained from reducing the agency costs, it will pay some individuals or group of individuals to buy shares in the market to reduce the dispersion of ownership" (p. 64).

Shleifer and Vishny (1986) argued that large shareholders like institutional investors with large enough stake, were able to collect information and monitor the management so as to control the corporate performance. Thus, the SOH, as a large institutional shareholder, is expected to assume a controlling role in monitoring firms and governance, leading to improved corporate performance. In the case of Vietnam, non-GLCs may have their controlling roles assumed by either the largest family or foreign institutions. It is generally believed that foreign investors can enhance capital utilisation through investments and innovations (Bena, Ferreira, Matos, & Pires, 2017) as well as improve their monitoring role and corporate governance of invested companies (Huang & Zhu, 2015), it appears that the performance of firms that are controlled by families tended to be more controversial. Literature tends to contain conflicting empirical evidence (Wang & Shailer, 2017; Schickinger, Leitterstorf, & Kammerlander, 2018). This study thus investigates the relative performance of SLCs over GLCs and non-GLCs so as to understand the role SOH plays in corporate performance.

## 2. Theoretical Framework and Hypothesis Development

### *2.1 Agency Theory, Large Shareholder and Corporate Control*

The agency theory stresses on the relationship that exists between the principal and the agent. Jensen and Meckling (1976) defined agency

relationship as, "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent" (p. 5). In the context of the majority and minority owners' relationship, or principal-principal relationship, the controlling shareholder acts on behalf of the minority shareholders, who are not willing to monitor the performance of the management. The majority shareholders provide partial solution to the free-rider problem of the minority shareholders through their monitoring and governance roles over the management (Shleifer & Vishny, 1986; Faccio & Lang, 2002).

### *2.2 State-Owned Holding Company*

Wong (2004) stated that the problem of SOE's governance is their pursuit for multiple conflicting objectives, political intervention, and the lack of transparency. The holding structure seems to serve the purpose of resolving the first two problems at SOEs well since the holding structure is also believed to be able to serve as a layer shielding the SOEs from politics and government intervention. Transparency can be improved by the opening ownership access to the public (Wicaksono, 2008). The relationship between the government, SOH, and SLCs, is a two-tiered principal–agent relationship where the SOH serves as an agent to the government, and as a principal to its SLCs (Sam, 2007; Kim & Chung, 2018).

Placing SLCs under the control of the SOH instead of direct ownership of the state could reduce the inherent conflict of the state's role, both as a shareholder and a regulator (Chen, 2014). The SOH acts as a safety valve between the regulator and regulated firms (Hamdani & Kamar, 2012). This would allow the government the flexibility to deal with a particular target firm or industry, thereby helping to avoid a dilemma in which a heavy regulatory enforcement and action could harm the government's interests (Chen, 2014).

### *2.3 SCIC, a SOH of Vietnam*

Vietnam's State Capital Investment Corporation (SCIC), a SOH, could be considered as a special state-owned enterprise, in comparison to other SOEs. SCIC is a strategic investor of the government; it represents the state capital interests, or the state's holding company. SCIC invests in key sectors and industries so as to generate maximum values, and sustainable returns on its investments. Its mission is to be the

government's strategic investor, active shareholder, and professional financial consultant. Since its establishment, SCIC has invested and managed a fund of USD2.1 billion until 2019 (www.scic.vn), and within the same period, Vietnam's stock market capitalisation had reached USD171 billion in the same period.

### *2.4 Hypothesis Development*

Research focussing on the agency problem and its remedies is ongoing. The ownership and board of directors are among the governance remedies to the agency problem (Panda & Leepsa, 2017). A SOH with profitability objective is a remedy to address the state ownership agency problem. As a result, the performance of the SLCs, and GLCs are examined in the Vietnamese context so as to provide an empirical evidence to the existing literature of SOEs and SOH.

The SOEs' performance is one of the major concerns of governance literature. Many studies (Bai, Liu, Lu, Song, & Zhang 2004; Ding, Zhang, & Zhang, 2007; Li, McMurray, Sy, & Xue, 2018; Long & He, 2018; Pei et al., 2019; Lin et al., 2020) have found that state ownership is regularly linked to low efficiency. SOEs, on the other hand, receive government subsidies, hence they do not need to improve their performance (Taussig, Nguyen, & Nguyen, 2015; Yu, 2019). Therefore, there is reason to believe that GLCs will be less efficient than other counterparts.

The SOH, however, is expected to be different. In Vietnam, SCIC is a SOH that is expected to reform SOEs which can enhance the efficiency of state capital utilisation. SCIC is a strategic investor with profit maximisation orientation (Sam, 2010; Kim & Chung, 2018). Since the SOH is more likely to act as an active investor which promotes greater transparency and better corporate governance, agency problems caused by conflict of principal–principal interests could be resolved (Chen, 2014; Sam, 2013; Kim & Chung, 2018). Moreover, the SOH has large enough ownership to collect information and monitor the management to drive corporate performance (Sam, 2013). Furthermore, the SOH also carries less pressure to maximise short term interest, hence it could align its interest as a major shareholder with other minority shareholders in SLCs. The SOH alleviates the principal–principal agency problem, where conflicts between the controlling and minority shareholders arises (Peng et al., 2016). Empirical evidence shows that Singapore's Temasek-linked companies (SLCs) have higher valuations, and better corporate governance than its country's non-SLCs (Ang & Ding, 2006; Kim &

Chung, 2018). Similarly, Malaysian SLCs were found to be effective in creating firm value (Lau & Tong, 2008). As a result, there was an expectation of positive relationship between the SOH ownership and firm performance. Thus, the hypothesis is formulated as:

$H_1$: SOH ownership has a positive impact on firm performance.

Family ownership is prevalent around the world. It is also being investigated in many studies (Wang & Shailer, 2017; Schickinger et al., 2018). In the U.S., Anderson and Reeb (2003) found that one-third of the S&P 500 comprised of family firms. They play dominant roles in Asia (Claessens & Fan, 2002), including in Vietnam (Pham, 2016). This kind of ownership have both advantages and disadvantages. For example, family concentrated ownership contains lower transaction costs as it involves family members. There will also be lesser problems of information asymmetry between insiders and outsiders (Claessens & Fan, 2002). Further, family owners can enhance their monitoring role (Wang & Shailer, 2017) since family representations could lead to the centralisation of authority, and decision-making power (Yeh, Lee, & Woidtke, 2001). Anderson and Reeb (2003) noted that family firms outperformed non-family firms.

However, controlling families have been blamed for expropriating non-controlling minority shareholders (Bloom & Van Reenen, 2007). In family companies, unqualified members could be appointed to key positions without competition (Claessens, Djankov, & Lang, 2000). Due to the close relations and informal linkages, family managers are less monitored (Young et al., 2008). Likewise, Connelly, Limpaphayom and Nagarajan (2008) found that lower firm performance was significantly associated with firms having high family control, in the case of Thailand. Giovannini (2010) also disclosed that in Italy, family involvement had negatively impacted share performance. Wang and Shailer (2017), similarly found that family ownership and performance changed over time, and across countries. In comparison, Vietnam has a weak corporate governance environment, where the legal protection of minority shareholders is not strong, and where external governance mechanisms, such as markets for corporate control, are underdeveloped. It is believed that expropriation and abuse related party transactions in family-owned firms are popular in Vietnam. This is the reason used by the present study to argue that family ownership could have a negative impact in Vietnamese firms. Thus, the hypothesis is formulated as:

$H_2$: Family ownership has a negative impact on firm performance.

Foreign ownership generally confers performance advantages (Carney, Estrin, Liang, & Shapiro, 2019) with the belief that local companies with foreign ownership could benefit from internal transfer of tangible and intangible assets from abroad (Dunning, 1988). Foreign investors can enhance capital utilisation via investments and innovations (Bena et al., 2017), besides improving the companies' monitoring and corporate governance (Huang & Zhu, 2015). Pfaffermayr and Bellak (2002) argued that affiliations with foreign firms helped local companies to have access to newer and superior technologies, thereby leading to superior performance. Studies had shown that firms with foreign ownership tend to display superior performance in many economies (Gugler, 1998; Bellak, 2004; Estrin, Hanousek, Kočenda, & Svejnar, 2009; Carney et al., 2019). Based on this, the impact of foreign ownership on firm performance is thus hypothesised as below:

$H_3$: Foreign ownership has a positive impact on firm performance.

Prior corporate governance studies had attempted to locate the relationship between board of directors (BOD), and firm performance (Brennan, 2006; Pillai & Al-Malkawi, 2018; Paniagua, Rivelles, & Sapena, 2018). Agency theorists (Fama & Jensen, 1983; Brennan, 2006; Paniagua et al., 2018; Masulis & Zhang, 2019) nevertheless, believed that for protecting the interests of shareholders, the BOD would exercise effective oversights. One of the vital conditions for the BOD to develop an effective oversight is independence. It appears that independent board of directors are able to provide defence against the exploitative behaviour of the controlling shareholders and directors (Fama & Jensen, 1983; Masulis & Zhang, 2019). Independent directors could carry external knowledge, provide advice, and resources to help the firms to succeed (Hillman & Dalziel, 2003). It was observed by Kao, Hodgkinson and Jaafar (2019) that firms with higher independent directors have stronger performance. In contrast, Pearce II and Patel (2018) found that board independence was not related to firm performance. Ilhan-Nas et al. (2018) found that board independence developed a negative relationship. In Vietnam, the Code of Corporate Governance regulates that one-third of the BOD must be non-executive directors. Although this representation could demonstrate a reasonable balance of power between controlling shareholders and minority shareholders for the Vietnam market, majority of firms do not comply with the Code. Further, the government had also failed to build an effective mechanism to impose appropriate sanctions for noncompliance (Tran, 2020). The

impact of the independent board of directors will thus be investigated under the hypothesis formulated below:

$H_4$: The proportion of independent directors in the board has a positive impact on firm performance.

The effect of CEO duality on company performance has been widely debated (Dalton, Hitt, Certo, & Dalton, 2007; Tang, 2017). Duality grants power authority to one person, and this allows the CEO to control information from other members. Duality also permits the board to be controlled by the manager, thereby reducing the monitoring role of the board (Peng, Zhang, & Li, 2007; Tang, 2017). Jensen (1993) and Peng et al. (2007) argued that the BOD is often ineffective because the role of the chairperson is combined with the CEO position. However, the separation of the two roles involves both costs and benefits because there could be an implicit rivalry between two people. Moreover, it is difficult to isolate responsibilities for poor performance (Balatbat, Taylor, & Walter, 2004). There has been some arguments which state that duality roles could enhance the unity of commands from the BOD (Dalton et al., 2007). In the context of the SOH, it is important to ensure that the SOH's have autonomous authority as it can be vulnerable to the interventions coming from bureaucrats (Kim & Chung, 2018). Therefore, in the case of the SOH, separating leadership roles would increase the board's efficiency in monitoring firms (Fama & Jensen, 1983). Doing so could reduce the agency problems between the CEO and the Chairman (Kim & Chung, 2018). Based on this, it is hypothesised that a separation of the two roles can prevent power abuse.

$H_5$: Duality has a negative impact on firm performance.

## 3. Data and Methodology

### *3.1 Data*

Data were collected from all the non-financial firms that were listed on the Ho Chi Minh Stock Exchange (HOSE), and the Hanoi Stock Exchange (HNX), prior to 31/12/2009. These were collected from the annual reports and prospectuses of listed companies which were published on the HOSE and HNX. Additionally, the audited financial statements provided by Tai Viet Corporation (Vietstock), Ho Chi Minh City Securities Corporation (HSC), and VietCapital Securities Joint Stock Company (VCSC) were included. Ownership data were manually obtained, and supported by Vietstock. These were based on

the respective annual reports and prospectuses. The data were then verified with transactions recorded by the VCCorp Corporation (CafeF), subjected to compulsory information disclosure, especially for family members' ownership which is only published under each related party's transaction. Although the number of listed companies totalled 453 firms in 2009, the disclosure of ownership structure was insufficient. Thus, the final sample was confined to only 242 firms with full balanced data, thereby accounting for 60 per cent of the stock market capitalisation of 2009. The balanced panel data could provide observations of the same company in all time period, thereby reducing the noise introduced by unit heterogeneity. Moreover, the period of 2009-2017 was observed to be more accurate when measuring the role of corporate governance and management, following the global financial crisis of 2008. The year 2018 was excluded because it was the booming year of Vietnam's securities' market which could affect market performance.

### *3.2 Model and Variables*

The impact of ownership structure and board characteristics on firm performance were investigated in this study by using the model below.

$$\text{Firm's performance} = f(\text{Ownership Structure, Board Characteristics, Control Variables})$$

The model provided was adapted from the studies of Short and Keasey (1997), Anderson and Reeb (2003), Ang and Ding (2006), and Paniagua et al. (2018) with modifications made for Vietnam. SCIC model thus represented the SOH model.

### *3.3 Methodology*

The said model was estimated using the ordinary least squares regression technique (OLS), fixed effects (FE), random effects (RE), feasible generalised least square (FGLS), and panel-corrected standard error (PCSE). The consistency of results between different regression methods would ensure the reliability of the model. The OLS, FE and RE are simple, but may develop disadvantages if the model contains heteroskedasticity and/or autocorrelation which could lead to bias results. Prior to regression, correlation analysis would be conducted to ensure for non-multicollinearity between the variables used in the model. If there is multicollinearity between the independent variables, regression

analysis can have a severe impact on the estimated parameters, and on the estimation techniques. The regression model used for investigating the nature of the relationship between ownership structure, board characteristics and firm performance is provided below. It is accompanied by a detailed definition of the variables, as described in Table 1.

$$\{\text{TOBIN} \mid \text{MB}\}_{jt} = \beta_0 + \beta_1 \text{SOH Ownership}_{jt} + \beta_2 \text{Government-linked Ownership}_{jt} + \beta_3 \text{Family Ownership}_{jt} + \beta_4 \text{Foreign Ownership}_{jt} + \beta_5 \text{Board Independence}_{jt} + \beta_6 \text{Duality}_{jt} + \beta_7 \text{Growth Rate}_{jt} + \beta_8 \text{Leverage}_{jt} + \beta_9 \text{Size}_{jt} + \beta_{10} \text{Board Size}_{jt} + \beta_{11} \text{Stock Exchange} + \sum_{k=12}^{m} \beta_k \text{Industry}_k + \sum_{p=m+1}^{l} \beta_p \text{Year}_p + \varepsilon_{jt}$$

Table 1: Variables Definitions

| Variable Name | Variable Code | Measurement |
|---|---|---|
| SOH Ownership | s_own | The percentage of company shares owned by SCIC. |
| Government-linked Ownership | g_own | The percentage of company shares owned by government (excluding SOH's Ownership). |
| Family Ownership | f_own | The percentage of company shares owned by the largest family. |
| Foreign Ownership | fr_own | The percentage of company shares owned by foreign investors. |
| Board Independence | b_indep | The proportion of independent directors on the board of directors. |
| Duality | d_dual | Dummy variable: 1 if the company has the combination of the roles of Chairman and CEO. |
| *Control Variable* | | |
| Growth Rate | growth | Compounded annualised rate of growth of revenue (%). |
| Leverage | lev | Leverage = (book value of debt)/(total assets). |
| Firm Size | size | The natural logarithm of total assets. |
| Board Size | b_size | The total number of directors on a board of directors. |
| Stock Exchange | d_hose | Dummy variable: 1 if the company is listed on HOSE. |
| Industry | industry | Industry Classification of ICB. |
| Year | year | Dummy variable for year. |

Table 1: Continued

| Variable Name | Variable Code | Measurement |
|---|---|---|
| *Firm Performance* | | |
| Tobin's Q | tobin | Market value of equity plus book value of total liabilities divided by Total Assets. |
| Market to Book | mb | Market value of equity divide by Book Value of Equity. |

Three types of performance are often used in studies of corporate governance, including investment performance, market performance and operating performance (Krafft, Qu, Quatraro, & Ravix, 2014). Market performance is selected to reflect the growth prospects of a company. A good market performance ratio indicates that the investors anticipate that the management could create more value from corporate assets. If the corporate governance could improve the market valuation of the company, it is then translated into a higher firm valuation.

## 4. Results

### *4.1 Data Description*

Descriptive statistics of the 242 enterprises observed in the nine years, from 2009 to 2017, are presented in Table 2.

Table 2: Descriptive Statistics of Observed Variables

| Stats | N | Mean | Median | Min | Max | Standard Deviation |
|---|---|---|---|---|---|---|
| s own | 2137 | 0.031 | 0 | 0 | 0.578 | 0.101 |
| g own | 2137 | 0.243 | 0.192 | 0 | 0.844 | 0.243 |
| f own | 2137 | 0.048 | 0 | 0 | 0.810 | 0.144 |
| fr own | 2137 | 0.089 | 0.023 | 0 | 0.882 | 0.135 |
| b indep | 2137 | 0.119 | 0 | 0 | 0.833 | 0.169 |
| d dual | 2137 | 0.282 | 0 | 0 | 1 | 0.450 |
| size | 2137 | 27.22 | 27.19 | 23.15 | 33.27 | 1.594 |
| lev | 2137 | 0.512 | 0.543 | 0.006 | 0.995 | 0.228 |
| growth | 2137 | 0.145 | 0.082 | -1.039 | 30.15 | 0.822 |
| b size | 2137 | 5.540 | 5 | 2 | 11 | 1.160 |
| d hose | 2137 | 0.492 | 0 | 0 | 1 | 0.500 |
| tobin | 2137 | 1.053 | 0.935 | 0.0841 | 11.35 | 0.615 |
| mb | 2137 | 1.050 | 0.799 | 0.021 | 9.851 | 0.995 |

The descriptive statistics for the independent variables (Table 2) showed that SCIC (SOH) owns an average of 3.1 per cent of company shares such that SCIC owns a maximum of 57.8 per cent of shares of the SLCs. The government agencies (excluding SCIC) own 24.3 per cent of companies' shares on average, with the maximum ownership of 84.4 per cent contributed by the oil and gas industry in which the government's role is to ensure energy security. Families own 4.8 per cent of company shares on average, with the maximum ownership of 81 per cent. Foreign investors own 8.8 per cent of company shares. The proportion of independent board members is averaged at 11.9 per cent, and 28.3 per cent of companies have CEOs carrying dual leaderships. Of the samples, the SLCs account for 14 per cent or 34 firms in the sample.

The correlation analysis is presented in Table 3 to demonstrate the relationship of interested variables, and to identify potential multicollinearity between the independent variables used in the model. The analysis showed that independent variables have low correlations.

Table 3: Independent Variables Correlation Matrix

| | s_own | g_own | f_own | fr_own | d_indep | d_dual |
|---|---|---|---|---|---|---|
| s_own | 1 | | | | | |
| g_own | -0.271*** | 1 | | | | |
| f_own | -0.0529* | -0.321*** | 1 | | | |
| fr_own | 0.286*** | -0.281*** | 0.0829*** | 1 | | |
| b_indep | 0.0231 | -0.182*** | 0.0689** | 0.126*** | 1 | |
| d_dual | 0.0398 | -0.118*** | 0.121*** | 0.00696 | 0.0523* | 1 |

*Note*: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

### *4.2 Performance Comparisons between SLCs, GLCs and non-GLCs*

One of the aims of this study is to demonstrate the role of SOH as the professional investor that could impact on firm performance in a more positive way than other state-owned entities. The superior performance of SLCs is demonstrated by comparing various measures of the financial and market performance of SLCs with GLCs and non-GLCs as presented in Table 4. These include profitability, asset efficiency, expenditures and financial ratios. Companies were classified as SLCs or GLCs if the ownership of SCIC or non-SCIC government agencies is equal to or greater than 20 per cent of the total shares. The remaining companies in the sample were classified as non-GLCs.

Table 4: Benchmarking of SLCs, GLCs and Non-GLCs Excluding Financial Companies

| Variables | SLCs vs GLCs All Years | | | | | SLCs vs Non-GLCs All Years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SLCs | Mean SLCs | GLCs | Mean GLCs | T-Test | SLCs | Mean SLCs | Non GLCs | Mean Non GLCs | T-Test |
| Tobin's Q | 147 | 1.490 | 1047 | 1.017 | 0.473*** | 147 | 1.490 | 943 | 1.026 | 0.465*** |
| Market to Book | 147 | 1.735 | 1047 | 0.912 | 0.823*** | 147 | 1.735 | 943 | 1.096 | 0.639*** |
| ROA | 147 | 0.169 | 1047 | 0.093 | 0.076 | 147 | 0.169 | 943 | 0.083 | 0.086*** |
| ROE | 147 | 0.109 | 1047 | 0.055 | 0.053*** | 147 | 0.109 | 943 | 0.049 | 0.059*** |
| ROS | 147 | 0.119 | 1047 | 0.059 | 0.060** | 147 | 0.119 | 943 | -0.034 | 0.153 |
| Excess Return | 147 | 0.032 | 1047 | -0.015 | 0.047 | 147 | 0.032 | 943 | 0.011 | 0.021 |
| P/E | 144 | 6.489 | 1039 | 13.11 | -6.617 | 144 | 6.489 | 910 | 23.28 | -16.790 |
| Growth | 147 | 0.113 | 1047 | 0.109 | 0.004 | 147 | 0.113 | 943 | 0.190 | -0.077 |
| Expense to Total Assets | 137 | 0.191 | 986 | 0.150 | 0.040*** | 137 | 0.191 | 912 | 0.116 | 0.075*** |
| Expense to Sales | 137 | 0.173 | 986 | 0.144 | 0.029** | 137 | 0.173 | 912 | 0.220 | -0.047 |
| Interest to Net Assets | 147 | 0.016 | 1047 | 0.019 | -0.003* | 147 | 0.016 | 938 | 0.021 | -0.004** |
| Interest to EBIT | 147 | 0.193 | 1046 | 0.251 | -0.058 | 147 | 0.193 | 937 | 2.501 | -2.308 |
| Dividend to Net Assets | 147 | 0.052 | 1047 | 0.030 | 0.022*** | 147 | 0.052 | 943 | 0.025 | 0.028*** |
| Size | 147 | 27.97 | 1047 | 26.88 | 1.091*** | 147 | 27.97 | 943 | 27.49 | 0.485*** |
| Leverage | 147 | 0.410 | 1047 | 0.528 | -0.118*** | 147 | 0.410 | 943 | 0.509 | -0.099*** |
| Long Term Debt to Equity | 147 | 0.221 | 1047 | 0.472 | -0.252** | 147 | 0.221 | 943 | 0.520 | -0.299 |
| Total Assets to Equity | 147 | 2.165 | 1047 | 3.085 | -0.920** | 147 | 2.165 | 943 | 3.145 | -0.980 |
| Sales to Total Assets | 147 | 1.163 | 1047 | 1.358 | -0.196* | 147 | 1.163 | 943 | 0.928 | 0.234*** |

Table 4: Continued

| Variables | SLCs vs GLCs All Years | | | | | SLCs vs Non-GLCs All Years | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SLCs | Mean SLCs | GLCs | Mean GLCs | T-Test | SLCs | Mean SLCs | Non GLCs | Mean Non GLCs | T-Test |
| CapEx to Total Assets | 147 | 0.045 | 1046 | -0.007 | 0.052 | 147 | 0.045 | 942 | 0.038 | 0.007 |
| CapEx to Net Assets | 147 | 0.050 | 1046 | -0.008 | 0.058 | 147 | 0.050 | 942 | 0.040 | 0.011 |
| CapEx to Sales | 147 | 0.023 | 1046 | 0.009 | 0.014 | 147 | 0.023 | 942 | 0.132 | -0.108 |
| Cash to Total Assets | 147 | 0.064 | 1047 | 0.047 | 0.017*** | 147 | 0.064 | 943 | 0.045 | 0.019*** |
| Cash to Net Assets | 147 | 0.073 | 1047 | 0.053 | 0.020*** | 147 | 0.073 | 943 | 0.052 | 0.021*** |
| Cash to Sales | 139 | 0.075 | 1047 | 0.055 | 0.020 | 139 | 0.075 | 939 | 0.108 | -0.033 |
| EBITDA Standard Deviation | 103 | 1.600e+11 | 779 | 5.000e+10 | 1.1e+11*** | 103 | 1.600e+11 | 768 | 1.100e+11 | 5.200e+10 |
| Cash Flows Standard Deviation | 103 | 0.032 | 779 | 0.046 | -0.014*** | 103 | 0.032 | 768 | 0.043 | -0.011*** |
| Board Independence | 147 | 0.128 | 1047 | 0.089 | 0.040*** | 147 | 0.128 | 943 | 0.152 | -0.024 |
| Board Size | 147 | 5.993 | 1047 | 5.274 | 0.719*** | 147 | 5.993 | 943 | 5.764 | 0.230* |
| Duality | 147 | 0.687 | 1047 | 0.729 | -0.042 | 147 | 0.687 | 943 | 0.597 | 0.090** |

*Note*: This table compares the means of various performance measures of SLCs to GLCs and Non-GLCs by t-tests. Companies are classified as SLCs or GLCs if the ownership of SCIC or non-SCIC government agencies is equal to or greater than 20%. The remaining companies are classified as Non-GLCs. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

The benchmarking comparisons made between SLCs and GLCs or SLCs and non-GLCs revealed that SLCs have better market performance than both the GLCs and non-GLCs, as shown by Tobin's Q and market to book significance.

### *4.3 Regression Analysis and Hypothesis Testing*

When feasible generalised least square (FGLS) and panel-corrected standard error (PCSE) were used to test the hypotheses, the results showed evidence of heteroscedasticity in the model. To make the results reliable, robustness check was performed to examine whether regression coefficients were plausible and robust. This was done by adding or removing repressors. In addition, 2SLS regression was performed to control for potential endogeneity which was similar to the approach of Gugler and Weigan (2003), and Džanić (2012) in which lagged explanatory variable was used as an instrument for ownership structure. This is indicated in Table 5.

The results showed that s_own, representing SOH ownership, had positive and significant impacts on Tobin's Q and MB, across the sub-models. This outcome supports the hypothesis that the SOH positively contributes to firm's good performance. This indicates that the SOH is an effective model for Vietnam, and the representation of the SOH in firms would improve firm performance. The result is consistent with the findings of Ang and Ding (2006) who used the Singapore-Temasek model. In terms of governance structure, analysis showed that SLCs have more independent directors and board members than GLCs. This was at significant levels while duality difference was not statistically significant. These outcomes can be considered as additional points explained for the positive significant impact of the SOH ownership structure on firm performance.

In this study, fr_own which represents foreign ownership, had positive impacts on Tobin's Q. This result is compatible with Gugler (1998), Phung and Mishra (2016) and Bena et al. (2017) who found that foreign ownership improved firm performance. This is also consistent with the argument that foreign investors support local companies, thereby improving firm performance (Huang & Zhu, 2015; Bena et al., 2017).

The current study also used b_indep to represent independent director's ratio. The results showed that this had a significant impact on firm performance in the MB regression. The representation of the independent directors in companies, as a result, had positively affected

Table 5: Impacts of Ownership Structure and Board Characteristics

| Variables | FGLS | | | | | | PCSE | | 2SLS |
|---|---|---|---|---|---|---|---|---|---|
| | (1) tobin | (2) tobin | (3) tobin | (4) tobin | (5) tobin | (6) mb | (7) tobin | (8) mb | (9) tobin |
| s_own | 0.367*** | 0.314*** | 0.248** | 0.248** | 0.249** | 0.314** | 0.755*** | 0.655** | 0.921*** |
| | (0.128) | (0.120) | (0.101) | (0.101) | (0.101) | (0.150) | (0.228) | (0.322) | (0.160) |
| g_own | | -0.0577** | -0.00317 | -0.00317 | -0.00349 | 0.0245 | 0.0456 | -0.0417 | 0.126* |
| | | (0.0252) | (0.0269) | (0.0269) | (0.0274) | (0.0305) | (0.0669) | (0.0992) | (0.0667) |
| f_own | | -0.0270 | -0.000979 | -0.000979 | 0.00152 | -0.0399 | -0.0673 | -0.115 | -0.114 |
| | | (0.0533) | (0.0642) | (0.0642) | (0.0644) | (0.0819) | (0.100) | (0.224) | (0.106) |
| fr_own | | 0.296*** | 0.299*** | 0.299*** | 0.307*** | 0.0486 | 0.310*** | 0.129 | 0.429*** |
| | | (0.0553) | (0.0575) | (0.0575) | (0.0580) | (0.0552) | (0.118) | (0.155) | (0.124) |
| b_indep | | | | | -0.0131 | 0.0358 | 0.0779 | 0.307*** | 0.0608 |
| | | | | | (0.0291) | (0.0296) | (0.0749) | (0.112) | (0.0843) |
| d_dual | | | | | 0.00266 | 0.00126 | -0.0225 | -0.0290 | -0.0183 |
| | | | | | (0.0105) | (0.0103) | (0.0271) | (0.0389) | (0.0326) |
| b_size | | | | | -0.000892 | -0.00608 | -0.00167 | 0.0313 | -0.00862 |
| | | | | | (0.00527) | (0.00569) | (0.0113) | (0.0203) | (0.0134) |
| growth | | | 0.00771 | 0.00771 | 0.00767 | -0.00189 | 0.0111 | 0.00557 | 0.0147 |
| | | | (0.00546) | (0.00546) | (0.00548) | (0.00649) | (0.00907) | (0.0164) | (0.0162) |
| lev | | | 0.0922** | 0.0922** | 0.0921** | 0.0117 | -0.370*** | 0.0961 | -0.349*** |
| | | | (0.0369) | (0.0369) | (0.0371) | (0.0348) | (0.131) | (0.219) | (0.0723) |
| size | | | 0.0159** | 0.0159** | 0.0157** | -0.00681 | 0.0506* | -0.00348 | 0.0442*** |
| | | | (0.00659) | (0.00659) | (0.00676) | (0.00917) | (0.0260) | (0.0483) | (0.0129) |

Table 5: Continued

| Variables | FGLS | | | | | | PCSE | | 2SLS |
|---|---|---|---|---|---|---|---|---|---|
| | (1) tobin | (2) tobin | (3) tobin | (4) tobin | (5) tobin | (6) mb | (7) tobin | (8) mb | (9) tobin |
| d_hose | | | 0.0325** | 0.0325** | 0.0321** | 0.267*** | -0.00125 | 0.166** | -0.0265 |
| | | | (0.0153) | (0.0153) | (0.0155) | (0.0242) | (0.0382) | (0.0767) | (0.0340) |
| Industry | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Year | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | 0.974*** | 0.969*** | 0.604*** | 0.604*** | 0.616*** | 0.943*** | 0.0137 | 0.446 | 0.371 |
| | (0.00760) | (0.0117) | (0.168) | (0.168) | (0.170) | (0.242) | (0.656) | (1.236) | (0.325) |
| Firm-year Observations | 2,137 | 2,137 | 2,137 | 2,137 | 2,137 | 2,137 | 2,137 | 2,137 | 1,899 |
| Number of firms | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 | 242 |

*Note*: This table presents regression results of Tobins'Q (*Tobin*) and market to book (*MB*) on ownership variables, using FGLS, PCSE and 2SLS. Independent variables of study include *s_own*, *g_own*, *f_own*, *fr_own*, *d_indep* and *d_dual* representing for SOH ownership, Government Ownership, Family ownership, Foreign ownership, Board Independence and Duality. Control variables includes Growth rate (*growth*), Leverage (*lev*), Firm Size (*size*), Board Size (*b_size*), Stock Exchange listed (*d_hose*), Industry (*industry*) and Year (*year*). Standard errors in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels.

firm performance. Assumptions stating that independent directors could prevent expropriation from controlling shareholder was thus supported. The result is consistent with the findings of Duong and Vo (2016). However, the result was inconsistent with Balatbat et al. (2004), Pearce II & Patel (2018) and Vu, Phan and Le (2018) who noted no relationship between board independence and firm performance. The results also contradicted the findings of Bhagat and Bolton (2008), Vo and Nguyen (2014) who observed a negative relationship. This outcome could be attributed to the fact that the boards were expanded for political reasons, such as more politicians, environmental activists or consumer representatives. It is deduced that such outsiders could destruct firm performance.

The g_own was used to represent other state ownership, except SOH ownership, and this was observed to have a significant impact on Tobin's Q and MB in the main model. Thus, this did not support the argument that state capital firms have bad performance (Bai et al., 2004; Ding et al., 2007; Nee, Opper & Wong, 2007; Tran, Nonneman & Jorissen, 2014; Li et al., 2018). This could be explained by the fact that although these firms are GLCs, they need to demonstrate good performance before being listed, hence they are better than normal SOEs. To be qualified for listing, the company's ROE of the most recent year must be 5 per cent, at minimum, and the business operation of two consecutive years, prior to the listing date, must be profitable. Besides, it was an additional requirement that listed companies possess no overdue debts over one year, no accumulated losses up to the year of listing registration, and they must comply with the law on the accounting of financial statements. It is deduced that this outcome could be the result of a variety of special privileges granted to state capital firms, and GLCs, thereby giving them an advantage over their non-state competitors (Taussig et al., 2015). Privileges granted to GLCs were also noted in the comparison analysis in terms of expense to sales, and expense on total assets, which proved that GLCs really enjoyed the privileges granted. They include governance expressed through lower expense to sales ratio. The privileges were also specified by lower interest to net assets ratio even though GLCs have higher leverage than SLCs and non-GLCs.

The f_own in this study, which represented family ownership, showed no significant impact on Tobin's Q and MB, for all the models. The result contradicted with the assumption that family ownership concentration could increase the expropriation of non-family minority shareholders (Bloom & Van Reenen, 2006). This also defied the

assumption that in family companies, unqualified members could be appointed to key positions without competition (Claessens et al., 2000), and that family managers were less monitored (Young et al., 2008). The outcome was noted to be inconsistent with past studies of Anderson and Reeb (2003), Connelly et al. (2008), and Giovannini (2010). They had found that family involvement had negatively impacted share performance. This suggests that the impact of family ownership on firm performance is still unclear, more so in the Vietnamese context which is unlike other countries that may also have similar sample firms with family ownership.

In the current study, d_dual, was used to represent duality. It was observed that duality did not have any significant impact on firm performance. This result did not support the expectation which deemed separation between two roles would prevent the abuse of power. Thus, the outcome contradicted the findings of Duong and Vo (2016), Tang (2017), and Pearce II and Patel (2018), Bhagat and Bolton (2008), and Vo and Nguyen (2014), all of whom had found positive relationship between duality and firm performance. It is possible that the variation was caused by the sampled period used.

The controlled variable of Leverage (lev) was found to have negative significant impact on Tobin's Q. This result was in line with Balatbat et al. (2004), Tran and Duong (2011), Duong and Vo (2016), and Pillai and Al-Malkawi (2018), all of whom had found negative relationships. Nevertheless, Phung and Mishra (2016), and Pearce II and Patel (2018) found otherwise.

The controlled variable of Size (size) was found to have positive significant on Tobin's Q. This outcome was compatible with previous studies of Short and Keasey (1997), Tran and Duong (2011), and Vu et al. (2018). It was however, contradictory to Pearce II and Patel (2018). It was pointed out by Lee (2009) that the relationship between firm size and firm performance varied across industries, and market performance. Similarly, Doğan (2013) had indicated that empirical studies on this relationship tend to be mixed.

The controlled variable of d_hose was used to represent the listed companies on the HOSE. It was observed to have a positive impact on firm performance. This outcome could be explained by the HOSE's requirement for a chartered capital of at least VND 120 Billion (more than VND 30 Billion requirement of HNX), followed by the historical fundamentals of HOSE which require large companies to be listed on the HOSE. These companies are good, and they perform better.

Additionally, the trading size of the HOSE is superior to the HNX, thus it tends to attract better companies to be listed, hence better investors.

The current study also used b_size to represent Board Size, and results showed that it did not have any significant impact on firm performance. Pillai and Al-Malkawi (2018) and Paniagua et al. (2018) found that small boards of directors were more effective. Companies with small boards also exhibited more favourable values for financial ratios, and it also promoted stronger CEO performance incentive. However, the relationship between board size and firm performance was noted to be significant for the whole period from 2009-2017. The result was thus inconsistent with the finding of Duong & Vo (2016) who found positive relationship.

The controlled variable of Growth Rate (growth) was also found to have no significant impacts on Tobin's Q and MB. This contradicted with Klapper and Love (2004) who found positive relationship between sales growth and firm performance. In contrast, Tran and Duong (2011) did not find any significant relationship between growth rate and firm performance.

The results indicated that ownership structure and board characteristics was associated with firm performance whereby SOH Ownership, Foreign Ownership, Board Independence, Size and Exchange, were all found to significantly impact on firm performance. Leverage showed a negative relationship with Government Ownership, Family Ownership, Duality and Board Size, and did not significantly impact on firm performance.

## 5. Implications and Conclusions

This study found a positive relationship between SOH Ownership and firm performance. This information offers some insights into understanding how state capital firms function. The empirical results drawn from this study differred significantly from previous studies arguing for state ownership. This study offers empirical contribution to the existing literature on principal-principal conflicts of agency problem. Similar to the case of the Singapore-Temasek model, which had shown that better governance exists, the current findings depicting Vietnam showed that SOH can be utilised as an appropriate model to mitigate the problems of state capital firms. Since SLCs were not associated with low performance (Bai et al., 2004; Hu, Tam & Tan, 2010; Cheng-Han, Puchniak & Varottil, 2014; Lin et al., 2020), then the SOH can be

considered as a mechanism to resolve the conflict of interests in the agency theory. The SOH is an intermediary agent that acts like a direct investment holding arm of the country's government who is profit oriented (Sam, 2007; Kim & Chung, 2018). Given that the SOH is a buffer for reducing the agency problem (Kim & Chung, 2018), it can thus be said that this study contributes empirical results which can consolidate the role of the SOH in existing literature.

The SOH, first of all, would act in a a role that is similar to an institutional investor, and it has stronger incentives to maximize firm values. As a result, agency problems due to the conflict of interests could be minimised (Sam, 2013). In addition, acting as an institutional investor with large enough ownership, the SOH can use its rights to place pressures on managers in improving corporate governance and transparency. This practice can lower the agency problems (Sam, 2013). The result of this study contributes to an experimental outcome of the agency theory on institutional perspective. The SOH model is presumably able to overcome the agency problems existing in state capital firmsl it also serves as a one-stop agency for resolving problems related to its SLCs (Kim & Chung, 2018).

Secondly, the SOH is anticipated to play an effective role in mitigating the agency problems existing between the government and firms. The holding structure seems to serve the purpose of resolving the first two problems of conflicting objectives and political interference at state capital firms well. This is on the condition that the holding structure is a layer shielding the SOH-invested companies from politics and government intervention. Meanwhile, transparency can be best improved by opening access of ownership to the public (Wicaksono, 2008; Sam, 2013). The positive correlation between the SOH and firm performance suggests that the model we used is effective even in an underdeveloped corporate governance environment like Vietnam. This model would be potentially compatible with Wong's (2004) and Peng et al.'s (2016) three pillars of state capital firm reforms - avoiding conflicting objectives, minimising political interventions, and improving transparency (Wong, 2004; Peng et al., 2016). The agency theory had argued that state capital firms are pessimistic due to conflicting interests arising from the poor monitoring, and controlling of government institutions (Wicaksono, 2008). However, the findings of this study highlight the SOH's role for existing literature by providing evidence which supports state capital investment. This evidence is also drawn from a developing economy like Vietnam, which henceforth adds to

the current but limited understanding of how the SOH operates as a shareholder in SOH-Linked Companies (SLCs). The findings noted of the context of Vietnam strengthens literature on SOEs; they also enrich the perspectives of corporate governance by showing the efficiency of the SOE and its reforms.

This study provides policy makers, managers, and investors in Vietnam, the empirical evidence which showed how different ownerships affect firm performance. In this regard, policy makers have another reference when developing corporate governance policies to suit Vietnam's conditions. It seems obvious that the SOH model could be encouraged and replicated because of its appropriateness in mitigating the problems existing in state capital firms. The model can also help regulators and managers to make adjustments to corporate governance at the company level so as to achieve better firm performance. The current study also helps investors and other stakeholders to better understand the problems of corporate governance in Vietnam, thereby enabling them to make better decisions for making investments, choosing board directors, or making corporate governance policies.

The outcome of this study may also be used as a reference by researchers in other countries so as to examine the role of the SOH, particularly in conditions of weak corporate governance. This study has some limitations. Firstly, this study could be the first attempt to examine the impact of the SOH ownership structure on firm performance of listed firms in Vietnam. The role of the SOH in improving the efficiency of state capital investment should be comprehensively explored, and in more details which can be addressed by future studies. Secondly, in this study, firm performance was measured by market performance indicators, which are popularly used in financial studies. Nonetheless, the current study did not take into consideration other performance measures developed in recent years which could provide aggregated indicators to reflect firm performance more accurately. Further, other non-financial dimensions, such as customer satisfaction, employee satisfaction, social performance, and environmental performance had not been taken into consideration for this study. All of these limitations could be further addressed by future studies. A multidimensional approach for performance measurement could be proposed for future attempts too. Last but not least, the constants of regressions are significant in several estimations, indicating that the models were not perfect. This, therefore, leaves room for other variables to be added into the model in future studies.

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