OWNERSHIP STRUCTURE, CHARATERISTIC DIFFERENCES AND THE SIZE OF CORPORATE BOARD OF COMMISSIONER: THE CASE OF INDONESIA STATE-OWNED ENTERPRISES

Emita W. Astami*, Rusmin Rusmin**, Bambang Hartadi**

Abstract

This study scrutinises the association between ownership identity and board size in a unique institutional setting: state-owned enterprises in Indonesia, a country incorporating a two-tier management structure. It investigates whether the ownership identity explains the size of the board of commissioners by using the year 2006 data set from 155 SOEs in Indonesia consisting of 112 of fully SOEs and 43 of partially- privatised SOEs. This study hypothesizes that SOEs with a higher level of private sector ownership will have a greater incentive to monitor the performance of executive management through board of commissioners than those SOEs that are fully owned by the state government. It finds that compared to those fully SOEs, the partially-privatised SOEs are likely to have more board of commissioners. Even though this result is not statistically significant and, therefore, the proposed hypothesis is not statistically supported, the regression statistical analysis reveals that control variables assist in explaining the size of board of commissioners. The size of the board of directors as a control variable is significantly associated with the size of the board of commissioners. Other control variables including size of the SOE as well as the return on equity measure moderately explain the size of the board of commissioners. The findings give insight to stakeholders such as regulators or the private sector investors interested in making investment decisions in Indonesia considering the ownership structure and the effect on the effectiveness of the board of commissioners.

Keywords: Indonesia, Ownership structure, SOEs, Corporate governance

**Corresponding author, Universitas Teknologi Yogyakarta, Jl. Ringroad Utara, Yogyakarta, Indonesia,*
Tel.: 62-274623310
Fax: 62-274623306
Email: eastami@gmail.com
*** Fakultas Bisnis, Teknologi, dan Informasi, Universitas Teknologi Yogyakarta, Indonesia*

Introduction

As suggested by Wicaksono (2008), the recent efforts for the corporate governance's reform in monitoring role of governance, especially, by the controlling shareholders, board of directors[16] and audit committee has been the topic of an active debate among regulators, corporate governance reformists and academics. This study scrutinises the association between ownership identity and board size in a unique institutional setting: state-owned enterprises in Indonesia, a country incorporating a two-tier management structure. Previous research such as Raheja (2005) scrutinizes the ideal size and composition of a corporate board in explaining the effectiveness of corporate governance. Among practitioners, new regulations and practices such as the Sarbanes-Oxley Act have been proposed that restrict corporate board structure and seek to improve corporate governance. Raheja (2005) suggests that board size is a determinant of the effectiveness of corporate governance. Empirical tests of the effectiveness of corporate governance in Indonesia, especially in state-owned companies have been hampered by a lack of data

16 Indonesian companies have a two-tier board structure consisting of a supervisory board (namely board of commissioners) and a board of directors which is fully responsible for the management of the companies. The board of commissioner is independent of the board of directors.

availability. This study provides empirical evidence whether ownership identity[17] incorporating fully and partially-privatized state-owned enterprises (SOEs) explains the effectiveness of the board of commissioners in state-owned enterprises in Indonesia by the size of the board of commissioners. Year 2006 data from 155 SOEs in Indonesia consisting of 112 of fully SOEs and 43 of partially-privatised SOEs is examined in this study.

Boubakri, Cosset, and Guedhami (2005) argue that there are two dimensions of the ownership structure. These include the ownership concentration (concentrated and dispersed ownership) and the ownership identity (government and private ownership). Previous studies suggest that they are three main characteristics of the board that affect the effectiveness of corporate governance. These characteristics include board composition, board leadership structure and board size (Hermalin and Weisbach 1998; Mak and Li 2001; Klein 2002). This study focuses on the role of ownership identity in explaining the effectiveness of monitoring function of the Board of Commissioners (BOC) proxied by board size.

A study on Corporate Governance and Finance in East Asia (ADB, 1999) reports that the economic crisis in East Asia including Indonesia were caused by the failure in implementing prudent corporate governance. Forum for Corporate Governance in Indonesia-FCGI (2004) also suggests that weak corporate governance practices in most of Indonesia companies have result in many deficiencies in their decision makings and corporate actions that result in inefficient investment and highly financial leverage. These issues suggest the need for strong corporate governance mechanisms. Cadbury (1997) argues that strong governance involves balancing corporate governance with appropriate level of monitoring or scrutiny of management's actions. The board of corporation is the central corporate governance mechanism. Following the economic crisis, Indonesia has introduced an extensive set of reforms to make boards more effective; the National Committee of Corporate Governance (NCCG)[18] issued the National Code for Good Corporate Governance (the Code) in 2001 and in 2004, Coordinating Minister of Economic Affairs established the National Committee of Governance Policy. Nam and Nam (2004) argue that board size is an important determinant of board effectiveness. In line with this argument, this study employs the size of board to proxy the board effectiveness.

Empirical tests of the effectiveness of corporate governance in Indonesia, especially in state-owned companies have been hampered by a lack of data availability. The major contribution of this study is that it uses a data set from an institutional environment that is very different from that of most previous research has been done. For example, Boone, Field, Karpoff and Raheja (2007); Guest (2008); Linck, Netter, and Yang (2008) provide empirical evidence on corporate governance such as corporate board size, composition and structure based on data sets from the UK and USA which are more developed western economies. The literature on board size mainly concerns large publicly listed companies and the results of the studies do not address the firms operating in different institutional setting such state-owned companies. This study is conducted in Indonesia utilising state-owned enterprises (SOEs). SOEs in Indonesia are unique as they are established to pursue public policy as well as commercial objectives. Additionally, SOEs in Indonesia spread over most business sectors and the majority of them are wholly owned by state and some of them are being privatised. The privatisation of some SOEs resulted in the shift of ownership identity in which some SOEs are still fully owned by the state and some other SOEs are partially owned by state. Additionally, Indonesia adopts a two-tier system of corporate board. Therefore, the results of this study can fill the gap of the existing literature and enhance the understanding as to how these institutional differences explain the ownership identity affects corporate governance.

Indonesia has implemented SOEs privatization concept since 1988 by promulgating Presidential Instruction No. 5 of 1988 on Guidance of Restructuring and Managing of SOEs. Law No. 19 of 2003 on SOEs has provided a strong legal basis to conduct privatization. Privatisation or moving from state-owned enterprises (SOEs) to private or mixed owned enterprises provides many advantages to the companies. Previous studies (Boardman and Vinning 1989; Friedman, Gray, Hessel, and Rapazynski 1999; Kikeri and Nellis 2004) argue that private enterprises are more profitable, productive and efficient compared to SOEs.

17 There are two key dimensions of the ownership structure, the ownership concentration (concentrated and dispersed ownership) and the ownership identity (government and private ownership) (Boubakri et al. 2005). This study focuses on the role of ownership identity in predicting the effectiveness of monitoring function of the BOC.

18 The NCCG was formed in 1999 with a mandate from the Coordinating Minister for Economic Affairs. Members of the Committee consist of prominent law practitioners and influential government officials (Muljadi 2001).

Our findings indicate that ownership identity and the effectiveness of the board of commissioners are associated insignificantly. We find no evidence that the proportion of company's share owned by state influences the effectiveness of corporate governance. However, we also find that board of directors as a control variable is significantly associated with the effectiveness of corporate governance. The other control variables that help in explaining the effectiveness of board of commissioners are company's ROE and Size.

The remainder of this paper is organized as follows. Section 2 describes the institutional environment in Indonesia. It discusses corporate governance practice and SOEs in Indonesia. This section is followed by theory and hypothesis development section and followed by sections discussing research approach and empirical findings. The final section is conclusion.

2 Institutional Background

2.1 Corporate Governance Practices

It is claimed that poor corporate governance in East Asia countries, especially in Indonesia, as one of the primary factors that brought on the Asian economic crisis (Choi 2000; Donnan 2006) . The practices of corporate governance in many Indonesian companies are far behind those in the more developed economies (Roche 2005). The lack of transparency, accountability, fairness and responsibility practices in most of Indonesian publicly listed firms have led to many deficiencies in their decision makings and corporate actions. These, finally, cause the Indonesian corporate sector vulnerable to the currency shock during the financial crisis. In order to restore investors' confidence and increase quality of financial reporting, Indonesian regulators have taken significant actions. The reform has been focused, especially, on the strength of corporate governance framework. The National Committee of Corporate Governance (NCCG) issued the National Code for Good Corporate Governance (the Code) in 2001 and revised it in 2006. Some important issues addressed in this Code include the role of board commissioners and board of directors as organs of the company and the rights and the role of shareholders and stakeholders.

Management structure of Indonesian companies is based on two-tier system where directors and commissioners are a separate legal entity. The Board of Directors (BOD) is fully responsible for the management of the firm; performing the executive roles. Then, the Board of Commissioners (BOC) has to supervise the performance of the executive management and its policy. The Code requires each member of BOD and BOC to be of good character and have relevant experience. This provision is adopted for the SOEs by issuing the Decree of Minister of SOEs through Decree No. 117/2002. In 2004, the Coordinating Minister of Economic Affairs established the National Committee of Governance Policy through the Decree No 49/2004. Still, to enhance the BOC to have a more independent voice and position towards BOD, some listed SOEs have appointed independent commissioners through a relatively fair and transparent process (Alijoyo, Bouma, Sutawinangun, and Kusadrianto 2004).

2.2 State-owned Enterprises

Indonesia is a country in transition and since early years of the independence of Indonesia, SOEs have had their strategic roles in the economic and political development (Treverton, Levaux, and Wolf 1998). The implementation of their roles has been changed by carrying out several reforms of SOE**.** After two decades (1966-1986) of rapid economic development and change, Indonesia has been expanding the role of private sector by deregulating the economy and shrinking subsidies to SOEs and opening the economy to foreign competition (Boycko, Shleifer, and Vishny 1996; Treverton *et al.* 1998). In the periods beginning at late 1980s and the beginning of 1990s government reformed SOEs. In these reforms, performance measurement that are commonly used for private companies such as profitability, liquidity and solvency were implemented. The objective of implementing those performance measurements coupled with implementing a variety of aspect of strategic management was to improve the performance of SOEs. The result of implementing this method of evaluation is that most SOEs being evaluated felt into 'unsound' category of SOEs (Irianto 2004). The conditions where some SOEs perform poorly lead some state-owned-enterprises were to be privatised; i.e. by going public. Being publicly listed companies, these enterprises are expected to increase transparency in management and encourage efficiency. In addition, the decreasing government's ability in subsidising SOEs as the fall of oil prices also intensify the Minister of Finance in outlining polices in order to improve performance of unsound SOEs. Other reasons for government to privatise some SOEs are in order government to generate revenues or

providing the cash flows to maintain the government's spending programs (Asian Development Bank, 2008).

In the periods of 1991 to 1997, there were some SOEs became partially-privatised. Some of the better and bigger SOEs went public successfully and as became privatised firms and these firms also successfully enhanced their performance (Van der Eng 2004). Following the economic crisis in 1997/1998, another wave of privatisation of SOEs was also undergone. In 1998, based on the Presidential Decrees No 12 and 13 Year 1998, Indonesian Government established Ministry of State Owned Enterprises. It represents the Government as the state shareholder for SOEs. This is in order to separate functions between shareholders and regulators and centralised supervision. Furthermore, in 2003, the Law No. 19/2003 was issued. It addresses specifically on the restructuring and privatisation of SOEs. In the same year, Indonesian government issued Government Regulation No. 41/2003. This regulation strengthens the role of the Ministry of SOEs as the sole government representatives of SOEs.

The vision of the Ministry of SOEs is to build SOEs into solid contributors to the national economy through professional management, competent global competition, and improved operational and financial performance while serving the needs of the stakeholders. There is an argument that SOEs are an essential part of the Indonesian economy as the large portion share of the economy they occupy. However, it is believed that they are hinder economic growth and development because of their low levels of efficiency. Thus, the privatisation program is still continued (Asian Development Bank, 2008). In addition to previously privatisation program, in fiscal year 2007 the Government of Indonesia Committee chaired by Coordinating Minister for the Economy approved 15 out of 24 state-owned-enterprises proposed by the State Ministry for SOEs for partial privatisation.

In 2004, the Minister of SOE issued a ministerial letter prohibiting the board of directors, board of commissioners, advisory boards, and SOE employees to serve as a member of political parties. Even though there are some prevailing regulations, the position of board of directors and board of commissioners are still not certain; whether to comply with Corporate Law as they run businesses or refer to Public Law since they serve the country.

As of 31 December 2006, there were 157 SOEs consisting of 114 fully SOEs and 43 SOEs owned partially by private sector investors. In this study, however, two firms do not disclose BOC information, thus we finally analyse data from 155 firms. The financial characteristics of those two categories (fully and partially-privatised SOEs) are summarised in Table 1.

Table 1. Financial characteristics of fully SOEs and partially-privatised SOEs

	Total Assets	*Total Debt*	*Total Revenues*	*Net Profits*	*ROE*
In trillions of rupiahs					
Fully SOEs (N=112)					
Sum	726,694 (26%)	363,463 (19%)	591,853 (75%)	27,179 (40%)	-
Mean	6,477	3,245	5,284	243	.02
Standard deviation	29,797	12,527	34,815	2,020	.74
Maximum	248,806	108,577	354,243	21,287	2.75
Minimum	5	.7	0	-1,521	-5.79
Median	623	367	375	7	.08
Partially-Privatised SOEs (N=43)					
Sum	2,062,528 (74%)	1,544,363 (81%)	197,380 (25%)	40,618 (60%)	
Mean	47,966	35,915	4,590	945	.01
Standard deviation	192,732	138,642	9,543	2,843	1.11
Maximum	1,235341	871,150	39,641	16,120	2.00
Minimum	32	7	-10	-182	-6.55
Median	1,020	595	822	34	.09

Legend:
Fully SOEs are companies with 100% shares owned by government and Partially-Privatised SOEs are companies with shares owned by government for less than 100%.

Table 1 shows that, in total, partially-privatised SOEs, incorporating 43 companies, account for 74 percent and 81 percent of total assets and debts, respectively. Even though this group of 43 partially SOEs accounts for only 25 percent of total revenues, this group produces a bigger portion of net profits, which

is 60 percent of total net profit of overall SOEs. However, the average ROE of fully SOEs is slightly higher, which is .02 than that of partially-privatised SOEs, which is .01. Whether or not these figures suggest that partially-privatized SOEs have an effective corporate governance than fully SOEs, the statistically analysis is carried out and reported in the Results and Discussion section.

3 Theory And Hypothesis Development

3.1 Related Literature

Many empirical studies have tried to find the optimal size of a company's board of director[19]. Huther (1997) suggests that, as any other decision making bodies, governing boards face coordination problems. These problems increase as the size of governing bodies increase. Lipton and Lorsch (1992), in their paper entitled a modest proposal for improved corporate governance, argue that the maximum size of the board of directors is ten. They further argue that the size less than ten is optimal as a smaller board works better and could be less manipulated by the delegated director. Jensen (1993) suggests that board sizes in the U.S. tend to be too large and recommends that boards have no more then eight directors.

From a theoretical perspective, the board's activities are classified into two major functions; these are monitoring and advising (Raheja 2005; Adams and Ferreira 2007). More recently, there are some studies that measure theoretical determinants of board structure, including board size. Lehn, Patro and Zhao (2004) find that board size is positively related to firm size and positively related to growth opportunities. Boone *et al.* (2007) find that board size increases as companies grow and diversify over time. They also argue that board size reflects a trade off between the firm-specific benefit and cost of monitoring. Linck *et al.* (2008) report that board structure across companies is consistent with the cost and benefits of the board monitoring and advising roles. They provide evidence based on the 1990s data set from the US that board size for large firms fell and board size for small and medium-sized companies was relatively flat. However, the trend of board size for larger companies was reversed by the implementation of the Sarbanes-Oxley Act of 2002. This implies that mandated reforms on firm's influences the association between board of structure and firm size and ownership (Linck *et al.* 2008). This study scrutinises the association between board size and ownership identity in state-owned enterprises in Indonesia.

3.2 Hypothesis Development

Both theories and empirical evidence reported that different ownership concentration impact on different incentives in overseeing executive management (Boubakri and Cosset 1998; Graziano and Luporini 2005; Boone *et al.* 2007). Concentrated ownership, for example, strengthens incentives to monitor corporate management while dispersed ownership has a weak incentive to oversee the performance of company leaders (Sorensen 2007). Yet, the real issues concerning good corporate governance involve responsibilities and to whom the owners and managers owe them. The magnitude of these issues is affected by the types of the company. Bati (2007) suggests that in SOEs, there would be issues regarding the interests of the state, on one hand, and the interests of managers, workers, citizens and consumers, on the other hand. In private companies, the issues came up are around responsibilities owed to shareholders and managers, customers, creditors, workers and suppliers. In privatised companies, the issues could be worse with the fact that managers still acknowledge the influence of the state.

Corporate governance theory suggests that state or government ownership represents a polar case of dispersion, therefore, the privatised companies can be expected to have strong incentive to monitor company management (Sorensen 2007). Dixit (1997) argues that government organisations must answer to more constituencies than do privately owned entities. He suggests that in the case of public ownership, all citizens have a share in the company and therefore it creates a collection action problem which can lead less power to monitor their agents and the government. Mak and Li (2001) also suggest that fully owned-SOEs are likely to have less incentive to adopt strong governance because of weaker monitoring by public ownership. In addition, the political economy theory observes that the presence of the elected politicians (in the case of stated-owned companies) create more problems than benefits due to the politicians pursue objectives that differ from the goals of the principal (Sorensen 2007). Based on these arguments, we expect that partially-privatised SOEs have a greater incentive to monitor the performance of executive management compared to those fully SOEs. Thus, our hypothesis is:

19 For the Indonesian case, it is called as the board of commissioner.

H_1: SOE with a higher level of private sector ownership will have a greater incentive to monitor the performance of executive management through board of commissioners than those SOE fully owned by the state government.

In addition to examining the effect of the ownership structure of state-owned-enterprises on their corporate governance, specifically corporate board size, as previous studies such as Boone *et al.* (2007), this study also investigates some variables that may have impacts on the governance of enterprises. These variables include firm performance, size, financial leverage, and board of directors. In this study, these variables are treated as control variables.

4 Research Approach

4.1 Data

This study carries out an objectivist-positivist research process. To examine the issue of ownership structure and its corporate governance, this study uses a data set of 155 SOEs in Indonesia[20]. The data is gathered from reports produced by the Supreme Audit Board of Indonesia for the year 2006.

4.2 Measurement of Dependent and Independent Variables

To examine the proposed hypothesis, this study scrutinizes the relationships between Ownership Identity and Board of Commissioners (BOC). This study uses the number of the board of commissioners as the proxy for the monitoring intensity on the performance of executive management by board of commissioners.

Previous studies (e.g., Dechow, Sloan, and Sweeney 1996; Peasnell, Pope, and Young 2000; Klein 2002) emphasis that the monitoring role of independent BOC as outside commissioners is expected to be more effective in monitoring management decisions. Furthermore, empirical findings regarding an association between the independent commissioner and corporate performance are not conclusive; it, therefore, is difficult to draw any substantive conclusions. Some studies suggest that the presence of the non-executive commissioners improve companies' value (e.g., Dechow, Sloan, and Sweeney 1996; Peasnell, Pope, and Young 2000; Klein 2002). Conversely, Agrawal and Knoeber (1996) indicate that more independent commissioners representation on the boards are associated with poor performance. Hermalin and Weisbach (1991) document no association between the percentage of outside commissioners serving on the BOC and firm value for a sample of 142 U.S. firms. Again, using the U.S. country dataset, a study conducted by Chtourou, Bedard and Courteau (2001) find no relation between the presence of the independent commissioners and the level of earnings management. To scrutinise the effect of ownership identity on the BOC function, this study uses the number of BOC as proxy for the monitoring role on the performance of executive management by board of commissioners as most SOEs in Indonesia did not disclose the availability of independent commissioners among commissioners in charge.

The independent variable is ownership identity consisting of two classifications that are the SOEs fully owned by the state government (fully SOEs) and the SOEs partially owned by the state government (partially-privatized SOEs). As presented in Table 2, among 155 SOEs, of 112 SOEs are classified as fully SOEs as the State owned a 100 percent share of these enterprises and 43 enterprises are classified as partially-privatized SOEs as the State owns an average of 51 percent share of these enterprises and the ownership is ranging from 1 percent to 99 percent. Since the purpose of this study is to examine the influence of ownership at an aggregated level, we split the broad ownership variable into two important categories (Fully SOEs and Partially-privatized SOEs). However, for the purpose of sensitivity analysis, this study measures ownership by using two methods. The first method is by calculating the percentage of the Indonesian government ownership of a SOE and the second measure is by using the categorical values where if the government owns 100 percent of the SOE then it is assigned a value of 1 and if the government owns less than 100% of SOE (or classified as partially-privatised SOE) then it is assigned a value of 0.

20 As of 31 December 2006, there were 157 SOEs consisting of 114 fully SOEs and 43 SOEs owned partially by private sector investors. However, two firms do not disclose BOC information, thus we finally analyse data from 155 firms.

4.3 Measurement Of Control Variables

The four control variables scrutinised in this study are Firm Performance, Size, Leverage, and Board of Directors. Several past studies document a positive relationship between firm performance and corporate governance performance. Hermalin and Weisbach (1998), for example, indicate that firms with high performance (measured by Tobin's Q) might decide to increase the number of outside commissioners to attract investors. In an Indonesian case, Alijoyo *et al.* (2004) found the correlation coefficients between firm value variables (as measured by Tobin's Q and ROA) and the corporate governance scores is positive. The firms' financial performance has been measured in different ways. Some studies (e.g., Eisenberg *et al.* 1998; Lehmann and Weigand 2000; Bhagat and Black 2002; Krivogorsky 2006) use profitability ratios, for example return on equity (ROE), return on assets (ROA), market adjusted stock price returns; while other research (e.g., Yermack 1996; Cho 1998; Mak and Kusnadi 2005) utilise Tobin's Q model for calculating the companies' performance. This study uses ROE which is the ratio of net income divided by total equity as a proxy for firms' financial performance.

Size of a company has long been expected to affect corporate governance (Dalton, Daily, Ellstrand, and Johnson 1998). Monitoring and advising functions of the company's board are expected to be affected by firm complexity. Large companies are likely to need more external advisors and contracting relationships (Booth and Deli 1996; Klein 1998); thus, they require larger commissioner members (Pfeffer 1972). In addition, Gureiv, Lazareve, Rachinski and Tsukhlo (2004) finds that large firms are more likely to have high quality of corporate governance in order to be more efficient in introducing corporate governance standards. Therefore, those previous studies suggest that there is a positive association between the size of the firms and the number of commissioners sitting on the BOC. Additionally, there is also a case that small Russian firms have less incentives to develop corporate governance because of lack of resources (McCarthy and Puffer 2003). Therefore, this study also explores the association between the sizes of the SOEs and looks at Size as a control variable. In this study, Size is measured by total assets of enterprises at the end of the year in trillions rupiahs and logged to reduce skewness.

Previous studies argue that firms with a higher level of leverage have greater advising requirements thereby need for larger supervisory body (Pfeffer 1972; Klein 1998). This study also looks at financial leverage as a control variable. In this study, financial leverage is proxied by total book value of debt divided by total book value of assets. Another factor perceived to affect the BOC's ability to function effectively is the size of the board of directors (BOD). Large size companies typically operate in multiple segments and tend to be more complex along with different dimensions. Thus, large scale firms are more likely to have bigger number of executive management; consequently, the larger member of supervisory body is needed. Some researchers suggest that lager boards are generally perceived to be less effective than smaller boards because of coordination problems (Jensen 1993; Yermack 1996; Eisenberg, Sundgren, and Wells 1998; Vafeas 2005). However, Dalton, Johnson and Ellstrand (1999) suggest that larger boards potentially offer better advice, more experience and knowledge. Thus, firms in particular with bigger size and complex operations should have larger number of BOD and therefore larger number of BOC. This study examines BOD as a control variable and is measured by the number of executive management on the BOD (Klein 1998).

5 Results And Discussion

This study examines the association between the effectiveness of the BOC control function measured by the number of commissioners on the boards as the dependent variable and ownership identity as the independent variable. It also scrutinizes firm performance, size, financial leverage, and board of directors as four control variables. It carries out univariate statistics and ordinary least square regression statistical analysis (Hair, Anderson, Tatham, and Black 1995). The following section discusses the results of statistical analysis.

5.1 Results Of Statistical Analysis On The Characteristics Of Soes

Table 2 reports the results of the examination of the differences of means of firm's financial characteristics based on the ownership identity by using univariate statistics.

Table 2. Statistical tests of means differences classified by Ownership

Mean	*Ownership*		
	Fully SOEs	*Privatised SOEs*	*Sig.*
Board Size	3.85	4.14	0.291
Total assets	6,477	47,966	**.000**
Total debt	3,245	35,915	**.000**
Total revenues	5,284	4,590	.628
ROE	0.02	0.01	.371
Leverage	.63	.75	**.027**
Size	13.41	14,27	**.046**
Ownership			
Percentage	87.55%	83.46%	.461
Fully vs Partially- privatised SOEs	.73	.71	.889
N	112	43	
Total N	155		

Legend:
Ownership is measured with two methods. First, it is categorized with a score one (1) if companies are companies with 100% shares owned by government (fully SOEs); otherwise scored zero (partially-privatised SOEs). Second, it is measured as the percentage of the Indonesian government ownerhip of SOEs.
Size: Natural logarithm of the total assets of firm *i* at financial statement date 31 December 2006.
Leverage: Ratio of total liabilities of firm *i* to total assets of firm *i* at financial statement as of 31 December 2006.
ROE: Ratio of net income to total equity of firm *i* at financial statement date 31 December 2006.

The statistical results of analysing the characteristic differences between fully SOEs and partially-privatized SOEs suggest that, on average, total revenues and ROE of fully SOEs is not significantly different from that of partially-privatized SOEs. Total assets and total debts of fully SOEs are significantly lower than those of partially-privatised SOEs, both with p-values of .000. These significant differences in total assets and debts, also results in significant differences of means of their financial leverage. The mean of fully SOE's financial leverage is .63, which is significantly lower (with a p-value of .027) than that of partially-privatised SOEs, which is .75.

Table 3 shows that, among 155 SOEs, the average number of BOC is four (the exact number is 3.93) with the minimum of one and maximum of seven. It also shows that the SOEs vary in size, the smallest company has five trillion rupiahs of assets and the largest company is with 1,235,340 trillion rupiahs. The number of BOD ranges from one to 11.

Table 3. Descriptive statistics of BOC, Total Assets, ROE, Leverage, BOD, and Government Ownership

	n	*Mean*	*Median*	*Standard Deviation*	*Minimum*	*Maximum*
BOC	155	3.93	4.00	1.44	1.00	7.00
Fully SOEs	43	3.85		1.60	1	7
Partially-privatized SOEs	112	4.14		1.37	1	7
Total assets (in trillion rupiahs)	155	9,987	811	105,441	5	1,235,340
ROE	155	0.01	0.09	0.85	-6.55	2.75
Leverage	155	.66	.58	.51	.02	4.21
BOD	155	4.39	4.00	1.58	1.00	11.00
Ownership (Method 2: Percentage)	155	.84	1.00	.27	1.00	100.00

Legend:
BOC: Total number of commissioners on the board of commissioners (BOC).
ROE: Ratio of net income to total equity of firm *i* at financial statements as of 31 December 2006.
Leverage: Ratio of total liabilities of firm *i* to total assets of firm *i* at financial statement date 31 December 2006.
BOD: Total number of directors on the board of directors (BOD).
GovOwn-1 (Measure 1): Indicator variable with firm *i* scored one (1) if companies are the companies with 100% shares owned by government (fully SOEs); otherwise scored zero (partially-privatised SOEs).
GovOwn-2 (Measure 2): Percentage of shares owned by government.

Table 4 presents Pearson and Spearman correlation matrix. The upper half of each panel reports Pearson pairwise correlation coefficients, the lower half Spearman correlation coefficients. The correlation results do not support for proposed hypothesis in this study. The correlation coefficient on between two alternative ownership variables (*GovOwn-1* and *GovOwn-2*) and the *BOC* is negative both for Pearson and Spearman correlations. This negative correlation coefficient indicates that the larger the proportion of company's share owned by private sector investors, the lager the number of BOC; however, this relationship is not statistically significant. The correlations between BOC and the explanatory variables suggest that BOC has positive and significant (at p<.01) correlations with two variables that are Size and BOD in the Pearson and three variables (Size, ROE and BOD) in the Spearman correlation matrix.

Table 4. Pearson and Spearman correlation matrix

	BOC	*GovOwn-1*	*GovOwn-2*	*Size*	*Leverage*	*ROE*	*BOD*
BOC		-0.091	-0.044	0.594*	-0.090	0.107	0.703*
GovOwn-1	-0.076		0.983*	-0.179**	-0.108	0.006	-0.147
GovOwn-2	-0.057	0.812*		-.0138	0.045	-0.046	0.008
Size	0.668*	-0.129	-0.120		-0.008	0.086	0.736*
Leverage	-0.104	-0.013	-0.001	0.041		-0.056	-0.025
ROE	0.281*	-0.033	-0.044	0.173**	-0.025		-0.015
BOD	0.731*	-0.41	0.000	0.752*	-0.020	0.139	

Legend:
* and ** indicate significance at p<0.01 and p<0.05 (based on two-tailed tests).
BOC: Total number of commissioners on the board of commissioners.
GovOwn-1 (Measure 1): Indicator variable with firm *i* scored one (1) if companies are the companies with 100% shares owned by government (fully SOEs); otherwise scored zero (partially-privatised SOEs).
GovOwn-2 (Measure 2): Percentage of shares owned by government.
Size: Natural logarithm of the total assets of firm *i* at financial statement date 31 December 2006.
Leverage: Ratio of total liabilities of firm *i* to total assets of firm *i* at financial statement date 31 December 2006.
ROE: Ratio of net income to total equity of firm *i* at financial statements as of 31 December 2006.
BOD: Total number of directors on the board of directors.

Whether or not the explanatory variables assist in explaining BOC as a proxy of company's corporate governance performance, multivariate analysis was carried out and the results is discussed in the following section.

5.2 Results of Statistical Analysis on Ownership and BOC

In this study, the effectiveness of the BOC control function is measured as the number of commissioners on the boards. Table 5 shows the results of multivariate statistical analysis examining the relationships between BOC and its proposed predictors based on two measures. Measure 1 indicates that the ownership variable measured as categorical variable. Measure 2 presents the regression results when the ownership variable is measured by percentage of shares owned by government. Four control variables, *Size*, *Leverage*, *ROE* and *BOD* are measured as continuous variables. Both measures were run with the OLS statistical technique.

Table 5. Results of regression analysis with BOC as the dependent variable

	Prediction	**Measure 1**		**Measure 2**	
		t-stat	Sig.	t-stat	Sig.
(Constant)	+	.437	.663	.688	.493
GovOwn	-	-.268	.789	-.368	.713
Size	+	1.794	.075	1.658	.099
Leverage	+	1.203	.231	1.218	.225
ROE	+	1.730	.086	1.729	.086
BOD	+	7.025	.000	6.987	.000
Model Summary					
F-statistic		32.592	.000	32.618	.000
R-Squared		.522		.523	
Adjusted R-Squared		.506		.507	
N		155		155	

Legend:
BOC: Total number of commissioners on the board of commissioners (BOC).
GovOwn-1 (Measure 1): Indicator variable with firm *i* scored one (1) if companies are the companies with 100% shares owned by government (fully SOEs); otherwise scored zero (partially-privatised SOEs).
GovOwn-2 (Measure 2): Percentage of shares owned by government.
Size: Natural logarithm of the total assets of firm *i* at financial statement date 31 December 2006.
Leverage: Ratio of total liabilities of firm *i* to total assets of firm *i* at financial statement date 31 December 2006.
ROE: Ratio of net income to total equity of firm *i* at financial statements as of 31 December 2006.
BOD: Total number of directors on the board of directors (BOD).

The model summary reported in Table 5 indicates that each measure of the overall model results in significant F-statistic with a p-value of .000 and adjusted R-squared .506 and .507 for Measure 1 and Measure 2 respectively.

Table 5 shows that the coefficients for both Ownership proxies negatively correlate with the corporate governance variable. These results infer that privatised SOEs are likely to have more commissioners on the boards. However, these coefficients are not statistically significant; thus, the proposed hypothesis is not statistically supported.

Consistent with previous research (e.g., Pfeffer 1972; Booth and Deli 1996; Klein 1998), this study reveals that the large scale firms tend to have greater number of commissioners on the BOC. Specifically, we find a positive and moderately significant (at p <.10) association between Size and *BOC* variable for both measures.

The coefficients of ROE for Measures 1 and 2 are all positive and significant (with p-values less than .10). These findings are inline with several past studies (e.g., Hermalin and Weisbach 1998; Alijoyo *et al.* 2004) which suggest that the higher the company financial performance the bigger its commissioners on the boards.

The coefficients on BOD for both measures are significantly (at p-values of .01) and positively associated with BOC. It suggests that the larger the member of executive directors (board of directors) the increase number of commissioners is needed for supervisory function. This result is consistent with finding reported by Klein (1998). Finally, we find the coefficients on *Leverage* for the both measures (see Measures 1 and 2, Table 5) are positive but statistically not significant. Therefore, this study fails to support previous findings (e.g., Pfeffer 1972; Klein 1998) which documented that firms with higher leverage need greater advising requirements, as a result, require for increasing the board of supervisory members.

6 Conclusions

This study examines whether the level of private sectors ownership on SOEs influences the intensity of the performance monitoring on their executive management. Based on the year 2006 data from 155 SOEs in Indonesia consisting of 112 of fully SOEs and 43 of partially-privatised SOEs, the study provides insightful results as follow. Compared to those fully SOEs, the partially-privatized SOEs are likely to have more commissioners on the boards. However, this finding is not statistically significant. The plausible explanation for this finding is that, in many cases, it is believed that the boards and management bodies of SOEs are dominated by political appointees acting under directives of the state agency to which they are subordinate. Therefore, the circumstances explaining which political parties ruling the government might also affect the size of board of commissioners of fully SOEs. Boubakri and Bouslimi (2010) argue that state-owned enterprises are characterised by extreme agency problems that lead them to pursue political rather than profit-oriented objectives.

The statistical methods carried out in analysing the influence of control variables on the number of the BOC in this study reveal that, first, the large-scale firms tend to have greater number of commissioners on the BOC. Then, this study also finds a positive and moderately significant (at p-values <.10) association between *ROE* and *BOC* variables for both measures. This finding suggests that the higher the company's financial performance, the company is likely to have more number of commissioners on the boards.

The BOD variable in both measures is significantly (at p-values of .01) and positively associated with the BOC. It suggests that the larger the member of board of directors the larger number of the board of commissioners is needed for supervisory function. This result is consistent with finding reported by Klein (1998). Finally, this study fails to support previous findings (e.g., Pfeffer 1972; Klein 1998) which documented that firms with a higher level of leverage need a greater advising requirement, as a result, require for increasing the board of supervisory members. We find the coefficients on *Leverage* for the both measures (see Measures 1 and 2, Table 5) are positive but statistically not significant.

This research provides a very fruitful area for future research. Further research can be carried out by analysing a longitudinal data to find out the determinant factors of the board size. A future research in this topic may scrutinize more control variables, such as the influences of firm scope of operations that can be proxied, for example, by the number of business segments. Another control variable that also may influence the board size is the directors' negotiation skills. A future research may also look at the possible influence of privatisation methods used by each of company on the size of the commissioners.

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