STATE-OWNED ENTERPRISES PERFORMANCE AND THE ROLE OF CORPORATE GOVERNANCE AND STRATEGY SELECTION

Abstract

The inconclusive results of earlier studies have given a reasonable doubt whether state ownership in state-owned enterprises is the main cause of low performance as well as the source of inefficiency within the company. There is also still little evidence about this topic for the emerging economies, such as Indonesia. Therefore, this study is about to examine whether there is a difference on performance related to different type of ownership of publicly listed SOE and non-SOE in Indonesia. It also wants to examine the influence of moderating factors of strategy selection and corporate governance mechanism over this different type of ownership on the performance of the company. The corporate governance mechanisms that will be put to the test are audit quality and level of board independence. The empirical results proved that there are no significant and systematic effects from type of ownership difference between SOE and non-SOE on the performance of the company. It also proved that strategy selection and audit quality have moderating role in the relations between type of ownership and performance, while the level of board independence has not.

Keywords :   State-Owned Enterprise; Performance; Corporate Governance; Strategy

Introduction

Previous studies that examine the influence of type of ownership between private and state-owned companies on performance still reporting mixed results. Many studies conclude that privately owned companies generally perform better than the state-owned companies (Boardman and Vining, 1989; Goldeng et al., 2008). While several studies find ambiguous or not find a systematic and significant difference in performance between private owned companies and state-owned companies (Atkinson and Halvorsen, 1986; Newbery and Pollit, 1997). Nevertheless few studies argued that state-owned companies perform better than privately owned companies (see Bruggink, 1982).

The diverse results of these studies gave a reasonable doubt whether state ownership in state-owned enterprises is the main cause of low performance and competitiveness as well as the source of inefficiency within the company. Those competing conclusion also indicated the need for a better understanding about the relationship between state ownership in state-owned enterprises and the performance.

In the meantime, of the many studies concluding that privately owned companies perform better than state-owned enterprises, there is still little evidence for the *emerging economies,* such as Indonesia. Moreover, most of the studies that compare state-owned enterprises (SOE) with non-SOE only cover a limited sample selection based on certain industry sectors only. Research conducted with a selection of sample that includes the entire population of public companies in a country is still rare.

Therefore, this study objective is about to examine whether there is a difference in performance between SOE and non-SOE in Indonesia. Also be tested the influence of the good corporate governance mechanism and selection of strategy over these two different ownership types (between SOE and non-SOE) on the performance differences. The good corporate governance mechanisms that will be put to the test is the audit quality and the level of board independence.

This study contributes to add related literature that explains how the differences between ownership types affect performance in the context of the public companies in Indonesia. This study also add to the understanding of SOE and its governance for the policy settings and effective supervision of SOE by the government order to optimize the role of SOE as *agents of development.*

Next, it will be explained in brief about the SOE and its institutional development in Indonesia. Then some of the literature review about the type of ownership and its influence on the company's performance will be briefly presented. It will be followed by description of the role of strategy selection, quality of external auditors and the board independence level on moderating those influences. After hypothesis development, there will be an explanation on the research design and analysis of the test results. As closing, there will be conclusions and suggestions for future research on this related topic.

SOE in Indonesia

State ownership in SOE very often associated as the main cause of the inefficiency. There are three challenges facing the good corporate governance practices in SOE compared to the non-SOE that claimed as the cause of poor performance of SOE, namely: the competing purposes (commercial vs. non-commercial), bureaucratic interference and political interventions, as well as lack of transparency and weak managerial incentives (Wong, 2004). Based on the belief that private ownership is superior in performance compared to the state ownership (e.g. in Goldeng et al., 2008), then a lot of SOE especially in *emerging economies,* privatized. Privatization is perceived as a means to improve the performance of SOE (Wicaksono, 2009; Bozec and Breton, 2003).

In Indonesia, SOE regulations are under the umbrella of the SOE act (the Law No. 19/2003). Based on that act, the SOE are defined as businesses that all or most of the capital is owned by the state through its investment directly derived from the separated state finance. Therefore refers to the Act, there are two SOE legal entity form, ie.: General Corporations and Limited Corporation. The General Corporation is the SOE that all of its capital owned by the State and is not divided into shares. This kind of corporation was established for the purposes of public benefit in the form of the provision of goods and or services and at once looking for profit based on the principles of the corporate management. While the Limited Corporation is the SOE that all of its capital or at least 51% of its shares owned by the State with its main purpose of seeking profits. Those Limited Corporations of SOE that meet certain criteria and or publicly listed in accordance with the prevailing capital market regulations are shaped as Limited Liability Company.

Strategic Policy on SOE management in Indonesia according to the SOE act is conducted under the State Ministry of SOE. The strategy of the Ministry to improve the performance and increase the potential of the Indonesia SOE can be shortly described in three

steps: profitization, restructuring, and privatization. In general, the performance of SOE is still below the non-SOE if seen from indicators such as ROA, ROE and NPM implementation (Wicaksono, 2009). Therefore, various regulations are made by the government to increase the performance of SOE. Particularly the regulation associated with the implementation of good corporate governance practices as well as to encourage SOE to *go public*.

Hypothesis Development

Ownership structures are instrumental in shaping the governance and performance of the company (Shleifer and Vishny, 1997). But the influence of the related state ownership against the company's performance still found in varying conclusions. Study of Boardman and Vining (1989), Shleifer (1998) and Goldeng et al. (2008) concluded that state ownership in SOE is associated as the main cause of the inefficiency. While the study of Atkinson and Halvorsen (1986) as well as Newbery and Pollit (1997) found no significant and systematic difference in performance between SOE and non-SOE. Even few studies (see Bruggink, 1982) argued that SOE perform better than non-SOE. Based on that mixed conclusion from early studies, then we developed the first hypothesis of this study as follows:

H1: The difference type of ownership between SOE and non-SOE affect the company's performance.

Previous studies also found some factors that can affect the performance of the company. Gani and Jermias (2006) found a significant difference in performance on a company with a different competitive strategy options. Therefore we will examine whether the selection of different strategies can moderate the influence of state ownership on the performance of the company. Then we developed the second hypothesis as follows:

H2: Strategy selection moderating the influence of difference type of ownership between SOE and non-SOE on the company's performance.

Previous study by Larcker and Richardson (2002) concluded that there is a positive relationship between the auditor size and the audit quality that will affect performance and corporate governance. Concern on reputation is being a major deciding factor for big auditors in limiting the client's accounting choice which can degrade the quality of its financial performance. Based on this finding, we use audit size as the proxy of audit quality. Then we developed the third hypothesis as follows:

H3: Auditor size moderating the influence of difference type of ownership between SOE and non-SOE on the company's performance.

Related to the influence of the level of board independence on the company's performance, it still found mixed results. Chung et al. (2003) concluded that the level of board independence have positive effect on performance through effective control against management. Meanwhile Bathala and Rao (1995) found negative relationship between the level of board independence and the performance of the company. Other studies by Prevost et al. (2002) found no significant relationship between the level of board independence and the performance of the company. Based on those competing results, we developed the fourth hypothesis as follows:

H4: Level of board independence moderating the influence of difference type of ownership between SOE and non-SOE on the company's performance.

Research Design

Because this study is based on the perspective of corporate governance and strategy selection, it will be used the dependent variable in the form of company's performance (*PERFORM*) that reflect the benefit for shareholders. In this case, the benefit is associated with the company's profitability. As a measure of the profitability we select two profitability ratios: *ROE* and *ROI*. Both measurement of the profitability are expected to capture the performance differences between SOE and non-SOE that are affected by managerial factors (financial and operational) and stock market conditions (Goldeng et al., 2008).

The primary independent variable associated with type of ownership (*OWNTYPE*) is a dummy variable, given the value of 1 if the companis are SOE and 0 otherwise. The independent variable associated with the company's strategy selection (*DSTRAT*) is a dummy variable, given the value of 1 if the companies select strategy of innovation, and 0 if the company select the strategy of cost-efficiency. The strategy as in Gani and Jermias (2006) is determined by comparing the value of *Asset Utilization Efficiency* (*AUE*) with *Premium Price Capability* (*PPC*). *AUE* is calculated by using the ratio of total sales to total assets and *PPC* is calculated by using ratio of gross profit to total sales. If *PPC* is greater than *AUE*, then it is classified as selecting the strategy of innovation. Conversely if *AUE* is larger than the *PPC,* then it is classified as selecting the strategy of cost-efficiency. Related to the auditor quality variable (*AUDITQUAL*), this study uses a dummy variable given the value of 1 if the

company audited by *Big Four* and 0 otherwise. The level of board independence (*INDEP*) uses the ratio of the total independent board to the total amount of board of commissioners.

This study also uses three control variables. First, company size (*SIZE*) which in many studies inferred effect on company performance (e.g. Frank and Goyal, 2003). The size of the company is measured by the natural logarithm (Ln) values of the total assets. Second, *leverage* (*LEV*) that affects the performance through oversight activity by the lender. In this study *the leverage* is measured by using ratio of total debt to total assets instead of the ratio of total debt to equity in order to avoid the negative value of the variable. Third, *Investment Opportunities Set* (*IOS*) that may affect performance because the company with high investment opportunities will face higher cost of control (Andersen, Francis and Stokes, 1993). *IOS* is measured as the ratio of *gross* PPE against market value of equity *plus* the book value of the liabilities.

The first hypothesis was tested by looking at the influence of direct relationship of type of ownership on performance. While the second, third and fourth hypotheses were examined by moderating the type of ownership with the strategy selection, audit quality and level of board independence against its influence on performance. Therefore a model equation for all hypothesis testing is developed as follows:

$$PERFORM_{it} = \beta_0 + \beta_1 OWNTYPE_{it} + \beta_2 DSTRAT_{it} + \beta_3 AUDQUAL_{it} + \beta_4 INDEP_{it} + \\ \beta_5 OWNTYPE_{it} * DSTRAT_{it} + \beta_6 OWNTYPE_{it} * AUDQUAL_{it} + \\ \beta_7 OWNTYPE_{it} * INDEP_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} IOS_{it} + \varepsilon_{it}$$

Description:

PERFORM	=	Company's performance, measured by profitability ratio of ROE and ROI
OWNTYPE	=	Type of ownership, dummy variable given the value of 1 if SOE and 0 otherwise
DSTRAT	=	Selection of corporate strategy, dummy variables given the value of 1 if select strategy of innovation, and 0 if select strategy of cost efficiency
AUDQUAL	=	Audit quality, dummy variable given the value of 1 if audited by the *Big Four* and 0 otherwise
INDEP	=	Level of board independence, calculated by the ratio of the independent board to the total amount of board commissioners

SIZE	=	Company's size, measured by the value of natural logarithm (Ln) of total assets
LEV	=	Leverage, calculated by the ratio of total debts to total assets
IOS	=	Investment Opportunities Set, calculated by the ratio of gross PPE against market value of equity *plus* book value of liabilities

Based on the equation model above, the conclusion of the first hypothesis is shown by the estimation result of the coefficient *OWNTYPE* (β_1). This coefficient of *OWNTYPE* (β_1) represents linear relation between the type of ownership (SOE vs. non-SOE) and the company's performance. Whereas the conclusion of the second, third and fourth hypothesis are shown through the estimation result of the coefficients *OWNTYPE*DSTRAT* (β_5), *OWNTYPE*AUDQUAL* (β_6) and *OWNTYPE*INDEP* (β_7). Those three coefficients represent the moderation effect of strategy selection, auditor quality and the level of board independence against the influence of difference type of ownership (SOE vs. non-SOE) on the company's performance.

The entire hypothesis of this study will be proven when the estimation result of all four coefficients on the variable tested is significant. But this study does not predict the direction of the relationship between those four independent variables on the company's performance due to mixed finding from previous studies. The direction of the relationship will be known later through the regression results of the model.

Sample and Data Selection

The samples were taken from companies listed on the Indonesia stock exchange (IDX) in the period of 2005-2014. The financial data is obtained from *thomson reuters knowledge* database. The external auditor information and other data related to the composition of the Board are obtained through the annual report of the company by hand-collected.

The selection of the sample was based on the category of the industrial sector issued by IDX which consist of 9 sectors. Industrial categories of banking, financial services and investment (Sector 8) are excluded from the sample. From a total of 517 listed companies, 400 companies of non-banking, non-financial services and non-investments industry are selected. Then we excluded 5 companies listed in 2014 and thereafter and make 395 companies remain. This study also excluded 60 samples of firms that enter into the category of industry sectors where there are no SOE in it, such as plantation (sector 1) as well as the

manufacturing of food, drinks and motor vehicles (sector 5). At this stage, we collected the sample of 335 companies with a total of 2,252 firm-year observation. For more fair comparison between SOE and non-SOE, we conducted sorting sample that fall into the range of the same company size. As benchmark, we set the range of the total assets of SOE that are in the range of Rp400 million up to Rp150 billion. Then we excluded some samples with incomplete financial data or *outliers*. Finally there are 293 companies, which consist of 16 SOE and 27 non-SOE, with a total of 1,670 firm-year observation.

Descriptive statistics

Descriptive statistics from all observations are shown in table 1 Panel A and Panel B. We also performed a statistical comparison for each variable based on the type of ownership (*OWNTYPE*) between SOE and non-SOE. Panel A of table 1 shows descriptive statistics for continuous variables of *ROE*, *ROI*, *INDEP*, *SIZE*, *LEV* and *IOS*. Panel B of table 1 shows descriptive statistics for dummy variables of *AUDQUAL* and *DSTRAT*. Table 1 also shows the results of Test of Difference for each variable based on *OWNTYPE*. Panel A represent the test of difference for continuous variables using *t-stat test*, while Panel B represent the test of difference for dummy variable using the *chi-square value*.

From table 1 Panel A, it is shown that the average ROE and ROI for all samples are 0.43 and 10.39. While the average of ROE for the SOE and the non-SOE is 0.12 and 0.46. However the result from *t-stat test* of the average ROE is not significant. In the other hand the average of ROI for the SOE and the non-SOE is 15.56 and 9.98 with the result from the *t-stat test* of the average ROI is significant (at the level of significance 1%). This result indicates that the average of ROI of SOE was significantly higher (at level of significance of 1%) compared to the non-SOE. Test of difference also showed significant result for variable *INDEP*, *SIZE* and *LEV* but not significant for variable *IOS*. This result indicates that SOE has fewer *INDEP* (at marginal level of significance 10%), less *SIZE* (at the level of significance 1%) and smaller *LEV* (at level of significance 1%) compared to the non-SOE.

Related to the dummy variables as indicated in table 1 Panel B, it shows that the proportion of SOE that select *Big4* auditor is 49.18%, while non-SOE is 47.93%. However from the *chi-square value*, the results are not significant. Meanwhile the proportion of SOE that select *innovation* strategy compared to *cost-efficiency* is 18.03% to 81,97%, while the proportion of non-SOE is 32.38% to 67,62%. It indicates that public companies in Indonesia, both SOE and non-SOE, mostly implementing the strategy of *cost efficiency*. The *chi-square*

Table 1

Descriptive Statistics

Panel A: descriptive statistics and test different average continuous variables

Variable	Statistics	All Sample	OWNTYPE SOE (1)	non-SOE (0)	t-Stat test	
ROE	Mean	0.434	0.118	0.459	1.4537	
	Median	0.019	0.009	0.021		
	Std Deviation	2.495	0.560	2.585		
	Minimum	(15.226)	(1.157)	(15.226)		
	Maximum	45.792	4.319	45.792		
	Observations	1670	122	1548		
ROI	Mean	10.388	15.556	9.981	-4.3109	***
	Median	8.33	13.74	7.98		
	Std Deviation	13.825	10.95	13.948		
	Minimum	(88.63)	(13.37)	(88.63)		
	Maximum	97.07	63.27	97.07		
	Observations	1670	122	1548		
INDEP	Mean	0.411	0.393	0.412	1.6714	*
	Median	0.4	0.4	0.4		
	Std Deviation	0.117	0.075	0.120		
	Minimum	0.143	0.200	0.143		
	Maximum	1	0.6	1		
	Observations	1566	117	1449		
SIZE	Mean	21.854	22.813	21.779	-8.7723	***
	Median	21.672	22.940	21.599		
	Std Deviation	1.281	1.344	1.246		
	Minimum	19.808	19.984	19.808		
	Maximum	25.671	25.671	25.440		
	Observations	1670	122	1548		
LEV	Mean	0.262	0.181	0.268	4.3247	***
	Median	0.242	0.153	0.249		
	Std Deviation	0.215	0.148	0.218		
	Minimum	0	0	0		
	Maximum	2.358	0.535	2.358		
	Observations	1670	122	1548		
IOS	Mean	1.002	0.897	1.011	1.0118	
	Median	0.772	0.840	0.768		
	Std Deviation	1.192	0.637	1.225		
	Minimum	0.003	0.026	0.003		
	Maximum	25.787	2.621	25.787		
	Observations	1670	122	1548		

Panel B: descriptive statistics and test different proportions of variable dummy

Variable	Statistics	Value	Entire Sample	SOE (1)		Non-SOE (0)		Chi-square Value
				Freq.	%	Freq.	%	
AUDQUAL	Big4	1	802	60	49.18	742	47.93	0.0705
	Non-Big4	0	868	62	50.82	806	52.07	
	Observations		1670	122	100.00	1548	100.00	
DTSRAT	Innovation Cost -	1	520	22	18.03	498	32.38	10.8152 ***
	efficiency	0	1140	100	81.97	1040	67.62	
	Observations		1660	122	100.00	1538	100.00	

Description:
*, **, *** = significance at the level of 10%, 5% and 1%
ROE   = R*eturn on Equity*, measured as the ratio of net profit after taxation before *extraordinary items* to equity of common stock.
ROI   = *Return on Investments*, measured as the ratio of net profit after taxation before *extraordinary items* to capital investments (long-term debt).
OWNTYPE = Type of ownership, dummy variable, given the value of 1 if SOE, and 0 otherwise
DSTRAT   = Selection of corporate strategy, dummy variables, given the value of 1 if select the strategy of innovation, and 0 if select the strategy of cost efficiency.
AUDQUAL = Auditor quality, dummy variables, given the value of 1 if audited by the *Big Four* and 0 otherwise.
INDEP   = Level of board independence, measured as the ratio of total independent board of commissioners to the total amount of Board of Commissioners.
SIZE   = Size of the company, measured as the value of the natural logarithm (Ln) of total assets.
LEV   = Leverage, measured as the ratio of total debt to total assets.
IOS   = *Investment Opportunities Set*, measured as the ratio of *gross* PPE against market value of equity *plus* the book value of the liabilities

value for this strategy selection is significant (at the level of significance 1%). This means that the proportion of SOE that select the strategy of *cost-efficiency* significantly larger (at the level of significance 1%) than the non-SOE.

From the *Pearson's correlation test* for all variables used as shown by table 2, It is shown that *ROE* has a negative and significant correlation with *DSTRAT* and *IOS* (at level of significance 5%), as well as *AUDQUAL* and *SIZE* (at the level of significance 1%). This negative correlation gives an early indication that companies benefited from ROE select the strategy of *cost-efficiency,* have a smaller value of investment opportunity, are audited by non-*Big4* auditors and have smaller size of company. However the *ROE* has a positive and significant correlation with *LEV* (at level of significance 1%). This indicates that the companies benefited from *ROE* using more financing through debt.

Table 2

Test Correlation

Variable	ROE		ROI		OWNTYPE		DSTRAT		AUDQUAL		INDEP		SIZE		LEV		IOS
ROE	1.00																
ROI	0.00		1.00														
OWNTYPE	-0.04		0.10	***	1.00												
DSTRAT	-0.06	**	-0.17	***	-0.09	***	1.00										
AUDQUAL	-0.08	***	0.20	***	0.01		-0.19	***	1.00								
INDEP	0.05		0.01		-0.04	*	0.09	***	-0.01		1.00						
SIZE	-0.13	***	0.07	***	0.21	***	0.09	***	0.25	***	0.06	**	1.00				
LEV	0.08	***	-0.40	***	-0.10	***	0.01		-0.02		0.02		0.14	***	1.00		
IOS	-0.06	**	-0.08	***	-0.03		0.13	***	-0.01		0.03		-0.05	**	-0.21	***	1.00

Description:
*, **, *** = significance at the level of 10%, 5% and 1%
ROE = R*eturn on Equity*, measured as the ratio of net profit after taxation before *extraordinary items* to equity of common stock.
ROI = *Return on Investments*, measured as the ratio of net profit after taxation before *extraordinary items* to capital investments (long-term debt).
OWNTYPE = Type of ownership, dummy variable, given the value of 1 if SOE, and 0 otherwise
DSTRAT = Selection of corporate strategy, dummy variables, given the value of 1 if select the strategy of innovation, and 0 if select the strategy of cost efficiency.
AUDQUAL = Auditor quality, dummy variables, given the value of 1 if audited by the *Big Four* and 0 otherwise.
INDEP = Level of board independence, measured as the ratio of total independent board of commissioners to the total amount of Board of Commissioners.
SIZE = Size of the company, measured as the value of the natural logarithm (Ln) of total assets.
LEV = Leverage, measured as the ratio of total debt to total assets.
IOS = *Investment Opportunities Set*, measured as the ratio of *gross* PPE against market value of equity *plus* the book value of the liabilities

Meanwhile, *ROI* has a negative and significant correlation with *DSTRAT, LEV* and *IOS* (at level of significance 1%) but has a positive and significant correlation with *AUDQUAL* and *SIZE* (at the level of significance 1%). It indicates that companies benefited from *ROI* select the strategy of *cost-efficiency,* use less financing through debt, have smaller investment opportunity, are audited by *Big4* auditors and have bigger company size. There are also indications that the level of board independence of the Board of Commissioners does not affect the performance of company, as shown by the insignificant correlation between ROE or ROI and *INDEP*.

The analysis of the correlation test for *OWNTYPE* shows a negative and significant correlation with *DSTRAT* and *LEV* (at level of significance 1%), as well as significantly negative correlated with *INDEP* (at marginal level of significance 10%). However it has positive and significant correlation with *SIZE* (on the level of significance 1%). Those results shows no different with its test of difference results as mentioned before which indicated that the SOE prefer the strategy of *cost-efficiency*, using less financing through debt, have bigger company size and have less number of independent commissioners.

The Results

Table 3 shows the regression results of equations model to test the hypothesis with *ROE* and *ROI* as the dependent variable. The regression used panel data with *random effect* and has taken into account the potential for *heteroscedasticity* on the data. The overall model was significant with a value of *F-statistics* indicated through the values of *Chi2>Prob* less than 0.01 (significant at the level of 1%).

Model 1 in table 3 represents the regression results of the direct influence of the independent variable excluding the interaction variable. It is shown that the value of the coefficient of *OWNTYPE* is not significant. These results indicate that the type of ownership has no significant effect on performance. However there is the significant negative influence of strategy selection (*DSTRAT*) both on the ROE (at level of significance 5%) and ROI (at the level of significance 1%). This result indicates that the strategy of *cost-efficiency* has an effect to improve performance. Whereas the level of board independence was found no significant results on the coefficient of *INDEP*. This indicates that the level of board independence has no effect on performance.

Table 3

The Regression Results

	Model 1				Model 2			
	ROE		*ROI*		*ROE*		*ROI*	
Constants	4.474	***	-0.578		4.636	***	-0.11	
OWNTYPE	-0.089		0.866		0.166		-3.111	
DSTRAT	-0.313	**	-3.435	***	-0.333	**	-3.656	***
AUDQUAL	-0.326	**	1.908	*	-0.365	***	1.763	*
INDEP	1.413		3.273		1.497		3.098	
*OWN TYPE * D S T RAT*					0.343	**	3.049	**
*OWN TYPE * AUD MAIN*					0.566	**	2.481	
*OWN TYPE * INDEP*					-1.503		5.560	
SIZE	-0.208	***	0.788		-0.216	***	0.777	
LEV	0.914	**	-22.812	***	0.893	**	-22.875	***
IOS	-0.056		-1.233	**	-0.059		-1.240	**
Observation	1557		1557		1557		1557	
N	288		288		288		288	
R-squared	0.0357		0.2374		0.0370		0.2409	
Prob > Chi2	0.0079		0.0000		0.0090		0.0000	

Description:
*, **, ***	=	significance at the level of 10%, 5% and 1%
ROE	=	R*eturn on Equity*, measured as the ratio of net profit after taxation before *extraordinary items* to equity of common stock.
ROI	=	*Return on Investments*, measured as the ratio of net profit after taxation before *extraordinary items* to capital investments (long-term debt).
OWNTYPE	=	Type of ownership, dummy variable, given the value of 1 if SOE, and 0 otherwise
DSTRAT	=	Selection of corporate strategy, dummy variables, given the value of 1 if select the strategy of innovation, and 0 if select the strategy of cost efficiency.
AUDQUAL	=	Auditor quality, dummy variables, given the value of 1 if audited by the *Big Four* and 0 otherwise.
INDEP	=	Level of board independence, measured as the ratio of total independent board of commissioners to the total amount of Board of Commissioners.
SIZE	=	Size of the company, measured as the value of the natural logarithm (Ln) of total assets.
LEV	=	Leverage, measured as the ratio of total debt to total assets.
IOS	=	*Investment Opportunities Set*, measured as the ratio of *gross* PPE against market value of equity *plus* the book value of the liabilities

Model 2 in table 3 shows the regression results that including interaction variable of strategy selection, auditor quality and level of board independence with the type of ownership on performance. Hence the model 2 is used for testing all four hypotheses on this study. Related to the first hypothesis, regressions result on the model 2 shows that the coefficient *OWNTYPE* is not significant. These results do not support the first hypothesis that states the difference type of ownership affect performance. It can be inferred that there is no significant effects of different types of ownership between SOE and non-SOE on performance. This

finding might indicate that the purpose of government policy to improve the performance of SOE through privatization more or less has been achieved. Therefore, state ownership factor that is claimed by many previous studies as factor that aggravate the company's performance was not proven in Indonesia's listed SOE.

Related to the moderation factor from strategy selection over the type of ownership, the coefficient of the interactions variable of *OWNTYPE*DSTRAT* on the model 2 shows significant positive effect (at the level of significance 5%) both on the *ROE* as well as *ROI*. These findings support the second hypothesis that states strategy selection moderates the influence of type of ownership on performance. In this case, based on the regression results, it shows that the moderating effect is positive. This suggests that the influence of the type of ownership on performance is stronger in SOE that select the strategy of *innovations*. While the regression results for the moderation factor from the auditor quality over the type of ownership is indicated by the coefficient of the interaction variable of *OWNTYPE*AUDQUAL* on the model 2. It shows significant positive effect (at the level of significance 5%) on *ROE* but not significant on *ROI*. These findings support the third hypothesis that audit quality moderates the influence of type of ownership on performance, but it only applies on *ROE*. Based on regression results, the moderating effect is positive. This suggests that the influence of type of ownership on performance is stronger in SOE audited by the *Big4* auditors. The third moderation factor is related to the role of the level of board independence. It is indicated by the coefficients of interaction variable of *OWNTYPE*INDEP* that is found not significant. It suggests that the fourth hypothesis which states that level of board independence moderates the influence of type of ownership on performance is not proven.

Regression Results for control variables are consistent on both models. Coefficient *SIZE* has significant negative value on *ROE* (at level of significance 1%) but not significant on *ROI*. This means the smaller the size of the company the greater the performance in terms of *ROE*. Whereas the coefficient *LEV* has significant positive value on *ROE* (at level of significance 5%) but has significant negative value on *ROI* (on the level of significance of 1%). This shows that the performance in terms of *ROE* increases on companies that have larger financing through debt. In contrast, the performance in terms of *ROI* increases on companies that have smaller financing through debt. For the coefficients of *IOS*, it is found not significant on *ROE*, but found significantly negative on *ROI* (at the level of significance

5%). The results are consistent with the findings on the study of Andersen, Francis and Stokes (1993) which argue that the smaller the investment opportunities the greater the performance, which in the context of this study is in terms of *ROI*.

4.3. *Robustness Test*

As an additional test, we performed an analysis of the relationship between factors of strategy selections, audit quality and the level of board independence along with other control variables on performance at different types of ownership. The analysis is done by splitting the sample firms into sub-groups of SOE and non-SOE. In general the model equations for these two sub-groups are significant with the values of *F-statistics* test are less than 0.01 (significant at the level of 1%). The regression results of each group are shown in table 4.

From table 4, it can be shown that the influence of the independent variable on performance varies on different sub-groups. In SOE, strategy selection has no effect on performance, but it has significant negative effect in non-SOE, both on *ROE* (at level of significance 5%) as well as on *ROI* (at the level of significance 1%). Related to audit quality, it only has significant positive effect on *ROI* (at the level of significance 5%) in SOE. While in non-SOE, it has significant negative effect on *ROE* (at the level of significance 5%) and significant positive effect on *ROI* (at the marginal level of significance 10%). For the level of board independence, it found significant negative influence (at the marginal level of significance 10%) only on *ROE* in the SOE and were not found significant in non-SOE.

For the control variables, it is found that *SIZE* has significant positive influence on performance (at marginal level of significance 10%) in SOE in terms of *ROI*. This might be due to no variation of size in listed SOE. It happened because SOE conducted a public offering in the capital market is usually the big size SOE. While in non-SOE, it is found that *SIZE* has significant negative influence (at level of significance 1%) on performance only in terms of *ROE*. For *LEV*, it has significant negative relationship on *ROE* (at the marginal level of significance 10%) and on *ROI* (at level of significance 1%) in SOE. This finding indicates that the performance of SOE with more debt will decrease. Contrary to SOE, in non-SOE there is significant positive effect of *LEV* on *ROE* (at level of significance of 5%) but significant negative effect of *LEV* on *ROI* (at level of significance 1%). For *IOS*, it is found that non-SOE has significant negative relationship on *ROE* (at marginal level of significance 10%) and on *ROI* (at level of significance 5%). However, no significant relationship is found between *IOS* and the performance in SOE

Table 4

The results of Additional Tests for Regression

	STATE-OWNED ENTERPRISES				The Non-STATE-OWNED ENTERPRISES			
	ROE		*ROI*		*ROE*		*ROI*	
Constants	-0.184		-21.626		4.898	***	-0.489	
DSTRAT	-0.278		2.730		-0.329	**	-3.664	***
AUDQUAL	-0.134		4.070	**	-0.352	**	1.790	*
INDEP	-0.303	*	-0.607		1.481		3.082	
SIZE	0.029		2.062	*	-0.228	***	0.785	
LEV	-0.516	*	-52.957	***	0.923	**	-22.247	***
IOS	-0.108		-3.458		-0.062	*	-1.202	**
Observation	117		117		1440		1440	
N	16		16		272		272	
R-squared	0.0590		0.3913		0.0364		0.2288	
Prob > Chi2	0.0022		0.0000		0.0064		0.0000	

Description:

*, **, ***	=	significance at the level of 10%, 5% and 1%
ROE	=	R*eturn on Equity*, measured as the ratio of net profit after taxation before *extraordinary items* to equity of common stock.
ROI	=	*Return on Investments*, measured as the ratio of net profit after taxation before *extraordinary items* to capital investments (long-term debt).
OWNTYPE	=	Type of ownership, dummy variable, given the value of 1 if SOE, and 0 otherwise
DSTRAT	=	Selection of corporate strategy, dummy variables, given the value of 1 if select the strategy of innovation, and 0 if select the strategy of cost efficiency.
AUDQUAL	=	Auditor quality, dummy variables, given the value of 1 if audited by the *Big Four* and 0 otherwise.
INDEP	=	Level of board independence, measured as the ratio of total independent board of commissioners to the total amount of Board of Commissioners.
SIZE	=	Size of the company, measured as the value of the natural logarithm (Ln) of total assets.
LEV	=	Leverage, measured as the ratio of total debt to total assets.
IOS	=	*Investment Opportunities Set*, measured as the ratio of *gross* PPE against market value of equity *plus* the book value of the liabilities

Discussion and Suggestions

This study objective is about to examine whether there is a difference impact on performance based on different type of ownership of publicly listed SOE and non-SOE in Indonesia. It also wants to examine the influence of moderating factors of strategy selection and corporate governance mechanism over this different type of ownership on the performance of the company. The corporate governance mechanisms that will be put to the test are the audit quality and the level of independence of the Board of Commissioners.

Many studies conclude that non-SOE generally perform better than SOE. Yet some previous studies found ambiguous results or not found significant and systematic differences in performance between SOE and non-SOE. Even alittle study also argued that SOE perform better than non-SOE. This mixed conclusion brings up doubts against strong opinion that has already believed that state ownership in SOE is the main cause of low performance and low competitiveness as well as the source of the inefficiency in the company.

The empirical results in this study proved that there are no significant and systematic effects from type of ownership difference between SOE and non-SOE on the performance of the company. It argued that there is not enough evidence to state that the state ownership in the listed SOE cause a significant performance differences *vis a vis* non-SOE. These findings might indicate that the purpose of government policy to improve the performance of SOE through privatization policy has been achieved. State ownership factor does not affect the performance of public listed SOE in Indonesia.

The empirical results also proved that the interaction of the strategy selection and the audit quality with the difference type of ownership significantly affect performance. While the interaction of the level of independence of the Board of Commissioners with the difference type of ownership is not significantly affect performance. Analysis of the additional tests also proved that there is a variation on the relationship between these three factors on performance in SOE and non-SOE. Strategy selection for example found not related to the performance of SOE but in contrast found related to the company's performance of non-SOE. Audit quality has positive effect on the performance of SOE but has negative effect on the performance of non-SOE. However the level of independence of the Board of Commissioners in general has no effect on the company's performance both in SOE and in non-SOE.

This study limits its testing only on SOE that already *go public*. In the future, it is interesting to further examined whether there is a difference between the performance of SOE that have not yet to *go public* with SOE that are already listed on the capital market. It is expected that the findings generated can be increasingly strengthened the conclusions obtained related to the performance related behavior of SOE. The more solid conclusion will add to the understanding of SOE and its governance. Thus the policy settings and the supervision of SOE that were taken by the government will in turn optimize the role of SOE as *agents of development*.

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