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Article

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Does Government Linked Companies (GLCs) perform better than non-GLCs? Evidence from Malaysian listed companies

Nazrul Hisyam Ab Razak¹, Rubi Ahmad² and Huson Aliahmed Joher³

Abstract

The purpose of this paper is to examine the impact of an alternative ownership/control structure of corporate governance on firm performance. Specifically, we investigated the governance system of government linked companies (GLCs) in Malaysia. In this paper, we examine governance mechanism and firm performance of Malaysian GLCs and non-GLCs over a 11 year period from 1995 to 2005. We only select a sample of companies which are listed in Main Board. We chose a sample of 210 firms. We used Tobin's Q which is an indicator of market performance is used as a proxy for company's performances; meanwhile ROA is used to determine accounting performance. . This paper is to determine whether after controlling firm specific characteristics such as corporate governance, agency cost, growth, risk and profitability, GLCs perform better than non-GLCs. Findings highlight that non-GLCs performance is better GLCs in term

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of corporate governance, and other firm specific characteristics. The relationship between ownership structure and firm performance has been issue of interest among academics, investors and policy makers as one of key issues in understanding the effectiveness of alternative governance systems where government ownership serves as a control mechanism.

JEL classification numbers: G32

Keywords: Government ownership, Government linked companies, corporate governance.

1 Introduction

Not many researches have been specifically done on government ownership and firm value. Ang and Ding compared the financial and market performance of Government Link Singaporean Companies (GLC) with non-GLCs in [4], where each has a different set of governance structure, the key difference is government ownership. Similarly the main objective in this paper is to determine whether GLCs perform better than non-GLCs after controlling firm specific characteristics such as corporate governance, agency cost, growth, risk and profitability. Besides that, we also look on which of these companies specific characteristic for each GLCs and non-GLCs explain performance of companies in Malaysia. In this situation, we concentrate on government involvement in public listed companies in Bursa Malaysia and compare with other selected companies which categorized as non GLCs. We like to know whether government involvement will lead to positive or negative impact on company performance. Countries like Singapore, China, Korea and India as well as Malaysia which their government who is a part of stakeholders in company and holding more than 20% and will lead to decision making for companies. Some of these countries established their own organization to manage or invest in domestics companies as well as overseas.

2 Review of Literature

The understanding on the empirical differences in corporate control particularly government involvement has advanced recently. Many researchers discussed on structure of ownership and performance but there is a limited study on discussing the determinant of government ownership and performance specifically, on comparing the performance of government ownership with non government ownership.

The relationship between ownership structure and company performance has been an important research topic during the last decades, and has produced ongoing debate in the literature of corporate finance. Theoretical and empirical research on the relationship between ownership structure and firm performance was originally motivated by the separation of ownership from control [5] and more recently, by agency theory (see [9] and [14]). Definitely, shareholders of company wish to maximize value while managers prefer self-interested strategies which are far from maximizing value, and in the absence of either appropriate incentives or sufficient monitoring, managers can exercise their discretion to the detriment of owners.

A number of studies have discussed ownership and company performance. LaPorta, Silanes and Shleifer in his first study on ownership investigated the ultimate control in company, [16]. He divided the owners into five types of ultimate owners: (1) a family or an individual, (2) the State, (3) a widely held financial institution such as a bank or an insurance company, (4) a widely held corporation, or (5) miscellaneous, such as a corporative, a voting trust, or a group with no single controlling investors. State control is a separate category because it is a form of concentrated ownership in which the State uses firms to pursue political objectives, while the public pays for losses, [24].

In [7], Claessen, Djankov and Lang have improved the study done by [16] and applied it into East Asia. They investigated the separation of ownership and control in 2980 public companies in 9 East Asian countries. Their findings supported that corporate control typically enhances pyramid structure and cross holding firms in all East Asian countries. Only for Singapore, about half of the samples companies are controlled by state. Lemmon and Lins continued the discussion on ownership structure, corporate governance and firm value from 800 firms in eight East Asian countries, [17]. Their findings showed that cumulative stock returns of firms where managers and their families separate their control and cash flow rights through pyramid ownership structures are lower by 12 percentage points compared to those of other firms during the crisis period. They failed to find any evidence that firms with a separation between cash flow rights and control rights exhibit changes in performance different from firms with any such separation during pre-crisis period.

Orden and Garmendia examined the relationship between ownership structure and corporate performance in Spanish companies, [21]. Ownership structure has been analyzed in terms of concentration of control and the type of investor exerting control. Company performances which used in research were return on assets (ROA) and return on equity (ROE). One of the findings is that companies under control of government showed negative impact and have worse performance than other ownership structures. Zeitun and Tian examined the impact of ownership structure mix on company performance and the default risk of a sample of 59 publicly listed firms in Jordan from 1989 to 2002, [31]. The main findings were: ownership structure has significant effects on the accounting measurement return on assets (ROA); government shares are significantly negative related to the company's performance ROA and ROE (return on equity) but the results showed positive related to market performance, Tobin's Q.

Gursoy and Aydogan described on their paper [12] on main characteristics of ownership structure of the Turkish nonfinancial companies listed on the Istanbul Stock Exchange (ISE) and examined the impact of ownership structure on performance and risk-taking behavior of Turkish companies. Specifically, they tries to find out if foreign ownership (FRGN), government ownership (GOV), cross ownership (CROSS), family ownership (FAM) and affiliation to a conglomerate (CONG) has any impact on performance. Results indicated government ownership show negative and significant when correlated with accounting measurements (ROA and ROE) and when they controlled leverage and size, it was negative but significant with market measurement (share price to EPS, P/E).

Majority of studies have shown negative result when looking on government ownership and performance or firm valuation. There are many reasons that explain why government ownership results in poor financial performance. First, the government is guided by social altruism, which may not be in line with the profit motive. Second, the government is not the ultimate owner, but the agent of the real owners – the citizens. And it is not the real owners who exercise governance, but the bureaucrats. There is no personal interest for bureaucrats in ensuring that an organization is run efficiently or governed well since they do not have any benefits from good governance. Government-controlled companies may respond to signals from the government to enhance national welfare or other non-profit considerations, which may not relate well to a goal of value maximization, [27]. A government corporation or government-owned corporation is a legal entity created by a government to exercise some of the powers of the government. It may resemble a not-for-profit corporation as it is not necessarily required to provide the shareholders with return on their investment through price increase or dividends. Its sole goal is to provide some kind of good or service for the public.

Not many researches have been specifically done on government ownership and firm value. Ang and Ding compared the financial and market performance of Government Link Singaporean Companies (GLC) with non-GLCs [4], where each has a different set of governance structure, the key difference is government ownership. Their study found that GLCs on average exhibit higher valuations than non-GLCs, even after controlling for firm specific factors such as profitability, leverage, firm size, industry and foreign ownership. Majumdar compared the financial performance of state owned, private owned, and mixed state-private ownership firms in India from 1973 to 1989, [19]. His analysis suggests that the most profitable firms were privately owned followed by mixed ownership. State owned enterprises had the worst performance. A majority of other studies in India and abroad draw similar conclusions (see [22], [23] and [24]).

Tian and Estrin found that government ownership reduce corporate value due to political interference in China, [26]. Also in another paper Xu, Pan, Wu and Yim found that government enterprises have lower profitability than non-government enterprises, [29]. In [30], Xu and Wang examined the performance of domestic Chinese firms in various ownership categories versus foreign-invested enterprises (FIEs) based on two nation-wide surveys conducted by the National Bureau of Statistics in 1998 and 2002. They found that both domestic non-state-owned firms and foreign-invested enterprises performed better than state-owned enterprises. At the same time, three categories of Chinese firms privately owned, collectively owned, and shareholding had higher performance levels than the foreign invested enterprises. For European countries, especially Germany, Companies which are under Treuhand (govt.'s privatization agency) and Management KGs (government ownership organization) performed better than before privatization, [8].

Bortolotti and Faccio studied the change in government control of privatized firms in OECD countries, [6]. In their research, they used the term of golden share which is defined as a set of State's special power and statutory constraints on

privatized companies.⁴ One of findings shows that the ultimate voting rights held by government in company (i), in year (t) showed positive and significant correlation after controlling country and firm specific explanatory variables (which one of variables is ROE and market to book value). In another study [15], Kirchmaier and Grant on corporate ownership structure and performance in Europe identified state ownership is a third largest shareholder type in Italy and France. Summary results for both countries found that state ownership showed negative relationship between performance and corporate governance and other control variables. Relevantly, major factor was the influences of politician on company decision making, as well as protection from market discipline.

Bureaucrats and governments respond to various interest groups (e.g. trade unions) as part of their social agenda, [18]. Finally, even if the public can exercise control directly, it is unlikely to be effective because of the extreme dispersion of the principals. Any social or non-social benefits are likely to be so diffused among the electorate that it is unlikely that there will be much of an incentive to exercise any governance over the organization to ensure it performs effectively, [2]. There is considerable awareness about the poor financial performance of governments owned enterprises and the governments have started the process of privatization in recent years. However, the progress has been extremely slow. Many vested interests – employees, unions, bureaucrats and other political realities impede the process of privatization.

⁴Special power include (i) the right to appoints members in corporate board;(ii) the right to consent to or to veto the acquisition of relevant interests in the privatized companies; (iii) other rights such as to consent to the transfer of subsidiaries, dissolution of the company, ordinary management, etc.

3 Methodology

In this paper, we examine governance mechanism and firm performance of Malaysian GLCs and non-GLCs over a 11 year period from 1995 to 2005. We only select a sample of companies which are listed in Main Board. As at December 31, 2005 there are about 590 companies listed in Main board. We chose a sample of 210 firms for two major reasons. First, we only choose complete data available in databases (Datasream, worldscope, perfect analysis) from 1995 until 2005. Secondly, we excluded financial institutions from our study because they are different with regard to policies and acts.

We investigated the relationship amongst firm valuation, government ownership, and various governance factors, while controlling for cross-sectional differences between GLCs and non-GLCs. To determine if there are any differences between the performances of GLCs and non-GLCs, two groups of variables are employed to measure financial and accounting ratios utilizing Tobin's Q and Return on Assets (ROA).

3.1 Model Specification

In this study we used a fixed cross-sectional time series panel model to capture the equivalence of the parameter estimates between GLCs and non-GLCs. Generally in our model specification as shown in the below:

$$Value = f \{ Governance, Profitability, Growth, Risk and Agency cost \}$$

There are three models that we suggest to be tested in this study. This regression models are adopted from research by Ang and Ding with minor amendments which we thinks it's suitable for Malaysian case, [4].

In this equation, we utilize cross-sectional time series panel model shown in Equation (1), which is designed to capture the equivalence of the parameter estimates between GLCs and non-GLCs.

$$\begin{aligned} \text{Value} = & \beta_0 + \beta_1 \text{GSize} + \beta_2 \text{GnDual} + \beta_3 \text{GDebt} + \beta_4 \text{GAC} + \beta_5 \text{GGrowth} + \\ & + \beta_6 \text{GPM} + \beta_7 \text{nGSize} + \beta_8 \text{nGnDual} + \beta_9 \text{nGDebt} + \beta_{10} \text{nGAC} + \\ & + \beta_{11} \text{nGGrowth} + \beta_{12} \text{nGPM} + \varepsilon_i \end{aligned} \quad (1)$$

For Equation (2), we run regression separately on GLCs and nonGLCs data.

$$\text{Value} = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{nonDual} + \beta_3 \text{Debt} + \beta_4 \text{AC} + \beta_5 \text{Growth} + \beta_6 \text{PM} + \varepsilon_i \quad (2)$$

This regression is used to support result from (1), which are independent variables of these two categories show positive and significant on dependent variable (value of firm).

3.1.1 Measurement Issues

Table 1a: Descriptive of Operationalization of Dependent variables

Variables	Measuring Variables
A. Market Measures Tobin's Q	$\text{Tobin's Q} = \frac{\text{MV} + \text{Total Debt}}{\text{Total Asset}}$
B. Accounting Measures Return on Asset (ROA)	$\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}$

In Table 1a, the higher Q value, the better the market's perception of company performance and the more effective the corporate governance in [1] and the higher ROA shows effective use of companies' asset in serving shareholders' economic interests, (see [13], [20] and [28]).

Table 1b: Descriptive of Operationalization of Independent variables

Independent Variable	Definition
Company size (<i>Size</i>)	Ln(Total assets) - natural logarithm of total assets
Role non-duality (ndual)	A dummy variables on a value of one when CEO is separate from Chairman, zero otherwise
Government ownership (G) (Govowned)	A dummy variables on a value of one is government hold effective ownership 20% or more in listed, zero otherwise
Leverage/Debt (Risk)	
(i) Debt1	<u>Total Liabilities</u> Total Assets <i>Measuring on how companies managed capital structure i.e debt and equity</i>
Growth opportunities	
(i) Growth1	<u>Total Cash</u> Total Assets <i>Measure of how the firm managed their cash for growth opportunities</i>

Agency Cost

(i) AC

Total Expenses

Total Assets

Profitability

(i) PM

*Measure of how effectively the firm's
mgmt control operating costs
High expense ratio indicates high agency
costs, see [10].*

Net Profit

Sales

*Measure of how effectively the firm's
managed their sales for getting profit*

3.1.2 Multivariate and panel data regression

Since multivariate regression is used to test the hypotheses, assumption of multicollinearity, normality, homoscedasticity and linearity are also tested. Normality test based on skewness, kurtosis and Pearson correlation matrix is used to test multicollinearity assumption. In order to test the developed models, this study employed panel data regression. Under panel data regression, the two most common models to complement the regression are the fixed effects (FE) model and random effect model. Panel data is cross sectional and longitudinal (time series). A panel data regression has some advantages over regression that run cross sectional or time series regression independently. Among the prominent advantages are, firstly by combining time series and cross section observation,

panel data give more informative data, variability, less collinearity among the variables, more degree of freedoms and more efficiency, [11]. Secondly, by making data available for thousand units, a panel data can minimize the biasness that might happen if individuals or firms level data are divided into broad aggregates. Lastly, panel data can better detect and measure effects that simply cannot be observed in pure cross-section or pure time series data.

4 Result and analysis

While various forms of acceptable governance in each country evolves from a country's history, values, and culture, certain characteristics of superior governance have been documented in the literature (e.g. [24]). We have considered the role of corporate governance and government control in the context of Malaysian firms and its capital market and examined the issue of value relevance of corporate governance and governmental control in assessing firm value. We compare the financial performance of GLCs with non-GLCs, and determine whether government ownership and various governance measures contribute to accounting and market based firm valuation, using panel and pooled regression analyses.

From that, we extracted companies which are government owned to determine whether various corporate governances have significant impact on accounting and market based firm valuation.

Before estimating the proposed models, the stationary normal distribution of the data, multicollinearity, autocorrelation and heteroskedascity problems are some econometrics issues that need to be identified and ratified. This section will provide results of the various econometrics tests that help to detect these problems. In addition various remedies to these problems are also suggested.

Table 2: Normality Test Statistics of Malaysian companies

	Mean	Median	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability
TOBINQ	1.3656	1.0118	1.3650	4.5262	28.5729	18214.0200	0.0000
ROA	0.2006	0.0991	0.2660	1.9941	8.4014	1115.7500	0.0000
Gowned	0.5000	0.5000	0.5004	0.000	1.0000	99.0000	0.0000
nGowned	0.5000	0.5000	0.5004	0.0000	1.0000	99.0000	0.0000
SIZE	14.2120	14.2339	1.3754	-0.7330	3.9398	75.0461	0.0000
nonDual	0.9242	1.0000	0.2648	-3.2066	11.2820	2715.5420	0.0000
Debt	0.2150	0.1493	0.4763	3.8887	56.0980	71277.3000	0.0000
AC	0.2919	0.1760	0.2945	1.7428	6.6830	636.4235	0.0000
GROWTH	0.1186	0.0710	0.1346	2.2102	8.5286	1240.0970	0.0000
PM	0.4096	0.1894	0.6151	-2.3761	30.6810	19523.2500	0.0000

4.1 Results of Data Stationary normality test

The findings of the stationary test are shown in Table 2 (concentrate the last three columns in this both tables). Result show that the samples are not normally distributed. It is because, the variances are skewed which means that none of skewness readings is equal to zero. At the same time the value of kurtosis for all variables are more than 3 (three). Last but not least, values of Jarques-Bera for all variables are significant.

Then, we continue to test the means between GLCs and non-GLCs. Based on the results, we find that majority of the results are significant (Table 3).

Table 3: Differences of two test means

Variables	GLCs	Non-GLC	t-statistic	Significant
no of firm	27.0000	27.0000		
Observations	297.0000	297.0000		
Market measurements				
Tobin's Q (TobinQ)	1.2801	1.4511	-1.5280	*
Accounting measurements				
Return on Assets (ROA)	0.0570	0.3442	-15.6218	***
Control variables				
Size	14.1594	14.2646	-0.9315	
Debt	0.3494	0.0806	7.1623	***
Other variables				
Non-Duality	0.9966	0.8519	6.9204	***
Agency cost	0.1335	0.4503	-15.5332	***
Growth	0.1378	0.0997	3.4595	***
Profitability	0.1525	0.6670	-11.2045	***

**** significant at 0.01 level

** significant at 0.05 level

* significant at 0.1 level

4.2 Financial and market performance

Table 4 : Pearson correlation matrix

	Gowned	Ngowned	Size	TobinQ	Dual	Debt	ROA	TExpSales	CashtoAs	PM
Gowned	1.0000	-1.000**	-0.038	-0.0630	.274**	.282**	-.540**	-.538**	.141**	-.418**
		0.0000	0.352	0.1270	0.0000	0.0000	0.000	0.000	0.001	0.0000
Ngowned		1.0000	0.038	0.0630	-.274**	-.282**	.540**	.538**	-.141**	.418**
			0.352	0.1270	0.0000	0.0000	0.000	0.000	0.0010	0.0000
Size			1.000	-.274**	-.098*	.083*	-.092*	-0.066	-.310**	-0.068
				0.0000	0.0170	0.0430	0.024	0.108	0.000	0.099
TobinQ				1.0000	-0.024	0.0030	.184**	.109**	.193**	.166**
					0.5670	0.9490	0.000	0.008	0.000	0.000
Dual					1.0000	-.127**	-.141**	-0.078	0.073	0.075
						0.0020	0.001	0.059	0.076	0.069
Debt						1.0000	-.257**	-.217**	-0.012	-.240**
							0.000	0.000	0.771	0.000
ROA							1.000	.761**	-0.01	.327**
								0.000	0.807	0.0000
TExpSales								1.000	-0.054	.164**
									0.191	0.0000
CashtoAs									1.000	.082*
										0.045
PM										1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

We investigated the source of superior GLC performance by comparing various measures of financial and market performance of GLCs and non-GLCs. The results are presented in Table 4. Note that our choice of control firms in the sample passes the most essential test for good control firms—they must be able to track the movement of the firms in question as closely as possible. This condition holds if both firms are affected by the same set of factors. In market performance, results show that portfolios of control firms (non-GLCs) outperform GLCs for market performances (Tobin's Q). At the same time, Tobin's Q test is negative

and significant at the 1% level. For accounting purpose (ROA⁵), the result shows GLCs perform better than non-GLCs. We find that ROA's result is positive and significant at the 1% level. On the same token, we refer to Table 4 (Pearson's correlation coefficient)⁶, when the result explains that GLCs have negative correlation with Tobin's Q but not with ROA. It indicates that non-GLCs perform well on market performance and not on accounting performance. This negative correlation is due to the decrease in share prices for government companies especially after Asian economic crisis.

As mentioned earlier, government owned a large percentage of market capitalization therefore, it played a major role in decreasing the market price when crisis hit Malaysia until recovery section in 2000 onwards. Our result is inconsistent with that of Ang and Ding [4] and Singh and Siah [25]. Their study suggested that GLCs outperform non-GLCs on both counts of profitability (ROA and ROE). Ang and Ding's result in Singapore study show that GLCs are able to achieve at least similar levels of profitability and are as efficient as non-GLCs.

In determining the leverage, we tested the debt ratio (Total Debt to Total Assets). We found that leverage ratio shows that GLCs have lower debt than non-GLCs with negative correlation but significant at 5% level. It means that non-GLCs tend to have larger leverage than GLCs. Similarly, we look on growth opportunities for both sides. Results show that GLCs tend to have lower asset turnover than non-GLCs.⁷ We also found that GLCs maintain a significantly higher cash to asset ratio than non-GLCs and it is positively correlated and significant at the 1% level. Because of higher debt structures of GLCs they tend to hold higher amount of cash to meet greater interest payments and unexpected cash shortfalls. GLCs and

⁵ It's support by GLCs have higher profit margin than non-GLCs in Table 4.

⁶ Table 4 presents the correlation matrix between independent and dependent variables. Result shows that no multicollinearity problem as the correlation is relatively low.

⁷ The finding of a lower asset turnover among GLCs is not inconsistent with that of Singh and Siah in [25], where GLCs exhibits a higher asset turnover in three industries and lower turnover in four other industries.

their investment companies have to provide their own cash reserves against distress and are not expected to be financially dependent on the government.

In measuring agency costs, we examined the expense to assets [3] and results show that GLCs in fact have lower expenses at the 1% level.⁸ This finding is supported by Pearson's correlation in Table 4 which shows negative correlation and significant for both ratios. The finding indicates that GLCs in Malaysia are different from the generally inefficient nationalized firms that are run by the government and are more apt at managing expenses than non-GLCs.

In summary, we can conclude that GLCs tend to exhibit higher valuation than non-GLCs due to their ability to earn higher returns on their investments. GLCs also run more efficient and with lower operation expenses than non-GLCs. The results support our hypothesis that GLCs outperform non-GLCs not only in market based valuation measures, but also in accounting based measures of internal process efficiency.

5 Panel and pooled regression analysis

Prior evidence shows that investors value good corporate governance. If certain governance measures are positively related to firm value, we can determine if government involvement in GLCs helps to increase firm value by emphasizing those areas of corporate governance. Therefore, we used panel and pooled regression by equation (1).

⁸ Total expenses include administration expenses, interest expenses and depreciation.

Table 5: Fixed Panel regressions on performance(s) and independent variables

Panel A (i): Tobin's Q with Fixed effect				Panel B (i): ROA with Fixed effect			
Variable	Coef- ficient	t-Statistic	Prob.	Variable	Coef- ficient	t- Statistic	Prob.
C	2.3847	4.5894	0.0000	C	0.2207	2.7426	0.0063
GSize	-0.0464	-1.4273	0.1540	GSize	-0.0078	-1.5238	0.1281
GnDual	-0.8987	-1.3789	0.1685	GnDual	-0.0678	-0.7973	0.4256
GDebt	0.2712	1.5108	0.1314	GDebt	-0.0464	-1.3345	0.1826
GAC	-0.3239	-1.1637	0.2450	GAC	-0.0127	-0.2784	0.7808
GGrowth	1.2650	4.1464***	0.0000	GGrowth	0.1371	2.3586**	0.0187
GPM	0.1285	1.8568*	0.0638	GPM	0.0891	7.2864***	0.0000
nGSize	-0.1024	-3.028***	0.0026	nGSize	-0.0120	-2.2796**	0.0230
nGnDual	-0.4207	-3.1541***	0.0017	nGnDual	-0.0863	-3.6486***	0.0003
nGDebt	0.0221	0.2620	0.7934	nGDebt	-0.0173	-1.2816	0.2005
nGAC	0.5006	3.6584***	0.0003	nGAC	0.7967	31.7288***	0.0000
nG Growth	0.5209	1.4367	0.1513	nG Growth	-0.1120	-1.7794*	0.0757
nGPM	0.3270	3.2939***	0.0010	Ngpm	0.0300	1.7180*	0.0863
R- squared	0.1092			R- squared	0.7616		
Adj R- squared	0.0908			Adj R- squared	0.7566		
F- statistic	5.9363			F- statistic	154.6317		
Prob (F-stat)	0.0000			Prob (F-stat)	0.0000		

*** Correlation is significant at the 0.01 level

** Correlation is significant at the 0.05 level

* Correlation is significant at the 0.1 level

Where Value represented by the Tobin's Q and Return on Assets; G and nG refer to GLCs and nonGLCs; Size is the natural logarithm of the company's total assets; nDual is a dummy variable that takes on a value of one when the company's CEO is separate from Chairman, and zero otherwise; Debt is total liabilities to total assets; AC is agency cost where total expenses to total assets; Growth is total cash to total assets and; PM is profit margin where net income over sales.

$$\begin{aligned}
 \text{Tobin's Q} = & 2.3847 - 0.00464\text{GSize} - 0.8987\text{GnDual} + 0.2712\text{GDebt} - \\
 & (4.5894^{***}) \quad (-1.4273) \quad \quad \quad (-1.3789) \quad (1.5108) \\
 & - 0.3239\text{GAC} + 1.2650\text{GGrowth} \\
 & (-1.1637) \quad \quad (4.1464^{***}) \\
 & + 0.1285\text{GPM} - 0.1024\text{nGSize} - 0.4207\text{nGnDual} + 0.0221\text{nGDebt} + \\
 & (1.8568^*) \quad (-3.0280^{***}) \quad (-3.1541^{***}) \quad (0.2620^{***}) \\
 & + 0.5006\text{nGAC} + 0.5209\text{GGrowth} + 0.3270\text{GPM} \\
 & (3.684^{***}) \quad \quad (1.4367) \quad (3.2939^{***}) \quad (3)
 \end{aligned}$$

with

$$\text{Adj. } R^2 = 9.08\% , \quad \text{F-statistic} = 5.9363, \quad \text{Prob(f-stat)} = 0.0000$$

and

$$\begin{aligned}
 \text{ROA} = & 0.2207 - 0.0078\text{GSize} - 0.0078\text{GnDual} - 0.0464\text{GDebt} - 0.0127\text{GAC} \\
 & (2.7426^{***}) \quad (-1.5238) \quad (-0.7973) \quad (-1.3345) \quad (-0.2784) \\
 & + 0.1371\text{GGrowth} + 0.0891\text{GPM} - 0.0120 \text{nGSize} - 0.0863\text{nGnDual} \\
 & (2.3568^{**}) \quad (7.2864^{***}) \quad (-2.2796^{**}) \quad (-3.6486^{***}) \\
 & - 0.0173 \text{nGDebt} + 0.7967\text{nGAC} - 0.1120 \text{nGGrowth} + 0.0300 \text{nGPM} \\
 & (-1.2816) \quad (31.7288^{***}) \quad (-1.7794^{**}) \quad (1.7180^*) \quad (4)
 \end{aligned}$$

with

$$\text{Adj } R^2 = 76.16\%, \quad \text{F-statistic} = 154.6317, \quad \text{Prob(F-stat)} = 0.0000$$

We report the results of a panel regression with fixed effect by (1) in Table above. In Equation (3), we find that our result is significant at any level of significance, which resulted in F-statistic = 5.9363. Our adjusted R^2 of 9.08% shows that there is no heteroskedascitiy. Firm values of Tobin's Q is positive and significant even after controlling for common governance measure such as non duality, firm specific differences such as profitability, risk and growth. In details, in market measurement, we found only growth and profitability of GLCs significant and positive. Non-GLCs size, non-duality, agency cost and profitability show significant but different relationship. And agency cost and profitability indicate significant positive relationship at any level of correlation additionally size and non-duality are negative but significant. Debt and growth in non-GLCs do not show any significant relationship significant. As the overall conclusion, we identify that size of non-GLCs has effect on market performance but not for GLCs which is negatively correlated with 1% level of significant. It's mean that small size of company in non-GLCs will lead to high company performance but not for larger company.

For accounting measurements (ROA) in equation, we find that adjusted R-squared is 75.66% and F-statistics of this equation is 154.63 is significant at any level of significance. In Equation 1a, results show that growth and profitability in GLCs are positive and significant. Meanwhile, for non-GLCs, growth shows significant (but negative) relationship and for size, non-duality, agency cost and profitability it is different from market measurement.

For this equation, we run it separately on performance and various dependents of GLCs and non GLCs in equation (2), that is

$$\text{Value} = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{nonDual} + \beta_3 \text{Debt} + \beta_4 \text{AC} + \beta_5 \text{Growth} + \beta_6 \text{PM} + \varepsilon_i \quad (5)$$

In equation (2), we separate data between GLCs and non-GLCs and run them separately. The result shows that not much difference except for size. Equation (5)

indicates size has negative significant relationship but not in accounting measurement.

Whereas, for non-GLCs, the results show that only debt is not significant. Also, debt and profitability is not significant at any level of significance. Table 6 shows that result of non-GLCs is better than GLCs due to many variables show significant relationship.

Table 6: Fixed regression for separate categories on performance and independent variables

Government Linked Companies							
(a) Dependent Variable: TOBINQ				(b) Dependent Variable: ROA			
Variable	Coef- ficient	t- Statistic	Prob.	Variable	Coef- ficient	t- Statistic	Prob.
C	1.7057	1.9298	0.0546	C	1.86E-02	0.2126	0.8318
Size	-0.0618	-2.2873	0.0229***	Size	-7.53E-04	-0.2837	0.7768
nDual	-0.0587	-0.0741	0.9410	nDual	3.60E-02	0.4565	0.6483
Debt	0.3499	2.5307	0.0119**	Debt	-6.72E-02	-4.3141	0.00***
Agency				Agency			
Cost	-0.2494	-1.2405	0.2158	Cost	-2.27E-03	-0.1367	0.8914
Growth	1.4005	5.7396	0.0000***	Growth	1.58E-01	5.5556	0.00***
Profita- bility	0.1605	2.9842	0.0031***	Profita- bility	0.0811	1.42E+01	0.00***
R-squared	0.2063			R-squared	0.5632		
Adjusted				Adjusted			
R-squared	0.1898			R-squared	0.5542		
F- statistic	12.5606			F- statistic	62.3276		
Prob (F-statistic)	0.0000			Prob (F-statistic)	0.0000		

Non Government Linked Companies_non GLCs							
(c) Dependent Variable: TOBINQ				(d) Dependent Variable: ROA			
Variable	Coef- ficient	t- Statistic	Prob.	Variable	Coef- ficient	t- Statistic	Prob.
C	2.7125	4.5098	0.0000	C	0.3131	2.4686	0.0141
Size	-0.1243	-3.2000	0.0015***	Size	-0.0177	-2.1663	0.0311**
nDual	-0.4101	-2.8219	0.0051***	nDual	-0.0914	-2.9473	0.0035***
Debt	-0.0065	-0.0676	0.9462	Debt	-0.0195	-1.0787	0.2816
Agency				Agency			
Cost	0.4440	2.9860	0.0031***	Cost	0.7922	24.1426	0.00***
Growth	0.7144	1.7998	0.0729*	Growth	-0.1353	-1.6534	0.0993*
Profita- bility	0.2913	2.7135	0.0071***	Profita- bility	0.0274	1.2066	0.2286
Weighted Statistics				Weighted Statistics			
R-squared	0.1063			R-squared	0.6832		
Adjusted				Adjusted			
R-squared	0.0878			R-squared	0.6766		
F- statistic	5.7488			F- statistic	104.2218		
Prob (F-statistic)	0.0000			Prob (F-statistic)	0.0000		

6 Conclusions and Future Research

In this paper, we investigated the level of corporate governance displayed by the GLCs and compare it to sample of listed non GLCs on Main Board, Bursa Malaysia. We computed the Tobin's Q as proxy of company performance (as

market measurement) and ROA (as accounting measurement) to determine the degree to which government involvement and corporate governance affects company performance. We found that GLCs exhibit lower valuations than non-GLCs, even after controlling for firm specific factors such as profitability, size, non-duality, agency cost, risk and growth opportunities.

We compared the financial and market performance of GLCs with non-GLCs, while each have a different set of governance structure, the key difference is government ownership. We found that non-GLCs perform better than GLCs after examining corporate governance and factors which influence company performance such as risk, growth and leverage. In GLCs, we found that majority of variables have significant relationship except debt and growth (in ROA, growth show significant) but for GLCs, only growth and profitability are significant but not others. As conclusion, although separate analysis shows government ownership performs better than non-GLCs (with the sample of 210 companies), but when we utilized matched sample for comparison, we found out that performance of non-GLCs is better than GLCs which is because three out of thirty companies in GLCs which are Tenaga Nasional Berhad (TNB), Telekom and SIME DARBY need to be dropped (can not match with other non-GLCs in our sample). These three companies have given a huge impact on performance of GLCs For the reason that besides their large market capitalization, they are also monopoly and leader in their industries.

Finally additional research on this topic using other types of analysis is needed. Much can be learned from the progress that has been by previous studies. In many ways current study lends support for the literature at hand and future studies is needed to add up other independent variables on corporate governances, industry factors to get a clearer picture of corporate governance in Malaysia. At the same time other studies can work on improvement of current measurements of performances.

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Appendix

A. LIST OF GOVERNMENT LINKED COMPANIES

No	Company	Industry
1	Boustead Holdings	trading
2	Boustead Property	trading
3	Cements Industries	production
4	Central Ind Corp	trading
5	Faber Group	trading
6	Golden Hope	plantation
7	Guthrie Rope	plantation
8	Highland & Lowland	plantation
9	Island & Penisular	properties
10	Johan Ceramics	trading
11	Kump Guthrie	plantation
12	M'sian Airport	trading
13	Mentakab Rubber	plantation
14	MRCB	trading
15	MISC	trading
16	Negara Properties	properties
17	Opus	trading
18	Petronas Dagangan	trading
19	Petronas Gas	trading
20	Proton Holding	consumer product
21	Sime UEP	plantation
22	Time Engineering	trading
23	TIME Dot Com	production
24	Tractors Holdings	production
25	UAC Berhad	trading
26	UMWS	consumer product
27	YaHorng	production

B. LIST OF NON- GOVERNMENT LINKED COMPANIES

No	Company	Industry
1	Berjaya	Trading
2	Keramat	Production
3	Fraser & Neave	Production
4	Lion Corporation	Property
5	Tiong Nam Transport S B	Trading
6	Asiatic	Plantations
7	Batu Kawan	Trading
8	Berjaya Holding	Consumer product
9	Berjaya Toto	Consumer product
10	Choo Bee Metal Ind	Production
11	Faber	Trading
12	Gamuda	Plantations
13	GlenealyPlantations	Plantations
14	IOI Corporation	Trading
15	KL Infrastructure Grp	Trading
16	Kuala Lumpur Kepong	Plantations
17	Malayan United Industries	Trading
18	Malayawata Steel	Production
19	Malaysia Aica	Production
20	Malaysian Mosaics	Trading
21	MMC Corporation	Trading
22	MOL.COM	Plantations
23	Mycom	Plantations
24	Nam Fatt	Trading
25	PK Resources	Production
26	PPB Group	Plantations
27	Resort World	Consumer product