The Performance of Government-Linked Companies in Malaysia

Mansor Isa[1] & Siew-Peng Lee[2*]
[1]*Universiti Malaya*
[2]*Universiti Tunku Abdul Rahman*

***Abstract*:** This study examines the performance of selected government-linked companies (GLCs) versus non-GLC matching firms, during the period 2008-2013. Our sample of GLCs is drawn from the list contained in the GLC Transformation Program of the Government of Malaysia. Three performance measures are used – ROA, ROE and Tobin's Q ratio. Two methods of analysis are performed: univariate analysis and multiple regressions. The results strongly indicate that GLCs perform worse than their non-GLC counterparts in all performance measures and in both univariate and multivariate tests. The performance of both GLCs and non-GLCs is found to be negatively related to leverage and board size. Further, non-GLCs performance is also found to be related to firm size and non-duality.

Keywords: Government-linked companies, firm performance, corporate governance, returns on asset, return on equity, Tobin's Q ratio
JEL classification: G30, G32

1. Introduction

There has been unending debate concerning the performance of government-linked companies (GLCs), and whether Government involvement, as the majority shareholder, has a positive or negative impact on the performance of these companies. Those who argue that GLCs perform better than non-GLCs have cited reasons such as effective monitoring mechanism, proper corporate governance structure and favouritism in awarding government contracts and concessions, as factors that should contribute to superior performance. Whereas those who argue that GLCs would suffer from government involvement cited reasons that include non-business intervention, government appropriation and appointment of unqualified directors and managers. Additionally, there are people who insist that non-GLCs should perform better than GLCs due to freedom from government pressure and intervention, which allows them to focus on business considerations in decision-making with the aim of maximizing profits and shareholders' value.

Empirical studies on GLCs in both developed and emerging markets generally show mixed results. Some studies find that GLCs outperform non-GLCs (e.g., Ang and Ding 2006; Mrad and Hallara 2012; and Yu 2013) while others find just the opposite (for example, Shleifer 1998; Thomsen and Pedersen 2000; and Dewenter and Malatesta 2001). In emerging markets, the indications are that GLCs perform worse than their non-GLC counterparts (e.g., Sun *et al*. 2002; Wei and Varela 2003; and Megginson *et al*. 2004). In view of such divergent results, this paper attempts to provide additional evidence from a developing market by examining GLCs performance vis-à-vis non-GLCs in Malaysia.

Malaysia may be considered as a fast developing market, with a market capitalization of RM1,702 billion (about USD510.6 billion) at the end of 2013. In 2004, the Malaysian Government launched the GLC Transformation Program, which aims to transform GLCs into high performance entities in the areas of profitability, governance and management efficiency to enhance their contribution to the development and growth of the country's economy (PCG

* Corresponding author: Siew-Peng Lee. Email: leesp@utar.edu.my

2005). This study analyses the performance of the GLCs listed in the transformation program. These companies are given special focus and assistance by the government and it is expected that the GLCs would be more efficiently managed and their performance greatly enhanced. In addition, our study also look at the corporate governance practices in the GLCs because this is one of the strategic focus of the transformation plan. This study is different from Lau and Tong (2008) and Razak *et al*. (2011). Lau and Tong use very small sample to study government ownership and performance whereas Razak *et al.* use dummy variable to analyse the difference in performance between GLCs and non-GLCs. None of these two studies use matched sample analysis and neither look at corporate governance variables. The findings of this research have important policy implications for the Malaysian corporate sector as well as the government in assessing the effectiveness of the GLC Transformation Program.

2. Literature Review

Evidence of underperforming GLCs is provided by Boardman and Vining (1989) and Villalonga (2000). The reasons these authors cited for the weak performance of GLCs include bureaucratic processes, inefficiency, ineffectiveness, incompetence, corrupt practices and excessive government intervention. Consequently, the companies incur losses and wastage of public resources. In addition, Shirley and Walsh (2000) state that the lack of managerial skills among management is an important problem in GLCs, and Kennedy and Jones (2003) view GLCs as a convenient outlet for locating surplus labour and providing a wide array of social benefits. Megginson *et al.* (1994) mention that oftentimes the positions of directors and senior managers in GLCs are occupied by retired military and high-level civil servants or politically connected individuals who may not be qualified to run a business entity.

In addition, GLCs around the world seem to present the government with unending problems. A World Bank study indicates that GLCs in developing countries account for one-half of the outstanding domestic debt and a substantial portion of the foreign debt (World Bank 1995). In China, Endean (1991) finds that 17% of the national budget is used for direct subsidies and loans to unprofitable GLCs. In another study, Sun *et al*. (2002) examine the performance of state-owned enterprises (SOEs) using data from 1994 to 1997. The authors find that the China SOEs underperform their listed counterparts due to high debt and government influence, and are too focused on safeguarding social welfare rather than maximizing shareholder value. Hatfield (2000) and Phillips and Kunrong (2005) find that GLCs in South Africa and Thailand respectively experience unsustainable debt burdens, utilize poor technology and have confusing corporate structures. In a study on European companies in which the government is the major shareholder, using data collected over the period 1990-1995, Thomsen and Pedersen (2000) find that these companies experience low performance in terms of the value of equity and return on assets. The authors reason that this may be due to the lack of the profit maximizing orientation of the companies, instead that the companies are driven by political agenda and social welfare.

A study conducted by Razak *et al*. (2011) in Malaysia using 1995-2005 data, finds that GLCs underperformed non-GLCs, especially in respect of market performance, as measured by Tobin's Q ratio. The authors state that the difference in performance may be driven by high growth industries and the low leverage policies of non-GLCs. Hamid (2011) investigates whether the appointment of senior government officials and political persons on the GLC boards could influence the performance of GLCs, and based on data collected from 2001 to 2003, the author finds no correlation between these two variables. Although Razak *et al*. (2011) find lower performance for GLCs in Malaysia, an earlier study by Lau and Tong (2008) finds opposite results. Based on data from 2000 to 2005 and using only 15 GLCs, Lau and Tong (2008) find that GLCs perform better than non-GLCs. They argue that large government ownership in GLCs may improve the governance structure of the companies,

and, thus, improve performance. In a recent study, Bhatt (2016), using 18 GLCs and 65 non-GLCs over the period 1996 to 2013, find that there is no difference in accounting performance between the two groups of companies.

While the above studies seem to indicate the inferior performance of GLCs, there are also studies that indicate otherwise. Studies on GLCs in Singapore in particular tend to show that GLCs perform better than non-GLCs. These studies include Pangarkar (1998), Heracleous (2001), Feng *et al.* (2004) and Ang and Ding (2006). Pangarkar (1998) points out that a strengthened legal system and clients' protection as well as the open economy policy adopted in Singapore could be factors contributing to the higher performance of Singapore's GLCs. Heracleous (2001) also find the same result for Singapore's GLCs based on data for 1994 to 1999. As a case in point, the author reveals that Singapore Telecom, a GLC, is driven by profit maximisation, supported by the Government to improve efficiency and profitability and stay ahead of international competitors. Feng *et al.* (2004) find no evidence that GLCs underperform non-GLCs, based on data collected from 1975 to 1998. Ang and Ding (2006) compare the financial performance of GLCs and non-GLCs in Singapore from 1990 to 2000. They find that the performance and corporate governance of GLCs were better than that of non-GLCs. Their results remain unchanged even after controlling for firm specific variables, such as firm size, leverage, profitability and ownership structure. In addition, a study in China by Tian and Estrin (2008) shows superior performance of the SOEs. Based on the data collected for 1994 to 2004, the authors find that the relationship between government ownership in SOEs and performance is non-linear; rather, the relationship takes the form of a U-shape, which means the SOEs perform better than non-SOEs when the government holdings are either very low (below 25%) or very large (above 25%). An ownership of 25% seems to be associated with the lowest performance of the SOEs.

2.1 Performance and Firm Specific Variables

Previous studies also evaluate how various factors impact firm performance of GLCs. Some studies investigate the relationship between the performance of firms and firm specific factors, such as, firm size, leverage and liquidity. In terms of firm size, it is expected that large firms should be more profitable due to their access to new technology and scale of operations. However, Lau and Tong (2008) find that in Malaysian GLCs, performance is not related to firm size. On the other hand, Razak *et al.* (2011) indicate that the total assets are negatively related to firm performance as measured by ROA and the Tobin's Q ratio. Leung and Cheng (2013) also find that the total assets are negatively associated with Tobin's Q ratio, indicating that the value of larger China central state-controlled firms decreases as firm size increases.

Financial leverage, as measured by the proportion of debt in the capital structure, is usually taken as a measure of financial risk. As high leverage means high risk, it is expected that leverage has a negative impact on performance; however, the evidence is mixed. Weir *et al*. (2002) and Davies *et al.* (2005) find that leverage is positively related to firm performance. In Malaysia, Razak *et al.* (2011) find evidence of a negative relationship between debt ratio and return on assets in GLCs. In China, Yu (2013) finds that debt ratios are negatively related to state-owned enterprises performance.

Liquidity refers to the ability of firms to meet their short-term obligations. Previous studies have used various methods of estimating liquidity. Muhamed *et al.* (2014) uses current ratio while Phung and Mishra (2015) on the other hand, use cash over total asset ratio as measure of liquidity. Muhamed *et al.* (2014) find no significant relationship between liquidity and GLCs performance but Phung and Mishra (2015) find the coefficient for liquidity to be positive and significant.

2.2 Performance and Corporate Governance

Corporate governance has been defined as the entire system of rules, processes and practices by which a company is controlled, directed and managed. The objective of corporate governance is to ensure that company's objectives are achieved and the interests of all company's stakeholders are fulfilled. The board of directors is usually entrusted to oversee the corporate governance practices in the company. The Malaysian Code of Corporate Governance (2012) emphasizes that good corporate governance requires a strong board of directors to govern a corporation as distinct from management, which is the function of the executives. The separation of power between the board and management should act as a check and balance to safeguard the interests of the stakeholders. In general, previous studies find that firms with good corporate governance have better performance. These studies include Weir *et al.* (2002) and Gompers *et al.* (2003). In addition, the OECD (2004) attributes the poor performance of GLCs to poor governance.

Evidence from emerging markets is also consistent with those in developed markets. A study by Campos *et al.* (2002) using data from six emerging markets (India, Republic of Korea, Malaysia, Mexico, China, and Turkey) finds that good governance is associated with a higher market valuation. In another study, Klapper and Love (2004) investigate the relation between corporate governance and the performance of 374 firms across 14 countries (Brazil, Chile, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Singapore, South Africa, Taiwan, Thailand and Turkey), and find that better corporate governance is associated with higher performance, as measured by return on assets and Tobin's Q ratio.

In studying corporate governance, the most commonly used variables are board size, percentage of independent directors and board's duality. Evidence on the relationship between board size and performance is relatively mixed. There are conflicting ideas about board size with some arguing for smaller board size and others contending that larger is better. Generally, each firm will have its own appropriate board size, which depends on the firm's characteristics, such as firm size and complexity of the firm's business. Dalton *et al.* (1999) mention that the benefits to the firm of a large board include the availability of more expertise. However, Jensen (2010) argues otherwise; large board size is easily controlled by CEOs and makes the functioning of the board less effective. Jensen (1993) presents evidence that is in favour of a smaller board size. However, Adams and Mehran (2012) find that there is a positive association between board size and the Tobin's Q ratio. In Malaysia, Haniffa and Hudaib (2006) find that board size is positively related to firm performance.

Another corporate governance variable commonly studied is the number of independent directors. The agency theory suggests that board composition should include independent directors, which will lead to a better monitoring role that eventually leads to better corporate performance. Vance (1983) believes that independent directors are required as part of the board because they can provide an unbiased view and assessment, and are more concerned with the interests of the stakeholders. Indeed, many studies support the view that independent directors have a positive effect on performance. These studies include Borokhovich *et al.* (1996), and Hermalin and Weisbach (1998). In contrast, Agrawal and Knoeber (1996), and Bhagat and Bolton (2008) find a negative relationship between independent directors and firm performance.

The leadership structure of the board may affect firm performance. In some firms, the chairperson of the board is also the CEO of the company. This form of "duality" is widely seen as going against good governance practices. The proponents of the agency theory argue that the chairman has to be independent in order to monitor the behaviour of the CEO and management. Jensen (1993) supports the view that CEO duality would result in less board independence, and therefore, less board effectiveness. However, Stewart (1991) argues that duality enhances decision-making to permit a sharper focus on the company's objectives, and

promote more rapid implementation of operational decisions. However, there is no compelling evidence in support of this popular view. Instead, Donaldson and Davis (1991), and Haniffa and Cooke (2002) present evidence that companies that practice duality perform better than those with separate leadership. In Malaysia, Abdullah (2004) finds that there is no significant difference in performance (as measured by ROE, ROA and EPS) between firms with and without duality.

3. Data and Methodology

3.1 Data

GLCs may be defined as companies whose major shareholders are governmental institutions or government agencies. As a rule of thumb, a company that is owned 20 percent or more by the government is deemed a GLC (Razak *et al.* 2008 and 2011; and Ang and Ding 2005). In such companies, the government would have direct control of the companies through the appointment of directors and top management. In Malaysia, the government's involvement in private corporations is made through its special vehicle, Khazanah Holdings Berhad, which is a public limited company that was specifically set-up to hold shares in listed companies for the Malaysian government.

This study examines the GLCs that are listed in the book "GLC Transformation Program", published by the government of Malaysia (PCG, 2005). Our sample consists of 13 GLCs included in the Transformation Program and 13 matching non-GLCs. The number of listed GLCs in the GLC Transformation Program initially was 20. The number changed due to delisting and due to mergers of companies. We also exclude GLCs finance companies. This leaves us with only 13 GLCs. The period of study is from 2008 to 2013. This period was chosen in order to maintain a balance panel data. The list of GLCs used in this study and their matching companies are listed in the Appendix.

In this study, we use the matched-pair approach to analyse the difference in the performance between GLCs and non-GLCs. Originally it was intended that the matching be based on the same industry and firm size as measured by the total assets at the end of 2012. However, we find that size matching is hard to do because of the very large size of GLCs. Hence, in most cases, it is just industry matching. All data requirements, including share prices and companies' annual reports are obtained from the Bloomberg database.

3.2 Methodology

The focus of this study is to examine the performance of GLCs versus non-GLCs. This is undertaken in two stages. In the first stage, a univariate analysis is performed through which we compare the performance of GLCs and non-GLCs, and the significance of the difference is measured by *t*-statistics. In the second stage, a multivariate analysis is performed in which we run a multiple regression combining the data for GLCs and non-GLCs and use a dummy variable to test the difference between the two groups. We also run separate regressions for the two groups in order to determine if their respective performance is driven by similar factors. In this study, firm performance is represented by three measures, as follows:

(1) Return on assets (ROA), measured by net income divided by total assets.
(2) Return on equity (ROE), measured by net income divided by shareholders' equity at book value.
(3) Tobin's Q ratio, measured by total market value of the firm divided by book value of total assets, where the total market value is measured by the current market share price multiplied by the number of shares outstanding plus long-term debt and net current assets.

In the multiple regression, the dependent variable is the respective performance measures, and the independent variables, which consist of factors that may be conveniently

classified as the company specific factors and corporate governance factors. The regression equation is as follows:

$$\text{Performance} = \alpha_i + \beta_1(\text{DGLC}_{i,t}) + \beta_2(\text{SIZE}_{i,t}) + \beta_3(\text{LEV}_{i,t}) + \beta_4(\text{LIQ}_{i,t}) + \beta_5(\text{BS}_{i,t}) + \beta_6(\text{IND}_{i,t}) + \beta_7(\text{NDual}_{i,t}) + \varepsilon \quad (1)$$

The independent variables are explained below:

(1) Government-linked company (DGLC) is measured as the dummy variable to denote the company ownership. This variable takes a value of 1 if the company is a GLC and 0 otherwise.
(2) Firm size (SIZE) is measured by the total assets at book value. In the regression, the log transformation of total assets is used. The coefficient is expected to be positive due to market power and economies of scale in operation.
(3) Leverage (LEV) is measured by the ratio of the total debt to total assets. The coefficient may be positive or negative.
(4) Liquidity (LIQ) is measured by the current ratio (current assets divided by current liabilities). This ratio measures the firm's ability to meet its short-term obligation. As a rule of thumb a ratio of around 2.0 is considered a safe ratio but if it is too high it may reflect inefficient use of working capital due to the fact that current assets contribute lower yield than fixed asset. In this study, since we do not expect the current ratios to be overly large, the coefficient is expected to be positive.
(5) Board size (BS) is measured by the number of board members. The log transformation is used in the regression. The sign of the coefficient is difficult to predict because it is generally believed that there is an optimum board size. If the board size of the sample companies is below optimum, the coefficient will be positive. However, if the current board size is at the optimum point, the coefficient will be negative.
(6) Independent board members (IND) is measured by the percentage of independent directors on the board. Based on the principle of good governance, a higher number of independent directors is preferred. The coefficient is predicted to be positive.
(7) Non-duality (NDual) is the case in which the chairperson of the board does not play the dual role of being the CEO of the firm. This is a dummy variable that takes the value of 1 in the case of non-duality and 0 otherwise. Based on the principle of good governance, non-duality is preferred. Hence, this coefficient is expected to be positive.

4. Results and Analysis

4.1 Descriptive Statistics

Table 1 lists the variables used in this study along with the average values of the variables for GLCs and non-GLCs. The numbers are the means of yearly cross-sectional averages over the years of study, 2008-2013. The *t*-test is used to determine the significance of the difference of the means of the two groups. Panel A in Table 1, shows that for all measures, the performance of GLCs is significantly lower than that of non-GLCs. It should also be noted that the Tobin's Q ratio of the GLCs is less than 1.0 implying that market valuation is lower than the book value of assets. Panel B shows the means of the variables for firm characteristics. It can be seen that the average size of GLCs is almost double that of non-GLCs. As mentioned earlier, originally, GLCs were large government agencies that provided essential services that were privatised and become large private companies. In terms of debt usage, the numbers indicate that the leverage ratio of GLCs is slightly higher than that of non-GLCs, however, the difference is not significant. The liquidity measure, as measured by the current ratio, indicates that non-GLCs have far better liquidity position than GLCs. The low

current ratio of GLCs means that there is a higher probability that the group may face difficulty in meeting its current liabilities.

In relation to the corporate governance variables, Panel C in Table 1 indicates that the average board size is about the same for the two groups. In terms of board composition, the mean percentage of independent directors on the boards is higher for GLCs (0.45) compared to non-GLCs (0.36). Both numbers, however, are in compliance with the recommendation of the Malaysia Code on Corporate Governance that independent directors should make up at least one third of the total board members. Our result also indicates that most GLCs and non-GLCs have separate individuals holding the positions of board chairman and CEO. This is also in line with the recommendation of the Malaysian Code on Corporate Governance that discourages the duality of functions to ensure the existence of the balance of power and authority between the chairperson and the CEO.

In summary, our initial results in Table 1 indicate that the performance of GLCs is lower than that of their non-GLC counterparts, despite having a larger scale of operation and a greater number of independent board members. Furthermore, GLCs have a greater short-term financial risk compared to non-GLCs, as shown by the current ratio.

Table 1: Descriptive statistics - mean values of variables use in the study

	GLCs	Non-GLCs	*t*-statistic of the difference
Panel A: Performance measures			
Return on assets (ROA)	0.0339	0.0810	-4.7319***
Return on equity (ROE)	0.0520	0.2468	-2.5624**
Tobin's Q	0.8530	2.0497	-6.9949***
Panel B: Firm characteristic			
Firm Size (Total Asset, RM million)	18,911.39	10,489.71	4.8479***
Leverage (Total Debt/Total Asset)	0.3098	0.2931	0.6343
Liquidity (Current Asset/Current Liabilities)	1.3435	2.4325	-6.2543***
Panel C: Corporate governance variables:			
Board size	9.5065	9.3246	0.4695
Independent directors	0.4509	0.3594	4.4035***
Non-duality	0.8571	0.8442	0.2757

Notes: The numbers of companies use in the study are 13 GLCs and 13 non-GLCs over a six-year period. ***and ** indicate significance at the 1% and 5% levels, respectively (two-tailed). The official exchange rate as at 30 December 2013 is RM1.00 = USD0.30.

4.2 Univariate Analysis

Table 2 reports the comparison of the performance between GLCs and non-GLCs in respect of the three performance measures for all the years in the study. Panel A of the table compares the ROA of GLCs versus non-GLCs. The results show that the ROAs of GLCs are generally lower than those of non-GLCs for almost all years of the study as well as for the overall average. The mean ROA for non-GLCs (at 8.1%) is more than double that for GLCs (at 3.4%).

Panel B shows the ROE comparison. In general, the ROE also indicates that the performance of GLCs is lower than that of their counterparts; but the difference in ROE is significant for only one year. It should also be noted that the average ROE for non-GLCs is almost five times greater than that for GLCs. This implies that the shareholders of GLCs are not receiving their fair returns from investments compared to their non-GLC counterparts.

The Tobin's Q ratio is a market-based measure that compares the market value of the firm to its book value. A high ratio is preferred as it reflects a high valuation of the market to the firm. Panel C of Table 2 shows that GLCs have a significantly lower Tobin's Q ratios compared to non-GLCs for all the years. It can also be seen that the ratios for GLCs are generally less than 1.0 for all except one year, indicating that the market values for GLCs are less than their respective book values. This implies that the stocks of the GLCs are generally

undervalued. In contrast, the Tobin's Q ratios for non-GLCs are all greater than 1.0. The Tobin's Q result is consistent with the performance measures of the ROA and ROE discussed above, indicating the inferior performance of GLCs compared to non-GLCs.

Table 2: Comparison of ROA, ROE and Tobin's Q ratio of GLCs and non-GLCs by year

Year	GLCs (N=13)	Non-GLCs (N=13)	*t*-statistic of the difference
Panel A: ROA			
2008	0.0359	0.0703	-1.5291
2009	0.0331	0.0660	-2.0735*
2010	0.0379	0.0828	-2.9735**
2011	0.0256	0.0849	-2.7922**
2012	0.0400	0.0865	-2.3750**
2013	0.0310	0.0988	-1.9326*
Average	0.0339	0.0810	-4.7319***
Panel B: ROE			
2008	0.0713	0.1068	-0.5985
2009	0.1196	0.1418	-0.3444
2010	0.0839	0.2002	-2.0829*
2011	0.0959	0.2005	-1.5288
2012	0.0872	0.5165	-1.7465
2013	0.0482	0.3520	-1.5037
Average	0.0520	0.2468	-2.7946**
Panel C: Tobin's Q			
2008	0.6389	1.8492	-5.0676***
2009	0.7489	1.7171	-4.5620***
2010	0.9394	1.7203	-4.2916***
2011	0.8711	1.9901	-3.3587***
2012	0.9333	2.3979	-2.1115*
2013	1.0338	2.7597	-2.7987**
Average	0.8530	2.0497	-6.9949***

Notes: ***, ** and * indicate significance at the 1%, 5% and 1% levels, respectively (two-tailed).

4.3 Multivariate Analysis

It is seen that the results from our univariate analysis clearly indicate that the performance of GLCs is lower than that of their non-GLC counterparts. However, the univariate analysis has its shortcomings in that it does not control for other variables that may have confounding effects. In this section, we present the results of our multivariate analysis that test for the difference in the performance of the GLCs versus non-GLCs after controlling for other variables.

Table 3 reports the results of the multiple regression in which firm performance is regressed against a host of firm specific factors and corporate governance factors. Three regressions are run, each time using different performance measures as dependent variable. A dummy variable is used to test if the performance of GLCs is different from their non-GLC counterparts. The dummy variable takes the value of 1 for GLCs and zero otherwise. Table 3 shows that the dummy variable is negative and significant at the 1% level for all three regressions. This implies that after controlling for firm specific variables and corporate governance variables, it is found that GLCs are significantly under-performing the non-GLCs for all performance measures – ROA, ROE and Tobin's Q ratio. These results are consistent with the univariate results.

Table 3: Results of multiple regression using combined data (GLCs plus non-GLCs)

	Dependent variable is ROA		Dependent variable is ROE		Dependent variable is Tobin's Q	
Independent variables	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Constant	0.1198	0.2581	0.1864	0.7278	4.6009***	0.0000
DGLC	-0.0532***	0.0023	-0.3546***	0.0003	-0.5064***	0.0011
Firm size	-0.0174***	0.0081	-0.0647*	0.0616	-0.0964**	0.0365
Leverage	-0.1375***	0.0084	-0.4687*	0.0856	-0.4035	0.3979
Liquidity	-0.0135	0.1704	-0.0138	0.7235	-0.1085	0.1127
Board size	-0.0983***	0.0077	-0.6040***	0.0035	-0.4445*	0.0749
Independent directors	-0.0977	0.1381	0.2291	0.4297	-0.6430	0.2483
Non-duality (dummy)	0.0554**	0.0163	0.0294*	0.0680	0.0935	0.6318
Adjusted R^2	0.1012		0.0985		0.1445	
F-statistic	3.4597		3.3886		4.6904	
P-value (F-statistic)	0.0019		0.0012		0.0001	

Notes: Number of observations is 156. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

As for the control variables, it is found that size is negatively related to performance. Leverage is only significant for ROA and ROE and liquidity is unrelated to performance. As for governance variables, board size is negatively related to performance, while independent directors is unrelated and non-duality is related only to ROA and ROE. The findings are consistent with Muhamed *et al.* (2014) who reports that size is negatively related to the firm's performance, while liquidity is insignificant. Similarly, Razak *et al.* (2008), Razak *et al.* (2011) and Phung and Mishra (2015) find a negative relationship between size and performance. Ang and Ding (2006) find that non-duality is an important contributor to improve firm performance.

Thus far, our evidence seems to indicate inferior performance of GLCs compared to non-GLCs. To have a more in depth understanding of the factors influencing performance, we run separate regressions for the GLCs and non-GLCs using the same set of explanatory variables. The results are presented in Table 4. It can be seen that more factors are influencing the performance of non-GLCs compared to GLCs. For GLCs, only two factors are significantly related to performance – leverage and board size – both of which have negative signs. These two factors also influence the performance of non-GLCs in a similar fashion. In addition, the performance of non-GLCs is also negatively related to firm size and positively related to non-duality. Our results also indicate that liquidity and independent directors are not significantly related to the performance of GLCs or non-GLCs.

Our result that shows firm size is negatively related to performance for non-GLCs is inconsistent with the theory of the economies of scale. For GLCs, although the signs are all negative, the coefficients are insignificant. Our result for the size effect is similar to that of Lau and Tong (2008) but inconsistent with Razak *et al.* (2008) and Razak *et al.* (2011) who find a negative relation for firm size.

Our result indicates that firm leverage as measured by debt ratio, is negatively related to firm performance for GLCs as well as for non-GLCs, which is unexpected. Based on extant finance theory and supported by many empirical findings, increasing leverage is usually associated with higher performance (Weir *et al*. 2002; and Margaritis and Psillaki 2010). Given the modest level of debt ratio of about 30% (see Table 1) for both groups, it is quite surprising that the coefficient is negative.

In relation to the corporate governance variables, the regression results show that the performance of both GLCs and non-GLCs is negatively related to board size. This is in line with the argument that an optimum board size does exist, beyond which increasing the board

size would be counter-productive to firm performance. This result is inconsistent with previous local studies, such as Haniffa and Hudaib (2006); and Mohd Ghazali (2010), which find that board size is insignificant in explaining performance. Our result concerning the insignificance of independent directors is similar to that of Haniffa and Hudaib (2006).

Table 4: Results of multiple regressions for GLCs and non-GLCs run separately

Independent Variables	Dependent variable is ROA		Dependent variable is ROE		Dependent variable is Tobin's Q	
	GLCs	Non-GLCs	GLCs	Non-GLCs	GLCs	Non-GLCs
Constant	0.0945	0.4198***	1.1146*	0.9671	0.2950	5.7966***
	(0.5779)	(0.0056)	(0.0703)	(0.3940)	(0.7139)	(0.0010)
Firm size	-0.0051	-0.0119*	-0.0476	-0.1049*	-0.0163	-0.2036*
	(0.5728)	(0.0807)	(0.1717)	(0.0848)	(0.6995)	(0.0741)
Leverage	-0.3008***	-0.0007**	-0.5440*	-0.5432	-0.2070	-1.0823
	(0.0010)	(0.0154)	(0.0641)	(0.3082)	(0.5878)	(0.2356)
Liquidity	-0.0288	-0.0051	-0.1679	-0.0088	-0.0751	-0.0278
	(0.4882)	(0.4817)	(0.4011)	(0.8766)	(0.4443)	(0.7856)
Board size	-0.0230*	-0.2116***	-0.0971**	-1.2081***	-0.4696*	-0.1018**
	(0.0764)	(0.0000)	(0.0395)	(0.0010)	(0.0719)	(0.0103)
Independent directors	-0.1121	-0.2233	-0.2690	-0.3643	-0.2740	-0.4120
	(0.2049)	(0.9897)	(0.1824)	(0.6023)	(0.1126)	(0.8647)
Non-duality (dummy)	0.0404	0.0536**	0.0537	0.3198*	0.5424	-0.1735
	(0.4247)	(0.0497)	(0.1477)	(0.0986)	(0.1566)	(0.6438)
Adjusted R	0.1791	0.2605	0.1272	0.2518	0.1493	0.1568
F-statistic	2.5445	4.1104	1.7003	3.9266	2.0468	2.1698
p-value (F-statistic)	0.0275	0.0014	0.0758	0.0019	0.0707	0.0561
Observation	78	78	78	78	78	78

Notes: ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively. Numbers in parentheses are p-values.

In summary, in comparing with past studies, in respect of performance measured by accounting numbers, i.e. ROA and ROE, we find poorer results for GLCs compared to non-GLCs. These results are consistent with previous studies, such as Sun *et al*. (2002) in China, and Razak *et al.* (2011) in Malaysia, who find the performance of GLCs to be inferior. However, our results are inconsistent with Ang and Ding (2006) in Singapore, and Mrad and Hallara (2012) in France who find the performance of GLCs to be superior. Consistent with the accounting measures, our market measure in the form of the Tobin's Q ratio also shows that GLCs perform worse than non-GLCs; a result that is in line with that found by Razak *et al*. (2011).

5. Conclusion and Policy Implications

This study examines the financial and market performance of GLCs and their non-GLC matching firms for the period 2008-2013. The sample comprised 13 GLCs that are included in the GLC transformation program of the Government of Malaysia and 13 matched non-GLCs. The matching is done on the basis of industry similarity. Size matching is not possible due to the very large size of the GLCs compared to non-GLCs. The performance measures used in this study are ROA, ROE and Tobin's Q ratio. The univariate analysis indicates that for all performance measures, the performance of GLCs is significantly lower than that of the non-GLCs. The same result is also obtained in the multivariate analysis when the test controls for firm specific variables and corporate governance variables. In terms of factors influencing performance, it is found that for GLCs, two factors are significant, that is, leverage and board size, with both having negative signs. For non-GLCs, the same two factors also influence

performance in a negative way. In addition, the performance of non-GLCs is also negatively related to firm size and positively related to non-duality.

Based on the Malaysian government's transformation program, GLCs are supposed to play an important role in supporting the country's economic policies. Contrary to expectations, our results show that GLCs are underperforming non-GLCs in our match sample analysis. These results have several implications. Firstly, with the government's support and backing, and the power to provide direct and indirect aid to GLCs under the transformation program, it is surprising that the companies are not showing competitive performance with the non-GLCs. The Government, being the major shareholder, needs to take the necessary steps to improve the performance of the GLCs. The second implication concerns the inefficiencies in the management of the GLCs. The results indicate that GLCs are relatively larger than non-GLCs. Because of the sheer size, the GLCs command huge resources and a large number of employees and stakeholders. Therefore, ensuring the proper running of the GLCs is utmost important. Inefficiency in the management of GLCs is also seen in its liquidity management in which the current ratio shows that GLCs may have difficulty in meeting their current liabilities.

The third implication is in corporate governance. Board size and independent directors are higher for GLCs than for non-GLCs, but the regression results indicate that board size is negatively related to performance while independent director's coefficient is insignificant. This means that bigger boards do not lead to better performance and that having more independent directors on the board is not helpful in improving performance. It seems clear that GLCs need to make an assessment concerning the qualities of the directors and independent directors that are being appointed to the board.

References

Abdullah, S.N. 2004. Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance: The International Journal of Business in Society* 4(4): 47-64.

Adams, R.B. and H. Mehran. 2012. Bank board structure and performance: Evidence for large bank holding companies. *Journal of Financial Intermediation* 21(2): 243-267.

Agrawal, A. and C.R. Knoeber. 1996. Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis* 31: 377-389.

Ang, J.S. and D.K. Ding. 2006. Government ownership and the performance of government-linked companies: The case of Singapore. *Journal of Multinational Financial Management* 16(1): 64-88.

Bhagat, B. and B. Bolton. 2008.Corporate governance and firm performance. *Journal of Corporate Finance* 14: 257-273.

Bhatt, P.R. 2016. Performance of government linked companies and private owned companies in Malaysia. *International Journal of Law and Management* 58(2): 150-161.

Boardman, A.E. and A.R. Vining. 1989. Ownership and performance in competitive environments: A comparison of the performance of private, mixed and state-owned enterprises. *Journal of Law and Economics* 32(1): 1-33.

Borokhovich, K.A., R. Parrino and T. Trapani. 1996. Outside directors and CEO selection. *Journal of Financial and Quantitative Analysis* 31(3): 337-355.

Campos, C.E., R.E. Newell and G. Wilson. 2002. Corporate governance develops in emerging markets. *McKinsey on Finance* 3: 15-18,

Dalton, D., C. Daily, J. Johnson and A. Ellstrand. 1999. Number of directors and financial performance: A meta-analysis. *Academy of Management Journal* 42: 674-686.

Davies, J.R., D. Hillier and P. McColgan. 2005. Ownership structure, managerial behaviour and corporate value. *Journal of Corporate Finance*11: 645-660.

Dewenter, K. and P.H. Malatesta. 2001. State-owned and privately-owned firms: An empirical analysis of profitability, leverage, and labor intensity. *American Economic Review* 91(1): 320-334.

Donaldson, L. and J.H. Davis. 1991. Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management* 16(1): 49-65.

Endean, E.M. 1991. China's Foreign Commercial Relations', in US Congress, Joint Economic Committee, China's Economic Dilemma in the 1990s. Washington DC: US Government Printing Office, 741-757.

Feng, F., Q. Sun and W.H.S. Tong. 2004. Do government-linked companies underperform? *Journal of Banking and Finance* 28: 2461-2492.

Gompers, P.A., J.L. Ishii and A. Metrick. 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* 118(1): 107-155.

Hamid, A.A. 2011. Network governance in government-linked companies (GLCs) and non-government-linked companies (NGLCs) in Malaysia. *Journal of Financial Reporting and Accounting* 9(1): 54-73.

Haniffa, R.M. and T.E. Cooke. 2002. Culture, corporate governance and disclosure in Malaysian corporations. *Journal of Accounting, Finance and Business Studies* 38(3): 317-349.

Haniffa, R.M. and M. Hudaib. 2006. Corporate Governance Structure and Performance of Malaysian Listed Companies. *Journal of Business Finance and Accounting*, 33(7-8): 1034-1062.

Hatfield. 2000. *An accelerated agenda towards the restructuring of state owned enterprises: policy framework*. Department of Public Enterprises, Republic of South Africa, Ministry of Public Enterprises.

Heracleous, L. 2001. State ownership, privatization and performance in Singapore: An exploratory study from a strategic management perspective. *Asia Pacific Journal* of *Management* 18: 69-81.

Hermalin, B.E. and M.S. Weisbach. 1998. Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review* 88: 96-118.

Jensen, M.C. 1993. The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance* 43(3): 831-880.

Jensen, M.C. 2010. The modern industrial revolution, exit and the failure of internal control systems. *Journal of Applied Corporate Finance* 22(1): 43-58.

Kennedy, R.M. and L.P. Jones. 2003. Reforming State-Owned Enterprises: Lessons of International Experience, Especially for the Least Developed Countries. Working Paper 11, United Nations Industrial Development Organization, Vienna, Austria.

Klapper, L. and I. Love. 2004. Corporate governance, investor protection and performance in emerging markets. *Journal of Corporate Finance*10:287-322.

Lau, Y.K. and C.Q. Tong. 2008. Are Malaysian government-linked companies (GLCs) creating value? *International Applied Economics and Management Letters* 1(1): 9-12.

Leung, N.W. and M.A. Cheng. 2013. Corporate governance and firm value: Evidence from Chinese state-controlled listed firms. *China Journal of Accounting Research* 6: 89-112.

Malaysian Code of Corporate Governance (MCGG). 2012. Securities Commission Malaysia, Kuala Lumpur.

Margaritis, D. and M. Psillaki. 2010. Capital structure, equity ownership and firm performance. *Journal of Banking & Finance* 34: 621-632.

Megginson, W.L., R.C. Nash and M.V. Randenborgh. 1994. The Financial and Operating Performance of Newly Privatized Firms: An International Empirical Analysis. *Journal ofFinance*49: 403-452.

Megginson, W.L., R.C. Nash, J.M. Netter and A.B. Poulsen. 2004. The choice of private versus public capital markets: evidence from privatizations. *Journal of Finance* 59: 2835-2870.

MohdGhazali, N.A. 2010. Ownership structure, corporate governance and corporate performance in Malaysia. *International Journal of Commerce and Management* 20(2): 109-119.

Mrad, M. and S. Hallara. 2012. The impact of residual government ownership on performance value creation: The case of privatized French companies. *Procedia – Social and Behavioral Science*62: 473-488.

Muhamed, A., R. Stratling and A. Salama. 2014. The impact of government investment organizations in Malaysia on the performance of their portfolio companies. *Annals of Public and Cooperative Economics* 85(3): 453-473.

Organisation for Economic Co-operation and Development (OECD) Report 2004, *Principles of Corporate Governance*, OECD Paris.

Pangarkar, N. 1998. The Asian Multinational Corporation: Strategies, Performance and Key Challenges. *Asia Pacific Journal of Management* 15(2): 109-118.

Phillips, K.L. and S. Kunrong. 2005. What Effect Does the Size of the State-Owned Sector Have on Regional Growth in China? *Journal of Asian Economics* 15(6): 1072-1102.

Phung, D.N. and A.V. Mishra. 2015. Ownership structure and firm performance: Evidence from Vietnamese listed firms. *Australian Economic Papers* 55(1): 63-98.

Putrajaya Committee on GLC High Performance (PCG) (2005). *Catalysing GLC Transformation to Advance Malaysia's Development.* Accessed on 8 August 2014. http://www.pcg.gov.my/trans_manual.asp.

Razak, N.H.Ab, R. Ahmad and H.A. Joher. 2008. Government ownership and performance: An analysis of listed companies in Malaysia. *Corporate Ownership & Control* 6(2): 434-442.

Razak, N.H.Ab, R. Ahmad and H.A. Joher. 2011. Does government linked companies (GLCs) perform better than non-GLCs? Evidence from Malaysian listed companies. *Journal of Applied Finance & Banking* 1(1): 213-240.

Shleifer, A. 1998. State versus private ownership. *Journal of Economic Perspectives* 14(4): 133-150.

Shirley, M. and P. Walsh. 2000. Public versus Private Ownership: the Current State of the Debate. Washington D.C, World Bank.

Stewart, R. 1991. Chairmen and chief executives: an exploration of their relationships. *Journal of Management Studies* 28(5): 511-528.

Sun, Q., W.H.S. Tong and J. Tong. 2002. How does government ownership affect firm performance? Evidence from China's privatization experience. *Journal of Business Finance & Accounting* 29(1-2): 1-27.

Thomsen, S. and T. Pedersen. 2000. Ownership structure and economic performance in the largest European companies. *Strategic Management Journal* 21(6): 689-705.

Tian, L. and S. Estrin. 2008. Retained state shareholding in Chinese PLCs: Does government ownership always reduce corporate value? *Journal of Comparative Economics* 36(1): 74-89.

Vance, S.C. 1983. *Corporate leadership: boards, directors, and strategy.* New York: McGraw-Hill.

Villalonga, B. 2000. Privatization and efficiency: differentiating ownership effects from political, organizational, and dynamic effects. *Journal of Economic Behavior & Organization* 24(1): 43-74.

Wei, Z.B. and O. Varela. 2003. State equity ownership and firm market performance: Evidence from China's newly privatized firms. *Global Finance Journal* 14(1): 65-82.

Weir, C., D. Liang. and P.J. McKnight. 2002. Internal and external governance mechanisms: Their impact on the performance of large UK public companies. *Journal of Business Finance & Accounting* 29(5&6): 579-611.

World Bank. 1995. *Bureaucrats in Business: the Economics and Politics of Government Ownership.* New York: Oxford University Press.

Yu, M. 2013. State ownership and firm performance: Empirical evidence from Chinese listed companies. *China Journal of Accounting Research* 6: 75-87.

Appendix A

Table A: List of GLCs and non-GLCs used in this study

No.	GLCs	Non-GLCs matching company
1	Telekom Malaysia	Digi. Com Corporation
2	Tenaga Nasional	YTL Power International
3	Sime Darby	IOI Corporation
4	Malaysia Airlines System	Air Asia
5	Proton Holdings	MBM Resources
6	UMW Holdings	DRB-Hicom
7	Malaysia Airports Holdings	Bintulu Port Holdings
8	Pos Malaysia	GD Express Carrier
9	Boustead Holdings	IJM Corporation
10	Chemical Company of Malaysia	Southern Acids
11	Malaysia Resources Corporation	Gamuda Corporation
12	TH Plantations	IJM Plantations
13	Axiata Group	Maxis Corporation