CORPORATE GOVERNANCE MECHANISMS AND UNMANAGED EARNINGS: EMPIRICAL EVIDENCE FROM MALAYSIAN GOVERNMENT LINKED COMPANIES

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Abstract

The aim of this paper is to examine the effectiveness of board monitoring mechanisms in Government Linked Companies (GLCs) in Malaysia. Mainly it focuses on how the introduction of the transformation policy, which emphasizes strengthening the board effectiveness, would lead to an improvement in the performance of GLCs. Our study goes further to explain the impact of earnings management on performance as it is opined that the performance of the firm could be affected by the earnings management (EM) practices, and, hence, looking at the performance after stripping away the managed portion of performance could provide more accurate results concerning the impact of corporate governance on performance. Using regression analysis, the findings of the study showed that the adjusted R^2 increased from 14.8% to 26.8% (between the pre-transformation and post-transformation models). In addition, more corporate governance variables were found to be significant in the post-transformation model (i.e. board independence and board meetings). More importantly, the significance of the variables are as predicted in the hypotheses, thus lending support for the argument of the agency theory. This study has recognized a few limitations. First, the main limitation of the study is that the data were collected through publicly available data which include annual reports and other databases such as Bloomberg. Other data such as qualitative information could be helpful to gain more insight concerning the issue of the effectiveness of the transformation policy. Second, although we are using all available data for the Malaysian GLCs, the sample size of 35 companies could still be considered as a small sample size for generalization purpose. The government, in its role of regulating the corporate governance for GLCs, could gain an insight from the results of the study, thereby providing empirical support for the development of new regulations and recommendations, and takes the necessary corrective decisions regarding the effectiveness of the transformation policy. The paper provides further evidence concerning the relationship between performance and corporate governance mechanisms. Specifically, it looks into such a relationship within the Malaysian GLCs after the introduction of the transformation programme. The results of the study are more accurate for interpretation as the measure of performance has deducted the portion of managed earnings.

Keywords: Malaysia, Corporate Governance, Unmanaged Earning, Government Linked Companies, Transformation Programme

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1 Introduction

The shareholders of corporations are very concerned about the financial performance and value creation of the corporations. This purpose is very challenging for them since the management of corporations may behave in an opportunistic way to maximize their interests at the expense of shareholders and stakeholders in a wide sense. The separation between ownership and management makes the monitoring process difficult for shareholders, which is very indicative in the numerous collapses that the world has

experienced in the last two decades. Therefore, regulators dealt with the dilemma extensively with the aim to bridge the gap between the interests of shareholders and management interests and reduce the agency problem by tightening up the way corporations are managed and directed. Such effort from regulators, academicians and practitioners is due to the widely held belief that corporate governance enhances investor goodwill and confidence and boosts the economic health of listed corporations (Coleman and Biekpe, 2006; Chuanrommanee and Swierczek, 2007).

As with all public listed companies, Government Linked Companies (GLCs) in Malaysia are also subject to the agency problem. They are more concerned as they represent a wider group of shareholders. Those companies refer to companies that have primary commercial objectives, and in which the Malaysian Government has a direct controlling stake (PGC, 2006). Further, the government has the ability to appoint the board of directors (BOD), senior management, make major decisions (e.g. contract awards, strategy, restructuring and financing, acquisitions and divestments) for the GLCs either directly or through Government Linked Investment Companies (GLICs).

The significance of GLCs lies in the fact that GLCs and their major shareholders constitute a substantial part of the economic structure of Malaysia. According to the transformation policy manual, the GLCs account for approximately RM260 billion or 36% of market capitalization of Bursa Malaysia. In addition, GLCs are considered as the main providers of services in the key economic sectors, and, beyond that, they contribute 5% of the national workforce.

Due to the above mentioned facts and the recurring poor performance of GLCs in terms of operations and financial indicators in the last 15 years, the government launched the transformation programme as an urgent reaction to strengthen the governance system of its owned listed firms with the premise of creating economic and shareholder value through the improvement and enhancement of the performance of GLCs over the short, medium and long periods of time, and on the premise that an improvement in the performance of GLCs will have a positive demonstrable effect on the rest of the corporate sector. In addition, the GLC transformation policy is considered a significant cornerstone in the development of the Bumiputera community and preparation of the nation towards greater competitiveness as part of the government's efforts to achieve Vision 2020.

In order to implement the transformation programme it is necessary to upgrade the effectiveness of the board of directors. This is because a strong correlation exists between good corporate governance and long-run financial performance. Therefore, the Green Book has been launched as the first theme of initiatives and the cornerstone of the implementation of the GLC transformation programme. According to the Green Book of transformation policy, the enhancement of board effectiveness can be conducted by revamping board practices and processes and establishing guidelines that could further enhance the effectiveness of boards. These guidelines should be augmented either through the introduction of new principles or further illustration of practical details and examples, and the actions of the board should comply with the intent and spirit of the code.

Hence, this study aims to examine the impact of the introduction of the transformation policy on the performance of GLCs by comparing between the period pre transformation policy and the post transformation policy. With the expectation of greater effectiveness of the board in the post transformation period, corporate governance variables are expected to explain performance of GLCs better. Although many previous studies have been conducted to investigate the possible effects of corporate governance on performance, the uniqueness of this study lies in the fact that none of the previous studies examined the issue using real performance measures. Therefore, this study contributes to the literature by studying the performance of GLCs using real performance measures.

Despite the fact that the progress report of the transformation policy has shown that the performance of GLCs is improving in the post transformation period, using real performance can provide better evidence concerning the impact of the transformation policy on performance. This is because stripping away the potential impact of earnings manipulation or accounting discretions from the performance could reveal the true performance rather than the cosmetic effect of discretionary choices (Cornett et al., 2008).

The findings of the study show that there is an improvement in the strength of the regression model on the relationship between unmanaged earnings and corporate governance characteristics pre- and post-transformation period (i.e. the adjusted R^2 increased from 14.8% to 26.8%). In addition, board

independence and board meetings were found to be significant in influencing the unmanaged earnings of the GLCs in the post transformation period.

The main implication of these findings is that the government, in its role of regulating the corporate governance for GLCs, could gain an insight from the results of the study, thereby providing empirical support for the development of new regulations and recommendations, and take the necessary corrective decisions regarding the effectiveness of the transformation policy.

The paper is organized as follows. Section 2 briefly reviews the literature on corporate governance and performance. Discussions on the development of the hypotheses are also presented in this section. Section 3 presents an overview of our data and methodology. Section 4 presents the empirical results and Section 5 concludes the paper.

2 A survey of the literature and hypotheses development

Corporate governance research has been discussed and debated by both academics and practitioners for a number of decades. This is because of the potential impact of corporate governance on firm value and performance (Lefort and Urzua, 2008; Palmon and Wald, 2002). Studies in Asian countries including Malaysia regarding the effectiveness of corporate governance have provided weak evidence concerning the effectiveness of corporate governance (Mak and Kusnadi, 2005; Haniffa and Hudaib, 2006). Even though, in such countries, the governance practices are consistent with international benchmark, the evidence indicates that Asian corporations and their governance system do not achieve the same level of expectations as companies in developed markets. This suggests that Asian corporate governance is more an illusion or window dressing than fact (Chuanrommanee and Swierczek, 2007).

The critical issues of corporate governance in Asia may have contributed to the weak governance system and performance of firms. For example, the legal aspect of corporate governance, the role of family ownership concentration and the degree of minority rights protection delineate the incentives, policy and performance of the manager and their companies (Claessens and Fan, 2002)

The case is more problematic in government linked companies (GLCs). According to Mak and Li (2001), there are a number of possible reasons to explain why GLCs may have weaker governance compared to non-GLCs. One reasonable explanation is that the managers are attached to the government, which has a focus on the welfare of the nation rather than on profit. Furthermore, GLCs receive funding from the government, thus, they have easier access to extra funds. They further argue that the government is likely to be less effective in monitoring the GLCs. They assert that negative organizational factors provide fewer incentives for the GLCs to adopt good governance practices, and, consequently, this would adversely affect their performance (Mak and Li, 2001).

Researchers have analysed the effect of different mechanisms of corporate governance, such as board independence or composition and board size (Lefort and Urzua, 2008; Dahya and McConnell, 2007;), board leadership (Kang and Zardkoohi, 2005; Palmon and Wald, 2002; Fosberg and Nelson, 1999) and ownership structure (Klein et al., 2005; Tam and Tan, 2007) on corporate performance.

2.1 Board independence

Prior studies that have examined board independence and its impact on performance found mixed results. Lefort and Urzua (2008) and Krivogorsky (2006) found that outside directors are important mechanisms to control agency problems and affect firm performance positively. In contrast, others found a negative relationship between outside directors and firm performance (Bhagat and Bolton, 2008; Agrawal and Knoeber, 1996). Other researchers (Lam and Lee, 2012; Haniffa and Hudaib, 2006; Bhagat and Black, 1999) have shown no evidence of a significant relationship between firm performance and board independence.

Although previous empirical findings are inconclusive, the various codes on corporate governance clearly stress the importance of board independence in ensuring effective monitoring of the board. In particular, the GLC transformation policy and the revised code on corporate governance in Malaysia re-emphasised the importance of board independence in board monitoring. Thus the following hypothesis is stated:

Hypothesis 1: There is a significant positive relationship between outside and independent directors with firm performance in the post transformation period.

2.2 Board size

Researchers have debated the optimal board size and have different views on the appropriate number of members sitting on the board. Empirically, the results of studies on board size and corporate performance have shown mixed results. Ujunwa (2012), Mak and Kusnadi (2005), Eisenberg et al. (1998) and Yermack (1996) found a negative relationship with different performance measures in different contexts of organizations. Other studies, such as Coles et al. (2008), Haron et al. (2008), and Kiel and Nicholson (2003) found a positive relationship with performance. Furthermore, there is a group of studies that found an insignificant relationship between board size and firm performance (e.g. Mollah et al., 2012)

In the context of Malaysia, the Malaysian Code on Corporate Governance (MCCG) has determined no specific number of directors on the board, however, it is stated that every board should examine its size in order to determine the effect of size on board's effectiveness (Securities Commission, 2007). In contrast, the PGC reiterates that a GLC board should be no larger than 10 directors (PGC, 2006). The assumption of the PGC is that a larger board size would have a detrimental effect on the effectiveness of the board. Therefore, the following hypothesized relationship between board size and performance is formulated:

Hypothesis2: There is a significant negative relationship between board size and firm performance in the post transformation period.

2.3 Leadership structure and performance

Jensen (1993) theorized that for a board to be effective there should be a separation between the chair of the board and the CEO. Without an independent chairman, it is difficult for the board to perform its critical functions. Allowing these two positions to be held by different individuals provides a series of checks and balances that make it difficult for managers to behave opportunistically (Fosberg and Nelson, 1999). The Malaysian good governance practices in the transformation policy emphasize assigning the two positions to two different individuals, which enables a better monitoring function.

Empirically, the studies conducted by Harjoto and Jo (2008), Peng et al., (2007), Dehaene et al (2001) document a positive relationship between combining the role of chairman and CEO and different performance measures. In contrast, Forsberg and Nelson (1999), and Palmon and Wald (2002) found that separating the role of the CEO and chairman enhanced performance. Other studies found no significant difference in market valuation between firms that combine the role and firms that split the role (Lappalainen and Niskanen, 2012; Schmid and Zimmermann, 2008; Haniffa and Hudaib, 2006) Therefore, based on the transformation policy guidelines and with reference to the agency theory, the hypothesis is set out in the alternative form, in which the separating role is said to mitigate the agency problem, hence enhancing firm performance:

Hypothesis 3: There is a significant positive relationship between the non-duality role and firm performance in the post transformation period.

2.4 Board meetings and performance

Vafeas (1999), Conger et al. (1998) and Lipton and Lorsch (1992) suggest that the effectiveness of the board of directors is a function of time. In the transformation manual, the PGC (2006) emphasizes the role of board meetings and requires the board to meet regularly to satisfy the needs of the company's owners. Six to eight meetings are suggested by the PGC to be enough to settle critical issues.

Brick and Chidambaran (2007) and Vafeas (1999) found a positive relationship between performance and the number of meetings. Based on the agency theory and the PGC, which emphasize the importance of board meetings in business functioning, it is perceived that the greater the activity of the board, the higher the monitoring role and, hence, better performance will be achieved. As such, the following hypothesis is proposed:

Hypothesis 4: There is a significant positive relationship between the board meeting role and performance in the post transformation period.

2.5 Multiple directorships and performance

Ferris et al. (2003) proposed the busyness hypothesis, which indicates that the more directorships held by directors on other boards, the less effective the board is as time will be the critical issue for those directors. Further, Ferris et al. (2003) argue that the presence of multiple directorships on the board reduces the oversight of management and has an impact on the firm's market value. The counterargument for the busyness hypothesis is the reputation hypothesis, as proposed by Fama (1980), and Fama and Jensen (1983). According to the reputation hypothesis, the market for labour is based on the idea that more directorships are considered a proxy for directors' quality.

In the Malaysian scenario, the Bursa Malaysia listing requirements limit the directorships of directors to 10 in publicly traded companies and 15 to other non-listed companies. More strictly, the PGC has restricted the limit to 5 directorships in publicly traded companies and not more than 10 in non-listed companies. In the spirit of the agency theory, the busyness hypothesis and the PGC requirements that cap the limit of board directorships of other firms, the expected relationship between multiple directorships and performance is stated in the hypothesis below:

Hypothesis 5: There is a significant negative relationship between the number of board directorships and firm performance in the post transformation period.

2.6 Audit committee effectiveness and performance

The effectiveness of the audit committee is conditioned by certain characteristics, such as independence, committee activity and the presence of financial expertise on the audit committee (Dezoort et al., 2002). As such, the impact of audit committee on performance (Turely and Zaman, 2004) varies according to the effectiveness of such a committee.

The PGC seems to follow the Bursa Malaysia requirements in respect of the audit committee establishment. The code requires the audit committee to comprise at least three directors, the majority of whom are independent, including the chairman. In addition, the code requires the inclusion of one directorwho is a member of an accounting association or body (Securities Commission, 2007).

Empirical studies suggest that audit committee independence influence the performance of a firm. Chan and Li (2008) found a positive relationship between audit committee independence and firm performance. In contrast, Brick and Chidambaram (2007) found no impact of audit committee independence on performance. Furthermore, empirical results show that audit committees with financial expertise have a positive impact on performance (Lee et al., 1999; Chan and Li, 2008; Defond et al., 2005; Davidson et al., 2004). Building on agency theory, the researcher hypothesizes the following association:

Hypothesis 6: There is a significant positive relationship between audit committee independence, financial expertise and frequency of meetings, and firm performance in the post transformation period.

3 Data and methodology

3.1 Sample selection procedures

In this section the data and methodology adopted to test the research framework and the set of research hypotheses will be presented. The sample examined here consists of all the GLC firms listed on Bursa Malaysia. The sample period covers two time horizons; the first period is the year 2002 and 200, which is the pre transformation period and the second period covers the year 2005 and 2006, which is the year following the transformation policy of the GLCs that the government launched in order to restructure the GLCs into high performing companies. In total, at the time of the 2006 annual reports there were 53 listed GLC firms.

For the purpose of adjusting the performance measure for earnings management, firms in the financial sector were excluded from the sample since the finance industry is a highly regulated industry and the behaviour of earnings in the finance sector is different from other sectors, which require other methods to calculate the discretionary accruals that cannot be captured by the modified Jones model (Abdul Rahman and Ali, 2006; Peasnell et al., 2005; Klein, 2002). After excluding the finance companies, 43 observations were available, of which 8 either had missing data on the explanatory corporate governance

variables or had insufficient data on Bloomberg to enable an estimation of discretionary accruals, thus leaving a final sample of 35 firms.

The base data was taken from the Bursa Malaysia website, which has all the annual reports of the listed firms. The data on board characteristics was extracted from these annual reports. In addition, the researchers collected the data on firm performance, firm size and financial leverage and other financial data from the Bloomberg database.

3.2 Dependent variable: Unmanaged Earnings (UnmanEBIT)

This study used EBIT as a measure of profitability. However, Cornett et al. (2008) argue that managers can influence EBIT through their assumptions concerning accruals (e.g. sales and accounts receivable) as well as the treatment of depreciation and amortization. Thus, to measure performance that is relatively free of manipulation, there is a need to exclude the impact of EM by stripping away the discretionary accruals (DA) portion lagged by total assets. Consequently, the performance can be measured based on unmanaged performance. Unmanaged performance is calculated by subtracting the DA as a percentage of total assets from the EBIT lagged by total assets.

Thus, to adjust performance for earnings management we employed the cross sectional Jones (1991) modified model to estimate discretionary accruals. Specifically, the firms are classified into industry categories, as firms within the same industry usually have a similar pattern of assets, and, generally, have similar financial and legal incentives to manipulate accounting earnings (Othman and Zeghal, 2006). Using Ordinary Least Squares (OLS) regression, the coefficient parameters for all other non-sample firms in each industry are estimated separately using the original version of the Jones model in equation 1 (Bartov et al., 2001; Jaggi and Leung, 2007; Ashbaugh et al., 2003).

Equation 1

$$\frac{TA_{itk}}{A_{itk-1}} = \alpha_1\left(\frac{1}{A_{itk-1}}\right) + \alpha_2\left(\frac{\Delta REV_{itk}}{A_{itk-1}}\right) + \alpha_3\left(\frac{PPE_{itk}}{A_{itk-1}}\right) + \varepsilon_{itk}$$

Following Daniel et al. (2008), and Burgstahler and Dichev (1997), TA_{itk} is total accruals for firm *i* in industry *k* in year *t*, computed as the difference between net income before extraordinary items and cash flow from operations; PPE_{itk} is gross property, plant, and equipment for firm *i* in industry *k* in year *t*; ΔREV_{itk} is the change in revenue for firm *i* in industry *k* between year *t−1* and year *t*; ε_{itk} is the error term for firm *i* in year *t* for industry *k*, and, finally,$\alpha_1, \alpha_2, \alpha_3$ are industry specific parameter coefficients. All variables are deflated by lagged assets *t-1* to reduce heteroscedasticity.

Further, in order to ensure unbiased estimation, each industry includes at least ten observations, which is consistent with prior research (DeFond and Jiambalvo, 1994; Subramanyam, 1996; Klein, 2002). Using the estimated coefficients $\alpha_1, \alpha_2, \alpha_3$ from industry division regressions (Equation 1), the researcher evaluated the non-discretionary components of total accruals, NDA, for each sample firm-year observation using the Jones (1991) modified cross sectional model, as shown in equation 2;

Equation 2

$$NDA_{itk} = \alpha_1\left(\frac{1}{A_{itk-1}}\right) + \alpha_2\left(\frac{\Delta REV_{itk} - \Delta REC_{itk}}{A_{itk-1}}\right) + \alpha_3\left(\frac{PPE_{itk}}{A_{itk-1}}\right)$$

Finally, the discretionary accruals proxy is obtained by calculating the difference between total accruals and estimated NDA, as shown in equation (3) below.

Equation 3

$$DA_{itk} = TA_{itk} - NDA_{itk}$$

3.3 Model and statistics

Different steps were taken to analyse the data. In the first step, descriptive analysis is used. The descriptive statistics provide some initial insights into the distributions of the variables. In addition,

correlation analysis was mainly undertaken to identify whether there is a potential problem of multicollinearity before the regression analysis is undertaken.

Table 1. Independent variables' measurement

Variables	Definition	Operationalization	Expected sign
IND	A proxy for board independence	Independent directors to total number of directors	+
NEDs	A proxy for board independence	Non-executive directors to total number of directors	+
Bsize	Board of directors size	Total number of directors	-
Nondual	CEO-Chairman separation	Dummy variable being 1 for CEO-chairman separation, and 0, otherwise	+
Bmeet	Board meetings	Number of meetings divided by number of directors	+
Dship	Number of seats on other board held by each directors	Total number of outside directorships divided by number of directors	-
Comind	A proxy of audit committee independence	% of independent directors on audit committee to total number of directors	+
ComMeet	Audit committee meetings	Number of meetings divided by number of audit committee members	+
EXP	Financial expertise on audit committee	Dummy variable equal 1 if at least one member is a financial expert, and 0 otherwise	+
Fsize	Firm size	Total assets	+
LEV	Leverage	Ratio of total debts to total assets	-

The test on the relationship between the performance and the explanatory variables was tested using a linear regression model. This test is used because the dependent variables are continuous dependent variables (Cooper and Schindler, 2008). The following multiple regression model is used to test the hypothesized relationship between the variables. The detailed descriptions about the independent variables are explained in Table 1.

$$UnmanEBIT = \alpha + \beta_1 IND + \beta_2 NEDs + \beta_3 Bsize + \beta_4 Bmeet + \beta_5 Dship + \beta_6 Nondual + \beta_7 Comind + \beta_8 ComMeet + \beta_9 EXP + \beta_{10} Fsize + \beta_{11} LEV + \varepsilon$$

As the multiple regressions analysis requires that the variables be non-correlated and normally distributed, tests for all these assumptions are applied. Multicollinearity was investigated by a correlation matrix and Variance Inflator Factor (VIF). The normality test was conducted using Skewness, Kurtosis and Kolmogorov-Smirnov Z. The regression results are reported using normal scores due to the problems of non-normality of data (Haniffa and Cooke, 2002; Leventis et al., 2005). All continuous variables have been transformed to the normal distribution by the Van der Warden method.

4 The results

4.1 Descriptive statistics

As this study looks for the impact of corporate governance variables on performance, Table 2 reports the characteristics of the dependent and continuous explanatory variables. Interestingly, the table displays several noteworthy trends regarding performance and compliance with the GLCs' transformation policy requirements. First, the mean of Unmanaged Earnings in post transformation policy is 15.3%, which is much higher than the mean of Unmanaged Earnings in pre transformation policy, which is 9.6%. The

increase in the unmanaged earnings provides evidence concerning the effectiveness of the transformation policy to bring improvement in the GLCs. This improvement has been achieved despite the fact that earnings management activities were found to be slightly increased in the post transformation period (refer to Mohamad et al., 2012).

For other explanatory variables relating to compliance with the transformation policy requirements, the findings on board size, number of meetings and directorships will be highlighted as these are specific changes required by the policy. It can be seen in Table 2 that the size of the board (Bsize) across the sample in pre transformation policy ranges from 6 to 14 with a mean of 8 directors, whereas the board size for year post transformation policy ranges from 5 to 12 directors with a mean of 8 directors, which meets the requirements made in the transformation programme. The board requirement indicates that the board size should not exceed 10 directors. However, if the size is to be increased, a justification should be provided.

On average, the board size for the overall sample is considered to be the same for the pre and post transformation policy. On average, in 2003, the board met 7 times. The minimum number of meetings held in years pre transformation policy was approximately four meetings, while the maximum was about 15 meetings. Referring to the post transformation policy, it is found that the mean number of meetings increased to nine meetings. From the average, it seems that the sample firms are in compliance with the PGC requirements of holding at least six meetings each year.

The maximum number of meetings held for post transformation policy is about 18 meetings, which can be considered very high. However, the minimum meetings held per year indicates that at least one firm met only three times – something that is considered a violation of the requirements. In terms of the percentage of the non-executive directors on the board, there is not much difference between pre (85%) and post transformation policy (88%). Meanwhile, the statistics about board independence in 2003 indicate that the mean value for board independence is about 40%, which is considered quite similar for the mean of 41% for post transformation policy . It is interesting to note that in post transformation policy, all the GLCs fully complied with the regulatory requirement of Bursa Malaysia as emphasized in the PGC requirements for transforming the GLCs into high performing firms.

Each director in the sample, on average, had board seats on three other listed companies in the pre transformation policy period. The maximum number of directorships held on other boards is seven seats. Similarly, in post transformation policy period each director held an average of three seats on other listed companies with the maximum of about six directorships on other boards. Although, the maximum number of directorships is slightly higher than the requirement of the PGC of a maximum of five directorships on listed firms, the maximum number of seats in post transformation policy period (i.e. six seats) is lower than pre transformation policy period (i.e. seven seats).

The mean of audit committee independence is 69% for the pre transformation policy and 75% for the post transformation policy, which meets the requirement that most of the audit committee members are independent, including the chairman of the audit committee. On average, the audit committee members met five times for the years pre and post transformation policy period

The summary of variables duality and the presence of financial expertise show that about 98% of the sample firms have separated the role of CEO and chairman of the board. Meanwhile, about 97% of the firms have financial experts on the audit committee. Such evidence indicates that almost all GLCs are in compliance with the regulatory requirements of Bursa Malaysia concerning duality and financial expertise.

4.2 Correlation analyses

Table 3 presents the bivariate Pearson correlation matrix among all the independent and control variables. A multicollinearity problem might exist when the independent and control variables are highly correlated. Thus, the Pearson correlation coefficients were checked for the presence of high collinearity among the regressors. According to Lind et al. (2008), correlated independent variables make it difficult to make inference about the individual regression coefficients and their individual effects on the dependent variable. If the correlation coefficient between two independent variables is between -0.70 and 0.70, there is not likely to be a potential problem of multicollinearity (Lind et al., 2008). Table 3 and Table 4 did reveal some correlations that are at significant at the 0.05 and 0.01 levels. However, all these correlations

are still below 0.7, which would not pose any serious problems among regressed variables, and, hence, it would not affect the validity of the results. In addition to the above measure, the variance inflation factor (VIF) for both years shows that all variables have a VIF value of less than two. As a rule, a VIF value of 10 or more would suggest a multicollinearity problem (Cooper and Schindler, 2008). Therefore, multicollinearity is not a problem as the VIF of all variables, as shown in the regressions, is less than two.

Table 2. Distribution of continuous dependent and independent variables

YEAR / Variables	Mean		Std deviation		Maximum		Minimum	
	Pre	Post	Pre	post	Pre	post	Pre	post
Unmanaged earnings/total assets (UnmanEBIT)	**9.6**	**15.3**	22.8	71.0	106	405	-13.5	-24.3
Board size (Bsize)	8	8	1.84	1.47	14	12	6	5
Board meetings(Bmeet)	**6.9**	**8.5**	3.47	3.87	14.9	17.6	3.5	3.25
Percentage of board independence (IND)	40	41	.091	.075	75	63	29	33
Percentage of non-executive directors (NEDs)	**85**	**87.5**	11.2	11	100	100	50	50
Board directorships (Dship)	**3.15**	**2.91**	1.37	1.32	7.11	5.5	0.14	0.75
Audit committee independence (Comind)	**69**	**75**	.126	0.13	100	100	33	60
Audit committee meetings (ComMeet)	**5.3**	**5**	2.21	2.21	13	17.6	2	3.25

Table 3. Correlation analysis of independent and control variables (pre period)

	Bsize	Bmeet	IND	NEDs	Dships	Comind	ComMeet	Dual	EXP	Fsize	LEV
Bsize	1										
Bmeet	0.148	1									
IND	-0.180	-0.170	1								
NEDs	0.010	0.115	0.179	1							
Dships	-0.116	0.021	0.289	0.297	1						
Comind	-0.008	-0.161	0.335	0.47*	0.65**	1					
ComMeet	0.020	0.251	-0.250	0.273	0.030	-0.078	1				
Nondual	-0.254	-0.160	0.188	-0.026	0.170	0.070	-0.045	1			
EXP	0.158	0.093	0.217	0.213	0.050	0.042	0.030	0.300	1		
Fsize	0.130	0.40*	0.100	0.050	-0.030	-0.300	-0.003	-0.030	0.060	1	
LEV	-0.060	-0.004	0.62**	0.030	0.51**	0.330	-0.015	-0.015	0.040	0.230	1

Notes: The figures above are Pearson correlation coefficients. *, ** denotes significant at 0.05 and 0.01 levels, respectively.

Table 4. Correlation analysis of independent and control variables (post period)

	Bsize	Bmeet	IND	NEDs	Dships	Comind	ComMeet	Dual	EXP	Fsize	LEV
Bsize	1										
Bmeet	0.150	1									
IND	-0.06	-0.001	1								
NEDs	-0.120	0.120	0.183	1							
Dships	-0.140	0.008	0.164	0.120	1						
Comind	0.060	0.20	0.521**	0.070	0.150	1					
ComMeet	0.050	0.55**	-0.155	0.170	0.070	-0.029	1				
Nondual	-0.130	-0.200	0.030	-0.240	-0.260	0.020	-0.070	1			
EXP	0.110	-0.150	0.210	0.150	0.110	0.090	-0.010	0.030	1		
Fsize	0.120	0.115	0.231	0.020	0.010	0.180	0.40*	0.002	0.050	1	
LEV	0.020	-0.09	0.268	0.100	0.190	0.070	0.190	-0.020	0.090	0.230	1

Notes: The figures above are Pearson correlation coefficients. *, ** denotes significant at 0.05 and 0.01 levels, respectively.

Table 5. Regression results

	Unmanaged EBIT pre transformation				**Unmanaged EBIT post transformation policy**			
Variable	**B**	**t-value**	**t-sig.**	**VIF**	**β**	**t-value**	**t-sig.**	**VIF**
Constant								
IND	.256	1.508	.142	1.125	.352.	2.363	**.025****	.1.000
NEDs	-.079	-.463	.647	1.057	-.194	-1.268	.768	1.078
Bsize	-.190	-1.155	.257	1.028	.-.051	-.309	.760	1.038
Nondual	-.041	-.250	.804	1.001	.234	1.470	.152	1.038
Bmeet	.208	1.284	.209	1.002	.427	2.864	**.007***	1.000
Dship	-.248	-1.554	.131	1.003	.038	-.108	.915	1.026
Comind	.003	.016	.987	1.006	-.002	-1.209	.236	1.290
ComMeet	.122	.734	.468	1.015	-.154	-.123	.903	1.852
EXP	-.417	-2.557	**.016***		-.114	-1.355	.186	1.084
Control var.								
Fsize	-.123	-.749	.460	1.000	-.237	-1.400	**.**172	1.034
Lev	.127	.767	.449	1.009	.015	-.396	.695	1.046
Adjusted R^2	**0.148**				**0.268**			
F value	**6.540**				**7.033**			
F significant	**.016**				**0.003**			

4.3 Regression results for unmanaged earnings

Table 5 above presents the results of regression based on unmanaged EBIT. It was indicated previously that the unmanaged EBIT excludes the portion of DA from EBIT. Thus, this model shows the impact of corporate governance variables on the true performance of the firm. As shown on the left side of the table, the results of regression for 2003, the year of the pre transformation programme, are presented. The only significant variable that is found to affect performance negatively is the presence of financial expertise on the audit committee. The negative relationship could be due to the argument that financial expertise on the audit committee lacks independence (Defond et al., 2005). All other variables were found to be insignificant in influencing the performance based on unmanaged EBIT for the pre transformation policy.

On the right side of the Table, the results of regression for the year of post transformation programme are presented. The adjusted R^2 improved from 14.8 % in 2003 to 26.8% in post transformation policy. Independent directors were reported to have a positive impact on performance. This finding, as discussed

before, is consistent with the agency theory perspective (Jensen, 1993; Fama, 1980). The emergence of independent directors comes from the need of third party independence to judge performance independent of management that may pursue their self-interest at the expense of shareholders.

Board meetings are also shown to have a significant (at 1% level) positive relationship with performance. This positive relationship documented using unmanaged EBIT is consistent with Brick and Chidambaran (2007) and reflects the agency theory argument that increasing the number of board meetings leads to increased monitoring activity and time devoted to discussing the company's affairs and business strategy (Vafeas, 1999; Chen et al., 2006). However, more meetings might only benefit the small firms that usually have a smaller board, although that is not necessarily the case.
Surprisingly, both control variables, i.e. firm size and financial leverage, were found to be insignificant for the GLCs. For the GLCs, firm size is not a critical factor in ensuring better performance.

5 Conclusion

This study aimed to examine the impact of corporate governance variables on firm performance in Malaysian government linked companies. The focus was on how the transformation policy of GLCs could have an impact on the performance after the policy was enacted in 2004. The results indicate that corporate governance mechanisms show more influence on the performance of GLCs post transformation policy.

The results of the regression model in the post-transformation period (i.e. 2005 and 2006) have shown more explanatory power (i.e. 26.8%) than the result in the pre-transformation period (i.e. 14.8%). In addition, two corporate governance variables were significant in explaining performance in the post-transformation period (i.e. board independence and board meeting), compared to only one in the pre-transformation period (i.e. financial expertise in the audit committee). Furthermore, the sign of the relationship of the two significant variables in the post-transformation period is as hypothesized, thus providing support for the argument of the agency theory. The above findings clearly show that changes in the corporate governance variables in compliance with the transformation policy have an additional impact on improving the performance of the GLCs.

This study has recognized some limitations. First, the main limitation of the study is that the data were collected through publicly available data sources including annual reports and other databases. Other data could be helpful to gain more insight concerning the issue of the effectiveness of the transformation policy. Second, although we are using all available data for the Malaysian GLCs, the sample size of 35 companies could still be considered as a small sample size. Therefore, generalizing the results of the study might be limited.

This study opens avenues for future research by considering the impact of corporate governance using different variables, such as competence of the directors, CEO tenure, directors' qualifications and the interaction between corporate governance variables. The main implication of these findings is that the government, in its role of regulating the corporate governance for GLCs, could gain an insight from the results of the study, thereby providing empirical support for the development of new regulations and recommendations, and takes the necessary corrective decisions regarding the effectiveness of the transformation policy.

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