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1. INTRODUCTION

According to the OECD (2010: 5), “the scale and scope of state-owned enterprises in many Asian economies calls for specific attention to be given to their corporate governance”. In Malaysia, for instance, listed companies in which government investment organisations hold a controlling stake, so-called Government-linked Companies (GLCs), produce 10 per cent of the country's economic output, employ more than 300,000 people and account for 49 per cent of the total stock market capitalisation of the Bursa Malaysia (Malaysia Ministry of Finance, 2010: 100).

Improvements in the corporate governance of these companies aim to facilitate not only economic efficiency gains for individual firms but also to attract foreign investors and domestic savers to domestic capital markets. This is of particular importance as limited access to external funds is one of the key problems, which hamper the economic development of emerging economies both at national and at firm-level

(Tsoukas, 2011; Fan, Wei, and Xu, 2011). Portfolio investors tend to avoid companies and countries with weak investor protection laws and weak enforcement regimes (Fan *et al.*, 2011).

While many emerging economies have introduced reforms to improve minority shareholder protection and increase the transparency and efficiency of their capital markets, the ability to enforce relevant regulation often remains rather limited. As blockholders in listed firms, government investment organisations can potentially mitigate this problem by improving the supervision and control of their portfolio firms (Lau and Tong, 2008).

1.1 Government investment organisations

The Malaysian government originally set up investment organisations to supervise companies, which used to belong to the British Colonial Government prior to 1957. While the privatization policy of the 1980s saw many of these assets transferred to the private sector, government investment organisations continue to hold ownership and control rights in many privatized companies. Moreover, from 1971 onwards, a New Economic Policy (NEP) programme was implemented with the aim to facilitate the direct and indirect participation of the indigenous Malayan population (*Bumiputera*) in the country's economic development (Gomez and Jomo, 1999; Lee, 2002). As part of this policy, the government set up pension and investment funds, predominantly for the indigenous population, to help them invest their savings and pension contributions in private companies and, thereby, participate in the economic growth of the country.

Therefore, political processes led to the creation of three different types of government investment organisations in Malaysia: (i) federal government sponsored pension and investment funds (PIF GLICs); (ii) federal government owned investment organisations (FGLICs) charged with promoting the federal government's economic and social policies; and (iii) State Economic Development Corporations (SEDCs) charged with promoting state governments' economic and social policies.

Although historically these three types of government investment organisations were set up to pursue different objectives, the Malaysian government expects all of them to aid the improvement of corporate governance and financial performance of their portfolio companies, in a bid to make the Malaysian capital

market more attractive to private investors and, thereby, facilitate firms' access to private funding (Malaysia Putrajaya Committee on GLC High Performance, 2006a; Malaysia Ministry of Finance, 2010).

1.2 Research objectives

In the past, enquiries into the impact of government ownership on the financial performance of listed companies largely treated government investment as homogeneous (Shleifer and Vishny, 1994; Tam and Tan, 2007; Shen and Lin, 2009; Mohd Ghazali, 2010; Ab Razak, Ahmad, and Joher, 2011; Le and Buck, 2011; Najid and Rahman, 2011). However, research by Chen, Firth, and Xu (2009) into the impact of government ownership on listed firms in China first raised the question, whether differences in the corporate governance of government investment organisations matter for the impact of government ownership on listed companies' financial performance.

By taking into account different types of government investment organisations, golden share provisions and the participation of politicians and senior civil servants in the boards of directors of GLCs, this paper contributes to a more detailed understanding of the impact of government ownership and political representation in boards on the financial performance of listed GLCs.

This topic is of particular importance for emerging and developing economies, which aim to develop their stock markets by mobilising domestic savings and attracting foreign investors to facilitate firms' access to external funds (Tsoukas, 2011). Malaysia is an interesting case in this context, as government investment organisations, so-called government linked investment companies (GLICs), are explicitly charged with improving the corporate governance of their portfolio companies. This policy aims to improve not only the financial performance of the individual firms but also to encourage the mobilisation of private domestic savings as well as foreign direct and portfolio investment to improve domestic firms' access to outside capital (Malaysia Putrajaya Committee on GLC High Performance, 2006a; Malaysia Ministry of Finance, 2010). Moreover, as previously discussed, Malaysian government investment organisations can be differentiated into three distinct types, with different objectives and corporate governance structures.

The remainder of the paper is organized as follows. Section 2 introduces key characteristics of government influence on the corporate governance of GLCs in Malaysia. Section 3 reviews the relevant literature on

corporate governance mechanisms and sets out the hypotheses to be tested. Section 4 explains the data and the research methodology employed. Section 5 discusses the empirical results. The paper ends with summary and concluding remarks in Section 6.

2. GOVERNMENT CONTROL OF GLCS IN MALAYSIA

The Asian crisis of 1997-1999 had a far-reaching impact on the economic growth of the affected countries. Like in most Asian countries, the crisis exposed weaknesses in the corporate governance of both private and state-owned companies in Malaysia (Haniffa and Hudaib, 2006) and revolutionised the government's commitment to improving corporate governance (OECD, 2011). To advance the corporate governance of all listed companies, the government introduced a Code of Corporate Governance (Haniffa and Hudaib, 2006) and aligned Malaysia's accounting standards more closely with international benchmarks.

Moreover, the government established the Putrajaya Committee on GLC High Performance to oversee the implementation of a programme to improve the effectiveness and corporate governance of government-controlled listed companies, GLCs, and to enhance the capabilities of government investment organisations as "professional shareholders" (Malaysia Putrajaya Committee on GLC High Performance, 2005: 29).

With regard to their scrutiny of and influence on GLCs' corporate governance, all government investment organisations can draw on expert advice by the Putrajaya Committee on GLC High Performance. Moreover, government investment organisations are themselves supervised by federal and state parliamentary Public Accounts Committees, the Auditor General and the Putrajaya Committee on GLC High Performance. However, supervision tends to be tighter for federal government investment organisations, in particular FGLICs, than SEDCs.

In addition to the indirect influence politicians and government officials can exert over GLCs via their control of government investment organisations, senior civil servants and politicians often serve directly on the boards of directors of listed companies (Gomez and Jomo, 1999).

Moreover, the Malaysian government is able to influence some GLCs in strategic industries via a special rights redeemable preference share, commonly known as "golden share" (Gomez and Jomo, 1999), which is administered by the Ministry of Finance's investment organisation (MOF Inc.). Golden shares confer the

right to speak at shareholders' general meetings, to appoint up to three members to the board of directors, and to overrule any resolution proposed by the board of directors or the shareholders of a company, which is deemed inconsistent with government policies (Sun and Tong, 2002).

Previous research into the impact of government ownership and control rights on the financial performance of listed companies in Malaysia concentrates exclusively on whether GLCs out or underperform other firms. In this context, research by Tam and Tan (2007) suggests that GLCs tend to underperform firms controlled by family or foreign investors, while research by Ab Razak *et al.* (2011) and Najid and Rahman (2011) indicates the GLCs outperform other listed companies. However, there has been no research into whether different types of government investment organisations affect GLCs differently or whether the disparity between cash flow and control rights due to golden shares impacts on GLCs' financial performance.

3. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

3.1 Ownership structure, government ownership and corporate financial performance

Principal-agent theory suggests that the ownership structure of a company has implications both for the incentive alignment between managers and shareholders and for the supervision and control incentives of investors (Shleifer and Vishny, 1986). In this context, it is not only the size and distribution of ownership stakes, which is of importance, but also the identity of blockholders (La Porta, Lopes-De-Silanes, and Shleifer, 1999).

Property rights theory suggests that, given the mismatch between the costs and benefits from their participation in the corporate governance of their portfolio companies, investors who only own a small proportion of shares in any one company they invest in are likely to suffer from control apathy (Rock, 1991). In particular in economies with limited competition on goods, managerial labour and capital markets, and weak law enforcement regimes, low ownership concentration in firms is expected to lead to a control vacuum, which allows senior executives to exploit firms and their shareholders for their own private benefits (Sun *et al.*, 2002; Holderness, 2003). Since investors who control large stakes in individual companies are likely to face a much more positive cost-benefit relationship from their supervision and control efforts, their presence is expected to improve the control of firms' management and, therefore, reduce agency costs

(Rock, 1991; Holderness, 2003). If blockholders are mainly interested in the long-term returns of the firms they invest in, the positive impact of their control efforts on the firms' profitability and, subsequently, their share prices, will also benefit minority shareholders who only hold a few shares (Holderness, 2003). However, blockholders might use their control power to encourage firms' management to pursue policies that promote their interests at the expense of other, less powerful, investors (La Porta *et al.*, 1999).

With regard to the control incentives of government investment organisations, Le and Buck (2011: 231) argue that, "if the state is concerned with extracting tax revenues, based on a proportion of profit, or maximising the value of its stake for subsequent asset sales, it may press managers, just like a private blockholder, to make efficient decisions that raise firm value." The same should apply if the objective of government investment organisations is to improve the corporate governance of their portfolio companies in order to make the firm and the overall capital market more efficient and attractive for investment by domestic and foreign portfolio investors and to reduce domestic firms' cost of capital.

However, investment objectives of government investment organisations often also include the promotion of social targets, of economic development at national or industry rather than firm level, or of political support (Shleifer and Vishny, 1994; Shen and Lin, 2009). If company resources are employed to facilitate those objectives, the influence of government investment organisations on their portfolio companies might lead to the exploitation of private minority shareholders.

Moreover, from a property rights perspective, government representatives who control ownership stakes on behalf of the government do not tend to benefit personally directly from any cash flow gains generated by their control efforts. This raises the prospect that government representatives might suffer from control apathy (Shleifer and Vishny, 1994; Le and Buck, 2011).

However, Chen *et al.* (2009) highlight that some government representatives might benefit indirectly from the financial performance of the GLCs they supervise. They argue, for instance, that while government representatives who monitor SEDCs' investments in China cannot expect to be promoted depending on the firms' performance, the career prospects of government representatives who supervise FGLICs' investments are closely linked to the performance of their portfolio firms. This suggests that the incentives of

government representatives who administer and control government investment organisations are likely to influence how government ownership affects firm performance.

3.2 Hypotheses Development

As previously discussed, government investment organisations in Malaysia can be categorised into (i) federal government sponsored pension and investment funds (PIF GLICs), (ii) federal government owned investment organisations (FGLICs), and (iii) State Economic Development Corporations (SEDCs). Since government investment organisations are expected to play a vital role to improve the attractiveness of the Malaysian capital market to domestic and foreign private investors (Malaysia Putrajaya Committee on GLC High Performance, 2006a; Malaysia Ministry of Finance, 2010), we focus our investigation of the impact of government ownership on firms' financial performance, rather than on their operational or social performance. As minority shareholders in firms controlled by government investment organisations are supposed to be protected, rather than exploited, by the government blockholder (OECD, 2010), we consider both accounting (ROA and ROE) and market (Tobin's Q) performance measures. A firm's return on assets (ROA) gives an indication of how efficiently its management employs the available assets to generate profits. By contrast, a firm's return on equity (ROE) identifies, how much earnings managers generate in relation to the firm's equity capital. While the latter is often said to be of greater interest to shareholders, we consider both. Given the experiences with the Asian Financial Crisis of 1997, where many firms were vulnerable because of excessively high gearing ratios (Claessen, Djankov and Xu, 2000), we expect investors in Malaysia to be particularly aware that ROE might be driven by the liability structure of firms. With regard to the use of Tobin's Q, prior research by Bennedsen and Nielsen (2010) indicates that, even in situations where blockholders do not affect firms' operational or accounting performance negatively, the market value of blockholder dominated firms can be negatively affected because of the perceived threat of exploitation or the misuse of profits.

The objective of federal government sponsored pension and investment funds (PIF GLICs), such as the National Equity Corporation (*Permodalan Nasional Berhad*), the Armed Forces Fund Board (*Lembaga Tabung Angkatan Tentera*) and the Employees Provident Fund, is to provide pension benefits or to

maximise the long-term savings returns of their mainly Bumiputera depositors and unit holders. Because of the strategic importance of the funds not only for the economic enfranchisement of the indigenous population but also for Malaysia's pension system and long-term economic development (Asher, 1998), PIF GLICs are under ministerial oversight. While sponsoring government ministries have the ability to appoint representatives to their boards of directors, usually in form of civil servants, the majority of board members tend to be representatives of savers or employers and employees who contribute to the pension funds, as well as independent directors or specialist advisors.

From a property-rights perspective, the fiduciary duty of PIF GLIC directors to maximise depositors' and unit holders' wealth is expected to affect their supervision and control incentives, as they aim to meet their legal obligations and avoid prosecution for negligence or self-dealing. Prior research into the behaviour of employee share ownership trusts has shown that clear fiduciary duties towards shareholder wealth maximisation has influenced even directors representing trade unions to prioritise financial firm objectives over employee or stakeholder interests (Palcic and Reeves, 2011). Similarly, research into the behaviour of financial trustees suggests that fiduciary duties are increasingly perceived to require a narrow focus on the direct economic benefits of beneficiaries (Lydenberg, 2014).

Moreover, the representatives of employers and employees or savers have clear economic interests in maximising financial returns from PIF GLICs investment, as this reduces the costs of pension schemes or increases the returns to the beneficiaries. Representatives of beneficiaries and employers are, therefore, subject to personal exposure to the economic consequences of their funds' financial performance. Moreover, from an agency perspective, these directors also face an increased threat of replacement compared to political appointees if their PIF GLIC performs poorly, due to the economic control incentives of their constituents.

Federal government owned investment organisations (FGLICs), such as the Khazanah Nasional Berhad, the Ministry of Finance Incorporated (MOF Inc.) and Malaysia's Central Bank, are charged with promoting the government's economic and social policies. While the federal government benefits from dividend payments by FGLICs' portfolio companies and good corporate governance and the mobilisation of both domestic and

foreign investment is part of the government's economic and social development plan, so is the promotion of strategic assets and industries deemed crucial to Malaysia's economic growth and the support of the economic development of the indigenous population (Malaysia Putrajaya Committee on GLC High Performance, 2005; 2006a).

Although government policies state that minority shareholders in GLCs controlled by FGLICs should be protected – not exploited – by the government blockholder (OECD, 2010), in comparison to PIF GLICs, FGLICs are faced with a multitude of - at times incongruent - objectives and they are under no *fiduciary duty* to prioritise the financial interests of minority shareholders. This suggests that government representatives might use their influence in FGLICs to exert pressure on GLCs to use company resources to support other government's policies rather than to improve their long-term profitability (Gomez and Jomo, 1999; Najid and Rahman, 2011).

Another difference to PIF GLICs is that the boards of directors of FGLICs are appointed by the government and dominated by senior politicians, in particular the prime minister and senior ministers, as well as senior civil servants. From a property rights perspective, these directors lack direct economic incentives to engage in the supervision of FGLICs' portfolio companies as they do not personally contribute to the costs or receive benefits from the investment. Indirectly, however, government representatives have a personal incentive in preventing corporate governance and performance scandals in FGLICs' portfolio companies in order to avoid public embarrassment and, therefore, damage to their career and election prospects.

From an agency perspective the monitoring of the performance of FGLICs by the Auditor General and the federal parliamentary Public Accounts Committee heighten these indirect incentives, since they might expose corporate scandals. Moreover, the Putrajaya Committee on GLC High Performance routinely assesses the performance and corporate governance of key GLCs in the FGLICs' portfolio. However, while this additional scrutiny increases the risk that FGLICs and their representatives become subject to public censure, it only applies if GLCs in their portfolio fail to meet minimum performance standards.

These considerations suggest:

H₁: GLCs controlled by PIF GLICs display a better financial performance than GLCs controlled by FGLICs.

State Economic Development Corporations (SEDCs) aim to promote regional economic and social development programmes and generate dividend income for their state governments. The boards of SEDCs tend to be composed mainly of senior civil servants or political representatives from the relevant state and are usually chaired by the state's Chief Minister. Although there are similarities between SEDCs and FGLICs with regards to the organisations' objectives and the composition and control incentives of their board members, the performance of SEDCs and their portfolio companies is under less scrutiny as laws and regulations are more difficult to enforce the further entities are away from the centre of power (Chen *et al.*, 2009). Moreover, the Putrajaya Committee on GLC High Performance rarely reviews the performance of SEDCs' portfolio companies, although SEDCs themselves fall under the scrutiny of the relevant state's parliamentary Public Accounts Committee and the Auditor General. We therefore expect that:

H₂: GLCs controlled by FGLICs display a better financial performance than GLCs controlled by SEDCs.

Given our earlier discussion regarding the objectives and corporate governance of PIF GLICs, we also hypothesise that:

H₃: GLCs controlled by PIF GLICs display a better financial performance than GLCs controlled by SEDCs.

Property rights and agency theory suggest that, the higher the degree of share ownership by a blockholder, the greater the incentive and ability to participate in the supervision and control of the firm's management (Rock, 1991; Holderness, 2003; La Porta *et al.*, 1999). Tighter monitoring should reduce agency costs and, therefore, lead to improved financial performance (Shleifer and Vishny, 1986). Moreover, as blockholders' cash flow rights increase, their incentive to exploit minority shareholders falls, as they carry a higher proportion of the costs of any misuse of company funds (La Porta *et al.*, 1999; Holderness, 2003). This suggests a positive relationship between government investment organisations' ownership and GLCs' financial performance.

Indeed, empirical research by Ang and Ding (2006) into the influence of state ownership on corporate performance of GLCs in Singapore finds a positive significant relationship between firm value and government ownership. Similarly, in the context of Malaysia, research by Lau and Tong (2008) and Mohd Ghazali (2010) also reveals a significant positive relationship between the degree of the government ownership and firm value. We therefore expect that:

H₄: The proportion of government investment organisations' share ownership and GLCs' financial performance is positively related.

As previously discussed, the Malaysian government is able to influence some GLCs via “golden shares” (Gomez and Jomo, 1999). On the one hand, the existence of golden shares might be an indication that the government perceives these GLCs to be of particular strategic importance to the economic and social development of Malaysia, and that they might therefore benefit from protectionist measures and financial support (Tan, 2007). However, property rights theory indicates that the disparity between cash flow and control rights golden shares give rise to increases the incentives of the government to exploit the firm and other investors (e.g. see Bennedsen and Nielsen, 2010). This suggests that GLCs with golden shares are vulnerable to pressure to promote government policies, even if this is to the detriment of their financial performance. While prior research into the performance of firms with golden shares in Malaysia yielded no statistically significant results (Sun and Tong, 2002), research into the relationship between golden shares and firm performance in the UK indicates a negative correlation (Boardman and Laurin, 2000). We therefore hypothesise that:

H₅: The existence of golden shares is negatively related to GLCs' financial performance.

From the perspective of resource dependency theory, senior civil servants and, particularly, politicians, who are directly appointed to the boards of GLCs might act as boundary spanners and provide the companies with preferential access to government contracts and subsidies, or support their lobbying of market regulators (Lester, Hillman, Zardkoohi, and Cannella, 2008). They might also help reduce firms' uncertainty about political developments (Hillman, 2005). This is likely to be particularly beneficial to firms that operate in resource constraint environments, such as emerging economies. Previous research into listed companies

in Malaysia suggests that political connections can be beneficial as politicians can use their influence to facilitate preferential treatment with regard to financial support or protectionist measures (Johnson and Mitton, 2003; Mitchell and Joseph, 2010).

However, as GLCs already have close relationships with government officials via the blockownership by government investment organisations, it is debatable whether this additional facet of political connections is likely to generate additional support. Moreover, the ability of politicians and civil servants to control managers or give advice on strategic decisions is often questioned, as they tend to lack business expertise (Chen *et al.*, 2009). In addition, property rights theory suggests that, as politicians and government officials do not benefit personally from increased profitability of the firms, they might suffer from control apathy (Cuervo and Villalonga, 2000). Although Chen *et al.* (2009) suggest that, if politicians and senior civil servants are able to derive career benefits from being linked to the supervision and control of successful GLCs, they might have incentives to try to contribute positively to the firms' corporate governance, this only applies in a very limited fashion in Malaysia. While politicians might find their career and election prospects affected by association with poorly performing or governed GLCs, particularly if they are publicly criticised by the Putrajaya Committee on GLC High Performance or a Public Accounts Committee, association with well performing GLCs appears less noticeable. Moreover, politicians might be tempted to use their influence over GLCs to pursue business policies beneficial to key interest and voter groups (Shleifer and Vishny, 1994; Cuervo and Villalonga, 2000).

Since politicians and senior civil servants have different control incentives and might differ in their ability to act as boundary spanners we test two distinct hypotheses:

H₆: The proportion of senior civil servants on the board is negatively related to GLCs' financial performance.

H₇: The proportion of politicians on the board is negatively related to GLCs' financial performance.

4. RESEARCH METHODOLOGY

4.1 Sample Selection

Our initial sample consisted of all GLCs listed on the Main Board of Bursa Malaysia between 2004 and 2008 in which a single government investment organisation held at least 20% of the outstanding share capital and was the largest investor. This takes account of the Malaysian government's own definition of GLCs as "companies that have a primary commercial objective and in which the Malaysian Government has a direct controlling stake" (Malaysia Putrajaya Committee on GLC High Performance, 2006b: A1-1). In line with La Porta *et al.* (1999) and Ang and Ding (2006), we choose a 20 per cent threshold as the government suggests that its control rights should be sufficient to appoint board members and influence major decisions in relation e.g. to the award of contracts, strategy development, financing, acquisitions and divestments.

The observation period of 2004 to 2008 is chosen to reflect a phase of relative economic stability both in Malaysia itself and in the world economy, as it covers the time after the Asian financial crisis and the dot-com bubble and prior to the impact of the global financial crisis on Malaysia and other East Asian countries (Fidrmuc and Korhonen, 2010). In addition to the comparative macroeconomic stability, the period of 2004 to 2008 was also characterised by relatively little regulatory change. The Malaysian government tends to take a pragmatic, gradualist approach to economic reforms and after the introduction of a range of reforms related to poverty alleviation, investment and corporate governance in the period before 2004, in the subsequent five years regulation remained comparatively stable. From 2009 onwards, a new wave of regulatory reforms was introduced, in particular in relation to foreign direct investment and the liberalisation of the service sector (OECD, 2013). The comparative macroeconomic and regulatory stability of the period of 2004 to 2008 reduces the risk that the estimation results are distorted by unobserved factors the model does not account for.

As they are subject to different regulations, financial and unit trust firms were subsequently excluded (Ab Razak *et al.*, 2011; Haniffa and Hudaib, 2006). This leaves 224 firm-year observations for the sample period. The majority of GLCs are owned by *PIF GLICs* (39.73 percent), followed by *FGLICs* (35.27 percent), and *SEDCs* (25 percent). 42 of GLCs in our sample have golden share provisions.

4.2 Control variables

In line with previous research (Demsetz and Lehn, 1985; Chen *et al.*, 2009), we control for a range of variables, which are expected to impact on financial performance, such as firm *Size* (measured as logarithm of total assets), *Leverage* (measured as proportion of debts to total assets) and *Liquidity* (measured as a ratio of current assets to current liabilities). As financial performance may be affected by industry affiliation as different industries respond differently to macroeconomic developments (Hanniffa and Hudaib, 2006), we employ dummies for the five largest industries (*Trade & Services*, *Property*, *Plantations*, *Consumer Products* and *Industrial Products*) in our sample based on KLSE sector definitions.

Some GLCs have exclusive monopoly licences, which afford them market dominance. We, therefore, control for the existence of such licenses (*Monopoly*).

Moreover, we control for other standard corporate governance variables, which provide an indication of the quality of firms' corporate governance, such as the percentage of independent non-executive directors on the board of directors (*BOD_INED*), board size (*BOD_Size*), and the number of board meetings per year (*BOD_Meeting*) (Dalton, Daily, Ellstrand, and Johnson, 1998; Haniffa and Hudaib, 2006).

BOD_SCS and *BOD_POL* denote the percentage of board members who are senior civil servants and politicians respectively.

In line with Chen *et al.* (2009), *FGLIC* is a dummy variable coded 1 for firm years in which the biggest shareholder is a FGLIC. Similarly, *PIF GLIC* is a dummy variable coded 1 for firm years in which the biggest shareholder is a PIF GLIC. *Golden Share* is a dummy variable coded 1 for firm years in which the MOF Inc. held a golden share in a firm.

4.3 Descriptive Analysis

Table 1 summarizes key descriptive statistics. The data shows that the average ownership stake of controlling government investment organisation (*GLIC_share*) is about 47 percent. The data also suggests a high degree of variation in the percentage of senior civil servants (*BOD_SCS*) and politicians (*BOD_POL*) on the boards of GLCs.

[Insert Table 1 about here]

4.4 Model Specifications and Variable Measurement

As previously discussed, since government investment organisations are expected to play a vital role to improve the attractiveness of the Malaysian capital market to domestic and foreign private investors (Malaysia Putrajaya Committee on GLC High Performance, 2006a; Malaysia Ministry of Finance, 2010), we focus our investigation of the impact of government ownership on firms' financial performance. In line with prior literature (e.g. Haniffa and Hudaib, 2006; Najid and Rahman, 2011), we use Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q as alternate proxies for financial performance. However, since information about replacement costs of assets is unavailable for Malaysian companies, we use book values to calculate Tobin's Q in line with Chung and Pruitt (1994) and Lee and Tompkins (1999).

We use the following model to test the hypotheses outlined above:

$$\begin{aligned} \text{PERFORMANCE}_{it} = & \alpha_0 + \beta_1 \text{FGLIC}_{it} + \beta_2 \text{PIF GLIC}_{it} + \beta_3 \text{GLIC_share}_{it} + \beta_4 \text{Golden Share}_{it} + \beta_5 \text{BOD_SCS}_{it} + \\ & \beta_6 \text{BOD_POL}_{it} + \beta_7 \text{Size}_{it} + \beta_8 \text{Monopoly}_{it} + \beta_9 \text{Liquidity}_{it} + \beta_{10} \text{Leverage}_{it} + \beta_{11} \text{BOD_size}_{it} + \beta_{12} \text{BOD_meeting}_{it} \\ & + \beta_{13} \text{BOD_INED}_{it} + \beta_{14} \text{industry}_{it} + \epsilon_{it} \end{aligned}$$

5. EMPIRICAL RESULTS

5.1 Non-parametric analysis

Table 2 reports the mean and median financial performance of GLCs according to different types of controlling government investment organisation and tests the significance of differences between the groups. The table shows that the financial performance of the three different types of firms vary significantly. Both *t*-tests and Mann-Whitney-Wilcoxon test indicate that with regard to any performance measures FGLCs and PIF GLICs outperform SEDCs. These provisional findings support both hypotheses 2 and 3 that firms which are controlled by government investment organisations belonging to regional governments perform worse than those sponsored by the federal government.

[Insert Table 2 about here]

With regard to hypothesis 1, however, the results are inconsistent. Using accounting-based measures, the results suggest that PIF GLICs outperform FGLICs. By contrast, when performance is measured using

Tobin's Q, PIF GLICs outperform FGLCs with regard to median figures, but underperform them with regard to mean figures.

5.2 Multivariate analysis

Table 3 presents the Pearson correlation matrix for the independent variables. It indicates that all independent variables are moderately inter-correlated, except the variables *BOD_SCS* and *Golden Share*. This poses a potential multicollinearity problem.

[Insert Table 3 about here]

To investigate further whether our model suffers from multicollinearity problems, we calculated the variance inflation factor (VIF) and conducted a tolerance value test. As a rule of thumb, multicollinearity is expected to be present, if the VIF of a variable exceeds 10 or a tolerance value is lower than 0.10 (Gujarati, 2003). The VIF values of all variables range between 1.30 and 5.47, and tolerance values are above 0.10. While multicollinearity does not appear to threaten our analysis, our data suffers from heteroscedasticity and autocorrelation. We, therefore, employ generalized-least-square (GLS) estimators using robust (Eicker-Huber-White heteroskedastic-consistent) standard errors. GLS regressions use different error variances to reweigh the observations to make the errors of the model equally variable and thus least square efficient. They also perform better than OLS when outliers or non-normal distributions are present.

[Insert Table 4 about here]

Our findings indicate that the objectives and corporate governance of GLICs affect how government ownership influences the financial performance of GLCs.

The positive, significant coefficients for FGLIC and PIF GLIC reported in Table 4 suggest that GLCs controlled by federal government sponsored pension and investment funds and GLCs controlled by federal government owned investment organisations outperform GLCs controlled by SEDCs. This supports hypotheses 2 and 3.

As previously discussed, the comparatively poor performance of State Economic Development Corporations (SEDCs) as controlling blockholders might be explained by the lack of personal economic incentives of their representatives and the reduced scrutiny by regulatory authorities.

With regard to hypothesis 1, our results indicate that GLCs controlled by federal government sponsored pension and investment funds outperform GLCs controlled by federal government owned investment organisations when financial performance is measured using ROA. However, the results are reversed when performance is measured using ROE and Tobin's Q.

Given our earlier discussion about the differences between ROA, ROE and Tobin's Q, we considered, whether our results might be driven by greater risk aversion of government sponsored pension funds, who invest on behalf of small-scale private investors. Indeed, the Pearson correlation matrix (table 3) indicates that control by FGLICs is significantly positively related to leverage of GLCs, while control by PIF GLICs is significantly negatively related to leverage of GLCs. However, not only did we control for leverage in our model, the regression results in table 4 also indicate that leverage is not statistically significantly related to ROA, ROE or Tobin's Q. This implies that our findings cannot be explained by the different leverage ratios of companies controlled by PIF GLICs and FGLICs.

Similarly, since we use industry dummies as well as monopoly rights as control variables in the regressions, the results also cannot be explained by an industry selection bias of PIF GLICs and FGLICs.

The inconsistent results regarding PIF GLICs and FGLICs suggest that FGLICs are more concerned about minority shareholders' interests in firm profitability than PIF GLICs, while PIF GLICs' control is more closely associated with the return on overall assets. The greater focus of PIF GLICs on ROA might be related to the fact that pension and investment funds also invest heavily in corporate bonds. They might therefore not only consider shareholder returns but also the return and value of their corporate bonds. Unfortunately, we are unable to identify whether PIF GLICs also invest specifically in the bonds of their portfolio companies.

The fact that GLCs controlled by FGLICs outperform GLCs controlled by PIF GLICs when financial performance is measured using ROE and Tobin's Q suggests that the increased scrutiny of FGLICs by the parliamentary Public Accounts Committee, the Auditor General and the Putrajaya Committee on GLC High Performance substitutes and potentially even overcompensates for the clarity of objectives and personal control incentives of the board members of PIF GLICs.

Consistent with findings by Lau and Tong (2008) and Najid and Rahman (2011), our results indicate a significant positive association between the proportion of shares owned by the controlling government investment organisation and GLC's financial performance based on accounting and market-based performance measures. These findings support hypothesis 4 and indicate that the proportion of share ownership of government investment organisations affects both their incentive and ability to control the management of GLCs. Further robustness tests substituting the proportion of shares owned by the controlling government investment organisation with the total government ownership lead to consistent findings in terms of the direction of the relationships and their statistical significance, however, the size of the coefficients became much more marginal. This suggests that it is indeed the degree of ownership of the controlling government investment organisation, and not the proportion of total government ownership, which affects firm performance.

With regard to hypothesis 5, in contrast to our expectations, the results show a positive and significant association between golden shares and financial performance across all performance measures. However, we are not able to differentiate whether the impact of golden shares on GLCs' financial performance is related to the management control by the MOF Inc. or the MOF Inc.'s ability to act as a boundary spanner to government resources.

Our results differ noticeably from findings on golden share type regulations in China (Sun *et al.*, 2002) and Europe (Boardman and Laurin, 2000), which indicate a negative relationship with corporate performance. This inconsistency in findings could be an indication of the differences in the objectives and organisational characteristics of the government organisations that administer the golden shares in different countries. Moreover, the results of previous studies could also be affected by omitted variable bias, as they control for a very limited range of government ownership characteristics.

With regard to the impact of board membership of senior civil servants and politicians in GLCs our findings provide limited support for hypotheses 6 and 7, which suggested that senior civil servants' and politicians' limited control incentives and expertise in the supervision and control of managers negatively affect financial performance. While the coefficients are all negative, they are very small and not always significant.

These findings contradict earlier research on Malaysian firms (Johnson and Mitton, 2003; Mitchell and Joseph, 2010), which indicated a positive relationship between political connections and financial performance. The divergence in results can be explained by methodological differences, as our model controls not only for the presence of politicians and senior civil servants on boards but also for golden shares and block ownership by different types of GLICs. The Pearson correlation matrix (table 3) indicates statistically significant correlations between the proportion of senior civil servants and politicians on the board and PIF GLIC and FGLIC control as well as golden share provisions. This suggests that prior research, which failed to differentiate between the types of government investment organisations and to control for the presence of golden shares, suffers from model misspecification and consequently spurious results.

The adjusted *R*-Square statistics found in this study are noticeably higher than those reported in previous studies on Malaysia such as by Haniffa and Hudaib (2006) and Lau and Tong (2008), even when we exclude industry dummies from the regression. This suggests that taking into account different types of GLICs and considering the participation of senior civil servants and politicians in the board of directors of GLCs improves the predictive power of the empirical model.

5.3 Tests for Endogeneity

If capital, goods, and labour markets are efficient, corporate governance systems of individual companies might be endogenously determined. This suggests that market pressures force every firm to develop a corporate governance system consisting of different corporate governance mechanisms, which minimizes its principal-agent costs and is specific to its particular circumstances (Demsetz and Lehn, 1985). In this case, it would be unlikely to observe a pattern between ownership concentration and financial performance, which is consistent across the market. However, since emerging economies tend to be characterised by inefficient capital, labour and goods markets, it is unlikely that endogeneity is a problem in our research. Nevertheless, since the presence of endogeneity would lead to biased results, we applied the Durbin-Wu-Hausman test (Hausman, 1978) to investigate the presence of endogeneity and the appropriateness of using parametric test methods in the regression analysis. As expected, our results do not indicate an endogeneity problem.

6. CONCLUSION

In many emerging economies government investment organisations are expected to use their influence over their portfolio companies to promote corporate governance and performance. The rationale for this policy is to attract both domestic and foreign portfolio investors to domestic capital markets, since limited access to external funds has been identified as one of the key challenges for economic development of emerging economies both at national and at firm level (Tsoukas, 2011; Fan *et al.*, 2011). However, government investment organisations tend to be controlled by civil servants and politicians, who often do not benefit personally from the financial performance of the portfolio companies. Moreover, government investment organisations usually have additional, sometimes conflicting, objectives, such as supporting the government's economic and social policies. This raises questions about the incentives and abilities of government investment organisations to improve the corporate governance and financial performance of their portfolio companies.

As there are different types of government investment organisations with different objectives and different organisational characteristics, it is of interest to governments and private portfolio investors to improve their understanding about whether the different types vary with regard to their impact on the financial performance of their portfolio companies. Our research on Malaysian GLCs suggests that this is indeed the case. Our findings are, therefore, consistent with research by Chen *et al.* (2009), on the impact of different types of government investment organizations in China. Like them, we find that portfolio companies of government investment organisations that are more remote from the centre, such as SEDCs, have a worse financial performance than those owned by more tightly supervised government investment organisations.

Contrary to our expectations, we find that GLCs controlled by federal government owned investment organisations perform better in term of ROE and Tobin's Q, performance measures of particular interest to shareholders, than GLCs controlled by government sponsored pension funds. However, GLCs controlled by government sponsored pension funds perform better than GLCs controlled by federal government owned investment organisations when financial performance is measured using ROA.

The former finding suggests that the increased scrutiny of federal government owned investment organisations by regulatory authorities can substitute or even overcompensate for weaknesses in the personal incentives of their board members compared to board members of government sponsored pension funds. The latter finding might be related to pension and investment funds' investment in corporate bonds, which is likely to make them concerned not only about shareholder returns, but also the returns and values of corporate bonds.

The fact that GLCs with golden share provisions outperform GLCs without implies that the link between ownership and performance might not be driven just by corporate governance concerns but also by the ability of the Malaysian Ministry of Finance to act as a boundary spanner for access to government resources, government contracts and advice or support from regulators. This is likely to be of particular importance in emerging economies where the economic environment tends to be particularly volatile and resource availability tends to be rather limited (Fan *et al.*, 2011).

For future research, a more careful differentiation of performance incentives of government representatives, both at government investment organisation and GLC level, would be beneficial to improve our understanding the role of government representatives in government investment organisation and their portfolio firms. Moreover, with regard to the impact of government sponsored pension and investment funds, it would be helpful to consider not only their investment in firms' equity but also their debt capital.

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TABLES

TABLE 1

Descriptive Statistics (*N*=224)

Variables	Mean	Median	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis
<i>ROA</i>	4.49	4.12	6.10	-30.04	25.16	-1.08	10.47
<i>ROE</i>	10.48	8.08	15.69	-83.37	49.77	-0.64	9.11
<i>Tobin's Q</i>	0.85	0.68	0.59	-0.04	4.21	1.71	7.76
<i>GLIC_share</i>	47.09	48.14	15.39	20	86.81	0.06	2.02
<i>BOD_SCS</i>	3.22	0	7.21	0	33.33	2.30	7.65
<i>BOD_POL</i>	3.42	0	7.72	0	37.50	2.33	7.84
<i>Size</i>	6.31	6.25	0.66	4.92	7.84	0.19	2.36
<i>Liquidity</i>	2.79	1.70	3.42	0.33	30.4	3.99	24.94
<i>Leverage</i>	56.81	30.46	81.24	0	543.75	2.82	13.21
<i>BOD_size</i>	8.30	8	1.57	5	12	0.02	2.63
<i>BOD_meeting</i>	7.76	7	3.72	3	27	1.37	5.75
<i>BOD_INED</i>	44.76	42.85	11.07	22.22	80.0	0.82	3.36

TABLE 2

Financial performance of firms with different types of controlling government shareholder

Panel A							
	Mean			Median			
	ROA	ROE	TOBIN'S Q	ROA	ROE	TOBIN'S Q	N
PIF GLIC	6.36	13.34	0.93	7.66	7.45	8.19	89
FGLIC	5.30	12.24	1.00	6.12	5.62	7.72	79
SEDC	2.04	3.47	0.51	4.22	4.02	6.50	56
Panel B							
	PIF GLIC vs. FGLIC		PIF GLIC vs. SEDC		FGLIC vs. SEDC		
	Means ^a	Medians ^b	Means ^a	Medians ^b	Means ^a	Medians ^b	
ROA	2.1881**	1.622	5.9080***	5.515***	2.1400**	3.367***	
ROE	0.4127	0.408	5.3915***	5.312***	3.3979***	3.765***	
TOBIN'S Q	-0.7487	-0.580	5.6743***	4.755***	5.5298***	5.002***	

Notes: The table reports (a) *t*-value from the T-test of differences in means; and (b) *Z*-value

from the Mann-Whitney U-test of differences in medians. Significance level: ****p* < .01,

***p* < .05, **p* < .10.

Table 3**Pearson correlation matrix (N=224)**

Variable	A	B	C	D	E	F	G	H	I	J	K	L	M
A PIF GLIC	1.000												
B FGLIC	-0.599***	1.000											
C GLIC_share	0.009	-0.109	1.000										
D Golden Share	-0.390***	0.650***	0.006	1.000									
E BOD_SCS	-0.363***	0.567***	0.139**	0.807***	1.000								
F BOD_POL	-0.327***	-0.018	0.044	0.165**	0.009	1.000							
G Size	-0.021	0.305***	0.323***	0.424***	0.356***	-0.009	1.000						
H Monopoly	-0.142**	0.331***	0.115*	0.556***	0.529***	0.070	0.318***	1.000					
I Liquidity	0.296***	-0.167**	0.003	-0.081	-0.125*	-0.078	-0.146**	-0.074	1.000				
J Leverage	-0.134**	0.166**	0.011	-0.117*	-0.125*	-0.087	0.221***	-0.083	-0.254***	1.000			
K BOD_size	-0.098	0.041	0.211***	0.205***	0.198***	0.121*	0.090	0.246***	-0.074	-0.166**	1.000		
L BOD_meeting	-0.224***	0.456***	-0.035	0.455***	0.404***	0.109	0.315***	0.430***	-0.092	0.126*	0.252***	1.000	
M BOD_INED	-0.009	-0.030	-0.140*	0.010	-0.029	-0.087	0.061	-0.062	-0.126*	0.067	-0.116*	-0.026	1.000

The asterisks indicate a 1% (***), 5% (**), and 10% (*) level of statistical significance

TABLE 4

**GLS Regression Estimates of the Relationship between GLC Performance and
investment by government investment organisations**

Variables	ROA	ROE	Tobin's Q
PIF GLIC	6.35 (5.54)***	10.57 (4.24)***	0.27 (2.68)***
FGLIC	4.31 (2.83)***	12.72 (3.31)***	0.32 (2.27)**
GLIC_share	14.15 (3.77)***	24.19 (3.11)***	0.23 (0.56)
Golden Share	7.21 (3.12)***	21.67 (3.44)***	0.64 (2.73)***
BOD_SCS	-0.22 (-1.62)	-0.59 (-1.80)*	-0.02 (-3.04)***
BOD_POL	-0.07 (-1.89) *	-0.05 (-0.49)	-0.01 (-4.38)***
Size	-5.12 (-4.20)***	-4.19 (-1.30)	-0.06 (-0.52)
Monopoly	-2.53 (-1.20)	-12.93 (-1.92)*	-0.34 (-1.61)
Liquidity	0.14 (1.20)	0.08 (0.44)	-0.00 (-0.50)
Leverage	0.00 (0.19)	0.00 (0.20)	0.00 (0.28)
BOD_size	0.31 (1.47)	1.21 (2.55)**	0.07 (3.36)***
BOD_meeting	-0.06 (-0.53)	-0.59 (-1.75)*	0.00 (0.38)
BOD_INED	4.91 (1.66) *	17.38 (2.79)***	0.71 (2.58)**
Intercept	-1.86 (-0.21)	-34.44 (-1.87)**	-0.62 (-0.93)
 F-value	 12.54***	 7.87***	 9.36***
Adjusted R²	0.646	0.461	0.479
Observations	224	224	224

Although not reported here, the regression also included year and industry dummies. *t*-statistics are reported in parentheses. All estimators are robust. Asterisks indicate a 1% (***), 5% (**), and 10% (*) level of statistical significance.