



Corporate Governance: The International Journal of Business in Society

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Article information:

To cite this document:

Padmanabha Ramachandra Bhatt, R. Rathish Bhatt, (2017) "Corporate governance and firm performance in Malaysia", Corporate Governance: The International Journal of Business in Society, Vol. 17 Issue: 5, pp.896-912, <https://doi.org/10.1108/CG-03-2016-0054>

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Corporate governance and firm performance in Malaysia

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Abstract

Purpose – The purpose of this paper is to study the effect of Malaysian Code on Corporate Governance (MCCG, 2007 and 2012) on the performance of the listed companies in Malaysia. The agency theory and resource dependency theories indicate that the firms with strong corporate governance outperform firms with weaker governance. This paper explores this relationship in a developing country like Malaysia having different institutional environment compared to western countries.

Design/methodology/approach – The study used a sample of 113 listed companies in Malaysia. The study incorporates the endogenous relationship between corporate governance, firm performance and leverage.

Findings – The study analyzes how the corporate governance framework affected firm performance in Malaysia with the help of self-developed corporate governance index (MCGI). The authors' findings show that the performance of the firm is positively and significantly related with corporate governance measured by MCGI. Secondly, corporate governance of sample firms shows marked improvements after implementation of MCCG 2012 as compared to MCCG 2007.

Originality/value – The findings of this paper support the agency and the resource dependency theories. The study contributes to the understanding of the relationship between the corporate governance and firm performance in emerging economy and builds a case for enforcement of strong corporate governance code by government agencies.

Keywords Malaysia, Corporate governance, Corporate governance index, Firm performance, Malaysian Code of Corporate Governance

Paper type Research paper

1. Introduction

Corporate governance plays a crucial role to shape up a firm as also to make it competitive with global firms (Iwasaki, 2008; Ehikioya, 2009). Corporate governance legislation and guidelines issued by government agencies and international bodies, when implemented, help the firm in specific and country, in general, to attract foreign investments. These corporate governance codes would ensure investors' safety, protecting them from corporate scandals. Increasingly, it has been recognized that there is no one-size-fits-all approach to achieving effective governance (Bhagat and Bolton, 2008; Black *et al.*, 2014). Evidence suggests that the governance practices vary across nations (Shleifer and Vishny, 1997; Doidge *et al.*, 2007; Anderson and Gupta, 2009). This difference has been attributed to the institutional development background of the country (North, 1990; Peng and Jiang, 2010; Judge *et al.*, 2008). Regulating governmental bodies try to come up with governance codes based on international best practices that suit their business environment. The Malaysian government framed corporate governance codes such as Malaysian Code of Corporate Governance (MCCG, 2000, 2007 and 2012) in line with the Sarbanes-Oxley Act (SOX) of 2002 in the USA, the Principles of Good Corporate Governance and Best Practice Recommendations (ASX Corporate Governance Council, 2003 and 2007) in Australia, Enactment of Clause 49 of the Listing Agreements by Securities and Exchange Board of India (SEBI) in 2005, the Combine Code on Corporate Governance 2003, in the UK and others.

Received 21 June 2015
Revised 1 June 2017
Accepted 22 June 2017

The high-level finance committee in Malaysia has made concerted efforts to reform corporate practices to promote corporate governance in Malaysia. The first MCGG was issued in the year 2000 (MCGG, 2000). A revised version MCGG (2007) was introduced to strengthen the roles and responsibilities of the board of directors, audit committee and the internal audit function. Later, the Corporate Governance Blueprint 2011 was released by the Securities Commission Malaysia to enable for more stringent corporate governance guidelines for companies in Malaysia. Based on this blueprint, a new MCGG 2012 (MCGG, 2012) was issued to augment board structure and composition. The observance of MCGG (2012) by companies was made voluntary. Listed Malaysian companies were required to report on their compliance with the principles and recommendations of MCGG (2012) in their annual reports.

According to the high-level finance committee report on corporate governance 1999, Malaysia, corporate governance is defined as “the process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long-term shareholder value whilst taking into account the interests of other stakeholders”. MCGG 2012 (MCGG, 2012) encapsulates eight principles and the corresponding 26 recommendations of the high-level finance committee report. These principles established clear roles and responsibilities of the board, strengthening board composition, reinforce the effectiveness of independent directors, their commitments, uphold integrity in financial reporting, recognize and manage risks, ensure timely and high-quality disclosure and recognizing the relationship between company and shareholders. To highlight these changes, a comparison between the MCGG 2007 and 2012 is given in Table I.

Research on the structure of corporate governance and firm performance has been concentrated in developed countries (Rajagopalan and Zhang, 2008; Fan *et al.*, 2011). The literature, however, is inconclusive on the role of corporate governance on firm performance (Bhatt and Bhattacharya, 2015; Mohd Ghazali, 2010; Nicholson and Kiel, 2007; Leng, 2004). With globalization and the rise of economic importance of emerging markets, there has been an escalation in the interests of researchers studying corporate governance in these developing countries. Additionally, the impact of the corporate governance code on firm performance in emerging markets has not been established (Che Haat *et al.*, 2008; Ponnu, 2008). This paper attempts to provide insights into the evolving governance structure in an emerging market like Malaysia by studying the effect of MCGG (2007 and 2012) on the performance of the listed companies in Bursa Malaysia. We use accounting measures of firm performance to conduct the simultaneous equations panel data analysis on the effect of corporate governance on firm performance.

This paper makes several contributions to the literature. First, the paper provides evidence on the impact of corporate governance on the firm performance in the listed Malaysian companies. Thereby, establishing the role of strong institutional agencies in enforcing a change in corporate governance environment in an emerging country like Malaysia. Second, most of the studies in the emerging markets have not attempted to study this relationship by constructing a corporate governance index. For our analysis, we construct a self-defined Malaysian Corporate Governance Index (MCGI) to measure the governance parameters. Third, we address the limitation of prior works on firm-level corporate governance where most of them ignore the endogeneity issue. This study takes into consideration the endogenous relationship between corporate governance, firm performance and capital structure. The paper is subsequently organized as follows: Section 2 provided a survey of the literature. Hypotheses and methodology were discussed in Section 3. Section 4 was devoted to analyzing the results, and Section 5 concluded the discussion.

Table I Comparison between the MCCG (2012 and 2007)

<i>Serial no.</i>	<i>MCCG (2012) principle</i>	<i>MCCG (2012) recommendation</i>	<i>Blueprint recommendation 2011</i>	<i>MCCG (2007) code</i>
1.	Establish clear roles and responsibilities	The board should establish clear functions reserved for the board and those delegated to management; discharge its fiduciary and leadership role; formalize ethical code of conduct and ensure its compliance; ensure to promote sustainability, make access to information. The board should formalize ethical standards through a code of conduct and ensure its compliance	Mandate boards to formulate ethical standards and system of compliance through the company's code of conduct; to formalize the board charter and disclosure in the annual report	The board together with the CEO should develop position descriptions for the board and CEO; the board should explicitly assume specific responsibilities; the board should be supplied in a timely fashion with information to discharge its duties; to determine the size to impact on its effectiveness
2.	Strengthen composition	The board should establish a nominating committee which should comprise exclusively of non-executive directors, a majority of whom must be independent. The board should establish formal and transparent remuneration policies and procedures to attract and retain directors and recruitment process	Mandate boards to establish a nominating company with enhanced roles chaired by an independent director	There should be a formal and transparent procedure for the appointment of directors to the board. The board should appoint a nominating committee of directors composed of exclusively non-executive directors, a majority of whom are independent. The board should appoint remuneration committees to recommend to the board the remuneration of executive directors in all its form
3.	Reinforce independence	The board should undertake an assessment of its independent directors annually. The tenure of an independent director should not exceed a cumulative term of nine years. The position of chairman and CEO should be held by different individuals and the chairman must be a non-executive member of the board. The board must comprise a majority of independent directors where the chairman of the board is not an independent director	Mandate boards to undertake an assessment on independence of director annually; a cumulative term of nine years for independent director; separating the position of chairman and CEO and for the chairman to be a non-executive member of the board	There should be a clearly accepted division of responsibilities at the head of the company which will ensure a balance of power and authority
4.	Foster commitment	The board should set out expectations on time commitment for its members and protocols for accepting new directorships		
5.	Uphold integrity in financial reporting	The audit committee should ensure financial statements comply with applicable financial reporting standard		To strengthen the role of audit committees by requiring the committees to comprise fully of non-executive directors

(continued)

Table I

Serial no.	MCCG (2012) principle	MCCG (2012) recommendation	Blueprint recommendation 2011	MCCG (2007) code
6.	Recognize and manage risk	The board should establish a sound framework to manage risks and establish an internal audit function which reports directly to the audit committee		The board should maintain a sound system of internal control to safe guard shareholders' investment and company's assets
7.	Ensure timely and high-quality disclosure	The board should ensure the company has appropriate corporate disclosure policies and procedures	Move beyond minimum reporting by making explicit the requirement for shareholders to be provided with quality and timely information	
8.	Strengthen relationship between company and shareholders	The board should take reasonable steps to encourage shareholder participation at general meetings. The board should promote effective communication and proactive engagements with shareholders	Mandate companies to make public their commitment to respecting shareholder rights and take active steps to inform shareholders of how these rights can be exercised	Institutional shareholders have a responsibility to make considered use of their votes. Companies and institutional shareholders should each be ready, where practicable, to enter into a dialog based on the mutual understanding of objectives. The board should maintain an effective communications policy that enables both the board and management to communicate effectively with its shareholders and the public

Source: Security commission Malaysia (2012), MCCG, Kuala Lumpur

2. A survey of literature

Shleifer and Vishny (1997), Claessens and Fan (2002), Denis and McConnell (2003), Gillan (2006) have given detailed surveys on the relationship between corporate governance and firm performance. The effective governance practices stem from the agency theory perspective, where the primary responsibility of a board is to monitor the management and protect the shareholders from any conflict of interest that arises due to the separation of ownership and control (Jensen and Meckling, 1976). The divergence of the objective of managers and shareholders leads to agency cost. Agency costs become acute at the time of poor firm performance (Bebchuk and Fried, 2003). Effective monitoring can bring down these agency costs, thereby improving firm performance. The monitoring functions of the board may include ratification of major decisions, the threat of management entrenchment, planning CEO succession and rewarding the management (Pitcher *et al.*, 2000; Eisenhardt, 1989; Strebel, 2004; Conyon and Peck, 1998).

Board incentive is considered as an important antecedent to effective monitoring. When board incentive aligns the interest of board of directors and shareholders, boards tend to monitor the management more effectively (Jensen and Meckling, 1976). Specifically, equity compensation is found to improve monitoring by the board, and thereby improve firm

performance (Elson, 1995; Dalton *et al.*, 2003). Bhagat and Bolton (2008) found a significant relationship between the stock ownership of directors with firm performance.

From the resource dependency theory perspective, corporate boards are expected to provide access to various resources and provide strategic advice to managers to help achieve their profit maximization goals (Pearce and Zahra, 1992; Pugliese *et al.*, 2009). Thus, boards contribute to the firm value by reducing agency cost, providing access to external resources and advising management.

Globally, the independence of the board of directors has been studied widely, and it also featured in the governance principles, codes and policies of various countries and bodies (Grapsas and Powell, 2015; OECD code, SOX Act, UK Corporate Governance Code). Higher proportion of independent directors, which is not co-opted by management, is expected to provide effective monitoring of the management, and thereby improve firm performance (Jensen and Meckling, 1976; Fama and Jensen, 1983). Various empirical studies lend support to these theories. Coles *et al.* (2001) found that industry performance has a strong and significant influence on firm performance. Agency theorists have empirically ascertained the positive and significant relationship between the board independence with firm performance (Baysinger and Butler, 1985; Yammeesri and Kanthi Herath, 2010; Jackling and Johl, 2009). Contrary to these findings, Christensen *et al.* (2010) found board independence, especially outside independent directors, has a negative impact on ROA and Tobin's Q, but found a positive and significant relationship between inside directors and firm performance. Similarly, for Chinese firms, Wen *et al.* (2002) found a negative relationship between outside directors and firm performance. Some studies in the USA, OECD countries and Spain found no relationship between outside directors and firm performance measured by Tobin's Q (Bhagat and Black, 2001; de Andres *et al.*, 2005; Rodriguez-Fernandez *et al.*, 2014).

The literature on the relationship between governance parameters like role duality of chairman and CEO; board size, board meeting and stock ownership on firm performance has been inconclusive. Christensen *et al.* (2010) found a negative relationship between role duality and a large board with performance when ROA is used, but positive relationship when Tobin's Q is used. Rodriguez-Fernandez *et al.* (2014) found no relationship between board size and firm performance, but negative relationship between the board of directors' meeting and firm performance. They also found no significant relationship between the percentage of independence directors, business of directors and duality role of CEO-chairmanship with firm performance. Kumar and Singh (2013) found a negative relationship between board size and firm value, but significant positive relationship between promoter ownership and firm value. Adewuyi and Olowookere (2013) reported a positive relationship between board size, audit committee independence and ownership concentration for listed non-financial Nigerian firms. However, having more independent directors and directors' shareholding reduced firm performance. Non-duality of the roles of CEOs and the chairman was shown to improve performance. The governance measures like ownership concentration and debt-equity ratio were found to be the drivers of firms' productivity (Adewuyi and Olowookere, 2009). For large Indian-listed companies, Jackling and Johl (2009) found in their study that there was a positive and significant association between board composition in terms of size and firm performance. However, they found a negative relationship between role duality and firm performance. Ghosh (2006) found a poor relationship between the larger corporate board and stock price performance. Jameson *et al.* (2014) found a negative and significant relationship between controlling shareholder board membership and firm performance measured by Tobin's Q in Indian firms. Haji (2014) found no relationship between family members on corporate board, independent non-executive directors, board size, director ownership and government ownership and firm performance. McConnell and Serveas (1990) found a positive and significant relationship between ownership concentration and firm performance. But

Demsetz and Villalonga (2001) found no relationship between ownership structure and firm performance.

In the Malaysian context, Mohd Ghazali (2010) found no relationship between corporate governance in terms of board size, independent directors and chair independence and firm performance. However, Leng (2004) found in his study of 77 Malaysian-listed companies over the period 1996-1999 that there was a significant relationship between the size of the firm, the gearing ratio (scale of borrowing) and the proportion of shares held by institutional investors and firm performance. Ponnu (2008) found no significant relationship between corporate governance and company performance in the context of Malaysian public-listed companies, post implementation of MCCG (2000). However, Che Haat *et al.* (2008) in their study of 142 Malaysian companies in 2002 found that corporate governance matters for the performance of firms, even though the internal governance mechanism does not have a strong influence on the company performance. From the findings of the literature, we found that there were conflicting and inconsistent results for the relationship between various characteristics of corporate governance and firm performance. As the literature is inconclusive on the role of corporate governance on firm performance, there is a need to study the overall effect of corporate governance on firm performance, especially at the backdrop of the revised MCGC codes. Hence, an attempt has been made here to find the overall effect of corporate governance on firm performance by constructing an MCGI.

3. Hypothesis

The relationship between board independence and operating performance during the pre-SOX 2002 period in the USA was found to be negative, but the relationship was found to be positive and significant during the post-2002 period (Bhagat and Bolton, 2009). Adewuyi and Olowookere (2013), studying Nigerian firms, opine that bad governance changes may negatively affect the firm performance post changes in governance codes. However, the number of firms with good governance change was higher than that with bad governance change immediately after the release of new code. In the Indian context, the revisions of governance provision by the Security Exchange Board of India resulted in significant and positive relationship between corporate governance and firm performance in the firms that adhered to the provisions (Mishra and Mohanty, 2014). The available empirical evidence suggests that corporate governance does affect firm performance (Maher and Andersson, 1999). Hence, our proposed hypothesis is that there is a positive and significant relationship between corporate governance and firm performance in Malaysian firms.

4. Methodology of study

4.1 Construct of corporate governance index of Malaysia

The objective of this paper is to study the relationship between corporate governance and firm performance in listed Malaysian firms. For governance measure, we construct a self-defined corporate governance index of Malaysia (MCGI). To the best of our knowledge, there is no corporate governance index constructed for firms listed in Bursa Malaysia. Hence, an attempt has been made to construct the corporate governance index of Malaysia (MCGI) by taking into account various board characteristics of firms as also the mandatory provisions and other guidelines given in MCCG (2000, 2007 and 2012) to be followed by listed firms in Bursa Malaysia. While constructing MCGI, we follow, to some extent, the methodology used by Gompers *et al.* (2003), Bebchuk *et al.* (2005), Brown and Caylor (2006) and Varshney *et al.* (2012). Our sample for constructing the MCGI consists of 113 listed companies in Bursa Malaysia for the year of 2008 and 2013. We operationalize the various board parameters as follows: we start by assigning weights to different variables used in the construction of the index. To get a more accurate inference on the

correlation between the corporate governance and performance, governance parameters used in the construction of an index should be weighted (Bhagat and Bolton, 2008). The decision on the weightage of each variable was made in discussion with senior executives of various firms, consultants and experts in corporate governance. Subsequently, each of these governance parameters was assigned scores and weights. A score of 1 each was assigned to the non-executive non-independent director (NENID) and executive director (EXD). A score 2 was assigned for directors who were both non-executive and independent (NEID), because of their importance in the board. For role duality, we assign a score of 1 if the positions of chairman and CEO were occupied by the same person, and 2 if they were occupied by different persons. Board (SIZE) was defined as the number of members on the board and board meetings (BMEET) was defined as the number of times the board met in a year. For board attendance, we assign 5 per cent weight of the average percentage of the board meeting attended (ATTD). For the age of the directors (AAD), we assign, one-tenth weight of actual average age of directors. For the remuneration (REMU), the actual number in million ringgits is given as the weight to the board members. Ten per cent weightage of stock ownership percentage of the board members is assigned to stock ownership variable (STOWN). In the audit committee, if the chairman is independent and non-executive, a score of 2 is given; otherwise, the score is 1. Audit committee meeting (ADMET) is defined as the number of times the audit committee met in a year. As was the case with board meetings, 5 per cent weight is assigned to the average percentage of audit committee meetings attended (ADATD). Similarly, for the nomination committee, if the chairman is independent and non-executive, a score of 2 is given; otherwise, the score is 1. Nomination committee meeting (NOMET) is defined as the number of meetings of the nomination committee in a year. MCGI is constructed by adding these scores for both the years 2008 and 2013. For MCGI, we assign the highest score of the firm as 100 for both the years 2008 and 2013 and scores of other firms are adjusted accordingly. Firms with a higher index would be considered to have better governance practices than the ones with a lower index. Though this simple index may not reflect the impact of individual governance parameters, it does, however, help in distinguishing between the firms with stronger governance and those with weaker governance parameters.

4.2 Model

In our study, we address the endogenous relationship between firm performance, governance (MCGI) and leverage. Leverage is taken as an endogenous variable in several studies (Short and Keasey, 1999; Jensen, 1986). Profitable firms tend to have sufficient internal funds to fall upon, rather than to seek external funding. Thus, the need to enhance governance to attract external fund is low (Black *et al.*, 2006). Conversely, companies may change their governance structure in response to poor firm performance (Hermalin and Weisbach, 1988, 1998). A firm with strong external monitoring through better governance helps in reducing the cost of debt capital (Bhojraj and Sengupta, 2003). Debt also reduces the agency cost as it reduces the free cash flow available to the managers, thereby reducing its misuse (Jensen, 1986). A positive association between leverage and firm value has been documented in the literature (Harris and Raviv, 1991; Stulz, 1990). Higher the ratio, higher the constraint to the firm as it is at the risk of bankruptcy if the firm finds it difficult to repay amortization and interest. However, debt can be used as an opportunity to monitor the firm by the lender (Jensen and Meckling, 1976; Grossman and Hart, 1982; Jensen, 1986). To address these endogeneity issues, the simultaneous system of equation may be used (Bhagat and Black, 2001). To overcome the simultaneity problem, we use two-stage least squares (2SLS) method of estimation on the following set of simultaneous equations:

$$PER = \alpha_0 + \alpha_1 MCGI + \alpha_2 Leverage + \alpha_3 \log(asset) + \alpha_4 (EBIT/Sales) + \alpha_5 SalesGrowth + \varepsilon \quad (1)$$

$$MCGI = \beta_0 + \beta_1 PER + \beta_2 Leverage + \beta_3 \log(asset) + \beta_4 (netincome) + \beta_5 SalesGrowth + \varepsilon \quad (2)$$

$$Leverage = \gamma_0 + \gamma_1 PER + \gamma_2 MCGI + \gamma_3 \log(asset) + \gamma_4 (EBIT/sales) + \gamma_5 AGE + \varepsilon \quad (3)$$

In equation (1), performance (PER) regresses the governance index (MCGI) and control variables such as net income-asset ratio, sales growth and EBIT-sales ratio on performance variables. Performance variables used in our study include return on equity (ROE), return on assets (ROA) and return on invested capital (RIC). These performance variables are considered as endogenous. ROE is measured as the ratio of profits after deduction of tax and interest over the equity of shareholder; ROA is measured as the ratio of profits after deduction of tax and interest over average book value of total assets; and RIC is measured as the ratio of profits after deduction of tax and interest over invested capital. ROE, ROA and RIC are used as proxies for accounting-based performance measures, as they are more relevant in developing countries like Malaysia (Chang and Choi, 1988; Demsetz and Lehn, 1985) and are widely used performance measures (Vafeas, 1999; Bhagat and Black, 2009; Bhagat and Bolton, 2008). Leverage is defined as the ratio of liability to assets. Firms with a high proportion of debt in their capital structure are more likely to face creditor monitoring and may also care less about attracting equity capital, so could evolve weaker governance (a substitution story). In a reverse causation story, worse-governed firms could have less access to equity, and thus rely more on debt. Alternatively, creditors could offer better terms to firms with improved governance (an investor pressure story) (Bhojraj and Sengupta, 2003).

In our analysis, we include the following control variables based on literature. Log of assets is taken as a measure of firm size (Anderson and Reeb, 2003; Sarkar and Sarkar, 2009; Bhatt and Bhattacharya, 2015). Larger firms could need “better” (more normal) governance to respond to their more complex operations (Black *et al.*, 2012). Log of assets is found to have an impact on the performance of the firms (Gedajlovic and Shapiro, 1998; Bhatt and Bhattacharya, 2015). Variables such as sales growth, EBIT-sales ratio, liability-assets ratio, AGE of the company and net income are used as control variables in many studies (Black *et al.*, 2014). We measure sales growth as five-year moving geometric average of net sales growth, as a proxy for growth opportunity (Black *et al.*, 2012). A fast-growing firm has greater need to raise outside capital and may adopt better governance to attract this capital (Durnev and Kim, 2005). The EBIT-sales ratio has an impact on performance, as the ratio determines sustenance of the company in terms of profitability. A low ratio indicates lower profitability margin, which may be due to the competitive landscape (where all companies are having lower margins) or an issue just within the company (where the company is facing lower sales and higher costs). The liability-assets ratio is a solvency ratio that examines how much a company’s assets consist of liabilities. A high liability to assets ratio indicates low shareholder equity and potentially high solvency issues. Rapidly expanding companies have higher liabilities to assets ratio. Companies in signs of financial distress will often have a high liability-assets ratio. The data source for these financial data was Thomson Data Stream.

4.3 Sample data

For the study, the sample was drawn from Malaysian companies listed on Bursa Malaysia. We collect the firm-level data on board characteristics like independent directors, non-executive directors, board size, board meeting, board attendance, director’s age, director remuneration, director stock ownership and board committees from the annual report of these companies. The financial data for our sample companies were obtained from Thomson Reuters Data Stream database. Thomson Reuters Data Stream is a commercially available database containing firm-level data for various countries. To be a part of our sample, only those companies were selected where firm-level data were

complete in Thomson Reuters Data Stream database, in all aspects for the period of study. The final sample consisted of 113 companies after excluding the firms that failed to meet the above criteria. All companies in the sample had to comply with the revised MCGC (2007 and 2012). To reduce the weight of outliers, we cap the values of firm-level variables to first and ninety-ninth percentile. The distribution of listed companies by industry category was given in Table AI.

4.4 Estimation

We undertake various regression diagnostics test to check for the different estimation problems like multicollinearity and heteroskedasticity. The variance inflation factor (VIF) was calculated for each independent variable and was found to be less than 10, suggesting that there is no multicollinearity issue (David *et al.*, 1998).

In the multivariate analysis, we study the relationship between governance parameters and firm performance for the years 2008 and 2013. To eliminate the simultaneous equation bias, we used the 2SLS method of estimation of the model. To estimate the simultaneous equations, we include all exogenous variables in the system as instruments to estimate the endogenous variables, and then use this regressed value as explanatory variables in the original equation in place of the endogenous variables (Koutsoyiannis, 1977). With Hausman's specification test, it was found that the random effect model is more appropriate model than fixed effect model. Thus, to estimate the model, we use the random effects instrument variable (IV) approach using the 2SLS technique.

5. Results and discussion

The summary statistics for the sample data used in our analysis is given in Table II. The summary information is presented for the two time periods, 2008 and 2013. Table II shows that the mean (median) MCGI for the year 2013 was 71.29080 (70.30000) and that of 2008 was 63.64292 (62.63000). This difference in MCGI shows that MCGC (2013) significantly improved the corporate governance of the firms compared to the previous iteration of MCGC in 2008. This is in line with the literature that found that there was a marked improvement in corporate governance of the firms post implementation of governance codes (Bhagat and Bolton, 2009). For the accounting measures of performance in our study, the mean ROE, ROA and RIC for the sample firm for the year 2012 was 11.589, 5.621 and 8.086, respectively, which was higher than the mean ROE, ROA and RIC for the year 2008 (9.305, 5.581 and 7.456, respectively). These statistics show that the improvement in the corporate governance code by enforcement authorities has a positive impact on firm performance.

The results for simultaneous equation model estimated using the 2SLS technique are given in Table III. As the primary aim of the study concerns with the relationship between board structure and firm performance, we report the results for only equation (1) and not for the equations (2) and (3). From Table III, it was found that there is a positive and significant relationship between corporate governance and firm performance. MCGI was found to be positively related with both ROA ($p < 0.05$) and RIC ($p < 0.05$) as dependent variables. Our results were consistent with the findings of Leng (2004), Nandelstadth and Rosenberg (2003), Jensen and Meckling (1976), Gompers *et al.* (2003), Che Haat *et al.* (2008) and Arora *et al.* (2016). These results show that corporate governance matters for listed companies in Malaysia. The results are consistent with the agency and resource dependency theories (Hillman and Dalziel, 2003). The results reiterate that the implementation of strong corporate governance improves the performance of firms and gives clear evidence for incorporating governance rules and practices in companies (Wahyudin and Solikhah, 2017). Also, the results indicate that enforcement of a strong corporate governance code by government agencies is required to improve the corporate governance structure of the firms, and thereby the firm performance. This result could be

Table II Comparison of performance of firms between 2008 and 2013

Parameters	MCGI		ROE		ROA		RIC	
	2008	2013	2008	2013	2008	2013	2008	2013
Mean	63.64292	71.29080	9.305398	11.58929	5.580973	5.620885	7.456195	8.086195
Median	62.63000	70.30000	9.770000	7.890000	5.490000	4.580000	7.000000	6.030000
Maximum	100.0000	100.0000	65.66000	69.91000	26.93000	44.82000	55.08000	126.5000
Minimum	47.01000	56.28000	-27.24000	-10.28000	-23.87000	-6.390000	-22.83000	-7.850000
SD	6.811333	7.116153	12.25561	15.20350	6.306311	6.043369	8.410776	13.75615
Skewness	1.455435	1.050688	0.991984	9.482285	-0.360761	3.606455	1.329382	6.521596
Kurtosis	9.057514	5.222264	9.259281	9.76123	7.019537	22.46462	12.17538	53.17623
Jarque-Bera	212.6596	44.04287	202.9985	43085.13	78.52214	2028.808	429.6667	12654.96
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	7191.650	8055.860	1051.510	1309.590	630.6500	601.2600	842.5500	913.7400
Sum squared deviation	5196.156	5671.639	16822.39	138800.1	4454.191	4090.499	7923.008	21193.93
Observations	113	113	113	113	113	113	113	113

Notes: MCGI – Malaysian Code of Governance Index, ROE – return on equity, ROA – return on assets and RIC – return on invested capital

Table III Panel model estimates with cross-section random effects

Dependent variable Independent variable	ROE		ROA		RCI	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
C	283.7410	0.2503	191.9543	0.0018	215.0620	0.0174
MCGI	0.963016	0.2613	0.506628	0.0167*	0.644536	0.0396*
LIABILITY/ASSET	92.62330	0.0399*	26.68562	0.0158*	42.16913	0.0104*
LOG(ASSET)	-26.68129	0.2258	-16.48924	0.0026*	-19.10901	0.0179*
EBIT/SALES	30.79284	0.1036	23.40428	0.0000*	30.04048	0.0000*
SALESGROWTH	0.016694	0.8880	0.022565	0.4365	0.018569	0.6661
R ²	0.684219		0.656347		0.777580	
Adjusted R ²	0.342124		0.284057		0.536624	
SE of regression	21.35147		5.215467		7.746676	
F-statistics	2.032214		5.924574		5.339817	
Probability (F-statistic)	0.000111		0.000000		0.000000	
Number of observations	226		226		226	

Notes: *Significant at 5% level
Source: Estimated by the authors

due to the institutional and behavioral differences of the firms in emerging markets compared to those in developed countries (Peng and Jiang, 2010; Judge *et al.*, 2008). The result highlights the importance of law enforcements in emerging markets as a means to propel changes in the firm behavior and performance (Mishra and Mohanty, 2014). Top-down approach in implementation of corporate governance may be suitable in emerging markets, which are characterized by weak legal protection and low investor activism (Fan *et al.*, 2011). This study endorses the caveat in using a one-size-fits-all approach to corporate governance without incorporating the differences in institutional development in emerging markets.

Among the control variables, leverage (ratio of liability to assets) was found to be significantly related with all three measures of performance indicated by ROE ($p < 0.05$), ROA ($p < 0.05$) and RIC ($p < 0.05$). This is consistent with prior studies like Jenson (1986) and Ahmed Sheikh *et al.* (2013). Log (asset) and EBIT-sales ratio are significant in models with dependent variables ROA ($p < 0.01$) and RIS ($p < 0.01$). Sales growth measured as five-year moving average of net sales growth was not found to be significant for all performance measures. Firm size was found to have a negative and significant relationship with ROE ($p < 0.05$) and RIC ($p < 0.05$). In the case of other two equations (2) and (3), we found that performance variable ROE, liability-asset ratio (leverage ratio) and log of assets are significant in equation (2), whereas ROE and EBIT-sales ratio are significant in equation (3). These results, however, have not been shown in the table, as the focus of our paper was to find the impact of MCGI on performance of firms in Malaysia. The MCGI was designed with dual objectives of enhancing firm performance and to develop benefits to all stakeholders of the listed companies.

6. Conclusion

There is growing interest in the study of corporate governance and its impact on performance in emerging markets. A corporate governance mechanism varies across countries depending on their institutional development background (North, 1990; Peng and Jiang, 2010; Judge *et al.*, 2008). In this context, our study attempts to shed light on the corporate governance mechanism in a developing country like Malaysia. This paper studies the impact of MCGI on the firm performance of Malaysian firms with the help of self-developed corporate governance index (MCGI). The endogeneity issue is addressed by studying the relationship between corporate governance, firm performance and the capital structure of Malaysian firms using a system of simultaneous equations. In this study, we explore the impact of the changes in MCGI, (MCGI, 2007 and 2012) on firm

performance. Using a sample of 113 listed companies in Malaysia for the two subsequent years 2008 and 2013, we found a positive and significant relationship between MCGI and firm performance. Our study has contributed to the body of literature with our results that the implementation of MCGG (2007 and 2012) has improved the performance of listed firms in Malaysia. The result could be attributed to the institutional development background of the emerging economies. Our study confirms the belief that corporate governance practices vary among countries, and hence, comparing governance structures of developed markets with that of developing markets would be misleading. Our findings imply that corporate governance rules and practices, indeed, improve the performance of firms, and thus, MCGG codes do matter for the performance and sustainability of corporate in Malaysia.

This study is limited by its exploratory nature and further work on a larger sample, preferably an intra-sector, is warranted. Secondly, due to the data limitations, the analysis was restricted to the number of governance variables in a panel setup. Constructing a governance index incorporating a larger set of governance parameters can further extend the study. The study used only two years of data to construct the MCGG index for analysis. Hence, this study can be extended by using more than two years of data to arrive at more exhaustive understanding of corporate governance practices and their relationship with performance. This would be useful to get more meaningful analysis and interpretation. A cross-country research can also be conducted to compare corporate governance practices in Malaysia with other countries. A comparison of the relationship between governance structure and firm performance among various industry sectors in Malaysia could further extend this study.

The findings of our study have important implications for managers and policymakers. The study shows that efforts need to be made to strengthen the board-related governance measures in Malaysian firms. The role of institutional agencies in enforcing a change in corporate governance is to be taken into account. This study lends support for establishing a corporate governance index by the regulatory authority. The investing society in general and companies in particular would feel comfortable for future investment with the passage of corporate governance policies and practices, as it instills confidence in both investors and companies.

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Further reading

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Appendix

Table A1 Distribution of companies by industries

<i>Industry type</i>	<i>No. of companies</i>
1. Airport and airways	1
2. Automobile and parts	6
3. Banking	8
4. Chemicals	6
5. Construction materials	17
6. Electronics and electrical	3
7. Energy	2
8. Food producers	14
9. Industrial engineering	7
10. Tele and mobile communication	2
11. Petroleum and natural gas	3
12. Real estate and property development	26
13. Software and computer science	2
14. Technology hardware and equipment	3
15. General industrials	7
16. Financial service sectors	2
17. Health equipment and developments	2
18. Household goods and home construction	2
Total	113

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