THE MODERATING ROLE OF BOARD SIZE FOR THE RELATIONSHIP BETWEEN BOARD INDEPENDENCE AND FIRM PERFORMANCE IN MALAYSIA

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ABSTRACT
The significance of corporate governance mechanism in the management of companies cannot be underestimated. Most studies have demonstrated that well-governed firms are able to accomplish better improvements in performance, enhance competitive advantage and experience higher returns of investments. Therefore, with the focus of the importance of corporate governance principles of board features, this study aims to examine the relationship between board independence and board size with firm performance (Tobin’s Q, ROE & ROA). The samples of this study are the top 85 firms listed in Bursa Malaysia for the period of 2008 to 2016. This study found empirical evidences to support the view that board independence and board size had statistically given significant positive impacts on firm performance. Additionally, the findings highlighted that this association is positively moderated by board size. In overall, this study provides insights to policy makers to enlighten the corporate governance practices in Malaysia mainly on the effectiveness of board characteristics to enrich the firm’s future activities, affairs and performances.

Keywords: Board Independence, Board Size, Firm Performance, Malaysian Code on Corporate Governance.

INTRODUCTION
Recently, the influence of corporate governance on performance has received major consideration, particularly after the occurrence of corporate scandals in well-established organizations like WorldCom and Enron. Previously, these organizations experienced downfalls due to the misuse of authority by their own board of directors, which appeared to act for their own best interests instead of the company as a whole. Due to this unfavourable phenomenon, Malaysian Code on Corporate Governance (MCCG) was announced in year 2000 and required all Malaysian listed companies to adhere to it, starting in July 2001. Subsequently, the code was revised in 2007 and 2012 to adapt with the global expansion of capital markets. Specifically, the code highlights the composition of the board and the importance of the independent directors to ensure a focused board decision making for the best interest of the shareholders, besides the firm. As stated in MCCG 2012, should a company chairman is not an independent director, the board has to be dominated by independent directors as people who are entrusted by the shareholders. They are anticipated to reduce managerial opportunism and thus minimizing agency problems.

In most relevant studies, there are many empirical evidences that demonstrate the absence of good corporate governance structure or lack of adherence to principles being the main driver of failure for many companies. The board of directors are assumed to be a vital mechanism of corporate governance since they are accountable to monitor, setting relevant policy, provide sufficient resources and enhance advisory processes to ensure the management to carry out responsibilities and make decisions that prioritize the overall shareholders’ interests. Having an independent board will help to protect shareholders’ interests since they are expected to represent the shareholders and are predicted to improve firm value by monitoring top management and advising managers in implementing corporate strategy (Li et al., 2015). Due to this expectation, it is crucial for the companies to strengthen the...
independence of the board and clearly recognizing the role of directors and their responsibilities in order to ensure the effectiveness in management performance monitoring.

According to earlier literatures, board independence and its influence on firm performance appear to be one of the most argued issues in many organizations (Masood et. al., 2013; Ramdani & Wittleloostuijn, 2010). There are two different arguments between agency theory and stewardship theory in explaining the association between board independence and firm performance. Hypothetically, agency theory supports the perspective that supervisory board should be dominated by independent non-executive members in order to generate effective monitoring of executives. If the non-executive directors are dominant in number, it will lead to a better performance due to the freedom from company administration that reduces insider self-dealing. Alternatively, from a stewardship theory perspective, the non-executive board should be dominated by inside members to make effective decisions since they are better informed about the firm compared to outside directors. As detailed in this theory, managers are knowledgeable people who have greater firm information that allows them to produce more rational decision making compared to external members of the board. In turn, this boosts the firm’s performance.

From a different point of view, board independence might be probable to be related with board size specifically in term of direct monitoring and controlling responsibilities which later able to raise firm performance. Board size is an essential element in board characteristic as the directors need to work in a team of an optimum size to ensure board effectiveness. In corporate governance studies, the issue of board size is usually dealt using two perspectives. Some supported that larger board size is better than smaller board size because larger board size provides more monitoring resources which may enhance firm performance. In contrary, some argued that smaller board size is more effective to oversee the management because it reduces the number of problematic issues of coordination, communication and decision making. From these two contrary arguments, the potential interactions of board independence and board size are likely to be negative or positive towards firm performance.

In a Malaysian perspective, Zabri et al. (2016) concentrated on corporate governance practices among top 100 public listed companies in Bursa Malaysia. However, the period only covered year 2008 to 2012 in discovering the direct relationship between board size and board independence with firm performance (ROE & ROA). The period of merely three years shows a lack of results exposed regarding the moderating effects of board size for the relationship between board independence and firm performance. Prior evidence by Ramdani and Wittleloostuijn (2010) documented this relationship too, but the researchers only motivated a sample of stock listed enterprises from four East Asian countries namely Indonesia, Malaysia, South Korea and Thailand from 2001 to 2002. However, in this study, the writers focused on top 85 firms listed in Bursa Malaysia from 2008 until 2016 to explore the interaction between the board size and board independence-performance which contributes to the current literatures of corporate governance.

The remainders of this paper are structured as follows: The next section provides the analysis of the previous literatures on firm performance factors. The third section presents the sample and methodology used for data collection and analysis. The fourth section indicates the empirical results and discussions of the study. The final section concludes the paper.

LITERATURE REVIEW
Board Independence
Board independence has been an expansive level headed discussion in the literature in the matter of whether it provides better performance to the firm. However, the empirical evidences are mixed. On the one hand, a negative association between board independence and firm performance has been highlighted. For example, Zhou et al. (2018) claim that firms having more independent board members performed poorly. They further suggest that the relation between board independence and firm performance depends on the economic and institutional settings in which the firms operate. Furthermore, the finding was supported by a previous study made by Khosa (2017) in India, whereby the result suggested that independent board members are not effective in monitoring and controlling shareholders, therefore, their presence is valued negatively by the market. The same finding was also concluded in a study by Li and
Roberts (2017) who found that board independence is negatively associated with subsequent ROE and Tobin’s Q in public listed New Zealand firms.

On the other hand, it is widely believed that outside directors will promote investors' interests because of their legitimately vested obligation and in spite of board independence being recommended in many international corporate governance codes of best practices (Rashid, 2018). This is consistent with agency theory (Jensen & Meckling, 1976) which suggests that independent boards that are free from the influence of management, are better able to monitor and control management behavior. This theory assumes that managers are individualistic, opportunistic and self-serving. Thus, effective monitoring by independent boards is the key to making executives effectively seek after shareholders instead of their own self-interests.

The positive association between board independence and firm performance was supported by Ramdani and Wittleloostuijn (2010). They suggested that board independence is effective in average-performing firms instead of low and high-performing firms. The positively significant result was also found in China (Yu et al., 2015) and Korea (Black & Kim, 2012). Yu et al. (2015) further suggested that the appointment of independent directors, who can viably monitor firm management and can uphold the goal of shareholder wealth maximizations.

Based on the above arguments, this study suggests the following hypothesis:

**H1:** Board independence is positively associated with firm performance.

**Board Size**

Board size is considered as crucial in board characteristic as the directors need to work together in a group of a certain size to be more efficient and effective. In the previous literature, the issue regarding the board size can be viewed from two perspectives. Some supported that larger board size is better than smaller board size because more perspectives can be presented while some argued that smaller board size is more effective to oversee the management.

The ideal board size varies according to the size and complexity of the issues faced by the firm. For instance, Vo and Phan (2013) documented that the ideal board size is five while Zabri et al. (2016) suggested that the ideal board size is nine. According to Vo and Phan (2013), ROA has negative impact on board size, thus supporting that small board size leads to better firm performance in Vietnam. Duppati et al. (2017) evidenced that ROA and Tobin’s Q have negative impact on board size. Alternatively, Mohd Nor et al. (2014), Kumar (2016) and Alabdullah et al. (2018) argued that larger board size leads to high firm performance as more fresh ideas and skills can be contributed, thus would make them work more efficiently in managing business activities. In line with the above arguments, this study proposes the following hypothesis:

**H2:** Board size is positively associated with firm performance.

**The moderating effect of board size between board independence and firm performance**

In addition, this study also highlights the past literature on association between board size, board independence and firm performance. For example, Rashid (2018) reveals that board size has positively significant influence on both of board independence and firm performance. The study shows that board size has a positive and significant (at 0.01 levels) relationship with firm performance (using Tobin’s Q) while positive and significant (at 0.10 levels) relationship with firm performance (using ROA).

Previously, Ramdani and Wittleloostuijn (2010) suggests that board size could moderate the impact of board independence on firm performance. While using ROA as the single measurement for firm performance, their study concluded that the interaction of the proportion of independent directors and board size was not significant. However, this study suggests that by using other performance measures instead of preserving the use of ROA, the mechanism through which board independence affects firm performance could be through their influence over board size as a means of responding to shareholders’ interests. For now, whether board size moderates the relationship between board independence and firm performance permits an empirical question.
To address the above arguments, this study proposes the following hypothesis:

**H3:** Board size positively moderate the relationship between board independence and firm performance.

**Theoretical Framework**

Based on the theoretical backgrounds explained earlier, this study derives a theoretical model that shows the theoretical relationship between board independence and board size with firm performance (Figure 1). Therefore, the following hypothesis was anticipated:

**H1:** Board independence is positively associated with firm performance

**H2:** Board size is positively associated with firm performance

**H3:** Board size positively moderate the relationship between board independence and firm performance

![Figure 1. Framework model](image)

**METHODOLOGY**

**Data and Sample**

This study used samples from top 85 companies listed in Bursa Malaysia as of 31st December 2017 from the period of 2008 – 2016 to represent the changes in the Malaysian Code on Corporate Governance (MCCG) 2007 and 2012. In general, the samples were chosen based on market capitalization and thus consisted various industries. The financial data were obtained from Thomson Reuters Datastream database. Data related to board characteristics and corporate governance attributes were extracted from the annual report. The initial sample consisted of 85 companies which constituted a total of 765 firms, but excluded financial institutions, banks, unit trusts and insurance firms due to their different regulatory requirements and standards (Abdifatah, 2014). To facilitate the comparison of the results, financial data that was unavailable during the period were eliminated from the sample. As a result, after the screening process of over nine years sample period, the final sample consisted of 641 firm-year observations.

**Empirical Model**

This study used multiple regression model by modelling performance as a function of explanatory variables to examine the impact on the board independence and board size on firm performance of public listed firms in Malaysia.

Performance = β₀ + β₁BIND + β₂BSIZE + [BIND * BSIZE] + β₃SIZE + β₄LEV + e

**Measurement of Dependent, Independent and Control Variables**

The dependent variable in this study is firm performance and measured by using Return on Equity (ROE), Return on Asset (ROA) and Tobin’s Q (Tobin’s Q). This is consistent with the other prior studies that considered different measures of performance (Rashid, 2018; Sakawa & Watanabel, 2018). This study also examined two independent variables which were board independence (BIND) and board size (BSIZE). Two control variables were used to measure the characteristics of company namely firm
size (SIZE) and leverage (LEV). Firm size represents the firm size and leverage is the financial leverage of the company. The measurement of the dependent, independent and control variables are detailed in Table 1.

Table 1. Summary of the variables and measurements

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>Natural logarithm of book value asset less book value of equity plus market</td>
</tr>
<tr>
<td></td>
<td>value of equity divided by book value of total assets.</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>EBIT divided by total equity.</td>
</tr>
<tr>
<td>Return on Asset</td>
<td>EBIT divided by total asset</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Board Independence</td>
<td>Percentage of independent directors on the board.</td>
</tr>
<tr>
<td>Board size</td>
<td>The number of directors on the board.</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>Natural logarithm of the firm total assets</td>
</tr>
<tr>
<td>Leverage</td>
<td>Total debt divided by total asset</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

Descriptive Analysis

The summary of the descriptive statistics for the variables used in this study are indicated in Table 2. According to Tobin’s Q measurement, the minimum and maximum are within 0.00 and 11.99. In terms of ROE and ROA, the means are 13.53 and 0.11 respectively. The average independent directors in the sample is four which is consistent with the guideline and recommendation in the MCCG. The mean of board size is nine which implies that firms in Malaysia have larger board size. In this study, VIF value in term of the relationship between the independent variables is less than 0.50. For that reason, no violation of multicollinearity was found in this study.

Table 2. Descriptive analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin’s Q</td>
<td>0.00</td>
<td>11.99</td>
<td>2.02</td>
<td>641</td>
</tr>
<tr>
<td>ROE</td>
<td>0.63</td>
<td>36.91</td>
<td>13.53</td>
<td>641</td>
</tr>
<tr>
<td>ROA</td>
<td>0.38</td>
<td>0.62</td>
<td>0.11</td>
<td>641</td>
</tr>
<tr>
<td>BIN</td>
<td>2.00</td>
<td>9.00</td>
<td>3.96</td>
<td>641</td>
</tr>
<tr>
<td>BSIZE</td>
<td>5.00</td>
<td>15.00</td>
<td>8.85</td>
<td>641</td>
</tr>
<tr>
<td>SIZE</td>
<td>4.76</td>
<td>8.12</td>
<td>6.75</td>
<td>641</td>
</tr>
<tr>
<td>LEV</td>
<td>0.02</td>
<td>0.97</td>
<td>0.44</td>
<td>641</td>
</tr>
</tbody>
</table>

Multiple Regression Analyses

Table 3 below reports the evidences of multiple regression analysis of corporate governance attributes and firm performance where the Tobin’s Q, ROE and ROA represent dependent variables. The adjusted R² of regression using Tobin’s Q is 21%, F-value is 34.37 and p-value of 0.000 is highly significant at 1% level. Furthermore, the adjusted R² of model using ROE is 22.4% while ROA is 28.4%. Overall, the
adjusted $R^2$ indicates that the firm performance can be described by the overall explanatory variables in this study.

### Table 3. Multiple – Regression analyses

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tobin’s Q</th>
<th>ROE</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>T-Statistic</td>
<td>P-Value</td>
</tr>
<tr>
<td>BIND</td>
<td>0.129</td>
<td>0.795</td>
<td>0.427</td>
</tr>
<tr>
<td>BSIZE</td>
<td>0.246</td>
<td>2.220</td>
<td>0.027**</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.467</td>
<td>-12.115</td>
<td>0.000***</td>
</tr>
<tr>
<td>LEV</td>
<td>0.160</td>
<td>4.248</td>
<td>0.000***</td>
</tr>
<tr>
<td>BINBSIZE</td>
<td>0.278</td>
<td>1.220</td>
<td>0.223</td>
</tr>
</tbody>
</table>

- R-Squared: 21.6% 23.1% 29%
- Adjusted R-Squared: 21% 22.4% 28.4%
- F-Statistic (P-Value): 34.37 (0.000)*** 33.08 (0.000)*** 50.38 (0.000)***
- Firm-years: 641 641 641

Notes: *Significant at 10% level; ** Significant at 5% level; ***Significant at 1% level

In relation to the board independence, the result reported insignificant relationship using Tobin’s Q while another two models using ROE and ROA are positively significant at 5% level. Thus, Hypothesis 1 is accepted. The result in this study is in line with other previous studies such as Kumar (2016), Foo and Zain (2010) who found board independence has positive impact in raising firm performance. Indirectly, it means when the board was independent, it would be more transparent and would disseminate information which in turn contributes to firm’s performance improvement. Fuzi et al. (2016) further supported that independence directors are not bias and free from the influence of management, thus they can express their neutral views in the board discussion and are highly probably to protect any excessive power control by the management.

The coefficient on board size for Tobin’s Q is positive and significant at 5% level while for ROE and ROA are statistically significant at 1% level. The positive impact of board size for all three models recommends that the larger board size is, the higher the firm performance becomes. Thus, Hypothesis 2 is accepted. This finding is in line with the studies of Rashid (2018) and Alabdullah et al. (2018) that revealed positive association between firm performance and board size. Furthermore, Rose (2016) supported larger board size is better than smaller board since in this case, it allows all members to demonstrate dynamic roles in productive discussions and effective decision making processes. It is believed that with the wide variety of leadership and management skills, also expertise on the board, these will drive to a better firm performance.

For the interaction effect, the findings additionally highlighted that there was no moderation effect of board size for the relationship between the proportion of independent directors and firm performance based on Tobin’s Q. This goes against Hypothesis 3 since the evidence for a moderating effect was missing. The similar result was also documented by Ramdani and Wittleloostijin (2010). In contrast, board size was positively moderated for the linkage board independence-firm performance using ROE and ROA at 5% level. Referring to this result, the existence of board size seemed to strengthen the relationship between board independence and firm performance. In other words, it appears that the positive influence of board independence was not adversely affected as the number of board members increases. The reason is as the number of board members increases, monitoring, decision-making
processes, coordination and communication will become more effective and systematic, which later increase the benefits of board independence (Alabdullah et al., 2018; Rashid, 2018)

All the control variables in this study are found to be significant. All the three models show the negative and significant coefficient for firm size which imply that smaller firm size has high firm performance. The leverage has positive and significant coefficient with firm performance for all three models. Overall, the empirical results are consistent with the previous studies which verify that corporate governance practices do influence firm performance.

CONCLUSION
This study examined the relationship between board independent, board size and firm performance of top 85 firms listed in Bursa Malaysia from the period of 2008 to 2016. In corporate governance, the directors play important roles to supervise business operations and make strategic decision to the management that could affect firm performance. The relationship between board size and firm performance could be affected by many characteristics such as the firm’s specific characteristics that may require the directors to function differently, or the national institutional requirement. This study found that a larger board size is associated with firm performance. Board of directors are responsible to oversee and discipline the management teams to ensure that their interests are the same as the stakeholders’. Thus, by having more directors on the board, the monitoring and reviewing of the management’s action will become more effective and ultimately increase the firm’s performance.

This study also supported that by having more independent directors on the board, the firm’s performance can increase. Independent directors are good in balancing the board as they do not represent the investors or the founders. Thus, this makes them more impartial in moving the company to a beneficial direction. Furthermore, independent directors can also bring their expertise in different areas that the company can take advantage from, for the growth of the company’s opportunities in the future. Independent directors have experience and specific industrial knowledge and thus provide useful advice to the CEO to make the best decision. Therefore, the best practice of company is to include the independent directors to serve the board. Additionally, in this study board size appeared to moderate and support the relationship of board independence toward firm performance by using dependent variables measurement of ROE and ROA.

Limitations and Future Directions
This study provides empirical evidences that board size and board independence influence firm performance. However, this study only focused on two characteristics of corporate governance. Future researches can include more corporate governance attributes and focus on certain industries and different time periods such as 2017 to include the implementation of the Malaysian Code of Corporate Governance 2016 (MCCG 2016).

REFERENCES


