Analysis of Corporate Governance and Firm Performance: Evidence from Malaysian Listed Companies

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Abstract

There are a large number of studies examines the relationship of the corporate governance and the corporate performance. The different board structure and characteristics in corporate governance help a corporation to improve their performance and sales. This paper is to analyses the relationship between board characteristics and firm performance in Malaysia listed companies. Board characteristics were measured by the proportion of independent directors, board size, and the proportion of non-executive board members. The measurement used to measure the firm performance is the return on assets (ROA). All the data used in the study were collected from the 30 listed companies under Bursa Malaysia (KLSE) and Thomson Reuters Data Stream system from the period 2011to2015. The methods used for the empirical analysis include Pearson Correlation Coefficient, Panel Regression Analysis (Fixed Effect& Random Effect), OLS Model, Breusch and Pagan Lagrangian Multiplier (LM), Hausman Test, Specification Test and Diagnostic Test (Multi-collinearity, Heteroscedasticity and Serial Correlation). The results show that there is negative relationship between board characteristics and firm performance and none of the relationship is significant relationship with firm's performance.

Keywords: corporate governance, independent directors, board size, non-executive board members, returns of assets (ROA), firm performance

Introduction

In general, the Corporate Governance has become a hot topic for the developing countries because effective and efficient corporate governance can enhance the firm performance by increasing the capital investment from the investors with the fragile governance structures (Okpara, 2011). Regarding Nordberg (2011), corporations create value and wealth through the payment of dividends to shareholders. Corporations can broadly be defined as a place create employment for the most people and enhance the economy with creating value for the firm. Thus, it is clear that the shareholders invest the capital in research and development to develop the new products. Apart from that, researching and developing the new products can help a firm to reduce the costs but provides quality products and services. There are many concepts of the 'Corporate Governance' was recognized through several of research in the whole world. However, the social scientists and economists stated that the 'Corporate Governance' as the bodies that can affects the firm's allocation and returns (O'Sullivan, 2000). Corporate Governance also refers to a process, mechanism, or strategy to regulate the activities of firm (Nordberg, 2011).

As discussed above, Corporate Governance governs these corporate entities to guide their actions and monitor the activities for an effective performance. Another significant of the Corporate Governance is refer to the PwC Alert's report on Malaysian of the Corporate Governance (2012) was stated that Corporate governance is a plan or strategy that is used to administer the management in the firm to increase the accountability in board and firm profitability. Subsequently, the objective of the company can be achieved such as maximize the long-term shareholder's value. Besides, Crane and Matten (2007) highlights the accountability in corporate governance is needed because of the emergence of globalization. Apart from that, the financial performance's measurement including return on assets, earning per share and others financial ratio. According to Grossman (2000), he pointed out another measurement of performance can be used rather than ROE and profitability; return on investment (ROI). The financial performance's measurement also can use earnings per share (EPS) to estimate. Besides, Tippins and Sohi (2003) proposes that the firm performance is the ability of a corporation in the relation of providing results and achieving targets for example the profitability, return on investment and growth of the sales. There are many of studies have postulated that the boards member and the company's performance have a relation. Therefore, every management of company cannot be denied that the presences of the corporate governance as well as the board of directors are very essential study to understand the corporate governance. As Nicholson and Kiel (2007) observed and commend any governance theory can use to explain whether the presence of corporate board has relation to the company's performance. On the other hand, an Agency theory provides some ideas that could link with the size of board and the company's performance. Besides that, Resource dependency theories also determine the size of board can affect the activities of a business and directly relate with the firm value.

Background of study
Corporate Governance System

As discussed above, corporate governance in public policy debates around the world is regarded as the main key terms especially in academic concepts such as use in various institutions and cultural discourse. According to Gospel and Pendleton (2005), corporate governance is a theory of firm to enhance and maintain the unique nature relationship between the employees and employment in the area of economics and management. Davis (2005) holds the view that corporate governance is the processes, structure, and coordination that control the resources and power. According to Claessens and Fan (2002), the form of the ownership concentration in Asia countries is to reduce the agency problem. This issue occurs normally due to mispresenting, behavior or objectives of the management and it are inconsistent with the concerned parties. In short, the agency problem of conflicts is between outside shareholders and managers in the America and Europe country such as United Kingdom. As a result, UK developed and established an effective corporate governance through the combination of code on Corporate Governance and financial aspects in year 2003.To date, previous studies highlighted the differences of Corporate Governance system between the different nations. This is evident in the study of Gregory and Simms in year1999. According to Gregory and Simms (1999), in view of corporate governance in United States, United Kingdom or Canada, they aim to satisfy and brighten up the shareholder's value with ensured the accountability between the management and the board.

Corporate Governance system was developed in Malaysia by some important government organization which is Bank Negara and Securities Commissions. Its main principles are subsequent to MCCG (Malaysian Code on Corporate Governance), Financial Sector Master Plan (FSMP) and Capital Market Master Plan (CMP). In general, MCCG provides the guidelines on principles and rules in corporate management. Furthermore, MCCG also gives an obvious intention to establish this system in management of the firm. According to Bursa Malaysia (2016), there are total numbers of 903 listed companies in 2015 (Refer Figure 1) which 30 companies were selected for the further analyses. The number of listed companies in Bursa Malaysia shows a drastic increase from the year 2000 to the year 2006 which is from 795 companies increase to 1027 companies. However, starting from the year 2007, the numbers of listed companies falls from 987 in year 2007 to 903 in the year 2015.
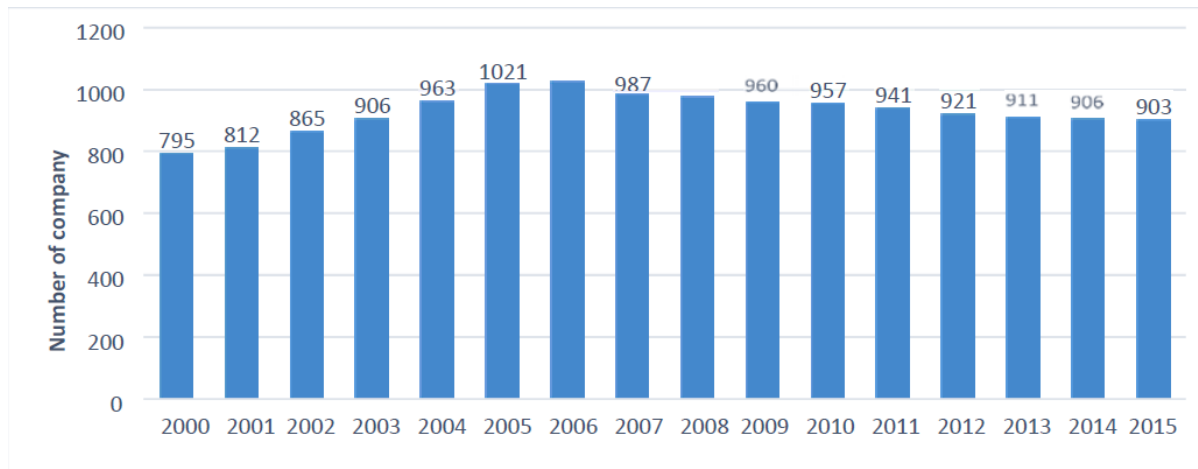
Figure 1 Number of company listed on Bursa Malaysia, 2000-2015.
Source: Bursa Malaysia (2016)

Problem Statement

The economy of Malaysia was stroke by the Asian financial crisis and global financial crisis (Refer Figure 2). From OECD National Accounts Data Files and World Bank National Accounts Data (2016) the GDP growth rate in Malaysia had dropped from 10% to 7%.
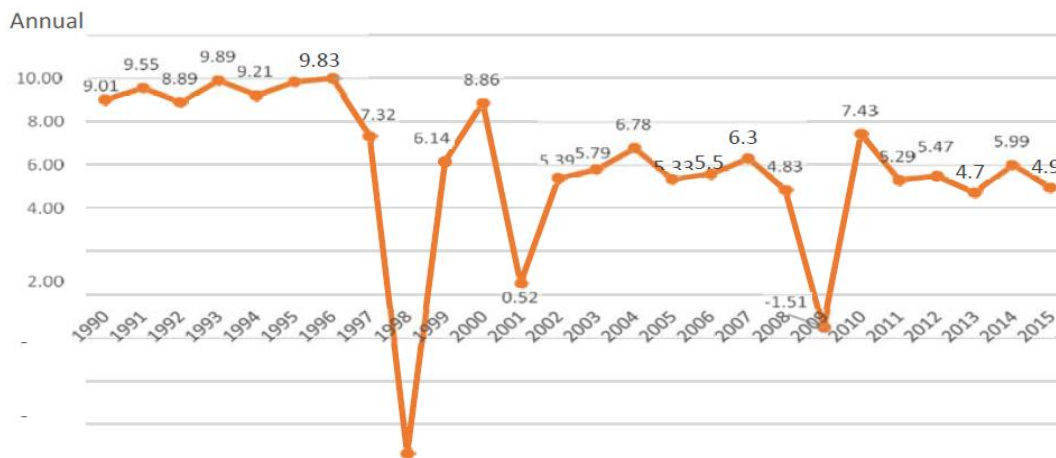

Figure 2 GDP growth in Malaysia, 1990 - 2015
Source: OECD National Accounts Data Files and World Bank National Accounts Data (2016)

This can be explained when the economy of Malaysia was stroke by the Asian financial crisis and global financial crisis inyear1997and1998. An inefficient management and oversight the uses corporate governance have found as main reason that lead this financial crisis attacked Asian stock market (Kim S, et al. 1998). The GDP growth rate decreased sharply from 7% in year 1997 to negative 7.36 in the year1998. According to Sachs (1998), Japan was faced the economic crisis in the early 1990s and has been influenced many profitability company especially in Malaysia. In general, there are many cases was affected the reputation and performance of Malaysia's company due to weak corporate governance problem for example Malaysia Airlines System (MAS) and Renong. Therefore, weak corporate governance is a major factor that caused economic crisis in Malaysia (Mohammed H, et al., 2006).

Most of the countries have developed Corporate Governance system in its country to secure their fund activities to attract the investors. Investment capital in businesses can help them to have more ability to manage and solve their

internal and external problem such as to minimize the employee turnover rate. Besides, the company also has enough of capital to manage their boards to enhance the accountability and fairness of board member to shareholders and then reduce the conflict by giving the compensation. Therefore, the company can be sustainable and the problem of weak corporate governance can be avoided. According to Gregory and Simms (1999) suggest an efficient-managed corporate governance is able to allocate the resources efficiency to ensure of making a lower cost investment, by the way to increase societal needs and improve the corporate long-term performance. In the year 2000, Malaysia has implemented various initiatives including the issuance for Code of Corporate Governance to strengthen corporate governance's structure. A survey made by KPMG Fraud Survey Report in the year 2009 found out the serious problem in the corporate governance is the corporate fraud. The results show that around 88% of the value of fraud incidents was attributed to the internal management in Malaysian companies in 2008 and the corporate fraud problem increases 26% compare in 2004. This case was indicated the internal problems faced by the employees and management in Malaysia companies are getting worse.

In 2011, the Securities Commission Malaysia issued the Corporate Governance Blueprint which developed the strategic initiatives aimed at to strengthen self-discipline and society. In the report of Securities Commissions Malaysia (SC) stated that the MCCG 2012 focus on clarifying the role of institutions in improving power and leadership, strengthening the independence and increasing the efficiency and effectiveness of institutions by strengthening its composition. Companies are encouraged to enter into a corporate disclosure policy which contains the principles of good disclosure by announced their commitment to be honored. The Securities Commission Malaysia (SC) has issued guidance on the draft of Code of Corporate Governance 2016 (MCCG 2016). As far as MCCG 2016 is concerned, to ensure that they are in line with business plan and development of the market, the Code was revised twice in 2007 and 2012. Another significant aspect of MCCG 2016 was adopting a different approach from the previous code after realizing the importance and the need to enhance corporate governance principles. The purpose is to encourage the development and emphasis on behavior and the outcome of corporate governance structure.

Consequently, it has been shown from this review that good corporate governance can help a corporation enhance the highest standards of ethics (Gregory & Simms, 1999). The Code of Corporate Governance emphasizes the transparency and disclosure principles to attain the trust of the customer, shareholders, and investors. High reputation and higher market valuation can be attractive and get the support of capital and funds from outside investors. Corporate Governance can regulate the internal management to improve the profit margin.

Research Questions

The purpose of this research is aim to justify the relation of corporate governance with the firm's performance in the country.

I. Does the size of the board have a noticeable relationship with the corporate's performance for the selected listed companies in Malaysia?
II. Is there any relation link with the proportion of non-executive directors and corporate's performance for the selected listed companies in Malaysia?
III. Does the proportion of independent directors correlate with the corporate's performance for the selected listed companies under Bursa Malaysia?

Literature Review

Corporate Governance and Firm's Performance

Corporate governance is a system which company is controlled and regulated (Cadbury Report, 1992). The board of directors has responsibilities to set the company's objectives and align the resources and activities in the company to satisfy the shareholders. Therefore, the board of directors has responsibility in managing the company and satisfying the shareholder's interests (Fama & Jensen, 1983).

There are several studies which conclude that an effective firm performance was due to the good corporate governance practice. According to Hossain, Cahan and Adams (2000), a good corporate governance can enhance firm's performance. In contrast, several studies have found that a firm performance and corporate board have negative relationship (Bathala and Rao, 1995; Hutchinson, 2002). Prior to the work of Park and Shin (2003), the existence of corporate governance is not able or can be said not functionally over the performance of corporation.

They found no relationship among its. However, this issue can be explained by many reasons such as inaccuracy of data due to limited scope of survey. In this research, the profitability of corporate was estimated by return on asset (ROA). Gani and Jermias (2006) revealed that the performance of firm can be measured by return on assets (ROA), return on equity (ROE), and earning per share (EPS). Most research also measures the effect of corporate governance on firm's performance by using Tobin Q measurement, ROE and ROA. There are many published studies indicates that the correlation was between corporate governance and performance of the firm. Hence, it is important to make further research to explore more findings.

Board Size and Firm's Performance

Several of studies have given an argument about the larger board is unlikely perform well in the firm. For instance, Lipton and Lorsch (1992) describe that not only larger boards cause ineffective but also not easy for supervision by the top management such as CEO. Besides, also have several of the studies found out the smaller the board size, the more effective when implementing the activities especially on decision making. On the other hand, Sunday (2008) supported that any decision making in the board and communication will become ineffective if the size of the board is larger. Additionally, an explanation about the larger the boards will result less effectiveness on implementing corporate activities for example allocation and arrangement, conversation, and decision-making. The results show the return on assets is significant positively related to the size of the board. A potential strategic is difficult to develop when a board become larger due to the more of argument in making decision. The time-consuming in making decision are also affected. The study conducted by Marn and Romuald (2012), there have positive relationship performance between the board size and the performance of the firm. The relationship is statically significant. The smallest the size of the board is, the better the performance in the firm. The outcome of the test also shows the earning per share is higher while there is small size of the board. Mak and Kusnadi (2005) mentioned that the size of the corporate board is inversely related to the value of the firm in the Malaysia. The methodology used was Tobin-Q and the results show that 5 of the members in the board was the moment achieving the highest value in the firm. The results indicate that only the stockholder ownership in the corporate governance has relationship with the company value. In contrast, not all the size of the board can enhance the firm's value.
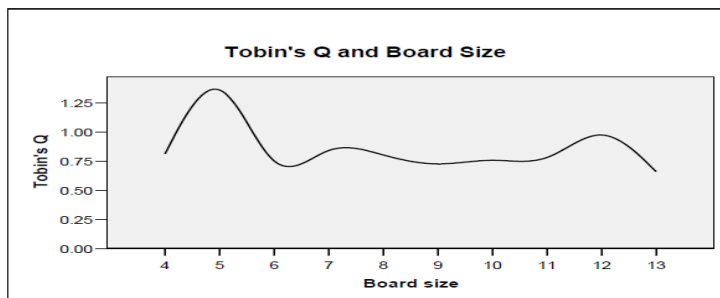
Figure 3 Relationship between Tobin's Q and the size of board.
Source: Study of board size, board composition and property firm performance by
Roselina (2010)

Rosalina (2010) conducted the study between the size of the board and firm's performance by using the method Tobin's Q, and the result shows the most efficient of the firm while the size of the board reached to five members. However, it declined after total of six member's presence. Besides, the results are similar with the results which conducted by Mak and Kusnadi (2005) which mean that when the board size reached at 5 was the highest firm's value. Jensen (1993) conducted the study to investigate the failure of the internal control system. He argued that the effective board is maintaining seven to eight members. This mean that small board can enhance the firm's value because the CEO or top management can easily control the board all the time. According to Yusoff and Alhaji (2012), the size of the board is six will significantly affect the return on assets. Furthermore, the research conducted by Haniffa and Hudaib (2006) were concluded that the total member in board is found to have a relationship with the company's performance. Although the large board is found less effective on decision making and costly for provide compensation to the board, but some studies argued that the larger board contribute more experience, skill, and competence in the company.

H_1: *There is a relationship between the board size and firm performance in Malaysia listed companies.*

Non-executive Directors and Firm's Performance

Refer to the perspective of the agency theory, the non-executive directors (NEDs) generate the activities and has authority to implement the decisions in management. Therefore, NEDs can affect the firm's profitability. Several theories had described there is a significant relationship between NEDs and the company's performance such as Agency theory and Resource dependence theory. The more proportion of NEDs in the board can lead better in managing and regulating the actions of the executive directors. Therefore, Agency Theory highlighted that NEDs is important in the board. According to Mangel and Singh (1993), NEDs has the ability to monitor and address the issue of incentives, and as a director. Therefore, it is believed to be a check and balance to improve the efficiency of the board. Furthermore, Yusoff and Alhaji (2012) proved that the company's performance can be affected by NEDs as refer to the result of the Spearman's correlation matrix. However, it is not significant with the ROE but significant affect to the earning per share (EPS). Abor and Adjasi (2007) also highlighted the high proportion of NEDs can improve the competitiveness by providing some effective plans to the company. Hence, it shows the positive relationship. Haniffa and Hudaib (2006) highlighted that NEDs is not related to the company's performance. In fact, from the studies of Cadbury Report (1992) stated that NEDs is not necessarily needed in the company in Malaysia because most of the NEDs are chosen for political reason, business needed or contracts and not due to their knowledge and expertise. On the other hand, the negative relationship between the NEDs to business profitability was found by Booth and Deli (1996). Besides, Abdullah (2001) found the proportion of NEDs in Malaysian firms is high.

H2: The relationship between the proportion of non-executive directors and firm performance are statistically significant in Malaysia.

H3: The proportion of non-executive directors are negative related to firm's performance in Malaysia listed companies.

Proportion of the Independent Directors and Firm's Performance

The proportion of the independent directors (INDs) defined as the percentage of the outsider reported by company. A non-profit organization in Brazil suggests that majority of the board member in firm should be independent member. This idea is suggested by Brazilian Institute Corporate Governance (IBCG) and others governance guidelines also agree the presence of the independent directors to exercise evaluation or opinion of management's performance. For example, Mexico Code of Governance suggested that the minimum proportion of independent directors should be at least 20% of the total member in the board. Apart from that, the Corporate Governance in Malaysia recommends the independent director is a person who is no relation to the business and could evaluate the board matter and management. Thus, every listed company should have independent directors. The independent members have abilities to increase the firm performance. Several of articles stated that the larger proportion of independent board member will lead to a more efficient management performance. Additionally, Adams and Mehran (2003) conclude that the independent directors are positively correlated on the company's performance while using the Tobin-Q as measurement, but its relationship is not significant. The results were supported by Hermalin and Wesbach (2001), the higher proportion of independent directors would not increase the firm performance instead of CEO turnover, executive compensation, and remuneration. Besides, Yermack (1996) also argues that the proportion of independent directors is negatively related to firm's performance.

H$_4$: The proportion of Independent directors has negative effect on firm's performance of Malaysian listed companies.

Methodology

Data Description

Bursa Malaysia has 903 listed companies were registered in the year 2016. This study will focus on 30 listed companies chosen from Bursa Malaysia. All the data used in the study were collected from the period of 2011 to 2015. Refer to 10th Malaysia Plan which was developed in the same time period and defined the year 2011 to 2015 could accelerate achievement of goal in 11th Malaysia Plan by strengthened the corporate governance system. Data of return on asset, the score of non-executive directors and the score of independent directors were collected from the company published annual report and Thomson Reuters Data Stream system.

Conceptual Framework

The following figure is the conceptual framework for this study. The dependent variable is the profitability of the corporation. The profitability or performance in firm can be measured by Return on Assets (ROA). The board

characteristics are used as the independent variables which are Board Size, the proportion of Independent Directors and the proportion of Non-Executive Directors.
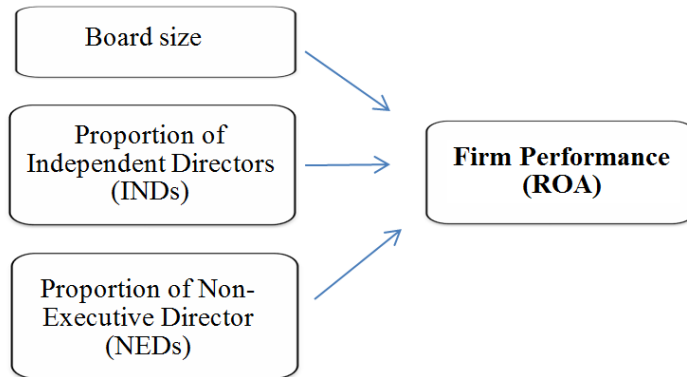

Figure 4 Conceptual Framework for the relationship between the corporate governance board structure and the performance of the corporation.

Empirical Framework

The OLS Regression (Ordinary Least Square) is an approach use to determine the linear model. The link between dependent variable (ROA) and the independent variables (board characteristics) can be explained through this model test.

$$ROA_t = \beta_0 + \beta_1 BSIZE_t + \beta_2 IND_t + \beta_3 NED_t + \varepsilon_t$$

Where,

ROA_t :   Return on assets (proxy for accounting measure of performance)

$BSIZE_t$:   Board size

IND_t :   Independent Directors

NED_t :   Non-executive Directors

β_0 :   Intercept

ε_t :   Error Term

Table 1 Formula for determining ROA, INDs and NEDs

Variables	Formula
Return on assets (ROA)	$\dfrac{NET\ INCOME}{TOTAL\ ASSET}$
Proportion of independent directors (INDs)	$\dfrac{NUMBER\ OF\ INDEPENDENT\ DIRECTOR\ IN\ BOARD}{TOTAL\ BOARD\ MEMBER} \times 100$
Proportion of independent non-executive directors (NEDs)	$\dfrac{NUMBER\ OF\ NON\ EXECUTIVE\ DIRECTOR\ IN\ BOARD}{TOTAL\ BOARD\ MEMBER} \times 100$

Dependent Variable

In this research, the Return on Assets (ROA) was used to determine the performance in company and to estimate the profitability of the firms. According to Jogongo and Makori (2013) mentioned that the best estimator to measure the profitability of the firm is ROA. There are also many studies stated that the ROA is not significant relationship with board composition but earnings per share (EPS), return on equity (ROE), and Tobin-Q has significant relationship with the board composition. Therefore, ROA is the most preferred measures to identify the relationship with the corporate board structure in this research.

Independent Variables

The independent variables use in this study include the proportion of non-executive directors (NEDs), proportion of independent directors (INDs) and the board size (BS).

Table 2 Measurement of independent variables

Variables	Terms of Measurement
Board Size	Total number of directors of the board in firm
Proportion of non-executive directors	Percentage of non-executive members in Board
Proportion of independent directors	Percentage of independent members in Board

The proportion of non-executive directors is the percentage of the non-executive member (NEDs) by the total number of member in the corporate board. Refer to some perspective of Agency theory, NEDs are important to a company because NEDs help to control the activities and regulate the management. On the other side, the proportion of independent directors (INDs) is the percentage of the independent directors as reported by the company. As review from the literature review, the proportion of independent directors is necessary in the board and has responsibility to the board in some countries such as Malaysia, Mexico, and Singapore. Most of the studies argued that total member in the board (BS) are correlated to the firm's performance. For example, some of the studies pointed out that the number of the size board more than seven members could lead the board management less efficient due to the corruption of the transmission, and decision-making.

Hypothesis Development

Hypothesis is needed to evaluate the link between the independent variables and dependent variables. Hence, the hypotheses are test which of the variables can affect performance of the firm.

H_1: *There is a relationship between the board size and firm performance in Malaysia listed companies.*

H_2: *The relationship between the proportion of non-executive directors and firm performance are statistically significant in Malaysia.*

H_3: *The proportion of non-executive directors are negative related to firm's performance in Malaysia listed companies.*

H_4: *The proportion of Independent directors has negative effect on firm's performance of Malaysian listed companies.*

Pearson Correlation Coefficient

The Pearson Correlation (r) is used to measure how the variables are related. Additionally, the correlation analysis also helps to measure the statistical strengths of the association. According to Kumar, Salim, & Ramayah (2013), the strengths of the relationship can be classified as:

$0.00 \leq |r| \leq 0.30$ weak

$0.31 \leq |r| \leq 0.60$ Moderate

$0.61 \leq |r| \leq 1.00$ Strong

Panel Data Regression Analysis

In this research, there are 30 listed companies are chosen from companies listed under Bursa Malaysia over the 5 years' period from 2011 to 2015 for the Panel Data Regression. Therefore, there will be total of 150 observations in the research.

Pooled Ordinary Least Square Model

The Pooled ordinary least square (OLS) model is used to investigate the relationship between the dependent variable and the independent variables in this research. At the same time, there have endogeneity assumptions need to execute in order to attain unbiased model estimation and constant. Therefore, the Random-Effect (RE) model and Fixed-Effect (FE) model always use to rectify the homogeneity problem.

Random-Effect Model

Random-Effect Model as an estimator model use to conduct the endogeneity assumptions. The Random-Effect Model is a model that is better than Fixed-Effect Model because it can be used for all the parameters and adjust the endogeneity bias from a large population. Besides, the Breusch and Pagan LM Test will analysis the most appropriate model between OLS regression and RE model.

Fixed-Effect Model

Fixed-Effect Model also called Least Squares Dummy Variable (LSDV). The Fixed-Effect Model is the alternative of the Random-Effect Model and use to control the endogeneity bias in the model. Next, Hausman Fixed Test will show the results to identify the most appropriate model between FE model and RE model.

Breusch and Pagan Lagrangian Multiplier Test

Breusch and Pagan LM Test are used to estimate whether the Pooled Ordinary Least Square or Random-Effect Model are more suitable to be used for further analysis. A hypothesis of the Breusch and Pagan LM Test shows as below:

H_0: *Pooled OLS Regression Model*
H_1: *Random-Effect Model*

The Breusch and Pagan LM Test will show the p-value of the result. If the p-value is smaller than 0.05(5% significance level), it is statistically significant at 5% of significance level. Hence, reject the null hypothesis. The Random-Effect Model is more appropriate for further analysis.

Hausman Test

Hausman test is used to distinguish the most appropriate model between the RE model or FE model for further analysis. A hypothesis of the Hausman Test shows as below:

H_0: *Random-Effect Model*
H_1: *Fixed-Effect Model*

When the result in Hausman test show the result is smaller than 0.05 (5% significance level), it is statistically significance at 5% of significance level. Hence, reject the null hypothesis. FE Model will be more suitable to be used for further analysis.

Diagnostic Tests
Multi-collinearity test

Multi-collinearity refers to the existence linear relationship among the explanatory variables. One of the CLRM assumptions is no exact collinearity between the independent variables. Multi-collinearity categorized into perfect multi-collinearity and imperfect multi-collinearity. Besides, the remedial measures can help to solve the multi-collinearity problem which is extending the sample's size, utilizing a prior information, transforming the functional relationship and dropping the variables which is with high collinear.

Heteroscedasticity test

Heteroscedasticity test check the variance of the error term and the heteroscedasticity problem presence when the variance is not constant. After that, the homoscedastic means equal variance while the heteroscedasticity means that is error variance and non-constant. The hypotheses of the Heteroscedasticity Test show as below:

H_0: *There is no heteroscedasticity*
H_1: *There is heteroscedasticity*

If the p-value of the heteroscedasticity test is smaller than 0.05 (5% significance level), it is statistically significance at 5% significance level. Hence, reject the null hypothesis. Therefore, it means there is heteroscedasticity problem in the proposed Fixed-Effect Model.

Autocorrelation test

Autocorrelation always occur in time series data and panel data. On the other hand, autocorrelation indicates that the error term from one time depends in some systematic way on error terms from other time. Autocorrelation might lead the estimator's coefficient become unbiased and the variances become larger. Therefore, the estimator will not in BLUE. The hypotheses of the Autocorrelation Test show as below:

H_0: *There is no serial autocorrelation*
H_1: *There is serial autocorrelation*

If the p-value is smaller than 0.05 (5% significance level), it is statistically significant at 5% significance level. Hence, reject the H_0.

Empirical Results and Findings
Descriptive Statistics

Table 3 shows the descriptive statistics of the selected variables. The mean for the return on assets (ROA) is 0.51 with the standard deviation of 0.72. The minimum of the average return of asset is 0.028. The result also shows

maximum mean for return on asset is 3.90. The higher the ROA, the better the firm performance is. It means Malaysian company generates 0.51 incomes from each assets in average. In addition, the Table 3 shows the mean for the board of size is 9.4 with the standard deviation of 2.03 and the minimum size is 5 members, and maximum number of member is 14. It means the companies average have 9.4 members in the board. Although some studies have stated that the larger the size of board may cause ineffective but there were many studies had suggested that bigger board size may increase the firm profitability. In year 2002, Bursa Malaysia set out the listing requirements with Securities Commission. The requirement limits the directorship of public listed companies which the required maximum directorship in company is10. Based on Agency theory, a higher proportion (percentage) of non-executive directors may have more authority to affect the company performance become efficiency. The empirical finding shows that the mean of non-executive directors in Malaysia is 65.02% and the mean of percentage for independent directors is 42.74 percent with the 17.67 of standard deviation.

Table 3 Summary of descriptive statistics for the dependent and independent variables in Malaysia

Variable	Mean	Standard Deviation	Minimum	Maximum	Observation
ROA	0.51	0.72	0.028	3.90	150
BS	9.4	2.03	5	14	150
NEDs (%)	65.02	18.15	9.25	90.85	150
INDs (%)	42.74	17.67	13.82	91.34	150

Notes: ROA=Return on assets, BS=Board size, NED=Non-executive directors, IND=Independent directors

Pearson Correlation Coefficient
Pearson's correlation is used to conduct all the variables in this research and determine the linear relationship between the variables.

Table 4 Pearson Correlation of determining variables in Malaysia

MALAYSIA	ROA	BS	NEDs	INDs
ROA	1.0000			
BS	-0.1695** (0.0381)	1.0000		
NEDs	-0.5412*** (0.0000)	0.1832** (0.0248)	1.0000	
INDs	-0.2698*** (0.0008)	0.1031 (0.2092)	0.2936*** (0.0003)	1.0000

Notes: ROA=Return on assets, BS=Board size, NED=Non-executive directors, IND=Independent directors

Table 4 above shows the correlation between return on assets (ROA) and board size (BS) is negative and it is statistically significant at 5% of significance level. Furthermore, the proportion of non-executive directors (NEDs) has negative correlation with ROA. Next, the correlation was statistically significant at 1% of significance level. Consequently, the correlation between the proportion of independent directors (INDs) and ROA also negative. The relationship was statistically significant at 1% significance level.

Panel Data Regression Analysis
In this research, there are 30 listed companies are chosen from companies listed under Bursa Malaysia over the 5 years' period from 2011 to 2015 for the Panel Data Regression.

Table 5 Results of Panel Data Analysis Dependent Variable for Malaysia listed companies

COUNTRY	MALAYSIA			
	Pooled OLS	**Random Effect**	**Fixed Effect**	**OLS with Heteroscedasticity and Serial Correlation**
Constant	2.2087 (7.93)	0.5274 (2.85)	0.4255 (2.98)	2.2087 (2.65)
In BS	-0.0237 (-0.95)	0.0026 (0.22)	0.0061 (0.55)	-0.0237 (-0.48)
In NEDs	-0.01960 (-0.79)***	0.0007 (0.47)	0.0017 (1.24)	-0.0196 (-1.88)*
In INDs	-0.00479 (-1.64)	-0.0021 (-1.56)	-0.0020 (-1.56)	-0.0048 (-1.46)
Breusch-Pagan LM test	chi2(1) =227.88 Prob> chibar2=(0.000)***		-	-
Hausman Specification test	-	Chi2(3) = 16.87 Prob>chi2 = (0.0008)***		-
Observations	150	150	150	150
Multi-collinearity (vif)	-	-	1.09	-
Heteroscedasticity (x2-stat)	-	-	1.9E+05 (0.0000)***	-
Serial Correlation (F- stat)	-	-	14.848 (0.0006)***	-

Notes: ROA=Return on assets, BS=Board size, NED=Non-executive directors, IND=Independent directors, ** means $p<0.05$ statistically significant at 5% significance level, * means $p < 0.1$ statistically significant at10% significance level, ***means $p<0.01$ statistically significant at 1% significance level.

Model Selection Test

The result of panel data regression analysis shown in Table 5, the regression models estimation used are Pooled Ordinary Least Square (OLS) model, Fixed Effects (FE) model and Random Effect (RE) Model. After selected the more appropriate model, the diagnostic checking was implemented to detect the multi-collinearity, heteroscedasticity and autocorrelation problems. The relationship between dependent variable and independent variables can be identified by applied this three model. In this study, there are consists of investigation and description about the empirical results of model used for the Malaysia's companies. In this study, Pooled OLS test is used to figure the pool effect. The Breusch and Pagan LM Test is used to discriminate between the Pooled Model and the Random Effect model. In addition, the Hausman specification test help to identify whether the Random Effect model or Fixed Effect model are most suitable to use in this research.

Evidence in Malaysia

Breusch and Pagan Lagrangian Multiplier Test

H_0 : *Pooled OLS Regression Model*
H1: Random-Effect Model

Refer to the Table 5, the p-value for Breusch and Pagan LM test is 0.000 which is smaller than 0.05 (5% significance level), therefore, H_0 is rejected. The Random Effect model is more suitable for the further analysis.

Hausman Specification Test

H_0= *Random-Effect Model*
H_1= *Fixed-Effect Model*

Refer to the Table 5, the p-value for Hausman test is 0.0008 (p < 0.05). It is statistically significant at 5% significance level. Hence, H_0 is rejected. In conclusion, the Fixed Effect model is more appropriate to be used compare to Random Effect model.

Model Diagnostic Check

As Fixed Effect Model is more appropriate in this study, diagnostic checks are necessary to detect multi-collinearity, heteroscedasticity and autocorrelation problems.

Multi-collinearity

There is no multi-collinearity problem if the mean VIF is less than 10. Therefore, the value for meanVIF is 1.09 (in Table 5) and no multi-collinearity problem exits. Fixed Effect model is well specified.

Heteroscedasticity

H_0: *There is no heteroscedasticity*
H_1: *There is heteroscedasticity*

The p-value for heteroscedasticity is 0.000 which is lesser than 0.05. It is statistically significant at 5% of significance level. It shows the presence of heteroscedasticity problem the proposed FE model. Therefore, the null hypothesis is rejected and concludes the presence of heteroscedasticity.

Serial Correlation

H_0: *There is no serial autocorrelation*
H_1: *There is serial autocorrelation*

The p-value of the serial correlation test is 0.0006. There is also autocorrelation problem in the proposed Fixed Effect model as the p-value of the serial correlation test is less than 0.05 (5% significant level). Therefore, the null hypothesis is rejected.

Summary of the Results on Model Selection Test and Model Diagnostic Check

Table 6 The results of Model Selection Test and Model Diagnostic Check

Model Selection Test	Malaysia
Pooled OLS vs RE model	**RE model** *Breusch* and *Pagan LM* test: p-value 0.000 < 0.05
RE model vs FE model	**FE model (Hausman test)**: p-value 0.0008 < 0.05
Model Diagnostic Check	**Multi-collinearity**: *Mean* *VIF = 1.09*
	Heteroscedasticity: *p-value 0.000 < 0.05*
	Serial Correlation: p-value 0.006 < 0.05

From table 6 above, the results of diagnostic checking show the tests have heteroscedasticity and autocorrelation problem. The heteroscedasticity test indicated the p-value is less than 5% significance level, which mean the presence of heteroscedasticity and the variance are constant (homoscedasticity). Autocorrelation Test shows the p-value is less than 0.05 then it is statistically significant. Therefore, the data does have first-order autocorrelation means there has serial autocorrelation problem. OLS with Heteroscedasticity and Serial Correlation Robust

Standard Error is used to control Heteroscedasticity and Serial Correlation by using the option "robust cluster" and precise the uneven variance of the error term.

Results OLS with Heteroscedasticity and Serial Correlation Robust Standard Error
The Regression Model:

$$ROA_t = -0.237BS_t - 0.0196^*NED_t - 0.0048IND_t + 2.2086$$

* means the coefficient is significant

Table 7 below indicates that there is negative relationship between return on assets and board size as the p-value of board size is 0.634 which is higher than 0.05 (5% significance level). Thus, the relationship between board size and return on assets is not significant. However, it shows that the board size is negatively related to return on assets. For the proportion of non-executive directors, the p-value is smaller than 0.10 (p =0.07). It is statistically significant at 10% significance level. The proportion of non-executive directors shows negative results of return on assets by having a coefficient -0.0196. The p-value of proportion of independent directors is 0.156 which is greater than 5% significance level (p>0.05). Therefore, there is no significant relationship between the proportion of independent directors and return on assets. At the same time, it shows that the proportion of independent directors is negatively related to return on assets.

In Malaysia, the fundamental analysis shows the size of board and the proportion of non- executive directors is not statistically significant at 5 % significant level to return on assets. Besides, the proportion of independent is statistically insignificant at 5% significance level. However, the empirical finding indicates that the ROA has negative relationship with all the independent variables.

Table 7 Results of OLS with Heteroscedasticity and Serial Correlation Robust Standard Error for the Malaysia's listed companies.

Variables			
ROA	**Coefficient**	**t**	**P >	t |**
BS	-0.0237	-0.48	0.634
NED	-0.0196	-1.88	0.070
IND	-0.0048	-1.46	0.156
_CONS	2.2086	2.65	0.013

Summary of Research Study and Theoretical Implication

The empirical findings have an evidence to determine the actions for the hypotheses, The Table 8 below shows the actions to hypotheses which have categorized into Accepted or Failed to Accept. As refer to the Table 8, the H_1 has supported by the empirical result. The relationship between the board size and performance of the company was found in Malaysia listed companies. Sunday (2008) was agreed that the ineffective performance in company due to larger size of board. Thus, it supports the H_1 which is negative relationship of board size and performance in Malaysia listed companies.

There were enough empirical results prove that the relationship between the proportion of non-executive directors and firm performance are statistically insignificant in Malaysia, thus the H_2 is fail to be supported by the results. This finding was supported by the Haniffa and Hudaib (2006) which stated that the NEDs are not related to the company's performance.

Furthermore, Booth and Deli (1996) support the H_3 where the NEDs and ROA is negatively related to performance. Refer to the findings, the result supports the H_4 which has a negative effect on firms' performance in Malaysia listed companies. As the negative results shown in Malaysia listed companies, Yermack (1996) supports that the higher proportion of independent directors may result in low performance in corporation.

Table 8 Actions to Hypotheses: Accepted or Failed to Accept

Hypotheses	Action
H_1: There is a relationship between the board size and firm performance in Malaysia listed companies.	Accepted
H_2: The relationship between the proportion of non-executive directors and firm performance are statistically significant in Malaysia.	Failed to Accept
H_3: The proportion of non-executive directors are negative related to firm's performance in Malaysia listed companies.	Accepted
H_4: The proportion of Independent directors has negative effect on firm's performance of Malaysian listed companies.	Accepted

Discussion

As discuss above, the results conclude that there is relationship between the corporate governance and firm performance in Malaysia. However, all the relationship is not significant. In Malaysia, the BS, INDs and NEDs have negative relationship to firm performance. These relationships are also insignificant. There is some information obtained from Cadbury Report for the year 1992, the records stated that most of the independent directors do not have any skill or knowledge in management because they were chosen for other motives such as political reasons. There are many reasons for the insignificant results. First of all, although there were studies concluded that the corporate governance has significant relationship with the profitability of company, but the results would be changed due to different business culture in different business (Turan and Bayyurt, 2013). This means that the relationship cannot be determined based on the internal issue, the outside factor also can affect the firm performance. Secondly, Malaysia always keeps changing based on development in this world. Thus, it would be outpacing for strengthen the corporate governance developments. Basically, the research for analysis the relationship between the corporate governance and firm profitability are mainly focus on the board of directors, stakeholders, board structure and so on. According to Leblanc and Gillies (2003), some factors might be neglected in investigation such as process of making decision. This studied is relevant with the studied done by Turan and Bayyurt (2013). The percentage of family controlled firms in Malaysia is more than half is attribute by the total firms, which is 70%. (Claessens, Djankov & Lang, 2000).

Conclusion

In general, Corporate Governance system is a mechanism that regulates the operation and activities of a company especially in management. Weak corporate governance can lead to a serious financial crisis and affect other countries, then the financial crisis was attributed to a downturn of the economy. One of the cases is financial crisis in the year1997and1998 in Malaysia and the crisis initially influenced by economic crisis in Japan. Others countries also had faced similar crisis due to the poor corporate government such Indonesia, South Korea, and the Philippines. Additionally, the corporate governance is important to a firm in the country since it is able to affect the large scope in economy and financial.

Overall, the empirical results have shown there is negative relationship between the proportion of non-executive directors and firms performance to Malaysia listed companies and the relationship is not significant. A better explanation to this result is most of the companies in Malaysia are family-owned firm and concentrated on the ownership and large shareholdings. Family firm are not fully conformed to the Code of Corporate Governance. The negative relationship between the proportion of non-executive directors and company's profitability can be identified. Besides, the board size is negative related to return on asset in Malaysia. This can be explained even though previous sentences conclude that the companies in Malaysia are family firm.

Limitation and Recommendation of the Study

The main limitation of this study is the measurement of the dependent variables. In fact, the research should select more of the indicators or measurement to identify the financial performance. In this study, the measurement for measure the firm performance is return on asset (ROA). It is recommended in future that the research can use more of the financial ratio to measure the performance, such as earning per share (EPS) and Tobin-Q measurement. Next limitation was to increase the number of sample size for the *t* analysis. This research only collects 30 companies

from Malaysia. It does not separate the according to the sector, hence it possibly could lead to inaccuracy due to the large scope of data estimation. The result obtain from small quantity of sample size also couldn't representing the results were accurate because some of the company's information are not in full disclosure and transparency, therefore smaller sample size leads to higher risk of default information. In addition, the five-year data (2011-2015) may not long enough because the market and the government issues keep changing from time to time. It is better to focus on one sector initially rather than directly focus large scope of company with the small sample size. The time period of data can be longer to make the result more conclusive to justify the dynamic nature of governance.

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