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The Impact of Corporate Governance and Capital Structure on Corporate Performance: Evidence from Malaysia

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Abstract: *This research aims to explore the impact of corporate governance and structure of capital on the corporate efficiency. Panel data was used to analyze the effects of corporate governance and capital structure on the corporate performance. The samples taken were 470 non-financial companies listed on Bursa Malaysia during 2013 – 2016 period. The results showed that the corporate governance represented by Board Size (BSIZE) and CEO Duality (BDUAL) contributed significant and positive impact on the corporate performance. In contrast, the Board Independence (BIND) and Board Meeting (BMEET) had significant and negative impact, while the Shareholder Ownership (SHARE)) and tenure (TENUR) had weak predictive capability on the corporate performance. Meanwhile, the capital structure represented by Short-Term Debt (SDEBT) and Total Debt (TDEBT) had significant and negative impact. In contrast, the Long-Term Debt (LDEBT) had no significant impact on the corporate performance.*

Keywords: *Corporate governance, capital structure, corporate performance*

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I. Introduction

Corporate governance is a set of guidelines, practices, and actions established to ensure the managers of a company work to achieve the company goals and maximize the wealth of the shareholders in an ethical manner [1]. Corporate governance has a critical role in building market confidence and attracting investors to the company. Corporate governance's essential spirit is to ensure transparency and trustworthy relationships between companies and stakeholders [2]. Besides, corporate governance helps providing a high level of trust in market operations by considering compliance with business ethics principles [3].

Corporate governance is a matter of concern for lenders, government, investors, and other stakeholders in today's business environment. The corporate governance framework focuses on allocating rights and obligations among the company's stakeholders, including the executives, the board of directors, and the shareholders. In order to control company decisions, it requires specified rules and procedures. Corporate governance offers a framework that helps companies set targets and track progress to ensure company objectives. Corporate governance is sufficient if the corporation has a robust regulatory structure, board empowerment, a high degree of accountability and disclosure, and well-protected shareholder rights [4].

There are currently several academic studies on the relationship between corporate governance and corporate efficiency. Some studies concentrated on one or more facets of the corporate governance and conducted the research to value the corporate performance. However, in a recent development, to understand the emerging complexity, some studies analyzed the impact of corporate governance on corporate performance by observing various factors and indexing [5], [6].

Previous studies found that corporate governance correlated with corporate performance [7], [8]. Well documented corporate governance will improve the corporate performance [9]. Another study revealed that corporate governance positively affected the corporate efficiency [10]. Likewise, there was also a research that discovered a negative correlation between the size of the board of directors, CEO Duality, and corporate performance [11]. Meanwhile, studies on the relationship between corporate governance and corporate performance have also been widely studied by various authors such as [12]–[16].

Also, it has noted the capital structure correlates with corporate performance. Prior study proved that capital structure positively affected corporate performance [17]. Additionally, short-term debt positively correlated with corporate performance, while long-term debt negatively associated with corporate performance

[18]. Another study found that total debt did not significantly affect corporate performance [19]. On the other hand, a negative and significant correlation between liabilities and corporate performance was documented [20].

This study aims to define the relationship between corporate governance and capital structure on corporate performance of non-financial companies listed on the Bursa Malaysia during the period 2013 to 2016.

II. Material And Methods

This study aims to discover the corporate performance relationship between corporate governance and capital structure of non-financial companies listed on the Bursa Malaysia. The researcher used panel data from the annual report of the selected companies for the period 2013 to 2016. Data on corporate governance was obtained from the yearly report taken from the bursamalaysia.com website as well as from the Thomson Reuters Datastream and Bloomberg terminal provided by the Sultanah Bahiyah library of the Universiti Utara Malaysia. As for the capital structure data and the corporate performance data, they were observed and taken by using the Thomson Reuters DataStream version 5.1 available at the library.

The initial dataset was 705 non-financial companies listed on Bursa Malaysia. From the period 2013 to 2016, only 470 samples were used as the research sample for the data analysis with 1880 observations.

In this research, the relationship between corporate governance (board size, independent board, CEO duality, board meetings, shareholder control, tenure) and capital structure (short-term debt, long-term debt, total debt) was explored against the corporate performance (Return On Asset), where the variables of firm size, firm age, and liquidity were considered as the control variables. Based on the set of hypotheses written in this research, then the regression analysis of the relationship between corporate governance, capital structure, and corporate performance can be formulated as follow:

$$\mathbf{ROA} = \alpha + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BDUAL_{it} + \beta_4 BMEET_{it} + \beta_5 SHARE_{it} + \beta_6 TENUR_{it} + \beta_7 SDEBT_{it} + \beta_8 LDEBT_{it} + \beta_9 TDEBT_{it} + \beta_{10} SIZEFIRM_{it} + \beta_{11} AGEFIRM_{it} + \beta_{12} LIQUID_{it} + €$$

(1.1)

Table 1: Summary of Measurement

Variable	Abbreviation	Measurement	Source
Return On Asset	ROA	Profit after tax/Total assets Corporate	[21]
Board Size	BSIZE	Total number of the board member	[21]
Board Independence	BIND	Percentage of independent members from the total number of board	[22]
CEO Duality	BDUAL	CEO Duality is a dichotomy of a binary variable. 1 if the chairman is also the CEO. and 0 if not	[21]
Board Meeting	BMEET	Total of board meeting frequency during the financial year	[23]–[25]
Shareholder Ownership	SHARE	Percentage of shareholding owned by the directors of the company	[26], [27]
Tenureship	TENURE	Number of years the board has served in the company	[28]
Short-Term Debt	SDEBT	Short-Term Debt / Total Asset	[18], [20], [29]
Long-Term Debt	LDEBT	Long-Term Debt / Total Asset	
Total Debt	TDEBT	Total Debt / Total Asset	
Firm Size	SIZE	The natural logarithm of an asset	[21]
Firm Age	AGE	The absolute metric of how many years the company has been operating	
Liquidity	LIQUID	The ratio of current assets to current liabilities	

Note: ROA: Return On Asset, BSIZE: Board Size, BIND: Board Independence, BDUAL: CEO Duality, BMEET: Board Meeting, SHARE: Shareholder Ownership, TENUR: Tenurship, SDEBT: Short-Term Debt, LDEBT: Long-Term Debt, TDEBT: Total Debt, SIZEFIRM: Size Firm, AGEFIRM: Age Firm, LIQUID: Liquidity

To conduct the empirical analysis and answer the study's main objectives, the STATA statistical analysis tool is used to analyze the data. Panel data will be useful for using both time series and cross-sectional information and provides a large number of observations, increasing the degree of independence and reducing joint correlation between explanatory variables [30]. Also, panel data is able to enhance the empirical analysis and provides more flexibility to model cross-sectional unit behavior than conventional time series analysis [31], [32].

III. Result

Descriptive statistics

This subsection presents descriptive statistics and univariate test results (t-test) for the data set used in this study. In terms of the variance or the combination of variables, descriptive statistics typically define a sample of subjects [33]. Moreover, descriptive analysis helps researchers understand their data by separating big data into summaries and categories [34]. Descriptive statistics provide a measure that allows the researcher to have an overview of the research sample and measurements. Therefore, the analysis result of the descriptive statistics (mean, standard deviation, minimum and maximum values) in this research is presented in Table 2.

Table 2: Descriptive Statistics of Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	1,880	4.13917	9.087745	-116.5	42.55
BSIZE	1,880	7.520213	2.075893	4	18
BIND	1,880	3.330319	1.113054	1	9
BDUAL	1,880	0.6351064	0.4815284	0	1
BMEET	1,880	5.351596	1.89065	1	27
SHARE	1,880	39.97337	11.55243	10.83	73.29
TENUR	1,880	5.040238	2.791586	0	22.5
SDEBT	1,880	0.1020269	0.1613449	0.0000349	3.170665
LDEBT	1,880	0.0689845	0.1737814	8.85E-06	4.217518
TDEBT	1,880	669274.8	2643738	0	4.03E+07
SIZE	1,880	13.25009	1.486763	10.12887	18.70489
AGE	1,880	30.46277	18.54694	2	228
LIQUID	1,880	100.5097	669.5107	0.0006564	20190.66

Note: ROA: Return On Asset, BSIZE: Board Size, BIND: Board Independence, BDUAL: CEO Duality, BMEET: Board Meeting, SHARE: Shareholder Ownership, TENUR: Tenurship, SDEBT: Short-Term Debt, LDEBT: Long-Term Debt, TDEBT: Total Debt, SIZEFIRM: Size Firm, AGEFIRM: Age Firm, LIQUID: Liquidity

According to Table 2, Return On Asset (ROA) has an average score of 4.13917, with a minimum of -116.5 and a maximum of 42.55, while the standard deviation is 9.087745. These results indicate considerable variation in Return On Asset across the sample. The corporate managers work effectively and efficiently to ensure the expected return on assets is obtained.

Descriptive statistics for independent variables based on the average, minimum, maximum, and standard deviation are shown in Table 2. The average Board Size (BSIZE) points the result of 7.5202. This average is comparable to the research performed among the listed companies in Malaysia [35], [36]. It is in the range of seven to eight directors recommended for board effectiveness [37]. However, this board's size in Malaysia is considered to be slightly higher than the findings found in other studies in East Asian countries. For example, in Bangladesh, the average board size was around 5 to 6 [38], while the average board size in Malaysia is lower than 8.5 of the research findings from Korean companies [39].

The average for the Board Independence (BIND) shows the result of 3.3303, which is similar to findings [40]. Descriptive statistics show that the organization has complied with the Malaysian Code of Corporate Governance recommendations that at least one-third of the board of directors should be comprised of independent directors. Furthermore, the descriptive statistical results on Board Meetings (BMEET) show that the average meeting is 5.351596, minimum value is 1, maximum value is 27, and standard deviation is 1.89065. These results indicate that some companies do not comply with the requirements of MCCG 2007 with a minimum of 4 meetings per year, for the listed companies in Malaysia, to perform their oversight functions effectively and monitor the management performance. Some companies have even met up to 27 times a year, while the standard deviation of 1,890 shows that the variation of some meetings between sample companies is not extensive. Apart from that, the average Shareholder Ownership (SHARE) in companies listed on Bursa Malaysia is 39.97337, a minimum of 10.83 and a maximum value of 73.29, and a standard deviation of 11.55243. Furthermore, the average Tenurship (TENUR) in companies listed on Bursa Malaysia is 5.040238, with the minimum value of 0 and maximum value of 22.5, and the standard deviation of 2.791586.

While the average for short-term debt (SDEBT) is 0.1020, minimum value is 0.1613, maximum value is 3.1706, and standard deviation is 0.1613. While the average for long-term debt (LDEBT) is 0.0689, with the minimum value of 8.85E-06 and maximum value of 4.2175, and standard deviation of 0.1737. The average for total debt (TDEBT) is 669274.8, minimum value is 0 and maximum value is 4.03E + 07, and standard deviation is 2643738.

Besides, descriptive statistical results show that the firm age has an average score of 30.46 years, with a minimum of 2 years and a maximum of 228 years. The standard age deviation of the firm is 18.54 for the listed firms in Malaysia. The firm's age is considered to affect the company's performance because the companies that have been operating for a longer period will have the economic advantages over the smaller companies [41].

CEO Duality (BDUAL) is a binary variable. CEO Duality is a situation where the chairman is also the CEO. CEO Duality is a dichotomy of a binary variable, 1 if the chairman is also the CEO and 0 if not. The data analysis results show that 63.51% of chairman in companies in Malaysia also act as CEO. Therefore, the binary variables are shown in Table 3.

Table 3: Dichotomy variables

Variables		**Number**	**Per cent (%)**
BDUAL	No (0)	686	36.49
	Yes (1)	1194	63.51
	Total	**1880**	**100%**

Multiple Regression Diagnostic

Before conducting a multiple regression analysis, some assumptions need to be met (outliers, normality, linearity, multicollinearity, heteroscedasticity and autocorrelation). Next, a model specification test developed by [42] was performed. Additionally, the study tested the autocorrelation issue by using the Wooldridge test and finally examined the cross-sectional dependence by using the Pesaran test. All of these tests are properly tested

Outliers are the observations that have very different values from other comments [43]. Several methods are available to solve them. This study used the distribution of the following variables based on previous reviews [44]–[49], which is one way to eliminate the possibility of the isolation. Therefore, to reduce the influence of the outlier, the continuous variables which have extreme values (outliers), have been changed from the actual observations to the normal distributions by adjusting these variables to a minimum, that is 1% at the top and bottom of their allocation to preserve the original data features. In this analysis, the winsorisation method was used. Therefore, all variables with unusual observations and extreme values were altered and normalized through the winsorisation to avoid the effect of outliers in the data distribution. Several variables that had isolation problems were ROA, BMEET, SDEBT, LDEBT, TDEBT, AGE and LIQUID. This study confirmed at 6 and 94 percentile to control isolation problems [50], [51].

Besides, the normality assumption test in this study used skewness and kurtosis. It generally recommends that skewness should be at the threshold of ± 3 [43]. For the kurtosis, it should not be more than ± 10 [52]. After testing, the all research data was found to be normally distributed. Furthermore, Pearson correlation was carried out to test for the multicollinearity issue. The analysis results did not show the multicollinearity because the correlation coefficient value in this research did not exceed 0.80 [43].

Table 4: Descriptive Statistics Skewness – Kurtosis

Variable	**Observation**	**Skewness**	**Kurtosis**
ROA_w	1,880	-0.002938	2.778169
BSIZE	1,880	0.9725055	4.591884
BIND	1,880	0.8564148	5.012245
BDUAL	1,880	-0.5613057	1.315064
BMEET_w	1,880	0.9398886	3.054723
SHARE	1,880	0.2640997	2.92177
TENUR	1,880	1.712738	7.592163
SDEBT_w	1,880	1.343364	3.697988
LDEBT_w	1,880	1.787883	5.039203
TDEBT_w	1,880	2.424051	7.810868

SIZE	1,880	0.7369094	3.727857
AGE_w	1,880	0.5661445	2.273815
LIQUID_w	1,880	2.518679	8.066812

Note: ROA: Return On Asset, BSIZE: Board Size, BIND: Board Independence, BDUAL: CEO Duality, BMEET: Board Meeting, SHARE: Shareholder Ownership, TENUR: Tenurship, SDEBT: Short-Term Debt, LDEBT: Long-Term Debt, TDEBT: Total Debt, SIZEFIRM: Size Firm, AGEFIRM: Age Firm, LIQUID: Liquidity

Direct Relationship

The data had a heteroskedasticity and autocorrelation problem. Then the analysis used Panel Correction Standard Error (PCSE) as suggested by [53]. PCSE is defined as superior for panel data with autocorrelation, heteroskedasticity, and cross-sectional dependence [54].

The test results for the model (ROA) utilized the Panel Corrected Standard Errors (PCSEs) to estimates and evaluate the company's performance which is presented in Table 5. The PCSE results shown in Table 5 illustrate some important indicators such as R-square (R2), which is the determination coefficient, and it evaluates the appropriate suitability for the regression model. Other indicators are P-values, WaldChi2 statistics, and beta coefficients (β), in which they show how the explanatory variables affect the outcome variables. The results of PCSE regression are shown in Table 5.

Table 5: Direct Relationship Regression Result for Model (ROA)

Variables	**Coef.**	**z**	**P>z**
BSIZE	0.496229	6.95***	0.000
BIND	-0.37872	-3.11***	0.002
BDUAL	0.570699	2.32**	0.020
BMEET_w	-0.48591	-4.71***	0.000
SHARE	0.014155	1.26	0.207
TENUR	0.008027	0.2	0.844
SDEBT_w	-3.26121	-2.64***	0.008
LDEBT_w	-2.25157	-1.44	0.150
TDEBT_w	-2.64E-06	-8.77***	0.000
SIZE	1.274174	9.54***	0.000
AGE_w	-0.00897	-1.04	0.300
LIQUID_w	0.001229	0.64	0.522
_cons	-11.8896	-6.71	0.000
R-Square	0.102		
P > z	0.000		

Note: ROA: Return On Asset, BSIZE: Board Size, BIND: Board Independence, BDUAL: CEO Duality, BMEET: Board Meeting, SHARE: Shareholder Ownership, TENUR: Tenurship, SDEBT: Short-Term Debt, LDEBT: Long-Term Debt, TDEBT: Total Debt, SIZEFIRM: Size Firm, AGEFIRM: Age Firm, LIQUID: Liquidity

IV. Discussion

Table 5 shows the result of R2 which is 0.1020. It indicates that 10.22% variance in performance is accounted by this model to determine the performance of ROA. Furthermore, a value of R2 of 10.22% is an indication that the variance in ROA as a measure of enterprise performance is statistically calculated by the regression equation (independent variables). The same results in Table 5 also show that model 1 is significant (p <0.0l) which it indicates the model's validity.

In consideration of the hypothesis testing, beta coefficients were used. Beta coefficients are used to determine the effect of each independent variable on the dependent variable. In this case, the higher the beta coefficient, the greater the impact of the explanatory variable on the dependent variable. In this model, the variable with the largest beta coefficient (3.3.26121) was Short-Term Debt (SDEBT) and was also found to be statistically significant at 0.008 (p <0.0l). SDEBT indicates that it made the strongest unique contribution in

explaining performance variable as demonstrated by ROA. Also, the beta coefficient score for Long-Term Debt (LDEBT) was (-2.25157), which was slightly lower than SDEBT. However, LDEBT was statistically insignificant at the level of 0.05 (p> 0.1).

Likewise, other related variables that were found to be statistically significant with ROA include: CEO Duality (BDUAL) (β = 0.5706, p < 0.05), Board Size (BSIZE) (β = 0.4962, p < 0, 01), Board Meeting (BMEET) (β = -0.4859, p < 0.01), Board Independence (BIND) (β = -0.3787, p < 0.01), Total Debt (TDEBT) (β = -2.64E-06, p < 0.01), Size Firm (SIZE) (β = 1.2741, p < 0.01). Seven variables (BDUAL, BSIZE, BMEET, BIND, SDEBT, TDEBT, SIZE) were statistically significant on the company performance as measured by ROA. Meanwhile, Shareholder Ownership (SHARE) (β = 0.0141, p > 0.1), Tenure (TENUR) (β = 0.0080, p > 0.1), Age Firm (AGE) (β = -0, 0089, p > 0.1), Liquidity (LIQUID) (β = 0.0012, p > 0.1), failed to make a statistically significant contribution to company performance as measured by ROA due to the result of their p values that were more than 1.

One of the qualities that researchers consider is the size of the board of directors. Prior studies about the effect of the board size on corporate performance demonstrated various results. Table 5 presents a significant and positive relationship between Board Size and Corporate performance (ROA), where the level of the Board Size (BSIZE) statistical value (β = 0.4962, p <0.01). This result supports the findings where the board size had a positive and significant effect on corporate performance [55], [56]. This result also supports the argument of the agency theory, which states that a large number of directors bring more experience and diversity, which significantly increases board effectiveness [57]. However, there was also findings that discovered a negative correlation between the size of the board of directors and corporate performance [8], [58], [59]. Likewise, the findings of the study on 452 large industrial companies in the United States, revealed a negative relationship between board size and corporate performance [60].

Meanwhile, Board Independence had a significant and negative relationship with corporate performance (ROA), where the level of the Board Independence (BIND) statistical value (β = -0.3787, p <0.01). This result follows the findings with the empirical result of a negative relationship between board independence and corporate performance [8], [59]. This result is also considered to be more consistent with the stewardship theory, in which boards play a supporting role by empowering executives and enhancing the potency for higher performance. Meanwhile, certain study suggested that the Independent Board had no significant relationship with corporate efficiency [56].

While CEO Duality (BDUAL) had a significant and positive relationship with corporate performance (ROA), where the statistical value level of CEO Duality (BDUAL) (β = 0.5706, p <0.05). This result follows the findings which stated that CEO Duality had a positive relationship with corporate performance [59]. However, it contradicts with the result of study which suggested that CEO Duality did not have a significant relationship with corporate performance [56]. The Board Meeting (BMEET) had a significant and negative relationship with corporate performance (ROA), where the statistical level of the Board Meeting (BMEET) (β = -0.4859, p <0.01). This finding is different from the result of study which stated that Board Meetings had a positive relationship with corporate performance [59]. Another study instead found that there was not significant relationship between the Board Meeting and the corporate performance [56].

Furthermore, shareholder ownership (SHARE) had no significant relationship with corporate performance (ROA), where the statistical value of Shareholder Ownership (SHARE) is (β = 0.0141, p> 0.1). This result supports the findings which stated that there was not significant relationship between shareholder ownership and corporate performance [61]. Finally, the analysis results of tenure (TENUR) was not statistically significant to corporate performance. It noted that a director's tenure is an indicator of company stability [62]. Longer board tenure indicates that shareholders are satisfied with the director's performance, and will have higher future abnormal returns. Meanwhile, certain study also discussed the relationship between CEO tenure and company performance and found that there was not any relationship between those two variables [63].

The analysis result between capital structure (SDEBT, LDEBT, TDEBT) and company performance (ROA) found a significant and negative relationship. This result is consistent with the study which reported that the capital structure and company performance had a negative and significant relationship [64]. Another study instead found that SDEBT and LDEBT had a negative and insignificant relationship with corporate performance (ROA), while it was also revealed that TDEBT had a positive relationship with corporate performance (ROA) [65].

V. Conclusion

This study examined the relationship between corporate governance, capital structure, and corporate performance. Corporate governance has an essential meaning for companies and society. Companies will gain the public's trust by fostering a healthy corporate governance environment. The analysis found that board size, board independence, CEO Duality, and Board Meeting statistically and significantly affected the company performance. Furthermore, shareholder ownership and tenure statistically had no significant impact on the

corporate performance. Meanwhile, the capital structure had a significant relationship with the company performance.

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