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DIVIDEND POLICY IN MALAYSIA: A COMPARISON OF DETERMINANTS PRE AND POST MALAYSIAN CODE ON CORPORATE GOVERNANCE

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ABSTRACT

This study was aimed at examining the differences between dividend policy determinants pre- and post-Malaysian Code on Corporate Governance (MCCG) 2012. Several factors, including profitability, lagged dividend, free cash flow, debt, firm size, investment opportunities and market risk were tested. The study investigated a total number of 631 non-financial firms in Malaysia that covered 7830 firm-year observations from 2005 to 2011 (pre-MCCG) and from 2013 to 2019 (post-MCCG). The study used pooled Ordinary Least Square (OLS) and random and fixed effect, with a robust standard error. The results demonstrated that from seven factors tested only four factors were found to be significant in determining dividend policy in pre-MCCG, and five factors in post MCCG. The pre-MCCG test

revealed that before the revised MCCG 2012, the factors determining dividend policy were as follows: profitability, lagged dividend, debt, and firm size. However, there were slight changes in the range of determinants affecting dividend policy, Post-MCCG 2012. The post MCCG test revealed that profitability, lagged of dividend, and firm size consistently determined firm dividend policy; however, debt was no longer a significant determinant of dividend policy post MCCG. Additionally, investment opportunity and market risk were found to be significant determinants of dividend policy post-MCCG in 2012.

Keywords: Dividend policy, corporate governance, emerging markets, Malaysia.

JEL Classification: G1, G3, G35.

INTRODUCTION

Dividend policy has been listed as the top ten unresolved issues in the world of corporate finance (Brealey & Myers, 2005). According to Black (1976), the complexity of the dividend could be visualised as a piece of the puzzle that was hard to fit each other. One of the main reasons the dividend was classified as a puzzle was that a firm's decision to pay or not pay, increase, or decrease the dividend would substantially influence the firm's performance and financial position. For example, if assuming a firm has decided to pay a dividend; in this case, the firm would have less financial capability to finance its investment opportunities. Conversely, if the firm has decided not to pay a dividend, it would affect the firm's valuation and damage its reputation.

The interconnected link between a firm's dividend policy and its other policies indicates how important it is to achieve an optimum dividend level. Several past empirical studies have revealed that a dividend policy could be affected by profitability, debt level, firm size, investment opportunity and cash flow. Although a substantial number of studies have been conducted regarding dividend policy determinants, there has been minimal attention given to corporate governance policy and its impact from the determinants of dividend policy. According to Bakri et al. (2019), the dividend could be used as a substitute for weak

governance to maintain a good relationship with shareholders. This implied that the governance or corporate governance could influence a firm's dividend in policy to a certain degree. For example, strong governance has been posited as significantly influencing a firms' intention to pay more dividends (Mitton 2004; Petrasek, 2012).

The strong influence of governance quality over the dividend policy and the minimal attention given to the determinants of dividend especially in the emerging markets creates a room to be filled in. Motivated by this concern, the study was aimed at determining whether the changes in the Malaysian code on corporate governance in 2012 might have influenced a firm's dividend policy. Furthermore, changes in the Malaysian corporate governance code have made it an imperative to investigate these issues because the country's market has experienced substantial growth in recent years.

Malaysia is considered one of the most developed capital markets among emerging markets (Yusof & Ismail, 2016). The Malaysian capital markets have continuously become the backbone of financial sources, with RM 90 billion raised via the primary market for the fourth consecutive year (Security Malaysia, 2016). During this financial year, RM 86 billion was raised via bond issuance and RM4 billion raised via initial public offering (IPO) (Security Malaysia, 2016). In 2017, the Malaysian capital market grew by 12.6 percent from the previous year, achieving a sum of RM 3.2 trillion with the total capital raised amounting to RM 146.6 billion (Security Malaysia, 2018).

The exponential growth of Malaysia capital markets and the changes in the policy on the Malaysia code on corporate governance has motivated the present study to investigate whether the factors that have determined dividend policy in Malaysia have changed over the past few years, after the changes introduced in the MCCG in 2012. The study would contribute to the existing body of knowledge on dividend policy by expanding the existing empirical evidence in several ways. First, the present study sought to examine the determinants of dividend policy using the corporate governance changes as the basis of comparison. This have not been tested or has been overlooked in past studies. Second, the study might be very helpful to the practitioner, especially to the management team, in determining its dividend policy or to prioritise on optimising dividend policy; strategies which could

maximise their shareholders' wealth, and at the same time without jeopardising the firm's performance.

The rest of the paper is structured as follows; the following sections discuss the study's theoretical framework, literature review related to dividend policy determinants, and how past theories and empirical evidence have been used to derive the present study's hypotheses. Next, are the sections on the methodology, findings, and discussions. Finally, the paper concludes by discussing the implications and limitations of the study, and suggestions for future research.

LITERATURE REVIEW

In general, at the end of each financial year, the firm with a profit will decide on whether to distribute its profit or not. If so, how much will this profit be distributed in the form of a dividend? For more than a decade, the dividend issues remained a mystery among researchers and practitioners. For instance, the firm is required to decide its optimum dividend policy, and this is because, the dividend will affect other the firm's other policies, such as firm investment and capital structure, which will be directly linked to firm-specific characteristics (Smith & Watts, 1992; Gaver & Gaver, 1993; Braclay et al., 1995). The complexity of the dividend often makes it being visualised as a puzzle which is difficult to piece together (Black, 1976). The puzzle of the dividend remains as potential issues that require further research. There are issues such as the regulation, policy, and economic changes that significantly influence how a firm determines its dividend policy throughout a year. Thus, to identify what has changed over the past year, research to update the body of knowledge in this aspect is crucial. This will enable stakeholders to understand whether the determinants of dividend policy has changed over the years, and whether these have impacted the firm's dividend policy.

One of the earliest studies with regards to dividend determinants was conducted by Lintner (1956). This study revealed that a firm's profitability and past year dividend had a major influence over the firm's dividend policy. The study posited that the reasons for this influence were that the investors preferred a dividend with a stable

payment rate. The finding was also supported by much empirical evidence from other later studies, which also showed that the dividend was significantly influenced by profits and past year dividend (Pruitt & Gitman, 1991).

Since the classic study by Lintner (1956), more studies have been conducted to examine the factors that may influence the dividend policy. One of the earliest theories relating to dividend policy is the signalling theory. According to Miller and Modigliani (1961), a dividend announcement would convey some information about a firm's performance, making the shareholders and investors likely to react to the announcement. Bhattacharya (1979) also supported this theory, when they showed that there was a profitability correlation with dividend policy. Furthermore, the dividend announcement reflected the stability of a firm's financial performance in the future (Kale & Noe, 1990). The dividend reflected a firm's financial performance stability because a firm generally would only announce a dividend payment or any dividend increase. Consider the scenario in which a firm has decided on a different dividend policy, for example, a dividend omission or decrease. In this instance, it has conveyed information to the shareholders and investors that the firm has become less profitable or could suffer a potential loss. As a result, the market would punish the firm that has made dividend omission, or has decreased their dividend by mitigating the demand for their stocks, or share sell by those firms, resulting in a low firm valuation.

Besides signalling theory, agency cost theory has also been related to dividend policy. The theory is based on the principal and agent relationship, in which a manager act as an agent and the owner or shareholder act as a principal. The problem arises when the manager's action is not aligned with the best interest of the shareholder. Agency cost theory suggests that the dividend can be used as a tool for the mitigated agency problem. Easterbrook (1984) and Jensen (1986) in their study indicated that the dividend could be used as a mechanism to divert the attention of insiders from using the excess cash to invest in an unprofitable project, or for personal use. Agency cost theory also suggested that the dividend can be used to mitigate the agency's problem by reducing agency cost related to free cash flow, debt, firm growth, investment opportunities, firm size and risk (Jensen & Meckling, 1976; Rozeff, 1982; Jensen, 1986; Utami & Inanga, 2011).

The theory indirectly indicates that these factors can potentially influence the dividend policy (Yusof & Ismail, 2016). To investigate free cash effect based on agency cost theory, the study used "FCF" as a proxy for free cash flow.

In general, the higher the profitability, the more cash available, and the more dividend paid to mitigate agency cost. In this regard, agency cost theory, pecking order theory, and signalling theory might help to explain the relationship between dividend and profitability (Fama & French, 2002; Yarram & Dollery, 2015). Kuzucu (2015) discovered that dividend and profitability had a negative relationship. In contrast, al-Malkawi (2007) Bokpin (2011), Patra et al. (2012) identified profitability as a key determinant which has a positive association with dividend policy. To investigate this effect on dividend policy, present study has used ROA as a proxy for profitability and FCF to proxy for free cash flow. To examine the impact of profitability on a firm's dividend policy, and following Fang et al. (2014) and Jiang et al. (2017), the present study used "ROA" which is a return on asset as a proxy for profitability. Whereas to examines the cash availability on dividend determinants, the study used FCF following Yusof and Ismail (2016).

In the context of the debt and dividend policy relationship, a firm with more debt requires excess cash to settle its debt obligations to prevent from default. It will then lead to a reduction, in terms of available cash to sustain the operating expenses. As a result, the management team may reduce the funds available to shareholders and reduce the term of dividend pay outs. In other words, a debt and a dividend have a negative relationship. Supporting this idea, several empirical studies have been conducted in the past years. For example, al-Malkawi (2007) discovered a negative association between debt financing and dividend policy when examining the determinants of dividend policy in Jordan. Similarly, the same findings were also found in Yusof and Ismail (2016); al-Shubiri (2011) and Ramli (2010). However, not all previous studies showed a negative association between debt level and dividend policy; for instance, Appannan and Sim (2011) found a positive association between debt level and dividend pay outs. In contrast, Singla and Samanta (2019) documented an insignificant relationship between leverage and dividend. To investigate the firm's debt-level effect on dividend policy, the present study used "Debt" to refer to the total liabilities to total asset ratio as a proxy for debt level.

Generally, when the firm size increases, it will pay more dividend to mitigate the agency problem, which is likely to increase. The reasons for the increasing agency problem among larger firms are that a large firm has more widespread ownership and therefore, difficulty in controlling its internal and external financing activities, relative to small firms (Yusof & Ismail, 2016). The positive relationship between firm size and dividend policy has been well documented in numerous past empirical researches such as in Ramli (2010), Mehrani et al. (2011), Hashemi and Zadeh (2012), and Yusof and Ismail (2016). Besides the finding on the positive association between dividend policy and firm size, past studies also recorded a negative association between firm size and dividend policy, such as in the studies by Ahmed and Javid (2009) and Huda and Farah (2011). To investigate firm size effect on dividend policy, the present study has used "Size" to refer to a natural logarithm of a total asset to proxy for the firm size, following past studies such as those by Yusof and Ismail (2016); and Dewasiri et al. (2019).

In the context of investment opportunity and its relationship with dividend policy, agency cost theory has been able to provide a rational explanation. According to this theory, a firm with no or less growth and investment opportunities would be prone to being exposed to agency costs related to free cash flow (Yusof & Ismail, 2016). According to Jensen (1986), to reduce firm agency cost, a firm with less investment and growth opportunities would pay more dividend. In contrast, a firm with greater investment and growth opportunities would be paying less or no dividend because they would have required more cash to finance its investment opportunity. The negative association between investment and growth opportunities, and dividend policy were recorded in many previous studies, such as those by Rozeff (1982), Jensen et al. (1992), al-Kuwari (2010), and Yusof and Ismail (2016). To investigate this effect, the present study used "INV" to refer to the ratio of retained earnings over total asset, following Yusof and Ismail (2016).

The factor of risk was also often associated with dividend policy in many past studies. A greater need for external sources of financing demonstrates a massive fluctuation in firm cash flow, which also indicates a higher firm risk. Thus, to mitigate the concerns regarding external sources of financing, a firm would often pay less dividend

(Rozeff, 1982). The negative relationship between risk and dividend policy were recorded in several past studies such as in Ramli (2010) and al-Shubiri (2011), which discovered a negative relationship between dividend policy and firm risk. In contrast, Al-Shabibi and Ramesh (2011) found a positive relationship between a firm's risk and the firm's decision to pay a dividend. In contrast, not all research discovered a negative association between risk and dividend payment. For example, Franc-Dabrowska et al. (2020) found an insignificant relationship between risk and dividend policies. To examine the influence of risk on a firm's dividend policy, the present study used "Risk" to refer to one year of market beta, following Yusof and Ismail (2016). Based on the postulates of signalling theory, agency cost theory, the Lintner model and empirical evidence discovered in previous studies, the hypotheses for the Malaysian context of dividend policy were developed as follows:

H_1 : There is a positive relationship between profitability and firm dividend policy pre- and post-MCCG 2012.
H_2 : There is a positive relationship between lagged of dividend and firm dividend policy pre-and post-MCCG 2012.
H_3 : There is a positive relationship between free cash flow and firm dividend policy pre- and post-MCCG 2012.
H_4 : There is a negative relationship between debt level and firm dividend policy pre- and post-MCCG 2012.
H_5 : There is a positive relationship between firm size and firm dividend policy pre- and post-MCCG 2012.
H_6 : There is a negative relationship between investment opportunities and firm dividend policy pre-and post- MCCG 2012.
H_7 : There is a negative relationship between market risk and firm dividend policy pre- and post-MCCG 2012.

METHODOLOGY

Sample Selection and Data Collection

The present study used a non-financial firm sample which was made available in DataStream within Malaysia. The reason the present study has elected to exclude a firm within banks and in non-financial sectors

was because of the issue of the high leverage and industry regulations (Dewasiri et al., 2016). This study also included a one year lagged of dividend per share to mitigate the concerns of serial correlation. As a result, the study lost some firm-year observations. There were two periods covered in this study; the first is the period between 2005 to 2011 (pre-MCCG 2012), and the second is the period between 2013 to 2019 (post-MCCG 2012). The main justification for selecting these two time frames for this study was the aim of examining the pre-and-post MCCG 2012 impact on dividend policy determinants.

Data Analysis

The data were analysed using Stata (version 13). More specifically, the regression method was conducted using pooled OLS, random as well as fixed-effect analysis. Before analysing the data, the study also carried out several diagnostic tests to ensure the data were free from any multi-collinearity and heteroscedasticity issue. The diagnostic test to identify multi-collinearity issues included the correlation matrix analysis and Variance Inflation Factors analysis. Furthermore, the study also used the robust standard errors calculation analysis to ensure that the data were free from heteroscedasticity issues.

The dependent variable used in this study was the dividend per share. Whereas the independent variables used in this study included the following: profitability, lagged of dividend, free cash flow, debt level, firm size, investment opportunities and market risk. The study also added industries and year fixed effect which used dummies to control for industry and year effect. The model used in this study is as follows:

$$DPS_{i,t} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 DPS_{i,t-1} + \beta_3 FCF_{i,t} + \beta_4 Debt_{i,t} + \beta_5 Size_{i,t} + \beta_6 INV_{i,t} + \beta_7 Risk_{i,t} + \delta_{i,t} + \mu_{i,t} + \varepsilon_{i,t}$$

Where,

$DPS_{i,t}$ = Dividend per share
$ROA_{i,t}$ = Return on asset
$DPS_{i,t-1}$ = Lagged of dividend
$FCF_{i,t}$ = Free cash flow
$Debt_{i,t}$ = Total liabilities over total asset
$Size_{i,t}$ = Natural logarithm of total asset

$INV_{i,t}$ = Investment opportunity
$Risk_{i,t}$ = Market risk
$\delta_{i,t}$ = Industries fixed effect
$\mu_{i,t}$ = Year fixed effect
$\varepsilon_{i,t}$ = Error terms

Table 1

Variables Definitions

Variables	Represented by	Definitions
Dividend	DPS	Dividend per share
Profitability	ROA	Return on asset
Lagged of dividend	LDPS	Dividend per share
Free cash flow	FCF	Free cash flow
Debt	Debt	Total liabilities/total assets
Firm size	Size	Natural logarithm of total assets
Investment opportunity	INV	Retained earnings/total assets
Market beta	Risk	1 Year of market beta

FINDINGS AND DISCUSSIONS

Descriptive Statistics

The descriptive statistics presented in Table 2 showed the mean, standard deviation, and minimum and maximum value for each variable tested in this study. As demonstrated in Table 2, the average dividend per share and return on assets were 0.05 and 3.57, respectively. The average lagged of dividend, free cash flow, debt, size, investment opportunities, and market risk were 0.05, 0.02, 0.37, 12.70, 0.08, and 1.05 respectively.

Before examining the main analysis, the study conducted several diagnostic tests. These tests were conducted to ensure the robustness of the result. They included tests on normality, heteroscedasticity, an autocorrelation test and lastly a multi-collinearity test. To mitigate the concern about any outlier, the study winsorizing the data at 1 and 99 percentiles. Next, the study examined the potential heteroscedasticity of the data using the White heteroscedasticity test. To reduce this concern, as indicated by the test, the study used the robust standard errors calculation.

Table 2

Descriptive Statistics of the Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
DPS	7830	0.0415	0.0917	0	0.59
ROA	7830	3.5717	9.5172	-35.41	31.96
LDPS	7830	0.0406	0.0897	0	0.59
FCF	7830	0.0114	0.1519	-0.617	0.569
Debt	7830	0.3736	0.2007	0.0235	0.9308
Size	7830	12.7062	1.6258	5.7930	19.0014
INV	7830	0.0889	0.4020	-1.8470	0.7086
Risk	7830	1.0470	0.6926	-0.678	3.268

The study also used the lag of dependent variable to solve the potential autocorrelation in the data, as indicated by the Breusch Pagan Lagrange Multiplier (LM) test. Finally, the study also conducted a multi-collinearity test. Following Hair et al. (2010), any value higher than 4.00 in VIF Score and 0.60 in the Pearson correlation matrix was considered as having high multi-collinearity. As shown in Table 3 and 4, no variables, excluding lagged dependent variables, had a value higher than 4.00 and 0.60. This indicated that there was no risk of multi-collinearity.

Table 3

Variation Inflation Factor Analysis of Determinants of Dividend Policy

Variable	VIF	1/VIF
INV	1.71	0.5850
Size	1.66	0.6031
ROA	1.42	0.7059
Debt	1.37	0.7302
LDPS	1.3	0.7711
Risk	1.09	0.9161
FCF	1.06	0.9431
Mean VIF	1.37	

Table 4

Pearson Correlation Matrix Results

Variables	DPS	ROA	LDPS	FCF	Debt	Size	INV	Risk
DPS	1							
ROA	0.3453***	1						
LDPS	0.9321***	0.3150***	1					
FCF	0.0958***	0.2181***	0.0738***	1				
Debt	-0.0289**	-0.1117***	-0.0246**	-0.1073***	1			
Size	0.3748***	0.2464***	0.3694***	0.0704***	0.2903***	1		
INV	0.2717***	0.4842***	0.2678***	0.1466***	-0.2820***	0.3637***	1	
Risk	-0.1689***	-0.1225***	-0.1691***	-0.0248**	0.0925***	0.1078***	-0.1184***	1

Note. *, ** and * denote statistical significance at 1%, 5% and 10% level of significance respectively.

Regression Results

The main analysis was as presented in Table 5. The Hausman test indicated that the fixed effect was the most appropriate choice, which referred to model III pre-MCCG and model VI post-MCCG 2012. From the seven variables tested in this study, four variables were found to be significant pre-MCCG 2012 and five variables in post-MCCG 2012. Referring to Model III, ROA, LDPS, Debt, and Size were found to be significant. From among the four significant variables pre-MCCG 2012, ROA, LDPS and Size, were significant at a 1 percent level, while debt was significant at 10 percent. From among the four significant variables, ROA, LDPS, and Size showed a positive relationship, whereas debt was negatively related.

The post-MCCG 2012 analysis results presented in Table 6 showed that there were slight changes in the range of dividend policy determinants; it was found that from the original seven factors tested post-MCCG 2012, only five variables were found to be significant including ROA, LDPS, Size, INV and Risk. The five factors found to be significant were the following: ROA and LDPS were significant at 1 percent level, Size and INV were significant at 5 percent level and risk was significant at 10 percent. Among the five factors, three variables, namely ROA, LDPS and Size, were positively related to dividend whereas, two factors, namely Debt and Risk, were found to be negatively correlated. Hence pre-MCCG 2012, H_1 (profitability), H_2 (lagged of dividend), H_4 (Debt), H_5 (Size) were supported, and the remaining variables were not supported. On comparison, post-MCCG 2012, H_1(profitability), H_2 (lagged of dividend), H_5 (Size), H_6 (INV) and H_7 (Risk) were supported, while the remaining variables were not supported.

The positive and significant relationship between profitability and dividend pre- and post-MCCG 2012 indicated that as a firm's profitability increases, it would increase its dividend payment, which indirectly supported the postulates of signalling theory. As the firm's performance became better, it could reward its shareholders in the form of a dividend payment. The results in this study were consistent with many other previous research studies, such as those by al-Malkawi (2007), Ahmed and Javid (2009), al-Kuwari (2010), Ramli (2010), Mehrani et al. (2011), al-Shabibi and Ramesh (2011), Yusof and Ismail (2016), and Dewasiri et al. (2016). However, the

findings regarding dividend and profitability were not corroborated in the results found in Anil and Kapoor (2008) and Appannan and Sim (2011) where the researchers discovered a negative association between dividend and profitability.

The documented positive relationship between dividend and lagged of dividend pre-and post-MCCG 2012 were consistent with those in Lintner (1956) and Yusof and Ismail (2016). Lintner (1956) had suggested that firm profitability and the past year dividend (lagged dividend) were major determinants of firm dividend policy. According to Yusof and Ismail (2016), the influence of past year dividend over the current year dividend was the result of the investor preferring a much stable dividend rate. As a result, a firm tended to make the dividend decision based on the past year dividend policy.

The negative association between debt level and dividend pre-MCCG 2012 was consistent with past studies such as those by Yusof and Ismail (2016), al-Shubiri (2011), Ramli (2010), and al-Malkawi (2007). This result also indicated that the debt level provided incentives to the firm to limit its dividend payment to fulfil its debt obligation. The finding also indirectly suggested that the debt level was influenced by the bank covenant, which might restrict the amount of dividend that could be paid by the firms. However, the result was inconsistent with several past studies such as in Appannan and Sim (2011), and Singla and Samanta (2019), which had demonstrated a negative and insignificant relationship.

The significant positive relationship between firm size and dividend policy pre- and post-MCCG 2012, indicated that the agency cost theory was supported. According to this theory, the larger the firm size, the greater the percentage of widespread ownership. This most likely had created a difficult to control internal and external financing sources (Yusof & Ismail, 2016). Thus, to control agency costs associated with the greater widespread ownership found in a large firm, the large firm tended to increase dividend payment. The findings from this study with regards to firm size and dividend policy had been consistent with those in previous studies such as those in al-Malkawi (2007), al-Kuwari (2010), Ramli (2010), Yusof and Ismail (2016) and Dewasiri et al. (2019).

The negative association between investment opportunities and dividend policy post-MCCG 2012 was consistent with agency cost

theory. According to this theory, a firm with little to no ability to demonstrate a high potential growth rate would be highly exposed to agency cost, especially regarding free cash flow (Yusof & Ismail, 2016). Therefore, to mitigate those concerns, a firm with a greater investment opportunity represented by INV in the present study would most likely pay less dividend. The reasons were due to the firm requiring the cash to finance its investment opportunity. The negative relationship between dividend and risk has found support in past empirical evidence presented in Al-Shubiri (2011) and Ramli (2010). The results indicated that a firm with greater market risk had more cash flow issues or greater fluctuation with regards to the firm cash flow. As a result, the firm might reduce its dividend payment to ensure better cash flow to meet its obligation and finance its investment opportunity. However, the results were found to be not consistent with other past empirical studies such as those in Franc-Dabrowska et al. (2020) which had found an insignificant relationship between dividend and risk.

Table 5

Panel Ordinary Least Square, Random Effect and Fixed Effects (with Robust Standard Errors)

Model	Model I: Pooled Ordinary Least Square (Robust Standard Errors)		Model II: Random effect (Robust Standard Errors)		Model III: Fixed effect (Robust Standard Errors)	
Regressors	Regression coefficient	t-statistics	Regression coefficient	z-statistics	Regression coefficient	t-statistics
Constant	-0.0364	-3.39**	-0.0344	-4.99***	-0.1031	-3.62**
$ROA_{i,t}$	0.0004	4.71***	0.0005	6.14***	0.0005	5.36***
$LDPS_{i,t}$	0.8896	28.44***	0.9138	32.41***	0.3994	5.00***
$FCF_{i,t}$	0.0091	1.43	0.0088	1.60	-0.0087	-1.10
$Debt_{i,t}$	-0.0134	-3.22**	-0.0128	-3.49**	-0.0208	-2.57*
$Size_{i,t}$	0.0045	4.97***	0.0037	5.22***	0.0107	4.57***
$INV_{i,t}$	-0.0030	-2.41*	-0.0031	-2.38*	-0.0050	-1.91
$Risk_{i,t}$	-0.0031	-3.02**	-0.0033	-3.83***	0.0006	0.44
Industries	Yes		No		No	
Year	Yes		No		No	
R-Squared	0.8321		0.8267		0.7543	

Note. *, ** and * denote statistical significance at 1%, 5% and 10% level of significance respectively.

Table 6

Panel Ordinary Least Square, Random Effect and Fixed Effects (with Robust Standard Errors

Model	Model IV: Pooled Ordinary Least Square (Robust Standard Errors)		Model V: Random effect (Robust Standard Errors)		Model VI: Fixed effect (Robust Standard Errors)	
Regressors	Regression coefficient	t-statistics	Regression coefficient	z-statistics	Regression coefficient	t-statistics
Constant	-0.0267	-3.43**	-0.0176	-2.64**	-0.0399	-2.01*
$ROA_{i,t}$	0.0005	6.24***	0.0005	6.34***	0.0004	4.28***
$LDPS_{i,t}$	0.9075	46.28***	0.9217	51.09***	0.4343	8.20***
$FCF_{i,t}$	0.0091	1.43	0.0094	1.52	-0.0076	-1.11
$Debt_{i,t}$	-0.0031	-1.04	-0.0034	-1.35	-0.0098	-1.85
$Size_{i,t}$	0.0020	3.45**	0.0018	2.86**	0.0054	3.32**
$INV_{I,t}$	-0.0050	-3.78***	-0.0053	-4.22***	-0.0077	-3.48**
$Risk_{i,t}$	-0.0022	-3.56***	-0.0016	-2.59*	-0.0032	-2.36*
Industries	Yes		No		No	
Year	Yes		No		No	
R-Squared	0.9078		0.9060		0.8876	

Note. *, ** and * denote statistical significance at 1%, 5% and 10% level of significance respectively.

Additional Test

The results presented in Table 5 and 6 might be influenced by endogeneity with regard to omitted variables bias. According to Jiang, Ma and Shi (2017), the firm fixed effect could reduce the concern of endogeneity, especially regarding omitted variables bias. Thus, the pesent study re-examined the model using the firm fixed effect to mitigate omitted variables bias following Jiang et al. (2017) and Bakri et al. (2020), the results are as presented in Table 7. The results revealed that dividend policy determinants remained persistent even after controlling for endogeneity concerns regarding omitted variables bias both in pre-and-post MCCG 2012, as represented via model VII and model VIII. Additionally, FCF was also found to be significant post-MCCG.

Table 7

Robustness Test-Endogeneity of Omitted Variables Bias

Model		Model VII: Firm Fixed Effects (Pre-MCCG 2012)		Model VIII: Firm Fixed Effects (Post-MCCG 2012)	
Regressors	Regression coefficients		t-statistics	Regression coefficients	t-statistics
Constant	-0.1031		-3.39	-0.0399	-2.23
$ROA_{i,t}$		0.0005	5.09	0.0004	5.58
$LDPS_{i,t}$		0.3995	22.18	0.4343	30.00
$FCF_{i,t}$		-0.0087	-1.82	-0.0076	-2.15
$Debt_{i,t}$		-0.0208	-2.92	-0.0098	-1.79
$Size_{i,t}$		0.0107	4.27	0.0054	3.78
$INV_{I,t}$		-0.0050	-1.42	-0.0077	-2.81
$Risk_{i,t}$		0.0006	0.43	-0.0032	-3.34
Industries		Yes		Yes	
Year		Yes		Yes	
R-squared		0.7543		0.8876	

Note. *, ** and * denote statistical significance at 1%, 5% and 10% level of significance respectively.

CONCLUSION

This study investigated the factors that might influence firm dividend policy in Malaysia. Examining a total of 631 non-financial firms listed in Malaysia, the study discovered that the range of determinants of dividend policy demonstrated slight changes pre-and-post MCCG 2012. Pre-MCCG results revealed that profitability, lagged of dividend, firm size, and debt significantly determined firm dividend policy in Malaysia. Post-MCCG 2012, the range of factors had changed; profitability, lagged of dividend, size, investment opportunity and market risk were found to be significant determinants of firm dividend policy. Specifically, the result was robust, even after controlling for endogeneity concerns, especially with regard to omitted variables bias.

The present study has shown originality in its approach and this is important as it has provided empirical evidence on the range

of dividend policy determinants that could change as a result of comparing two different timelines. Compared to previous studies in the field, this study has made a significant contribution by comparing pre-and-post MCCG 2012, which was neglected in the past. The study has also contributed to the growing body of knowledge based on empirical evidence obtained from studies of dividend policy. The present study has also added a corporate governance perspective within the Malaysian context.

However, the study has some limitations within the context of the selected timeframe on the latest MCCG changes. For example, the study only examined pre-and-post MCCG 2012. Future research may want to include important recent changes on the MCCG, which happened in 2017. Such an updated analysis would be very beneficial for management to settle on a reasonable or ideal dividend strategy that would support shareholder capital without neglecting corporate governance regulation, which might jeopardise firm evaluation and reputation.

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REFERENCES

Ahmed, H., & Javid, A. Y. (2009). The determinants of dividend policy in Pakistan. *International Research Journal of Finance and Economics*, *29*, 110-125.

Anil, K., & Kapoor, S. (2008). Determinants of dividend payout ratios – a study of Indian information technology sector. *International Research Journal of Finance and Economics*, *15*, 63-71.

Appannan, S., & Sim, L. W. (2011). A study on leading determinants of dividend policy in Malaysia listed companies for food industry under consumer product sector. Paper presented at *2nd International Conference on Business and Economic Research Proceeding*.

Bakri, M. A., Bany-Ariffin, A. N, Matemilola, B. T., & Lau, W.T. (2020). moderating role of financial market development on the relationship between stock liquidity and dividend. *Asian*

Academy of Management Journal of Accounting and Finance, *16*(2), 77-99.

Bakri, M. A., Noordin, B. A. A., Tunde, M. B., & Theng, L. W. (2019). Moderating effects of governance quality on the relationship between stock liquidity and dividend in emerging market countries. *Jurnal Pengurusan (UKM Journal of Management)*, *57*. http://ejournal.ukm.my/pengurusan/article/view/36855/10112.

Barclay, M. J., Smith, C. W., & Watts, R. L. (1995). The determinants of corporate leverage and dividend policies. *Journal of applied corporate finance*, *7*(4), 4-19.

Bhattacharya, S. (1979). Imperfect information, dividend policy, and "The bird in the hand" fallacy. *The Bell Journal of Economics*, *10*(1), 259-270.

Black, F. (1976). The pricing of commodity contracts. *Journal of Financial Economics*, *3*, 167–179.

Bokpin, G. A. (2011). Ownership structure, corporate governance and dividend performance on the Ghana stock exchange. *Journal of Applied Accounting Research*, *12*(1), 61-73.

Brealey, R., & Myres, S. (2005). *Principle of corporate finance* (8th ed.). McGraw-Hill.

Dewasiri, N. J., Koralalage, W. B. Y., Azeez, A. A., Jayarathne, P. G. S. A., Kuruppuarachchi, D., & Weerasinghe, V. A. (2019). Determinants of dividend policy: Evidence from an Emerging and Developing market. *Managerial Finance, 45*(3), 413-429.

Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *The American Economic Review*, *74*(4), 650-659.

Fama, E., & French, K. (2002). Testing trade off and pecking order predictions about dividends and debt? *The Review of Financial Studies*, *15*(1), 1-33.

Fang, V. W., Tian, X., & Tice, S. (2014). Does stock liquidity enhance or impede firm innovation? *The Journal of finance*, *69*(5), 2085-2125.

Franc-Dąbrowska, J., Mądra-Sawicka, M., & Ulrichs, M. (2020). Determinants of dividend payout decisions–the case of publicly quoted food industry enterprises operating in emerging markets. *Economic Research-Ekonomska Istraživanja*, *33*(1), 1108-1129.

Gaver, J. J., & Gaver, K. M. (1993). Additional evidence on the association between the investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Accounting and economics*, *16*(1-3), 125-160.

Hashemi, A. S., & Zadeh, F. Z. F. (2012). The impact of financial leverage operating cash flow and size of company on dividend policy (case study of Iran). *Interdisciplinary Journal of Contemporary Research in Business*, *3*(10) 264-270.

Huda, F., & Farah, T. (2011). Determinants of dividend decision: A focus on banking sector in Bangdalesh. *International Research Journal of Finance and Economics*, *77*, 33-46.

Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis* (7th ed.). Pearson Education.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, *76*(2), 323-329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305-360.

Jiang, F., Ma, Y., & Shi, B. (2017). Stock liquidity and dividend payouts. *Journal of Corporate Finance*, *42*, 295-314.

Kale, J. R., & Noe, T. H. (1990). Risky debt maturity choice in a sequential game equilibrium. *Journal of Financial Research*, *13*(2), 155-166.

Kuwari al-, D. (2010). To pay or not to pay: Using emerging panel data to identify factors influencing corporate dividend payout decisions. *International Research Journal of Finance and Economics*, *42*, 19-36.

Kuzucu, N. (2015). Determinants of dividend policy: A panel data analysis for Turkish listed Firms. *International Journal of Business and Management*, *10*(11) 149-160.

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *The American Economic Review*, *46*(2), 97-113.

Malkawi al-, H. A. N. (2007). Determinants of corporate dividend policy in Jordan: An application of the Tobit model. *Journal of Economic & Administrative Sciences, 23*(2), 44-70.

Mehrani, S., Moradi, M., & Esk, H. (2011). Ownership structure and dividend policy: Evidence from Iran. *African Journal of Business Management*, *5*(17), 7516-7525.

Miller, M. H., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business*, *34*(4), 411-433.

Mitton, T. (2004). Corporate governance and dividend policy in emerging markets. *Emerging Markets Review, 5*(4), 409-426.

Patra, T., Poshakwale, S., & Kean, O. (2012). Determinants of corporate dividend policy in Greece. *Applied Financial Economics*, *22*(13), 1079-1087.

Petrasek, L. (2012). Do transparent firms pay out more cash to shareholders? Evidence from international cross listings. *Financial Management, 41*(3), 615–636.

Pruitt, S. W., & Gitman, L. J. (1991). The interactions between the investment, financing, and dividend decisions of major US firms. *Financial Review*, *26*(3), 409-430.

Ramli, N. M. (2010). Ownership structure and dividend policy: Evidence from Malaysian companies. *International Review of Business Research Papers*, *6*(1), 170-180.

Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout ratios. *Journal of financial Research*, *5*(3), 249-259.

Security Malaysia. (2016). *Malaysian capital market grows across all segments: expands to reach RM 2.82 trillion*. https://www.sc.com.my/resources/media-releases-and-announcements/malaysian-capital-market-grows-across-all-segments-expands-to-reach-rm282-trillion.

Security Malaysia. (2018). *Malaysian capital market grew 12.6% to RM 3.2 trillion with strong growth across all segments*. https://www.sc.com.my/resources/media/media-release/malaysian-capital-market-grew-126-to-rm32-trillion-with-strong-growth-across-all-segments

Shabibi al-, B. K., & Ramesh, G. (2011). An empirical study on the determinants of dividend policy in the UK. *International Research Journal of Finance and Economics*, *80*,105-120.

Shubiri, al- , F. N. (2011). Determinants of changes dividend behavior policy: Evidence from the Amman Stock Exchange. *Far East Journal of Psychology and Business*, *4*(1), 1-15.

Singla, H. K., & Samanta, P. K. (2019). Determinants of dividend payout of construction companies: A panel data analysis. *Journal of Financial Management of Property and Construction*.

Smith Jr, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, *32*(3), 263-292.

Utami, S. R., & Inanga, E. L. (2011). Agency costs of free cash flow, dividend policy, and leverage of firms in Indonesia. *European*

Journal of Economics, Finance and Administrative Sciences, *33*(6), 7-24.

Yarram, S. R., & Dollery, Y. B. (2015). Corporate governance and financial policies. *Managerial Finance*, *41*(3), 267-285.

Yusof, Y., & Ismail, S. (2016). Determinants of dividend policy of public listed companies in Malaysia. *Review of International Business and Strategy*, *26*(1), 88-99.