

INTERNAL AND EXTERNAL FACTORS OF DIVIDEND PAYOUT POLICY: EVIDENCE FROM MALAYSIAN CONSTRUCTION SECTOR

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Abstract

This study is set to identify the internal and external determinants of dividend policy of Malaysian listed construction firms. In specific, this study (1) investigates which determinants strongly explain dividend policy's proxy and (2) identifies the relationship between firms' internal and external determinants with dividend policy's proxy. This study's specification model is developed using the Dividend Smoothing Theory. Four firms' internal factors (*EPS*, *SIZE*, *lagDIV*, *FCFps*) and one firms' external factor (*MBeta*) are investigated. Panel data regression analysis of Ordinary Pooled Least Squares, Fixed Effects Model and Random Effects model are used to investigate the identified factors. The findings highlight that the Fixed Effects Model is the most appropriate, with an explanatory power of 33.73%. Three firms' internal factors variables (*EPS*, *lagDIV*, and *FCFps*) are significant and positively affect firms' dividend policy. This study also investigates other empirically proven firm's factors and found that they are not significant. Furthermore, they worsened the model's explanatory power. Thus, proving a unique difference in dividend policy's predictors of the different economic sectors.

Keywords: Malaysia, Dividend Pay-out Policy, Internal Factors, External Factors, Construction Sector

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Introduction

Dividend payout policy or dividend policy is a decision made by a firm's management to determine the amount of dividend to be paid to the shareholders and also the level of profit to be retained and reinvested for the firm's future business growth. Dividend policy has always been an issue of debate in the financial study. It has developed several conflicting hypotheses, theories and explanations. It is a matter of importance to a corporate financial decision as it aims to maximize the shareholders' wealth (Nnadi et al., 2012). Hence, an ideal dividend decision is an essential matter to both practitioners and researchers.

Dividend policy is recognized to have a crucial impact on a firm's financing and investment decisions. In the point of view of a firm, a high dividend payment to investors would result in lower internal earnings, thus increasing the firm's dependence on external financing. This accentuates that dividend policy influences a firm's capital structure and its cost (Lee et al., 2010).

Whereas from the point of view of an investor, a greater amount of dividend distributed to the shareholders will attract more investors to invest in the firm. A strong and consistent dividend payout, in the long run, signals that the firm is healthy and highly profitable. Therefore, making the firm's stock hedge-able against inflation. Investors are confident when a firm is stable in paying out its dividend.

These show the importance of dividend policy and an optimal dividend decision is vital to a firm's future growth. Consequently, this significance has resulted in a world of research in dividend forecasting and dividend policy studies. Numerous existing literature in both developed and emerging markets have

analyzed the components influencing dividend policy and found that dividend decision could be influenced by different firm-level elements including firm's earnings, size, debt, investment opportunities, the previous dividend paid, cash flow and ownership structure (Patra et al., 2012; Zameer et al., 2013; Kozul, and Mihalina, 2013; Manneh and Naser, 2015).

Majority of studies on dividend policy accentuated on developed economies like Western Europe and North America (Charitou, 2000; Al-Malkawi, 2007; Ramli, 2010; Imran, 2011; Appannan and Sim, 2011; Hashemi and Zadeh, 2012). Less attention has been given to developing countries, especially in the East Asian region such as Malaysia. The study of dividend policy in Malaysia is imperative to expand the knowledge of the subject matter in a developing economy.

Past literature in the Malaysian setting has presented mixed and inconclusive findings and use data from public listed firms covering all sectors (Subramaniam and Devi, 2011; Mui and Mustapha, 2016; Yusof and Ismail, 2016). A study that focuses on a specific sector or industry are scarce in numbers (Eng et al., 2013). Mui and Mustapha (2016) recommend that it would be interesting to investigate dividend payout determinants from a specific industry. Furthermore, Pandey (2003) claimed that there is a significant industrial difference in dividend payout ratios in Malaysia.

The objective of this study is to investigate dividend policy determinants, both internal and external factors of Malaysian public listed companies in the construction industry. This study contributes to extending the body of knowledge on dividend policy, especially in an emerging economy. The empirical findings are beneficial to fellow academicians, practitioners, investors and the firm's board of directors. It sheds light on deciding a firm's optimal dividend policy and shareholders' investment decisions.

Problem Statement

Dividend payout policy can critically affect a firm's future value (Al-Twajjry, 2007). Thus, firms need to establish an optimal dividend policy to clinch the best payout for their shareholders (Arumba, 2014). Firms need to retain their dividend reimbursement to protect the interest of their shareholders. As a result, revision of dividend payout is necessary to match the firms' growth level in different sectors.

Despite numerous studies conducted, there are some differences between countries regarding which firms' specific factors having the strongest impact on dividend payout. Arumba (2014) establishes divergent views among researchers lead to a debate on what exactly impacts the dividend payout. Yusof and Ismail (2016) acknowledged that the determinants of dividend payout remained unsettled despite extensive studies done. Any related discoveries on developed economies are not relevant to developing economies, owing to the differences in regulations, corporate culture, economic framework and nature of investors (Al-Twajjry, 2007; Musiega et al., 2013). Thus, further solidifies the significance of this study in the Malaysian developing economy which is scarce.

Bank Negara Malaysia (BNM) claims that the economic crisis of 1998 has been disastrous on the construction sector and require a significant turnaround. In 2015, the construction companies in Malaysia delivered a mixed performance with satisfactory earnings. Department of Statistics Malaysia observes that the Malaysian economy grew at a slower pace of 4.2 per cent in the first quarter of 2016, along with a slower expansion rate of 7.9 per cent for the construction sector. Furthermore, according to BMI Research's industrial outlook report in 2016, the real growth in Malaysia's construction sector will continue to moderate over the coming years, decelerating from an estimated 10.7 per cent in 2015 to 7.8 per cent in 2016 and 6.6 per cent in 2017.

These reasons further compel the relevance of the study on the Malaysian construction sector. The moderate growth of this chosen sector affects the dividend payout of firms which ultimately distress the shareholders, investors and other industry players. Therefore, investigation on internal and external factors that may influence dividend payout of Malaysian construction firms' is of the utmost importance. This study seeks to benefit firms in deciding their revision for optimal dividend policy and assists shareholders in making accurate investment decisions.

The main objective of this study is to identify the internal and external determinants of dividend policy of Malaysian listed construction firms. In specific, this study (1) investigates which determinants strongly explain dividend policy's proxy and (2) identifies the relationship between firms' internal and external determinants with dividend policy's proxy.

Literature Review

Theoretical Literature

Dividend smoothing theory developed by Lintner (1956), studies dividend policy determinants of 28 US companies by developing a model based on interviews. Dividend policy is proxy by payouts and found to be influenced by current profitability and the previous year's dividends. The study finds in a scarce environment, companies prefer to use borrowed funds rather than subsidizing the allocation of dividends. Moreover, exclusively to the sample period of the study, it finds that US companies distribute a large part of their earnings as dividends while maintaining dividend stability. Correspondingly, managers contemplate the idea of stable dividends lessens negative reactions by the investor.

Additionally, dividends send an important signal of companies' future (Miller and Modigliani 1961). Dividend irrelevancy theory (Miller and Modigliani, 1961) implies that in a world without taxes, transaction costs, or other market imperfections, dividend policy is irrelevant to the value of the firm. This indicates that dividends do not affect a firm's stock price or cost of capital. It further proposes that dividends are paid from money left after investing in projects that provide positive net present value (NPV) and that debt is a cheaper source of financing preferable to equity.

Other supporting theories, such as agency theory (Jensen and Meckling, 1976) proposes that large firms with higher managerial ownership stakes are expected to have lower agency costs due to the better alignment of management and shareholder goals. This signifies a positive relationship between firm size and dividend payout ratio. Signalling theory (Ross, 1977) claims that the payment of the dividend is seen to convey positive information to shareholders. If management pays high dividends, it signals high-expected profits in the future. Profitable and established firms are more likely to pay a higher level of dividends (Bhattacharya, 1979; Ho, 2003).

Empirical literature

Numbers of studies use the dividend payout ratio as a proxy to dividend policy (Pandey, 2003; Omran and Pointon, 2004; Patra et al., 2012; Nnadi et al., 2013; Manneh and Naser, 2015). The dividend payout ratio is measured by a firm's dividend per share divided by its earnings per share. Yusof and Ismail (2016) use dividend per share as a proxy for a firm's dividend policy, while earnings per share is a proxy for a firm's profit.

In the effort of further understanding the influential factors of dividend policy, numerous proxies of firms' internal and external factors are investigated. Underpinning theories are used in identifying the possible influential factors as proxies. Through a thorough literature review, mixed results are found on all proxies.

Agency cost theory suggests that dividend payment is a possible mechanism for reducing the agency costs related to factors such as a firm's free cash flow, growth, size and risks (Jensen and Meckling, 1976; Rozeff, 1983; Jensen, 1986; Utami and Inanga, 2011).

Free cash flow measures firms' generated cash after deducting for their capital expenditures. Hence, Free cash flow is used as a proxy of a firm's profitability. Chen and Dhiensiri (2009) study firms in the New Zealand Stock Exchange and find a significant positive relationship between free cash flow and dividend payment. This positive finding is also supported by Thanatawee (2011). Imran (2011) and Utami and Inanga (2011) find contradict results of a significant negative relationship.

According to the theory of Lintner (1956), a stable dividend policy assures a firm's future performance

to investors. Moreover, investors are willing to pay a premium for firms with stable dividend policies. Hence, making firms' managers reluctant in revising their dividend policy frequently. A stable dividend policy is signalled through the consistency of firms paying their dividend in the past.

Large-sized firms often faced difficulty in monitoring their financing activities, resulting in a high information asymmetry and agency costs. According to agency cost theory, a dividend payment can be used to mitigate this issue. Thus, the size of firms is found to have a positive relationship with dividend payment (Kowalewski et al., 2007; Juma'h and Pacheco, 2008; Ramli, 2010; Mehrani et al., 2011; Thanatawee, 2011; Hashemi and Zadeh, 2012). However, some studies reported otherwise (Ahmed and Javid, 2009; Huda and Farah, 2011).

High dependence on external financing would increase a firm's volatility and risk. As a result, firms will pay lower dividends to minimize the firms' risk. Hence, a firm's risk is negatively associated with dividend payment. This is consistent with the findings of Kowalewski et al. (2007), Juma'h and Pacheco (2008); Ramli (2010) and Al-Shubiri (2011). But, Al-Shabibi and Ramesh (2011) reported a positive effect of firm risk on dividend policy.

Concerning the study of Malaysian economic settings, several studies examined the factors affecting dividend policy, the reported findings are mixed and inconclusive. Most studies investigate all sectors together (Subramaniam and Devi, 2011; Mui and Mustapha, 2016; Yusof and Ismail, 2016). Yusof and Ismail (2016) investigate the determinants of the dividend policy of 147 listed firms in Malaysia. The study uses pooled least squares model and revealed that earnings, firm size and investment are revealed to have a positive significant effect, while debt and large shareholders have a negative significant effect. Mui and Mustapha (2016) use multiple regression in examining the determinants of dividend policy of listed firms in Malaysia. The results indicate that investment opportunity, liquidity and firm size significantly influence the dividend payout of Malaysian listed firms. Subramaniam and Devi (2011) add the moderating effect of board size and board composition in their dividend policy study. The study finds that high growth firms make lesser dividend payouts. Moreover, dividend payout is weaker for firms with a larger board size and a larger number of independent directors.

Studies that investigate each sector specifically are scarce (Pandey, 2003; Eng et al., 2013; Issa, 2015). Pandey (2003) uses multinomial logit analysis and confirms that the influence of industry on dividend payout ratios. Furthermore, Malaysian companies' dividend payout are sensitive to the changes in earnings. Eng et al. (2013) study the determinants of dividend policy of the Malaysian banking sector only. The results show a statistically significant positive relationship between dividend payout and revenue growth for conventional financial institutions. Conversely for Islamic financial institutions, lagged dividend shows the positive significant relationship. Issa (2015) uses multivariate regression analysis to investigate the relationship between dividend payout ratio and firm's specific factors of 284 listed firms in Malaysia. The study found that free cash flow, return on assets, return on equity, earning per share, market to book value and market capitalization have a significant positive relationship with dividend payout ratio. While Beta has a strong negative relationship. Furthermore, the study highlights that the findings differ for each sector.

Hence, the investigation on a specific sector of the Malaysian economy is of importance as the influence of industry is present in the past empirical literature (Pandey 2003, Issa, 2015). This is further recommended by Mui and Mustapha (2016) in their study. Given the importance of dividend payout, this study attempts to enlighten on suggested variables by past literature, which might impact the firm dividend payout ratio of Malaysian construction firms. As been proposed by Al-Twajjry (2007), an appropriate dividend policy should be initiated considering the significant impact of dividends. According to Musiega et al. (2013), the dipping dividend of a company will direct a destructive sign in which the company is performing poorly. Hence, managers and investors need to be fully aware of the possible factors that influence the dividend policy. This study is looking to assist the board of directors in establishing the optimal dividend payout. Besides, a study on dividend payout for an emerging market such as Malaysia is extensive in imparting a clear vision to an investor for an investment decision.

Methods

Econometric Model

The model development of this study starts with the main theory of Lintner (1956). Underpinning theories such as dividend irrelevancy theory (Miller and Modigliani, 1961), agency theory (Jensen and Meckling, 1976) and signalling theory (Ross, 1977) are used for variable selection in the model. Thorough literature reviews help in identifying the proxies for each variable. As a result, the model specification is as follows:

$$DPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 SIZE_{it} + \beta_3 LagDIV_{it} + \beta_4 FCFps_{it} + \beta_5 MBeta_{it} + \mu_{it}$$

Data

There are 67 public listed construction companies in Malaysia to date. To achieve the study's objective, the selected proxies of firms' internal and external factors are obtained from the Bloomberg database. Data are collected beginning from 2010 to 2018, this is to circumvent the influence of the 2008 financial crisis in the analysis later. Some firms are excluded from the sample due to incomplete or missing data. The final sample includes annual data from 47 firms for 9 years, which amount to 423 observations.

Table 1. Summary of Variables

Acronym	Variable	Proxy	Calculation	Predicted Sign
Dependent Variable				
DPS	Dividend per share	Firm's dividend policy	Total dividends / Number of shares outstanding	
Independent Variable				
<u>Proxy for Firm's Internal Factors</u>				
EPS	Earnings per share	Firm's distributable profit	(Net income – Preferred dividend) / Number of shares outstanding	(+)
SIZE	Size of firms	Firm's size	Log of total asset	(+)
LagDIV	Lagged dividend	Firm's past dividend	Dividend _{t-1}	(+)
FCFps	Free cash flow per share	Firm's profitability	Total free cash flow / Number of shares outstanding	(+)
<u>Proxy for Firm's External Factors</u>				
MBeta	Annual market beta of firms	Firm's systematic market risk	Covariance of asset's return / Variance of the return	(-)

Findings and Analysis

Descriptive Statistics

Table 2 provide descriptive statistics of the data sample that consists of 423 observations. The data shows that on average, construction firms in Malaysia pay a dividend of RM 0.02 and the maximum dividend is RM 1.00. The firms have earnings per share in the range of -RM 1.35 to RM 4.17, which indicates firms' earnings in this sector are relatively small. The average size and free cash flow per share of construction firms in Malaysia are RM 1.33 million and -RM 0.05 respectively. Furthermore, the data indicates that the average risk of firms is 0.05 below the market risk.

Table 2. Descriptive Statistics

Variable	Observation	Mean	Std. Dev.	Min	Max
DPS	423	0.02	0.06	0.00	1.00
EPS	423	0.06	0.25	-1.35	4.17
SIZE	423	2.71	0.57	0.80	4.32
lagDIV	423	0.02	0.04	0.00	0.25
FCFps	423	-0.05	0.37	-5.11	1.28
MBeta	423	0.95	0.63	-1.42	4.68

Correlation Analysis

Table 3 illustrates the possibility of multicollinearity that would be a problem in multiple regressions investigation. It indicates only *lagDIV* and *DPS* correlate highly ($r > 0.5$) with each other. Thus, eliminating the possibility of multicollinearity for this study.

According to Central Limit Theorem, as the sample size approaches infinity, the mean of the sample distribution approaches a normal distribution. Moreover, the Law of Large Numbers states, as the sample size approaches infinity the centre of the distribution of the sample means becomes very close to the population mean and that any sample with more than 30 observations is considered normal. Enders (2004) adds the residuals don't need to be normally distributed. Furthermore, Gujarati and Porter (2009) state that ordinary least squares estimators are still the best linear unbiased estimators even when the error term are not normally distributed.

Table 3. Correlation Matrix

	DPS	EPS	SIZE	lagDIV	FCFps	MBeta
DPS	1.00					
EPS	0.20	1.00				
SIZE	0.23	0.21	1.00			
lagDIV	0.57	0.24	0.38	1.00		
FCFps	0.14	-0.44	-0.07	0.18	1.00	
MBeta	-0.05	0.01	0.01	-0.11	-0.00	1.00

Table 4 shows the regression results of pooled ordinary least squares, random-effect and fixed-effect models on internal and external factors that impact dividend policy. Hausman test result determines that the fixed effect model is appropriate in this study. This model allows heterogeneity or individuality among 47 firms of the Malaysian construction sector by allowing them to have individual intercept values. Although the intercept may differ across firms, the intercept does not vary over time, signifying that time remains constant.

Furthermore, the fixed-effect model generates an explanatory power of 33.73% based on the adjusted R-squared value. This shows that the model explains 33.73% of the variation of Malaysian construction firms' dividend per share. F-statistics is significant at a 1% significance level hence, the null hypothesis is rejected and three of the selected variables are significant in affecting firms' dividend per share (*DPS*). The fixed-effect model has no autocorrelation problem as the Durbin-Watson statistic is within the range of 1 to 2, with 1.3176.

Out of five selected variables, three variables (*EPS*, *lagDIV*, and *FCFps*) are significant in affecting *DPS*, while two variables (*SIZE* and *MBeta*) are not significant. All three identified significant variables agreed to their predicted sign. Additionally, only firms' internal factors are found to strongly influence firms' dividend policies.

The regression result shows a positive significant relationship of *EPS* on *DPS*. This implies, the increase in firms' earnings lead to higher dividend payout to the shareholders, where a 1% increase in the firm's *EPS* will increase *DPS* by 0.024%. The result confirms the signalling effect of earnings in conveying positive information. This is further supported by Charitou (2000), Al-Malkawi (2007), Kowalewski et al. (2007), Juma'h and Pacheco (2008), Ahmed and Javid (2009), Ramli (2010), Mehrani et al. (2011),

and Al-Shabibi and Ramesh (2011).

Table 4. Regression Results

Model	Pooled Ordinary Least Squares		Fixed Effect		Random Effect	
	Coefficient	<i>t</i> -statistics	Coefficient	<i>t</i> -statistics	Coefficient	<i>t</i> -statistics
Constant	0.0002	0.0178	-0.0317	-1.1523	0.0002	0.0179
EPS	0.0288**	2.4178	0.0247**	1.9267	0.0288**	2.4434
SIZE	0.0016	0.3424	0.0170	1.7047	0.0016	0.3460
lagDIV	0.7928***	10.9368	0.3434**	2.2541	0.7929***	11.0526
FCFps	0.0173**	2.1430	0.0111*	1.2677	0.0173**	2.1656
MBeta	0.0007	0.1695	0.0012	0.2667	0.0007	0.1712
Adjusted R ²	0.3232		0.3373		0.3232	
F-statistics (P-value)	41.307 (0.00)		5.212 (0.00)		41.307 (0.00)	
Durbin-Watson	1.2219		1.3176		1.2219	

Note: *, **, *** indicate the significance level at 1, 5 and 10% respectively

The second significant variable is *lagDIV* with a positive relationship on *DPS*. The result shows a 1% increase in the firm's *lagDIV*, *DPS* will increase by 0.3434%. It implies that firms' past dividend payout is significant in influencing firms' current dividend payment. This is inline dividend smoothing theory by Lintner (1956) which states that firms with stable dividend policy can be identified by their past capacity to pay dividends. This finding is supported by Pruitt and Gitman (1991) and Eng et al. (2013).

The third significant variable is *FCFps*. It has a positive relationship with *DPS*, where a 1% increase in the firm's *FCFps* will increase *DPS* by 0.011%. Since *FCFps* is a proxy of a firm's profitability, the theory by Lintner (1956) expects a positive relationship between dividend policy and profitability. The literatures that support this finding are Shirvani and Wilbratte (1997), Malkawi (2007), Chen and Dhiensiri (2009), and Thanatawee (2011).

This study is well aware of other factors that have been empirically proven to affect dividend policy. Internal factors such as firms' cash flow, debt, sales, future investment opportunities, and majority percentage of firms' shareholders are studied by numerous past literature and have been identified to be a significant predictor of dividend policy (Kowalewski et al., 2007; Truong and Heaney, 2007; Ahmed and Javid, 2009; Ramli, 2010; Al-Shubiri, 2011; Subramaniam and Devi, 2011). Hence, this study takes the initiative to investigate these factors. The findings are rather surprising as none of the factors is significant. Furthermore, the addition of these factors worsens the model's explanatory power.

This further confirms that there exists a unique difference between dividend policy's predictors in each sector of the economy, as the findings of this study are exclusive to Malaysia's construction sector. Moreover, the findings of this study are vastly different compared to previous empirical literature in Malaysia (Pandey, 2003; Subramaniam and Devi, 2011; Eng et al., 2013; Issa, 2015; Mui and Mustapha, 2016; Yusof and Ismail, 2016).

Conclusion

The dividend payout policy of a firm plays a vital role in the determination of a firm's future value (Al-Twajry, 2007). Establishing an optimal and stable dividend policy is imperative in keeping the interest of firms' shareholders. Given the importance of dividend payout policy, this study attempts to identify the internal and external determinants of dividend policy of Malaysian listed construction firms. This study is substantial due to the scarcity of literature regarding this matter in Malaysia, especially in the point of view of a specific sector of the economy (Pandey, 2003; Issa, 2015; Mui and Mustapha, 2016).

The findings highlight that the fixed-effect model is the most appropriate for this study with an explanatory power of 33.73%. Three firms' internal factors variables (*EPS*, *lagDIV*, and *FCFps*) are

identified to significantly affect firms' dividend policy, while firms' external factor (*MBeta*) is identified to be non-significant. All significant variables agreed to their predicted sign. Moreover, this study is aware of other factors that are empirically proven to affect dividend policy by past literature (Kowalewski et al., 2007; Truong and Heaney, 2007; Ahmed and Javid, 2009; Ramli, 2010; Al-Shubiri, 2011; Subramaniam and Devi, 2011). Internal factors such as firms' cash flow, debt, sales, future investment opportunities, and the majority percentage of firms' shareholders are examined and found to be non-significant. Moreover, the inclusion of these factors worsened the model's explanatory power. This study's findings further cemented that there exists a unique difference between dividend policy's predictors in different sectors of the economy as supported by Pandey (2003), Issa (2015), and Mui and Mustapha (2016).

This study serves as an extension to prior literature in the body of knowledge. It is useful to fellow academicians, investors, and the firm's management. Construction firms' management can be mindful in their decision-making involving firms' dividend policy, by monitoring key internal factors only. Furthermore, this study aids investors in their investment decision by providing valuable intuition upon weighing all impacts of firms' internal factors on expected dividend payment.

The use of secondary data in this study can be viewed as a limitation. For future research, it is recommended that a mix of quantitative and qualitative methodology such as interviews be used. This may provide richer data and a deeper understanding of factors that influence firms' dividend policy.

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