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Investment opportunity set and dividend policy in Malaysia: Some evidence on the role of ethnicity and family control

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Abstract. This paper investigates the relationship between Investment Opportunity Set (IOS) and dividend policy and if ethnicity and family ownership moderates this relationship in an emerging economy context. The contracting explanation based on Jensen's Free Cash Flow Theory (FCF) [22, 36] is empirically examined using a series of firm characteristics including industry type, size, return on assets, duality, government linked and debt to assets. Family ownership is examined because there seemed to be companies in the Bursa which are less diffused and dominated by companies with substantial shareholders. Ethnicity is examined because Malaysia is not only a developing country with an emerging capital market but also because there is considerable division based on ethnicity, language and religion. The results suggest that, there is strong support on the negative significant association between growth opportunities and dividend payout in the context of family controlled firms but not in the context of ethnicity.

Keywords: Dividend policy; Investment opportunity set; ethnicity; family ownership; free cash flow theory.

1. Introduction

The issue on dividends and dividend policy has always been the subject of much debate and research [26, 30, 5, 3 & 2]. [2] re-visited the dividend puzzle and found that there have been many questions yet to be answered. Thus, setting corporate dividend policy is very subjective and controversial. There has also been some recent consensus by [12, 34 & 28] that there is not just one explanation towards a dividend policy. Generally the effects of cultural differences in terms of ethnicity have been seen to influence business practices, organisations and accounting disclosure practices. One main factor that has shaped Malaysia's capital market has been the close identification between racial and economic functions [17].

In this study, family ownership is examined because there seemed to be companies in the Bursa which are less diffused and dominated by companies with substantial shareholders whereas ethnicity is examined because Malaysia is not only a developing country with an emerging capital market but also because there is considerable division based on ethnicity, language and religion. This paper contributes to the dividend debate albeit from the perspective of an emerging economy. [38] provide the beginnings of a positive theory of accounting, in which it is expected that certain factors would affect a firm's cash flow and this as a result is affected by accounting standard.

The discussion in this paper is organised as follow: Section 2 reviews literature on the empirical evidence of IOS, ethnicity, family ownership and dividend payout. Section 3 outlines the research design and regression model whilst Section 4 discusses the empirical findings. Section 5 elaborates on the implications of the findings and concludes the discussion.

2. Literature Review

There have been numerous studies primarily from the developed countries that examined the relationship between growth opportunities, debt, performance and dividend policy decisions [36, 16, 13, 18, 27, 6 & 7]. However, the studies on developing countries have been limited to China, Korea and Ghana. Three prior studies namely [36, 16 & 18] are of particular interest as the prior studies focus more on the contracting and

free cash flow relationship between (i) growth opportunities, (ii) debt and (iii) dividend policy decisions. Further, the difficulty in comparing the findings from these earlier studies such as [32, 11 & 21] relates to the vast array of IOS proxy variables used. The proxies used in the literature now amounts to well over 100 and this proliferation may explain why published findings about the role of growth opportunities (also known as IOS) vary from one study to another study [9].

The basic assumption is that family shareholders are perceived as owners and the firm largely belongs to the family. The firms are seen as assets to pass on to the next family member in due time and not as a one off wealth to be consumed for one generation [10]. [10] survey of the East Asian Corporations, found that of the sample of 238 Malaysian companies taken, 10.3% was widely held, 67.2 % was owned by families, 13.4 % by the government while financial and non-financial institutions owned 2.3 % and 6.7 % respectively. [29] argue that family run business in Asian markets including both Hong Kong and Malaysia, presents difficulty in evolving positive corporate governance practice as there is a strong resistance to transparency and accountability especially where the founder dominates the overall business practice and makes all major decisions. In contrast to family owned firms in a developed country it was envisaged that family owned businesses pay a lower dividend and do not smooth their dividends. The reason being they do not emphasize on dividend payout and therefore dividends payout is more volatile [24]. Further, [39] found that ethnicity has shaped how the country and businesses are run externally, through political means. Ethnicity has shaped to a considerable extent how the country and businesses are managed externally through political intervention and internally via cultural values [19]. Prior research suggests that high-growth firms are relatively riskier than low growth firms and risk is positively associated with earnings volatility [30].

Beginning with [22, 36, 16, 35 & 21] many research studies in the accounting and finance literature use agency and contracting theory to explain variation in important corporate policy decisions. However the gap here is that none of the prior studies focus explicitly on the link between a firm's investment opportunities set (IOS) and dividend policy and more importantly, whether ethnicity and family ownership moderate the investment opportunity set and dividend policy relationship. Two strands of such research are clearly discernable, first strand focuses on "signalling" explanations for dividends that are based on the desire by companies to communicate information to shareholders [26, 14]. The second strand is based on an agency theory which focuses on the relationship between growth opportunities (also used interchangeably as Investment Opportunity Set (IOS), debt, performance and dividend policy decisions [36, 16, 13, 18, 27, 6 & 7]. Evidently, although several theories exist to explain firms' dividend payout policies, none of these theories fully answer the question why firms pay dividends to their shareholders although it is opined that the agency theory seems to offer the most promising theoretical framework [3]. As [22] argues, dividends are expected to attenuate agency costs that result from the separation of ownership and management of public listed firms. Dividends reduce free cash flows that could otherwise be spent by managers on their private benefits [3].

Given that the Malaysian environment is predominantly different from other Asian countries mainly because of its unique political scenario, ownership structure and concentration of ownership, it is useful to examine the applicability of the contracting theory and Jensen's Free Cash Flow Theory on the relationship between growth and dividend payouts in Malaysia. Further, as Malaysia comes under the common law system, the role of the dividend policy arguably can be a disciplining mechanism in protecting minority interest.

3. Methodology and Research Design

This study consists of three hundred of the largest market capitalised companies listed on Bursa Malaysia for the years ended 2004 till 2006. This period is chosen because most reforms came into implementation during this period and the period concerned was expected to show higher level of corporate governance practices. Data on CEO duality is collected from the Malaysian stock performance guide books whereas data's on return on total assets, debt to total assets, market capitalisation, market to book equity and dividend payout are obtained from the OSIRIS and BANKSCOPE. The theoretical framework provides a rationale to examine the association between the IOS and dividend policy. In this framework, moderating variables and control variables are incorporated to examine influence and establish the relationship between independent

and dependent variables. The control variables that have been incorporated are return on assets (ROA), duality (DUAL), industry dummies, year dummies, logarithm of market capitalisation (LOGMKTC) and debt to total assets (DTA). LOGMKTC measures the percentage of market captured by the firms [23]; Return on assets is used to evaluate the extent in which the assets are put to good i.e the ratio of earnings before interest and taxes over total assets [20]; The financial leverage is measured as the ratio of the book value of long term debt divided by the book value of total assets (DTA); CEO duality is widely discussed in the literature and is commonly measured as a dummy variable [33]. The moderating variables comprise of family ownership (FLYC, 1 if family firms and 0 otherwise) and ethnicity (ETHNIC, 1 if Bumi and 0 Non-Bumi). FLYC depicts the presence of family members on the BOD and the equity ownership of the family firms of at least 20 % and ethnicity is distinguish by two ethnic shareholder groups i.e Bumiputera and Non-Bumiputera Malays (Chinese, Indians, other citizens and foreigners). The independent variable, IOS is measured in terms of market to book equity (MBE). This proxy variable has been used extensively on prior studies such as [8, 16, 21 & 35]. Dependent variable is the dividend payout ratio (DPP) and is the Cash dividend paid/Net income (Profit after tax) [36, 16, 21 & 1]. Pool regression with cross sectional data is used for hypotheses testing and to reveal the relationship between IOS, DPP and control variables. The equation represents the model for the valuation of the IOS. Ordinary least squares regression is used to test and evaluate the contribution and significance of the hypothesis. According to [37] the phenomenon of heteroscedasticity in the disturbances occurs only in models for cross-section data. This treatment is used to correct the variance of the error term of the model as we will divide the error term with its variance.

$$DPP = \alpha_0 + \beta_1 MBE_{it} + \beta_2 FLYC_{it} + \beta_3 GLC_{it} + \beta_4 DUAL_{it} + \beta_5 LOGMKTC_{it} + \beta_6 DTA_{it} + \beta_7 ROA_{it} + \sum_{i=1}^{n} \beta_8 IND\ TYPE + \varepsilon_{it}$$

Where:

DPP	= Dividend payout
MBE	= Market to book value of equity at the end of year t
FLYC	= Value '1' for family & '0' otherwise
GLC	= Value '1' for government linked & "0" for otherwise
DUAL	= Role duality '1' dual & '0' non-dual
LOGMKTC	= Log of market capitalisation
DTA	= Debt to Total Assets
ROA	= Return on assets
TYPE	= Consumer sector, Trading sector, Properties, Hotel & others, Construction, Plantations and Mining and Industrial
ε,i and t	= Error term, company and time respectively
α_0	= Intercept of the model

4. Empirical Findings

Table 3 (Panel A) reports on the drastic decline in the total value of MBE from the year 2004 onwards in which from 135.800, it drop to 39.890. The minimum DPP is where there were no dividends paid and the maximum DPP was at 87.5 percent in year 2006. The high DPP in Malaysia could be attributed to the dividend policy of Malaysian listed companies where the managers are reluctant to cut or avoid omitting dividend even when the performance of the company is deteriorating [33]. Table 3 (Panel B) reports the descriptive statistics of variables on the number of observations available on skewness and kurtosis of the data. To examine the correlation between the independent variables, a Pearson product moment correlation (r) is computed. Table 4, MBE is negatively and significantly correlated with DPP indicating that high growth firms have lower cash flow and, hence, pay lower dividends. The FLYC is negatively correlated with MBE and this implies that family controlled firms are paying lesser dividends. Additionally, the results provide strong positive support of the relationship between the LOGMKTC and ROA, which reveal that higher market capitalised companies maintain a higher return on assets ratio. On correlation among variables, there was no multicollinearity between the variables as none of the variables correlate above 0.80 or 0.90. The F-value for each of the models from 1 to 5, based on pooled data, is statistically significant at the 1 percent level. The adjusted R2 is the total variance of the dividend policy of the companies listed on the Bursa

Saham. The adjusted R2 for all the models are in the range of 7.1 to 8.5 percent. Although the adjusted R2 is considered low, it is slightly higher than the prior studies reported by [18] who examined the dividend policies among Korean companies, which was at 0.010 percent.

This study finds a significant negative association between MBE and DPP. The negative and significant result between dividend payout and IOS supports the FCF hypothesis, which suggests that high growth firms pay lower dividends and low growth firms pay higher dividends. These findings are consistent with prior findings by [15, 7, 27]. Other studies such as [36, 16, 18 & 22] who also report a significant negative relationship, suggest that high growth firms due to their low cash flow declare lower dividends as compared to low growth firms that declare high dividends due to their anticipated high cash flow. Further, a negative and significant association between FLYC and DPP indicates that high growth family controlled firms are paying lesser dividends and supports the contention that family controlled firms, appear to maximise sales and shareholder value. The results were consistent with prior findings by [25, 10, 4].With respect to industry dummy variables, the study finds a significant positive association between industry type (consumer and industrial products) and dividend policy. Ethnicity had no impact whatsoever on the way the dividend payout.

5. Implications and Conclusion

This study found a strong negative and significant relationship between growth opportunities and dividend policy. It is ensuring to note that this is consistent and extends the literature on the contracting theory based on Jensen's Free Cash Flow theory. As the prior studies on the FCF theory have been generally based on developed countries, the current findings help establish the fact that FCF theory is also applicable to East Asian countries in general and to the Malaysian context, specifically. Further, a firm's 'Free cash flow' (FCF) is also linked to its investment and dividend policy. The higher the investment for the period the smaller the dividend payout or the more the equity issued for the period. [22] document that firms with more growth opportunities have lower cash flow and thus pay lower dividend and similarly firms with less growth opportunities have higher cash flow and thus pay higher dividends and hence there should be positive relation between the proportion of assets and dividend yield.

On the subject of ownership and family controlled firms, the results show a negative significant association between family control firms and dividend payout. The implication of this finding to the policy setters is that family controlled firms are paying lesser dividends as compared to non-family control firms. This contribute to extant literature as the study offers insights to policy makers interested in enhancing the extent to which minority shareholders are protected. In particular, it highlights that improvements in corporate governance will be most beneficial in larger firms (as the sample taken was based on 300 highest capitalised public listed companies), where potential expropriation is greatest.

With regards to limitations, this study was based on the top 300 highest capitalised Malaysian public listed companies meaning that the validation of the conclusion might be applicable to large companies only. Furthermore, this study uses CG data for three years and, hence, may not be generalised for other periods such as prior to governance reforms or during the crisis. There is a also a strong element of sample bias as only firms reporting details on all the corporate variables of interest were included in the analysis.

Extension to the current study is possible in the following areas: i) A longer longitudinal study with more recent data is proposed to investigate the relevant corporate governance issues using time series data ii)

This research is situated in the positivist paradigm, which relies mainly on the quantitative based research approach and perhaps future research might follow up this study using interpretive or critical perspective to delve into issues such as on concrete measurement of the IOS and dividend payout iii) comparative analysis could be performed between Malaysia and other developing countries to gauge and scrutinise the similarities and the main differences on the determination of dividend payout.

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Table 1Sectors of the Sample Companies

	Number of Companies	%
Consumer product	28	9.33
Trading/Services	108	36.00
Properties/Hotel	50	16.67
Construction	19	6.33
Plantations	32	10.67
Industrial	63	21.00
Total	300	100.00

Table 2 Derivation of Sample 2004 to 2006

Sample selection	Total
Top 300 of the market capitalisation of the companies for the three years as listed on the Main Board of Bursa Malaysia	900
Less:	
Banks, Insurance and unit trusts	24
Companies with incomplete data	467
Final sample	409

Table 3 (Panel A) Descriptive Statistics of Continuous Variables

	All Mean Median Std Deviation Minimum Maximum N	2004 Mean Median Std Deviation Minimum Maximum N	2005 Mean Median Std Deviation Minimum Maximum N	2006 Mean Median Std Deviation Minimum Maximum N
LOGMKTC	6.406 6.270 1.371 2.400 10.610 825	6.390 6.250 1.346 2.480 10.580 275	6.305 6.110 1.387 2.480 10.610 275	6.521 6.380 1.376 2.400 10.610 275
ROA	0.062 0.050 0.315 -8.170 1.260 780	0.038 0.060 0.543 -8.170 0.630 238	0.062 0.050 0.080 -0.160 0.610 272	0.080 0.050 0.137 -1.500 1.260 270
DTA	0.563 0.450 0.719 0.000 9.280 832	0.603 0.450 0.875 0.000 8.030 270	0.516 0.440 0.492 0.000 3.990 276	0.570 0.455 0.741 0.000 9.280 286
MBE	13.011 10.260 16.418 -94.340 135.800 571	13.280 9.640 22.977 -94.340 135.800 214	14.266 11.180 10.553 0.800 56.070 157	11.737 10.100 10.802 -17.990 39.890 200
DPP	33.789 31.905 18.902 0.000 87.500 592	34.040 34.041 18.641 0.670 85.330 178	33.769 31.220 18.354 1.530 76.300 197	33.600 31.970 19.764 0.000 87.500 217

Table 3 (Panel B) Descriptive Statistics

	N	Skewness	Kurtosis
LOGMKTC	825	0.554	0.705
ROA	780	-22.819	602.095
DTA	832	6.380	56.249
IOS	571	1.597	13.668
IOSETHNIC	779	2.296	41.469
IOSFLYC	877	7.824	85.004
ETHNICFLYC	900	6.326	38.099
DPP	592	0.352	-0.550

Table 4 Correlation

	DPP	**MBE**	**DUAL**	**LOGMKTC**	**ROA**	**DTA**	**FLYC**	**GLC**
DPP	1							
N	592							
MBE	-0.147***	1						
	(0.002)							
N	434	571						
DUAL	-0.112***	0.107***	1					
	(0.007)	(0.012)						
N	579	555	843					
LOGMKTC	0.083**	-0.029	-0.056	1				
	(0.044)	(0.493)	(0.114)					
N	586	566	807	825				
ROA	-0.023	0.028	0.008	0.138***	1			
	(0.586)	(0.515)	(0.826)	(0.000)				
N	577	537	760	759	780			
DTA	0.036	-0.021	-0.045	-0.001	-0.033	1		
	(0.400)	(0.632)	(0.207)	(0.969)	(0.379)			
N	545	532	781	764	722	832		
FLYC	-0.048	-0.025	0.177***	0.164***	0.006	0.028	1	
	(0.242)	(0.545)	(0.000)	(0.000	(0.861)	(0.424)		
N	592	571	843	825	780	832	900	
GLC	0.006	-0.011	-0.014	0.344***	0.039	-0.021	-0.113***	1
	(0.881)	(0.787)	(0.692)	(0.000)	(0.273)	(0.545)	(0.001)	
N	592	571	843	825	780	832	900	900

Table 5 (Panel A) Multiple Regression Results

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coeff	**t-stat**	**Coeff**	**t-stat**	**Coeff**	**t-stat**	**Coeff**	**t-stat**	**Coeff**	**t-stat**
Pooled EGLS										
(Constant)	34.949	5.812***	35.082	5.762***	35.156	5.883***	34.959	5.803***	35.367	5.834***
MBE	-.213	-3.161***	-.221	-2.548***	-.264	-3.750***	-.213	-3.151***	-.272	-3.058***
DUAL	-2.671	-.631	-2.679	-.632	-3.727	-.881	-2.643	-.618	-3.544	-.830
LOGMKTC	.889	1.070	.886	1.066	.990	1.198	.885	1.061	.961	1.156
ROA	-15.271	-1.427	-15.311	-1.428	-16.747	-1.572	-15.253	-1.423	-16.684	-1.561
CONSUMER	6.731	1.932**	6.714	1.924**	7.106	2.051**	6.719	1.922**	7.008	2.013**
PROPERTIES	-1.714	-.573	-1.726	-.576	-1.432	-.481	-1.726	-.574	-1.531	-.512
CONSTRUCTION	-1.196	-.309	-1.189	3.881	-1.871	-.484	-1.218	-.312	-2.045	-.524
PLANTATION	4.585	1.431	4.590	1.431	5.032	1.578	4.583	1.428	5.029	1.572
INDUSTRIAL	-6.306	2.914**	-6.329	-2.166**	-6.722	-2.317**	-6.295	-2.152**	-6.675	-2.287**
GLC	-.421	3.412	-.412	-.121	-.422	-.130	-.422	-.123	-.436	-.128
DEBT	.492	.449	.491	.447	.533	.490	.497	.451	.571	.521
FLYC	-9.039	-2.871***	-9.058	-2.871***	-15.747	-3.727***	-8.966	-2.597***	-15.366	-3.529***
ETHNIC	2.306	1.108	2.029	.720	2.115	1.022	2.341	1.071	2.094	.730
IOSETHNIC			.020	.146					.020	.149
IOSFLYC					.516	2.362***			.529	2.388
ETHNICFLYC							-.392	-.052	-3.006	-.397
YEAR DUMMY 1	0.614	0.265	0.620	.267	.745	.323	.613	.264	.746	.323
YEAR DUMMY 2	-1.832	-.842	-1.826	-.838	-1.845	-.854	.-1.833	-.841	-1.851	-.854***
R^2		0.332		0.332		0.352		0.332		0.352
Adjusted R^2		0.073		0.071		0.085		0.071		0.080
F statistic		3.018		2.791		3.181		2.789		2.823
F-value		0.000		0.000		0.000		0.000		0.000
N		409		409		409		409		409

Notes:

The reported *t*-value and the significance opposite each variable indicates whether the variable is significantly contributing to the equation model. ***Significance at 1 %; **significance at 5 % level and *significance at 10 % level.

MBE = [Shares outstanding multiply shares closing price] divided by common equity; DUAL = Duality, LOGMKTC = Log of Market Capitalisation; ROA = Return on assets; Industry type = CONSUMER; TRADING; PROPERTIES; CONSTRUCTION; PLANTATIONS & INDUSTRIAL; GLC = Government linked companies, FLYC = Family control; IOSETHNIC = Interaction between IOS & ethnicity, IOSFLYC = Interaction between IOS & family control; ETHNICFLYC = Interaction between ethnicity & family control AND ETHNICFLYC = Interaction between ethnicity & family control.