European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.14, No.14, 2022

Dividend Policy and Firm Value: Evidence from the Nigerian Manufacturing Industry

Osaretin Kayode Omoregie[1*] Peter Abiodun Ige[2]
1. Lagos Business School, Pan-Atlantic University, Lagos, Nigeria
2. Obafemi Awolowo University (OAU), Ile-Ife, Osun State, Nigeria
* Email of the corresponding author: abiodunige116@gmail.com

Abstract
The impact of dividend payment on firm value is a subject of ongoing debate by academics and practitioners. We examine the impact of dividend policy on the value of Nigerian manufacturing companies over the period 2010 and 2018. Pooled ordinary least square (OLS) and fixed effect regression analysis was applied on twenty of the thirty-five manufacturing companies listed on the Nigeria Stock Exchange (NSE). The result indicates a significant positive relationship between dividend payout ratio, dividend per share and firm value. We also observe a bidirectional relationship between leverage ratios and price to book value with the coefficients of debt-to-equity ratio consistently positive and significant, while that of debt-to-asset ratio is negative. We conclude that while dividend payment positively affects firm value, resultant increased leverage to compensate for cash outflow may offset the positive effect on value. An appropriate balance between dividend payout and increase leverage is thus required.
Keywords: Dividend policy, Firm value, Leverage, Manufacturing
DOI: 10.7176/EJBM/14-14-08
Publication date: July 31st 2022

1. Introduction

The last five decades have witnessed tremendous interest from financial economists on the topical issue of corporate dividend policy and its effect on firm value. It has thus received a lot of intensive theoretical modelling and empirical explanations. For the most part, the results of the theoretical models are conflicting, and they are lacking in strong empirical support (Frankfurter and Wood, 2002). Furthermore, the available empirical evidence is equivocal, making the dividend puzzle one of the most challenging topics facing financial analysts (Bhattacharyya 2007, Black 1976). For example, Black reported: ‘‘The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just don’t fit together’’. This gives special impetus for researchers in the field of finance to delve more into the subject.

Dividend policy remains one of the most important strategic decisions for corporate managers. This is because it has implications for firm value and returns to investors and shareholders’ wealth. Dividend policy also affects a firm’s ability to raise funds and consequently its value (Inyiama, Okwo and Inyiama, 2015). Firms in countries with weak legal protection systems, particularly Nigeria, can increase their credibility by improving their corporate governance records through regular payment of dividends, because it signals investor protection and reduction of asymmetric information (Ionescu, 2012; Love and Klapper, 2002). Corporate governance practice through dividend policy can minimise agency problems.

The survival of any company is dependent on its continuous investment in assets and the employment of internal financing using retained earnings is an integral part of the sources of finance for this purpose (Uwuigbe, Jafaru and Ajayi, 2012). However, the Nigerian government’s fiscal policies tend to put some restrictions on the amount of dividend a company may pay. This invariably forced part of the realized profits to be ploughed back into the business. The restriction is further strengthened by section 379 (2) of the company and allied matters act (CAMA 2020), which provides that the general meeting shall have the power to change the amount recommended. One of the reasons behind the dividend decision policy of the Nigerian government is to ensure that funds are available for continuous investment in assets so that the companies will continue to operate as a going concern. This paper draws motivation from this established importance of dividend policy and its impact on firm value and the need for more empirical evidence from the Nigerian capital market.

The rest of the paper is organized as follows. The next section briefly discusses theoretical and empirical issues on dividend policy and firm value. Section 3 describes the methodology followed in the study. Section 4 contains the discussion of the empirical results, and the concluding remarks are presented in section 5.

2. Literature Review

2.1 Theoretical Issues

In finance, dividend policy has received considerable research effort with many researchers presenting theories and factors that determine dividend policy and its relationship to firm value. However, the foremost theoretical expositions on the influence of dividend policy on the value of a firm can be traced back to Gordon and Shapiro

(1956), Linter (1956), Gordon (1959), Linter (1962), Walter (1963), Fama and Babiak (1968). These researchers argue that the division of earnings between dividends and retention will influence share values. Specifically, Gordon asserts that shareholders who are risk-averse prefer some dividends to the promise of future capital gains because dividends are regular and certain returns whereas future capital gains are less certain. This assertion is called the 'Bird in the Hand' theory (Lintner, 1962) and it has been supported by a more recent research effort by Fairchild in 2010. Overall, it is argued that dividend pay-out has a positive impact on the firms' value.

In contrast, Miller, and Modigliani (1961) in their seminal paper based on a few assumptions, cotend that dividend pay-out policy does not have a significant effect on a firm's value. This view is known as 'Dividend Irrelevance Theory'. A firm's value, according to the theory, is determined solely by its investment decisions. Thus, the dividend payout ratio is mere detail and as such the effect of any dividend policy can be directly offset by other forms of financing such as the sale of new common equity shares. The assertion of this theory is based on the assumption of no taxes, no transaction costs, no issuance costs, and the existence of a fixed investment policy.

'Tax Preference Theory' is a third major theoretical proposition about the impact of dividend policy on a firm's value. It posits that dividend policy has an inverse relationship with firm value such that small dividend pay-outs lower the cost of capital thereby increasing the share price. In other words, paying low dividends lead to the maximization of the company's share value. This position is based on the understanding that taxes on dividends are normally more than that of gains on capital. In support of this discourse, Allen Michaely (2003) argues that firms should reduce dividend pay-outs due to the burden of high taxes on individuals. Fama and French (2001) also find that firms growing at a high rate with huge investments tend to pay low dividends. Thus the overall empirical evidence on this issue appears to indicate that from a tax perspective, dividends should be minimized for firms to maximise their share value.

Other relevant propositions include the 'Clientele Effects of Dividends', the 'Signalling Hypothesis (information content)' and the 'Agency Theory'. These propositions are mainly an offshoot of the Miller and Modigliani (MM) dividend irrelevant theory and the bird in the hand theory. With their clientele theory, MM (1961) posit that clientele effect play a role in the decisions regarding dividends under some circumstances. They argue that individual stockholder preference for portfolios being informed by some constraints in the market such as the costs of transactions and differences in tax regimes thereby preferring a variety of gains in capital and pay-outs. According to them, such constraints may make stockholders prefer stocks that lower such costs. This stakeholder's preference for pay-out securities is referred to as the "dividend clientele effect". In sum, it is argued that in an efficient market every investor is "as good as another"; therefore, the firm value remains the same; that is, policy on dividends is inconsequential to firm valuation.

The signalling hypothesis was put forward by Ross in 1977 when he argued that stock value may react to changes in dividend declarations. In essence, the author observed that firms that increase dividend payments had a corresponding increase in share prices whereas those that reduced dividend payments had a corresponding decline in share prices. Hence dividend declarations are a way of conveying implicit signals of the company's future profit potential. However, the signal should be reliable to help the market in differentiating between several firms. Fulfilment of this condition would enable the stock market to respond favourably to the declarations of pay-out increases and unfavourably to declarations of dividend reductions (Ang, 1987, Koch and Shenoy, 1999). For the positive association between dividend announcements and share returns, Pettit (1972), established strong support that dividend change announcements carry information to the market. Aharony and Swary (1980), and Benesh et al. (1984) drew similar conclusions, whereas Lee and Ryan (2002) found evidence for dividend initiations and omissions.

Lastly, the agency theory views dividend payment as a way of acting to straighten the conflicting positions and resolve the ownership problems existing between managers and stockholders, by rationing the liquidity left at the disposal of managers thereby reducing the agency costs between shareholders and management (Rozeff, 1982). The payment of dividends reduces the amount of retained earnings available for reinvestment and requires the use of more external equity funds to finance growth.

2.2 Empirical Evidence

Empirical evidence as to whether dividend policy affects firm valuation is mixed. Some studies have found that firms' value is not affected by dividend pay-out policy while many stockholders and financial analysts are of the opinion that dividends are important, both for their signalling effect (informational content) and because external equity capital is more expensive than retained equity. Other studies have found that, because of tax effects, investors require higher pre-tax returns on high-dividend pay-out stocks than on low-dividend pay-out stocks. Thus, when establishing an optimal dividend policy, a firm should consider shareholder preferences along with investment opportunities and the relative cost of retained equity versus externally raised equity.

Based on the dividend irrelevance theory, a good number of empirical studies have been conducted. These include Nwaorgu and Uzoegbu (2018), Soewarno, Arifin, and Tjahjadi (2017), Nurdin and Kasim (2017),

Sualehkhattak and Mazher (2017) among others. The study by Nwaorgu and Uzoegbu (2018) using Pearson correlation and panel least square random effect regression technique to test the relationship between the various forms of dividend policies employed by listed consumer and conglomerate companies in Nigeria conclude that dividends are irrelevant to firm value. In a similar effort based on the data for Indonesian manufacturing companies, Nurdin and Kasim (2017) find that the dividend policy has no significant effect on firm value. Their results also reveal that corporate governance generally cannot moderate the relationship between firm value and the company's financial performance. Sualehkhattak and Mazher (2017) applied the correlation analysis technique, ordinary least square (OLS) regression, t-test, and panel data regression analysis on 148 non-financial companies listed on Karachi Stock Exchange (KSE), for the period (2011-2015) and find an insignificant relationship between dividend payout and firm value. Soewarno et al. (2017) examines the mediating effect of leverage and dividend policy on the influence of corporate governance on firm value and find that leverage did not mediate the corporate governance-firm value relationship, and that dividend policy partially mediated the corporate governance-firm value relationship.

With a focus on the signalling effect, we find in Woolridge (1983) who in his study identified two potential effects: a wealth transfer effect and a signalling effect. It is demonstrated that the primary factor influencing security returns in response to dividend changes is market signalling though a wealth transfer effect is not ruled out. Similarly, Yoon and Starks (1995) find that dividend changes are associated with subsequent significant changes in capital expenditures over the years following dividend change. In addition, Baker and Powell (1999) find that with respect to dividend relevance, respondents generally express the highest level of agreement with statements about signalling effect.

A more recent effort by Al-Malkawi, Bhatti and Magableh, (2014) and Altiok-Yilmaz and Akben-Selcuk (2010) also provide empirical evidence in support of the signalling effect of dividend changes. Specifically, Al-Malkawi et al. using ten years' data of firms listed on the Muscat Securities Market provides a direct test for dividend smoothing and the signalling effect of dividend changes and find evidence to support the signalling hypothesis. This finding coincides with findings from Ozuomba and Ezeabasili (2017) based on public companies in Nigeria. Altiok-Yilmaz and Akben-Selcuk investigate the market reaction to dividend change announcements at the Istanbul Stock Exchange employing a sample of 184 announcements made by 46 companies during the period 2005 to 2008 and conclude consistently with the signalling hypothesis that the market reacts positively to dividend increases, negatively to dividend decreases and does not react when dividends are not changed. In contrast, some studies are not a corollary for this idea. For instance, research efforts by Benartzi et. al. (1997), Conroy et. al. (2000), Chen, Firth, and Gao (2002) and Gunasekarage and Power (2002), find no evidence of a significant relationship between dividend announcements and share returns.

Furthermore, recent studies have found evidence to back a positive relationship between dividend policy and firm value while a few ones reported an inverse relationship between them. On the positive view, Anton (2016) investigated the impact of dividend policy on firm value using a sample of sixty-three non-financial firms listed on the Bucharest Stock Exchange (BSE) over the period 2001-2011 and finds that the dividend payout ratio positively influences the firm value and that leverage, and firm size was found to have a positive effect on firm value. Using regression analysis, Timothy and Ochuodho (2013) sought to establish the relationship between dividend payout and firm performance among listed firms in the Nairobi Securities Exchange. Their findings indicate that dividend pay-out was a major factor affecting firm performance and that this relationship was strong and positive. In addition, the studies of Setiyawati, Wahyudi, and Mawardi (2018); Ozuomba and Ezeabasili (2017) and Giriati et al (2014) give evidence for dividend relevance. For example, Setiyawati et al. using multiple regression analysis find that dividend pay-out ratio and return on investment relate positively and significantly with firm value. However, the findings of Yahya and Ghazali (2017), Muhammad and Humayun (2010) and Hashemijoo (2012) who investigated the impact of dividend policy on share price volatility in the Malaysian Stock Exchange posits that there is a negative significant relationship between both dividend yield and payout ratio with share price volatility.

In conclusion, most of the empirical studies reviewed above have been centred on developed economies with very few efforts made for developing economies. For Nigerian firms, quantitative analysis regarding this topical issue is still very scanty and calls for more empirical contribution. It should also be noted that research effort in this regard for the Nigerian economy has majorly beenbased on finding the determinants of dividend policy without linking the resultant factor to the value of firms. Moreover, few studies relating to firms' capital structure and share price have usually been based on financial institutions. This study, therefore, is motivated to contribute empirically to the dividends policy and firm value discussion, which has remained an interesting puzzle over the years, with a focus on the manufacturing industries in Nigeria.

3. Methodology

3.1 Data description and sources

The study is carried out for twenty Nigerian manufacturing companies over the period 2010-to 2018. The

companies covered are Berger Paints, Beta Glass, Cadbury Nigeria, Cement Co. of Northern Nig., Cutix, Dangote Cement, Dangote Flour Mills, Dangote Sugar Refinery, Flour Mills Nigeria, Greif, Guinness Nigeria, Honeywell Flour Mills, Lafarge Africa, NASCOM Allied, Nestle Nigeria, Nigerian Breweries, Portland Paints and Products, PZ Cussons Nigeria, Unilever Nigeria and VITAFOAM Nigeria. All selected companies are quoted on the Nigerian Stock Exchange (NSE) as of January 1st, 2019. The selection of companies is guided by the availability of the data for the variables relevant to our model.

In this study, we use price to book value, which is measured by the ratio of market price per share to book value per share, as the value the firm created. For a more robust analysis, we also proxied dividend yield for firm value in our estimated model. The dividend yield is measured by the ratio of a company's annual dividend to its share price. The key independent variable for this study is the dividend payout ratio which is measured by the ratio of dividend per share to diluted earnings per share. Leverage was controlled for on the expectation that firms with high leverage would tend to have large investments and thus higher earnings growth (Mahalang'ang'a and Ochuodho, 2013). To capture this important aspect of corporate governance, two prominent measures of financial leverage are considered, which are debt to equity ratio and the debt to asset ratio. Lastly, firm size and market share are also included as control variables. Firm size is given by the logarithm of total assets whereas we use total market value as a proxy for market share. Theoretically, it is expected that our variables should have a direct effect on firm value.

The nature of our variables precludes that we search for them through secondary data sources. Hence, all data were sourced using the online Bloomberg facility made available by Lagos Business School. The data can also be obtained from the firm's annual reports most of which are publicly available online.

3.2 Conceptual Framework Model Specification

In this study, we adopt a modified version of the conceptual framework of Soewarno et al. (2017) and Sualehkhattak and Mazher (2017) to specify our model relating firm value and dividend policy as:

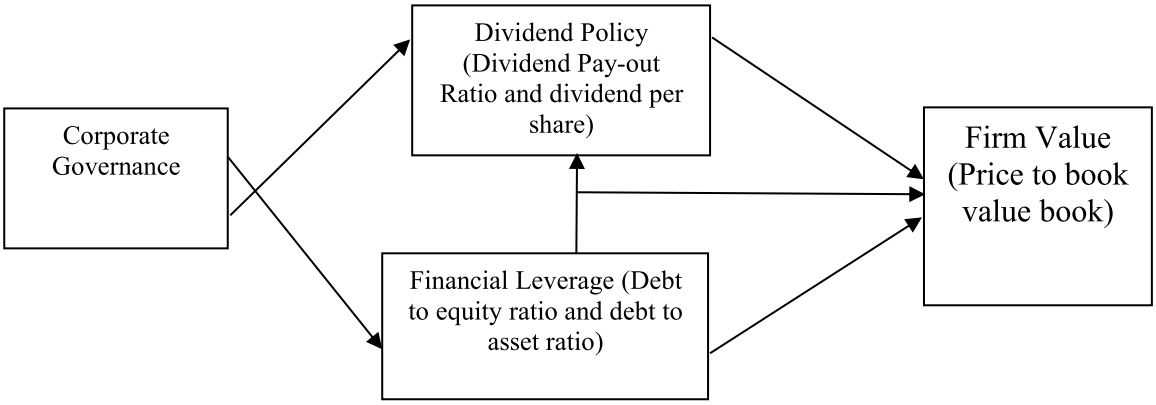

Figure 1; Conceptual Framework

3.3 Model Specification

Following the conceptual framework, the basic econometric regression model for our estimation is expressed as:

$$FV = \varphi + \gamma(DP) + \delta(Lev) + \sigma(DP * Lev) + \tau^{i}X + \varepsilon \quad 1$$

The nature of the data is the combination of time series and cross-sections known as panel data. Thus, we express the above in its panel form as:

$$FV_{it} = \varphi + \gamma(DP)_{it} + \delta(Lev)_{it} + \sigma(DP * Lev)_{it} + \tau^{i}(X)_{it} + (\varepsilon)_{it} \quad 2$$

Where FV portrays firm value indicators (the ratio of market price per share to book value per share and dividend yield); DP is the dividend policy measures (dividend payout ratio and dividend per share); Lev is the financial leverage variables (debt to equity ratio and debt to asset ratio); X represents our control variables (firm size and total market value) and ε is the error term while i represents the companies with t indicating time periods. In a more explicit way by incorporating our variables into the model, we can re-express equation 2 as:

$$(PB)_{it} = \varphi + \gamma_1(DPR)_{it} + \gamma_2(DPS)_{it} + \delta_1(DE)_{it} + \delta_2(DA)_{it} + \sigma_1(DPR * DE)_{it} + \sigma_2(DPR * DA)_{it} + \tau^{i}X_{it} + \varepsilon_{it} \quad 3$$

Where; PB is the price to book value, φ represents the constant while $\gamma, \delta, \sigma, and\ \tau$ measure the relative impact of each individual variable on firm value. DPR is the dividend pay-out ratio of the companies, DPS is the dividend per share, DE is debt to equity ratio while DA is debt to asset ratio. The interaction term between dividend payout ratio and financial leverage variables i.e., debt to equity ratio and debt to asset ratio is captured

by $DPR * DE$ and $DPR * DA$ respectively. i and t remain as defined above. For a more robust analysis, we also use the dividend yield to measure the value the companies created over the study periods. Therefore, using dividend yield (DY) as our dependent variable, we have;

$$(DY)_{it} = \varphi_t + \gamma_1(DPR)_{it} + \gamma_2(DPS)_{it} + \delta_1(DE)_{it} + \delta_2(DA)_{it} + \sigma_1(DPR * DE)_{it} + \sigma_2(DPR * DA)_{it} + \tau^i X_{it} + \varepsilon_{it} \quad 4$$

Variables remain as defined above. In panel data model, case of dynamic information is possible and may result to endogeneity problem between the explanatory variables and dependent variable. In order to account for this, equation 3 is transformed to;

$$PB_{it} - PB_{it-1} = \varphi_t + \rho PB_{it-1} + \gamma_1(DPR)_{it} + \gamma_2(DPS)_{it} + \delta_1(DE)_{it} + \delta_2(DA)_{it} + \sigma_1(DP * Lev)_{it} + \tau^i X_{it} + \mu_i + v_{it} \quad 5$$

Where μ_i represents unobserved time-invariant company-specific effects and v_{it} denotes disturbance term; the increase in firm value is represented by $(PB)_{it} - (PB)_{it-1}$; and to account for change common to all, φ_t indicates the period-specific intercept. To eliminate the company-specific effect term, the first difference of equation 5 is taken so that company-specific effects are controlled for. Hence, the model is stated as:

$$\Delta PB_{it} = \Delta\varphi_t + (\rho + 1)\Delta PB_{it-1} + \gamma_1\Delta DPR_{it} + \gamma_2\Delta DPS_{it} + \delta_1\Delta DE_{it} + \delta_2\Delta DA_{it} + \sigma_1\Delta(DP * Lev)_{it} + \tau^i\Delta X_{it} + \Delta v_{it} \quad 6$$

Where Δ $denote$ $change$. Other parameters remain defined as above.

Taking dividend yield as our dependent variable, we have;

$$DY_{it} - DY_{it-1} = \varphi_t + \rho DY_{it-1} + \gamma_1 DPR_{it} + \gamma_2 DPS_{it} + \delta_1 DE_{it} + \delta_2 DA_{it} + \sigma_1(DP * Lev)_{it} + \tau^i X_{it} + \mu_i + v_{it} \quad 7$$

$$\Delta DY_{it} = \Delta\varphi_t + (\rho + 1)\Delta PB_{it-1} + \gamma_1\Delta DPR_{it} + \gamma_2\Delta DPS_{it} + \delta_1\Delta DE_{it} + \delta_2\Delta DA_{it} + \sigma_1\Delta(DP * Lev)_{it} + \tau^i\Delta X_{it} + \Delta v_{it} \quad 8$$

All parameters remain as defined above.

3.4 Estimation Techniques

Different estimation techniques such as pooled OLS, fixed and random effects panel regressions are used to estimate our equation. However, the Hausman test for the appropriate model precludes that we use Fixed Effect regression for our analysis of equation 3. For robustness check, we employ the dynamic panel System-GMM estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998) that estimates with a level-equation and a difference equation for the analysis of equations 6 and 8. This estimator, even when the sample period is short, produces unbiased and consistent estimates after controlling for endogeneity.

4. Empirical Results and Discussion

4.1 Descriptive statistics

Descriptive statistics gives information about the sample statistics such as the mean and the variation of the sample measured by the standard deviation with the minimum and maximum value for each statistic. Table 2 shows the summary statistics of the data used in the model with the standard deviation showing three variations (i.e., overall, between and within). The overall statistics indicate a relatively low average value of price to book value (PB) 4.33 with between variation (across individual companies) more than the within variation (over time). The overall standard deviation is 5.12, suggesting less fluctuation in the value of the variable for the manufacturing companies in Nigeria over the study period (2010-2018). Similarly, the statistics of all the variables used in the model are reported, while the dividend payout ratio has within variation more than the between variation, all the other variables have between variation more than the within variation.

In the same vein, the correlation analysis gives information on the degree and direction of the relationship between pairs of variables used in the model. Table 3 shows the correlation coefficients among the variables in the model. The results indicate that all the variables are positively correlated to price to book value (PB), suggesting an appositive relationship between firm value and the explanatory variables. Dividend per share gives the highest correlation coefficient with PB pointing to its importance in the model. A high correlation coefficient of 0.91 is found to exist between debt-to-equity ratio and debt to asset ratio, indicating that these variables could be used interchangeably.

Table 1: Descriptive Statistic

Variable	Mean(overal)	Standard Deviation			Minimum	Maximum
		Overall	Between	Within		
Firm Value (F/V)						
Price to book value (PB)	4.3301	5.1271	4.7597	2.0212	0.4215	27.4825
Dividend Policy (DP)						
Dividend payout ratio (DPR)	59.6200	93.7774	39.3280	86.1639	0	1105.266
Dividend per share (DPS)	2.4257	5.8689	4.9228	3.1643	0	47.5
Financial Leverage						
Debt to Equity Ratio (DE)	55.3403	72.4497	64.3976	37.6903	0	350.8464
Debt to Asset Ratio (DA)	18.4854	19.2395	18.2427	7.8697	0	82.7168
Control						
Firm Size ($Fsize$)	24.3113	1.9364	1.9324	0.4123	19.9803	28.1583
Market Share ($Mava$)	24.6591	2.3708	2.3753	0.4487	18.9374	29.0831

Source: Author's compilation

Table 2: Correlation Matrix

Variable	PB	DPR	DPS	DE	DA	$Mava$	$Tasset$
PB	1.0000						
DPR	0.0320	1.0000					
DPS	0.6963	0.1513	1.0000				
DE	0.0954	-0.0056	-0.0209	1.0000			
DA	0.0293	0.0641	0.0217	0.9189	1.0000		
$Mava$	0.2802	0.0390	0.3948	-0.0355	0.0671	1.0000	
$Tasset$	0.0897	0.0435	0.2359	0.0563	0.1484	0.9033	1.0000

Source: Author's compilation

4.2 Pooled OLS and Fixed Effects

The results of the pooled OLS and fixed effects are shown in Tables 3 and 5. Table 3 shows the results of the model with price to book value (PB) as the dependent variable while Table 5 presents (in the appendix) the results with dividend yield (DY) as a dependent variable. As shown in the results, the Hausman test validates the appropriateness of the fixed effects model estimation. Column (i) serves as the base model with the exclusion of interaction variables. In columns (ii) and (iii) we include each interaction variable (i.e., the interaction between dividend policy and financial leverage). Based on the results of pooled OLS estimation, the dividend payout ratio is positive and significant at the 10% level. Also, depicting dividend policy measure, dividend per share has a highly significant positive effect on the price to book value (PB). This suggests that a unit increase in both dividend payout ratio and dividend per share will lead to an increase in the share value of the sampled companies in Nigeria. This result is consistent with the previous findings that good management of dividend policy will positively affect firm value (Setiyawati et al., 2018; Anton, 2016; Ozuomba et al. 2016; M'rabet and Boujjat, 2016; Timothy and Ochuodho, 2013 etc.) but contrary to the finding of Nwaorgu and Uzoegbu, (2018), Hooi et al. (2015), Hashemijoo (2012) who find evidence to support dividend irrelevance theory. Using dividend yield as our predictor, dividend per share is not significant while dividend payout ratio shows an appositive and statistically significant relationship with the price to book value.

We find a bidirectional relationship between leverage ratios and price to book value with the coefficients of debt-to-equity ratio (DE) consistently positive and highly significant in the three columns indicating that DE has a positive effect on firm value. This positive result affirms that leverage ratios can be used as a monitoring tool to maximize firm value by reducing managers' tendency to shirk shareholders' interests (Jensen, 1986). Also, Modigliani and Miller 1963 argued that maximum use of debt as financial leverage can serve as a tax-deductible, which may enhance firm value. Hence, firms usually result to external financing to curtail managers' use of excess cash of the firm on investment that is not valuable to them and to take the advantage of tax saving. This result is like the one obtained by Sualehkhattak and Mazher, (2017) and Rizqia, and Sumiati, (2013). However, the debt to asset ratio (DA) gives consistent significant negative coefficients revealing a negative relationship with firm value. A negative relationship between financial leverage and firm value may indicate that agency

issues may lead the firms to use higher than appropriate levels of debt in their capital structure. Consequently, lenders' influence may rise and in turn limits the managers' ability to manage firms' operations effectively, hence negatively affecting the firm value. Omoregie et. al. (2019) and Ahmed-Sheikh and Wang (2013) found a similar result in relation to this variable by reporting that the debt ratio is negative in relation to profitability and liquidity.

A bi-directional result such as this according to Asma (2019) may be due to different seen and unseen factors within the companies. While the results drawn from the study of Ahmed Sheikh and Wang, (2013) and Salim and Yadav (2012) emphasized evidence to support a negative association between leverage ratios and firm performance, they also found evidence in favour of a positive relationship. For instance, Ahmed Sheikh and Wang reported that measures of capital structure are negatively related to return on assets and at the same time revealed that the Short-term debt ratio is positively related to the market-to-book ratio. The empirical evidence is further supported in Table 5 presented in the appendix, although DE is not significant in column (ii), it shows a positive relationship with firm value. However, none of the coefficients of DA is statistically significant.

The coefficients of the interaction term in Table 3 are positive, but not consistently significant (with only DPR*DA significant at the 10% level), suggesting that the indirect effect of dividend policy on firm value through the channel of financial leverage is positive but the impact is minimal. In essence, the results imply that a good combination of equity and asset management with dividend policy is most likely to enhance firm value. The indirect effect of dividend policy through financial leverage on the value of firm hinges on the agency theory. In 1976, Jensen and Meckling opined that a firm's efforts to minimize agency problems can be done with a bonding mechanism of increasing debt amount and increasing dividends. Our results suggest that firm does not use bonding mechanism to reduce agency problems which is in congruence with the study of Rizqia and Sumiati, 2013 and Smith Puleo and Casey, 2008 who reported that financial leverage has no effect on dividend policy. This is saying that financial constraints did not affect corporate dividend decisions and firm value. As reported in Table 5, we find negative coefficients for these variables taking dividend yield as the measure of firm value.

Further and regarding our control variables; firm size and total market value), the pooled OLS estimation reveal that their coefficients are consistently significant with total market value (Mava) consistent with our theoretical expectation of a positive relationship with firm value while firm size shows negative value. A negative value for firm size contradicts the findings of Anton (2016) who find a substantial positive effect for this variable. However, we find a positive coefficient for the variable using dividend yield as the dependent variable as shown in Table 5. Although it is not significant in the base model, it becomes significant with the addition of the interaction variables in columns (ii) and (iii).

It is imperative to note that pooled OLS model does not account for heterogeneity or individuality that may exist among companies. Consequently, using WITHIN estimations (the fixed effects model in Table 3) could solve this problem by distinguishing between various companies that we have. Thus, under fixed effects estimation, dividend policy measure and financial leverage, coupled with their interaction term, the coefficients are of similar magnitude in comparison with those derived from pooled OLS, as they all maintain their signs. Specifically, both dividend payout ratio and dividend per share show a positive relationship with firm value. While DPS consistently show significant coefficients, DPR is significant only in the third column at a 10% level because of the inclusion of the interaction term. This suggests that in each manufacturing company in Nigeria, dividend policy has a positive influence on firm value. Also, from the fixed effects results, our control variables maintain their signs as in the pooled OLS. However, the inclusion of WITHIN estimations makes market value significant only in the third column. The results in Table 5, under fixed effect estimations, regarding all our explanatory variables, when the dividend yield is used as our predictor of firm value in the model, are consistent with results obtained in the pooled OLS results.

Table 3: Pooled OLS and Fixed Effects Estimation with (PB) as the Dependent Variable

Price to book value (PB)	Polled OLS			Fixed effects		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
Dividend pay-out ratio (DPR)	0.0004	0.0047	0.0161	0.0012	0.0041	0.0174
	[0.17]	[0.59]	[1.82] *	[0.72]	[0.70]	[1.76] *
Dividend per share (DPS)	0.3606	0.3577	0.3569	0.2730	0.2742	0.2806
	[8.14] ***	[8.01]**	[8.13] ***	[5.89] ***	[5.89] ***	[6.04] ***
Debt to Equity Ratio (DE)	0.0721	0.0704	0.0727	0.0303	0.0297	0.0304
	[7.70] ***	[7.25] **	[7.84] ***	[3.42] ***	[3.31] ***	[3.45] ***
Debt to Asset Ratio (DA)	-0.2249	-0.2307	-0.2542	-0.0575	-0.0611	-0.0699
	[6.61] ***	[6.56] **	[6.88] ***	[1.44]	[1.51]	[1.72] *
Firm Size $(Fsize)$	-4.0221	-4.1030	-4.2456	-1.1313	-1.1373	-1.1918
	[9.02] ***	[8.87] **	[9.31] ***	[2.46] **	[2.46] **	[2.59] **
Market Share $(Mava)$	3.8000	3.8798	4.0201	0.6339	0.6690	0.7551
	[10.2] ***	[9.93] **	[10.45]***	[1.59]	[1.64]	[1.86] **
$DPR * DE$		0.0000			0.0003	
		[0.67]			[0.51]	
$DPR * DA$			0.0004			0.0023
			[1.94] *			[1.42]
Constant	8.2867	8.6177	9.3096	15.5908	15.0395	
	[2.47] **	[2.54] **	[2.77] ***	[1.64]	[1.57]	
R^2	0.7825	0.7825	0.7878	0.5438	0.5547	
Observations	138	138	138	138	138	
No. of Company				20	20	
Hausman test (Prob. Chi 2)				0.0000***	0.0000***	0.0000***

Figures in parenthesis are/t-values/. (***), (**) and (*) indicates significance at 1%, 5% and 10% respectively

4.3 System Generalized Method of Moments (GMM)

Here, the results of Arrelano-Bond tests with the null hypothesis that there is no second-order autocorrelation validate our models as AR (2) is not significant. In the same vein, the Sargan test of overidentifying restrictions checks the validity of the instruments i.e., if all the instruments as a group are exogenous. The results show that our instruments are reliable as the required and acceptable p-values were obtained. Also, the rule of thumb is satisfied regarding the number of instruments, as the number of instruments is less than the number of groups. Depicting the dynamic nature of each model, the lag of price to book value, in Table 4, and the lag of dividend yield as reported in the appendix (Table 6) are positive and statistically significant at the 1% level. This indicates that price to book value and the dividend yield is positively influenced by their values in the leading period. The results of the system GMM ally with the findings from both pooled OLS and fixed effect (within) estimation as dividend per share, debt to equity ratio, debt to asset ratio, firm size and market share retain their individual sign. However, we observe a change in the sign of the dividend payout ratio as the result reveal a negative relationship with the price to book value. Overall, the results are robust in all the estimations as the signs of all the coefficients remain almost preserved in the whole estimation, even in line with system GMM which considers possible endogeneity.

Table 4: System GMM Estimation with (PB) as the Dependent Variable

Price to book value (PB)	System GMM		
	(i)	(ii)	(iii)
Price to book value (PB)Lag	0.6361	0.6014	0.6073
	[14.89] ***	[11.59] ***	[13.21] ***
Dividend payout ratio (DPR)	-0.0076	-0.0020	-0.0057
	[3.03] ***	[0.75]	[1.56]
Dividend per share (DPS)	0.2633	0.2791	0.2723
	[22.24] ***	[15.29] ***	[13.61] ***
Debt to Equity Ratio (DE)	0.0396	0.0362	0.0397
	[10.13] ***	[6.55] ***	[6.47] ***
Debt to Asset Ratio (DA)	-0.1188	-0.0828	-0.1035
	[6.05] ***	[3.28] ***	[4.90] ***
Firm Size (Fsize)	-1.2516	-1.3217	-1.4597
	[3.17] ***	[5.54] ***	[7.85] ***
Market Share $(Mava)$	1.0021	1.0919	
	[4.05] ***	[6.28] ***	
$DPR * DE$		-0.0001	
		[4.21] ***	
$DPR * DA$			-0.0002
			[1.76] *
Constant	7.3333	6.6045	8.7606
	[1.24]	[1.60]	[2.14] ***
Observations	121	121	121
No. of Company	20	20	20
No of instruments	14	14	14
A-Bond AR (1) test p-value	-2.789	-2.903	-2.7579
	[0.0053]	[0.0037]	[0.0058]
A-Bond AR (2) test p-value	-1.255	-1.2425	-1.2164
	[0.2095]	[0.2141]	[0.2238]
Sargan test	11.5665	11.9227	12.3346
	[0.999]	[0.999]	[0.998]

Figures in parenthesis are/t-values/. (***), (**) and (*) indicates significance at 1%, 5% and 10% respectively

5. Concluding Remark

The relevance of dividend policy as one of the important strategic decisions for corporate managers has warranted a increased debates on its effect on firm value. In view of this, the paper examines the impact of dividend policy measures on firms' value. Efforts were also made to investigate the effect of financial leverage as well as its interaction with dividend policy on firm value. Given the gap in the literature that very scanty studies have focused on the Nigerian manufacturing industry, we cover twenty (20) manufacturing companies out of the 35 listed (as of 1st January 2019) on the Nigerian Stock Exchange (NSE) for the period between 2010 and 2018. Choosing price to book value which has received considerable usage as the measure of firm value, the empirical model for the study is built on pooled OLS and fixed effect estimations as necessitated by the Hausman test.

Specifically, with a highly significant F-statistic, the effect of dividend policy on firm value is consistently positive, indicating that a policy to increase dividend pay-out will positively impact firm value though we find this effect very minimal. The positive relationship between dividend policy and firm value is an indication that Nigerian manufacturing companies seek to please their shareholders by paying more dividends rather than improving their capital gain or ploughing back most of their earnings as retained earnings. In addition, evidence shows that financial leverage is consistently significant and while the debt-to-equity ratio gives a positive boost to firm value, the debt to asset ratio gives a negative sign. In general, the evidence supports the view that policymakers across companies should formulate policies anchored on effective corporate governance with the right mix of leverage and dividend policy to enhance firm value in the Nigerian manufacturing companies. We suggest that more empirical work is needed on the relationship between financial leverage and dividend policy on the one hand, and their indirect effect (interaction) on the firm value on the other hand. This will enable managers and other financial practitioners as well as academicians in the field of finance to grasp the indirect effect of leverage and dividend policy on the performance of firms.

References

Aharony, J., & Swary, I. (1980), ‘‘Quarterly dividend and earnings announcements and stockholders' returns: An empirical analysis’’, *The Journal of Finance, 35(1), 1-12.*

Ahmed Sheikh, N., & Wang, Z. (2013), ‘‘The impact of capital structure on performance: An empirical study of non-financial listed firms in Pakistan’’, *International Journal of Commerce and Management, 23(4), 354-368.*

Allen, F., & Michaely, R. (2003), ‘‘Pay-out policy’’, In *Handbook of the Economics of Finance (Vol. 1, pp. 337-429). Elsevier.*

Al-Malkawi, H. A. N., Bhatti, M. I., & Magableh, S. I. (2014), ‘‘On the dividend smoothing, signalling and the global financial crisis’’, *Economic Modelling, 42, 159-165.*

Altiok-Yilmaz, A., & Akben-Selcuk, E. (2010), ‘‘Information content of dividends: Evidence from Istanbul stock exchange’’, *International Business Research, 3(3), 126. American Economic Review, 11: 97-113.*

Ang, J. S., (1987), ‘‘Do Dividends Matter? A Review of Corporate Dividend Theories and Evidence’’, *Monograph 1987-2, Salomon Brothers Center for the Study of Financial Institutions and Graduate School of Business Administration, New York University.*

Anton, S. G. (2016), ‘‘The impact of dividend policy on firm value. A panel data analysis of Romanian listed firms’’, *Journal of Public Administration, Finance and Law, (10), 107-112.*

Arellano, M., Bover, O. (1995), ‘‘Another look at the instrumental variable estimation of error components models’’, *Journal of Econometrics, 68(1), 29-51.*

Asma, S. (2019), ‘‘Effect of Capital Structure on Corporate Liquidity and Growth: Evidence from Tobacco Industry in Pakistan’’, *Academy of Strategic Management Journal, Volume 18, Issue 2.*

Baker, H. K., & Powell, G. E. (1999), ‘‘How corporate managers view dividend policy’’, *Quarterly Journal of Business and Economics, 17-35.*

Benartzi, S., Michaely, R., & Thaler, R. (1997), ‘‘Do changes in dividends signal the future or the past?’’, *The Journal of Finance, 52(3), 1007-1034.*

Benesh, G. A., Keown, A. J., & Pinkerton, J. M. (1984), ‘‘An examination of market reaction to substantial shifts in dividend policy’’, *Journal of Financial Research, 7(2), 131-142.*

Bhattacharyya, N. (2007), ‘‘Dividend policy: a review’’, *Managerial Finance, 33(1), 4-13.*

Black, F. (1976), ‘‘The dividend puzzle’’, *Journal of portfolio management, 2(2), 5-8.*

Chen, G., Firth, M., & Gao, N. (2002), ‘‘The information content of concurrently announced earnings, cash dividends, and stock dividends: an investigation of the Chinese stock market’’, *Journal of International Financial Management & Accounting, 13(2), 101-124.*

Conroy, R. M., Eades, K. M., & Harris, R. S. (2000), ‘‘A test of the relative pricing effects of dividends and earnings: Evidence from simultaneous announcements in Japan’’, *The journal of finance, 55(3), 1199-1227.*

Fairchild, R. (2010), ‘‘Dividend policy, signalling and free cash flow: an integrated approach’’, *Managerial Finance, 36(5), 394-413.*

Fama, E. F., & Babiak, H. (1968), ‘‘Dividend policy: An empirical analysis’’, *Journal of the American Statistical Association, 63(324), 1132-1161.*

Fama, E. F., & French, K. R. (2001), ‘‘Disappearing dividends: changing firm characteristics or lower propensity to pay?’’, *Journal of Financial Economics*, *60*(1), 3-43.

Frankfurter, G. M., & Wood Jr, B. G. (2002), ‘‘Dividend policy theories and their empirical tests’’, *International Review of Financial Analysis, 11(2), 111-138.*

Gordon, M. J. (1959), ‘‘Dividends, earnings, and stock prices’’, *The review of economics and statistics, 99-105.*

Gordon, M. J., & Shapiro, E. (1956), ‘‘Capital equipment analysis: the required rate of profit’’, *Management Science, 3(1), 102-110.*

Gunasekarage, A., & Power, D. M. (2002), ‘‘The post-announcement performance of dividend–changing companies: The dividend–signalling hypothesis revisited’’, *Accounting & Finance, 42(2), 131-151.*

Hashemiyoo, A. (2012), ‘‘The Impact of Initiating Dividend Payments on Shareholders' Wealth’’, *Journal of Business 12 (8), 77-96.*

Hooi, S. E., Albaity, M., & Ibrahimy, A. I. (2015), ‘‘Dividend policy and share price volatility’’, Investment *Management and Financial Innovations, 12(1), 226-234.*

Inyiama, E. C., Okwo, M. I. & Inyiama, O. I. (2015), ‘‘Dividend Pay-out Policy Determinants of Selected Listed Brewery Firms in Nigeria: A Meta-Analysis (2000–2013’’, *European Journal of Business, Economics and Accountancy, 3(3), 101-118.*

Ionescu, L. (2012), ‘‘Effects of corporate governance on firm value’’, *Economics, Management, and Financial Markets, 7(4), 215-220.*

Jensen, M.C. & Meckling, W.H. (1976), ‘‘Theory of the firm: Managerial Behaviour, Agency Costs and Ownership Structure’’, *Journal of Financial Economics, 3(4): 305-360.*

Jensen, M.C. (1986), ‘‘Agency costs of free cash flow, corporate finance, and takeovers’’, *The American*

Economic Review,76(2): 323-329.

Koch, P. D., & Shenoy, C. (1999), ''The information content of dividend and capital structure policies'', *Financial Management, 16-35.*

Lee, H. W., & Ryan, P. A. (2002), ''Dividends and earnings revisited: cause or effect?'', *American Business Review, 20(1), 117.*

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

Lintner, J. (1962), ''Dividends, earnings, leverage, stock prices and supply of capital to corporations'', *The Review of Economics and Statistics, Vol. 64, pp. 243-69.*

Love, I., & Klapper, L. F. (2002), ''Corporate governance, investor protection, and performance in emerging markets'', *The World Bank.*

M'rabet, R., & Boujjat, W. (2016), ''The relationship between dividend payments and firm performance: A study of listed companies in Morocco'', *European Scientific Journal, ESJ, 12(4), 469.*

Mahalang'ang'a, T. M., & Ochuodho, P. O. (2013), ''The Relationship Between Dividend Payout and Firm Performance. a Study of Listed Companies in Kenya'', *European Scientific Journal, 8.*

Miller, M.H. and Modigliani, F. (1961), ''Dividend policy, growth, and the valuation of shares'', *The Journal of Business, Vol. 34, pp. 411-33.*

Modigliani, F., Miller, M.H. (1963), ''Corporate income taxes and the cost of capital: A correction'', *The American Economic Review, 53(3), 433-443.*

Muhammad, A., & Humayun, H. B. (2010), ''Reaction of Stock Prices to Dividend Announcements and Market Efficiency in Pakistan'', *The Lahore Journal of Economics, 15: 1 (Summer 2010): pp. 103-125.*

Nurdin D, & Kasim, M.Y. (2017), ''Moderator Effect of Corporate Governance on the Relationship of Financial Performance and Dividend Policy, and Its Impact on Firm Value in Indonesia Stock Exchange'', *Int J Econ Manag Sci 7: 499. doi: 10.4172/2162-6359.1000499. Baker,*

Nwaorgu, I. A., & Uzoegbu, J. N. (2018), ''Impact of Dividend Policy on the Value of Firms'', *Archives of Business Research, 6(8), 310-325.*

Omoregie, O. K., Olofin, S. A., & Ikpesu, F. (2019), ''Capital Structure and the Profitability-Liquidity Trade-off'', *International Journal of Economics and Financial Issues, 9(3), 105-115.*

Ozuomba, C. N., & Ezeabasili, P. (2017), ''Effect of dividend policies on firm value: Evidence from quoted firms in Nigeria'', *International Journal of Management Excellence, Volume 8 No.2.*

Ozuomba, C. N., Anichebe, A. S., & Okoye, P. V. C. (2016), ''The effect of dividend policies on wealth maximization–a study of some selected plcs'', *Cogent Business & Management, 3(1), 1226457.*

Pettit, R. R. (1972), ''Dividend announcements, security performance, and capital market efficiency'', *The Journal of Finance, 27(5), 993-1007.*

Rizqia, D. A., & Sumiati, S. A. (2013), ''Effect of Managerial Ownership, Financial Leverage, Profitability, Firm Size, and Investment Opportunity on Dividend Policy and Firm Value'', *Research Journal of Finance and Accounting, 4(11), 120-130.*

Ross, S. A. (1977), ''The determination of financial structure: the incentive-signalling approach'', *The bell journal of economics, 23-40.*

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

Salim, M., & Yadav, R. (2012), ''Capital structure and firm performance: Evidence from Malaysian listed companies'', *Procedia-Social and Behavioural Sciences, 65, 156-166.*

Setiyawati, L., Wahyudi, S., & Mawardi, W. (2018), ''The Influence of Dividend Policy, Debt Policy, Independent Commissioner, And Institutional Ownership on the Firm Value with Growth Opportunities as Moderator Variables (Study on Non-Financial Companies Listed on IDX in the Period of Years of 2012-2015)'', *JURNAL BISNIS STRATEGI, 26(2), 146-162.*

Smith, F., Puleo, V., & Casey, K. M. (2008), ''Dividend policy and corporate governance: A research note'', *Corporate Ownership and Control Journal, 5(3), 220-224.*

Soewarno, N., Arifin, S. Y., & Tjahjadi, B. (2017), ''The mediating effect of leverage and dividend policy on the influence of corporate governance towards firm value'', *In SHS Web of Conferences (Vol. 34, p. 04002). EDP Sciences.*

Sualehkhattak, M., & Mazher Hussain CH. (2017), ''Do Growth Opportunities Influence the Relationship of Capital Structure, Dividend Policy, and Ownership Structure with Firm Value: Empirical Evidence of KSE?'', *J Account Mark 6: 216. doi:10.4172/2168-9601.1000216*

Timothy, M., & Ochuodho, P. (2013), ''The Relationship Between Dividend Pay-out and Firm Performance: A Study of Listed Companies in Kenya'', *European Scientific Journal, May edition vol. 8, No.9*

Uwuigbe, U., Jafaru, J., & Ajayi, A. (2012), ''Dividend policy and firm performance: A study of listed firms in Nigeria'', *Accounting and Management Information Systems, 11(3), 442-454.*

Walter, J.E. (1963), ''Dividend policy; its' influence on the value of the enterprise'', *Journal of Finance, Vol. 18, pp. 280-91.*
Woolridge, J. R. (1983), ''Dividend changes and security prices'', *The Journal of Finance*, *38*(5), 1607-1615.
Yahya, F., & Ghazali, Z. B., (2017), ''Effectiveness of Board Governance and Dividend Policy as Alignment Mechanisms to Firm Performance and CEO Compensation'' *Cogent Business & Management, 4: 1398124.*
Yoon, P. S., & Starks, L. T. (1995), ''Signalling, investment opportunities, and dividend announcements'', *The Review of Financial Studies, 8(4), 995-1018.*

Appendix

Table 5: Pooled OLS and Random Effects Estimation with (DY) as the Dependent Variable

Dividend yield (DY)	Pooled OLS			Fixed effects		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
Dividend payout ratio (DPR)	0.0013	0.0249	0.0377	-0.0020	0.0351	0.0064
	[0.46]	[2.64] ***	[3.61] ***	[0.81]	[2.70] **	[1.73] *
Dividend per share (DPS)	-0.0150	-0.0026	-0.0073	-0.1037	-0.1044	-0.1119
	[0.28]	[0.05]	[0.14]	[1.47]	[1.47]	[1.57]
Debt to Equity Ratio (DE)	0.0446	0.0065	0.0221	-0.0080	-0.0078	-0.0085
	[1.90] *	[0.58]	[2.20] **	[0.60]	[0.59]	[0.65]
Debt to Asset Ratio (DA)	-0.0346	-0.0058	0.0310	-0.0063	-0.0046	0.0062
	[0.84]	[0.14]	[0.71]	[0.11]	[0.08]	[0.10]
Firm Size $(Fsize)$	0.6194	0.9569	1.0947	1.0605	0.6617	1.1135
	[1.14]	[1.72] *	[2.03] **	[1.52]	[3.51] ***	[1.89] *
Market Share $(Mava)$	-0.6066	-0.9444	-1.0778	0.5475	0.5366	0.4362
	[1.34]	[2.04] **	[2.37] **	[0.91]	[0.88]	[0.71]
$DPR * DE$		-0.0002			0.0329	
		[1.82]*			[1.91] *	
$DPR * DA$			-0.0009			-0.0321
			[0.61]			[2.33] **
Constant	4.3310	2.9580	2.1774	-34.7019	-30.5277	-33.6964
	[1.05]	[0.73]	[0.55]	[2.44] **	[2.41] **	[2.36} **
R^2	0.1465	0.1519	0.1499	0.2254	0.2144	0.2481
Observations	139	139	139	139	139	139
No. of Company				20	20	20
Hausman test (Prob. > Chi 2)				0.0000***	0.0000***	0.0000***

Figures in parenthesis are/t-values/. (***), (**) and (*) indicates significance at 1%, 5% and 10% respectively

Table 6: System GMM Estimation with (DY) as the Dependent Variable

Dividend yield (DY)	System GMM		
	(i)	(ii)	(iii)
Dividend yield (DY)Lag	0.1742	0.1531	0.1184
	[2.99] ***	[3.05] ***	[4.47] ***
Dividend payout ratio (DPR)	-0.0034	0.0110	0.0184
	[1.06]	[3.92] ***	[4.40] ***
Dividend per share (DPS)	-0.1528	-0.1569	-0.1104
	[4.40] ***	[3.59] ***	[1.95] *
Debt to Equity Ratio (DE)	-0.0063	-0.0026	-0.0085
	[0.80]	[0.28]	[0.86]
Debt to Asset Ratio (DA)	-0.0540	-0.0457	-0.0003
	[1.42]	[0.94]	[0.01] ***
Firm Size (Fsize)	1.0610	0.4740	0.2711
	[3.38] ***	[0.62]	[0.50]
Market Share $(Mava)$	0.4737	0.6729	0.4753
	[1.63]	[1.32]	[1.19]
$DPR * DE$		-0.0001	
		[1.89] **	
$DPR * DA$			-0.0007
			[3.58] ***
Constant	-33.55701	-24.4731	-14.8785
	[4.79] ***	[2.27] **	[1.91] *
Observations	123	123	123
No. of Company	20	20	20
No of instruments	14	14	14
A-Bond AR (1) test p-value	-1.5995	-1.5805	-1.5154
	[0.0971]	[0.0140]	[0.0279]
A-Bond AR (2) test p-value	0.8361	0.7487	0.7011
	[0.4031]	[0.4540]	[0.4832]
Sargan test	12.8881	10.9674	8.3425
	[0.999]	[0.999]	[1.000]

Figures in parenthesis are/t-values/. (***), (**) and (*) indicates significance at 1%, 5% and 10% respectively