

VALUE RELEVANCE OF ACCOUNTING INFORMATION, DIVIDEND PAYOUT AND FIRM VALUE OF LISTED OIL AND GAS COMPANIES IN NIGERIA

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Abstract

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The study examined the value relevance of accounting information, dividend payout and firm value of listed oil and gas companies in Nigeria for the period of twelve years from 2012 to 2023. The study made use of correlational research design and secondary data were used to source information from eight (8) selected companies out of the nine (9) listed oil and gas companies from the Nigeria exchange group as at 31st December 2023. Major findings from the result of the study suggest that dividend payout has a moderating effect on the relationship between value relevance of accounting information and firm value evident by the interaction between the moderator and the explanatory variables revealing all the variables to have significant effect on Tobin's Q. However, while book value of equity and leverage has a negative but significant effect on Tobin's Q, earnings per share revealed a positive correlation. The study therefore concludes that accounting information have a significant effect on firm value of listed oil and gas companies in Nigeria and that dividend payout significantly moderates the relationship between the explanatory variables and firm value. Based on the conclusions, it is recommended that the oil and gas companies should focus on improving dividend payout policies strategically in communication to highlight their role in enhancing the relationship between accounting information and firm value.

Keywords: Value relevance, accounting information, firm value, dividend payout, oil and gas.

1. Introduction

The relationship between accounting information and firm value has been a subject of extensive research. Firm value is widely used because it provides a more complete picture of a company's

worth over a given period of time taking into consideration both the equity and debt of the companies compared to market capitalization which only accounts for the equity portion. Firm value is however useful in comparing companies with different capital structures. The main purpose of establishing a company is to create wealth for the company's shareholders. For companies that have been registered in the capital market, this effort can be achieved by increasing the value of the firm through increasing stock prices. The higher the stock price the higher the value of the firm (Sri & Siti, 2018). The increased in firm value indirectly signals the investors that the firm's performance is predicted to be better in the future so it can encourage them to invest more in the company. Furthermore, businesses in and outside of Nigeria strive to increase their firm value in order to continue operating through the board which has the trust of the proprietors', to strive and accomplish this objective. Effective management of a company's assets, including the formulation of strategic decisions, is essential for the generation of added value by management (Sudiyatno, et al., 2021). Moreover, the oil and gas industry is currently characterized by fierce rivalry among businesses since every business is driven by competition to perform even better.

Statement of the Problem

The value relevance of accounting information continues to be a contested topic, especially within Nigeria's oil and gas industry, where economic and regulatory challenges complicate traditional theories. Core to this debate is whether accounting information, such as earnings, leverage and book value, reliably predicts firm value, as suggested by value relevance theories (Oyerinde, 2019). These theories propose that accounting data influence investor decisions, thereby affecting firm value. However, external factors such as volatility in oil prices and currency instability often dominate performance in Nigeria's oil and gas sector, challenging the impact of accounting information alone. Studies on value relevance offer mixed findings. Some confirm the usefulness of accounting data to investors while others highlight that external economic and political forces reduce the data effect on stock prices, questioning its value relevance (Olarewaju, *et al*, 2020).

This debate is also fueled by dividend policy theories. The dividend relevance theory posits that dividend payment influences firm value by signaling investors about the firm's stability, this theory is in contrasts with Modigliani and Miller's (1961) dividend irrelevance theory, which holds that in efficient markets, dividend policy does not impact firm value. Within the Nigeria's oil and gas sector, characterized by market inefficiencies and variable cash flows,

both theories face scrutiny. Some suggest that dividend signal financial resilience in a high risk business sector while others argue that unpredictable economic conditions often necessitate dividend adjustments regardless of firm performance, weakening dividend payment as indicators of stability (Adegbite & Ayinde, 2023). The firm value of listed oil and gas companies in Nigeria faces several challenges, resulting from regulatory, economic, and operational factors. Mondaq (2024) reported in their article that the implementation of the Local Content Directive which is aimed at increasing local participation in production process in Nigeria, has introduced new compliance requirements. These directives aim to reduce bureaucracy and contracting timelines but also place additional burdens on companies to demonstrate local capacity and adhere to new contracting thresholds. There is an ongoing struggle with inadequate infrastructure and capacity constraints. The Local Content Directive emphasizes the need for production capacity building within the country, yet many Nigerian firms lack the necessary resources to meet these requirements effectively, thereby hindering project execution and increasing costs.

Mondaq, (2024) also reported that foreign companies are increasingly exiting the Nigerian oil sector, leading to concerns about sustained investment and operational continuity. This trend is partly due to global shifts towards cleaner energy and the complexities of operating within Nigeria's regulatory framework. The Nigerian oil and gas industry is also experiencing challenges with global oil price volatility and internal economic instability. These factors affect revenue projections and investor confidence, further influencing the firm's value negatively. These challenges underscore the complexity of the Nigerian oil and gas sector, where regulatory changes, operational risks, financial strategies, and technological advancements all interplay to impact firm value. Addressing these challenges, requires strategic reforms and robust implementation of policies to enhance efficiency, attract investments, and ensure sustainable growth in the sector.

This paper therefore, focuses on the value relevance of accounting information, dividend payout and firm value of oil and gas firms listed in the Nigerian Exchange Group Ltd. although the effect of value relevance of accounting information on firm value have been discussed in previous studies in isolation. However, the comprehensive exploration of the varied impacts of accounting information stemming from book value of equity, earnings per share, and leverage moderated by dividend payout on firm value (Tobin's Q) appears to be scarce in the oil and gas industry. Therefore, the specific objective of this study is to analyze this component

of value relevance of accounting information, dividend payout and firm value of oil and gas companies listed in the Nigerian Exchange Group Ltd. Based on the above objective the following null hypotheses (H_0) are developed to guide this study in order to meet the objective:

***HO₁** Book value of equity, Earning per share, and Leverage has no significant effect on the firm value of listed oil and gas companies in Nigeria.*

***HO₂** Earning per share, has no significant effect on the firm value of listed oil and gas companies in Nigeria.*

***HO₃** Leverage has no significant effect on the firm value of listed oil and gas companies in Nigeria.*

***HO₄** Dividend payout has no significant effect on the firm value of listed oil and gas companies in Nigeria.*

***HO₅** Dividend payout does not significantly moderate the relationship between value relevance of accounting information and firm value of listed oil and gas companies in Nigeria.*

2. Review of Literature

The pioneered study on value relevance was presumed to be first conducted by Ball & Brown, (1968), following their studies, many other studies began to emerge on the value relevance of accounting information along different perspective bothering on the relationship with investment decision, share prices among other relating concepts. However, with the introduction of the residual income valuation model of Ohlson (1995), the focus of studies on the value relevance of accounting information shifted from just the information perspective to also include the measurement perspective in respect to accounting information.

Mohamed and Mohamed, (2024) investigated the moderating effect of dividend policy the relationship between corporate risk disclosure and firm value for non-financial companies listed on the Egyptian stock exchange using a sample of 45 non-financial firm for a period of seven years. Result of their study revealed that dividend policy positively moderates the relationship between corporate disclosure risk and firm value.

Caroline, *et al.* (2024), conducted a conceptual review on the mediating role of dividend policy on financial performance and firm value. According to the findings of multiple prior study sources utilized in their literature review, the majority of the empirical study's findings that the authors reviewed suggest that profitability, leverage, and liquidity have an impact on dividend

policies. Profitability, leverage, liquidity, and a firm's size are all factors that impact company value. Dividend policies have an impact on company worth as well. It is also discovered that dividend policies can help to mediate the impact of profitability and liquidity on company value, but they cannot mediate the effect of leverage.

Sudiyatno et al, (2024) investigated the factors affecting firm value with dividend policy as moderator for companies listed on the Indonesia Stock Exchange (IDX) for the period of two years. The total research sample were taken from companies with the consumer non-cyclical sector selected by purposive sampling method. The data collected were analyzed using multiple linear regression analysis techniques. The results of the study indicate that dividend policy does not moderate the effect of profitability, liquidity and company growth on firm value and recommend that management should pay more attention on other factors that affects firm value.

Belinda and Sofia, (2023), investigated the factors affecting firm value with dividend policy as moderating variable. The study gather empirical and quantitative evidence from secondary source of manufacturing firm listed in the Indonesia stock exchange for the period of four years. Using dividend policy as a moderator, purposive sampling technique was utilized and a sample of 40 companies was collected. Data used in the study, was subsequently analyzed using E-views 12 with the Moderated Regression Analysis (MRA). The study's findings show that firm size affected firm value. On the other hand firm value was unaffected by profitability, liquidity, leverage, firm growth, and total asset turnover. The study also revealed that the relationship between profitability and leverage on firm value can be moderated by dividend policy while the relationship between liquidity and firm growth on firm value cannot be moderated by dividend policy.

Ibrahim, *et al.* (2023), examined the moderating effect of dividend policy on the relationship between profitability and firm value of listed banks in Nigeria. The study adopted the Ex Facto-research design and data were collected from secondary source of twelve sampled firm listed banks on the floor of the Nigeria Exchange Group for the period of ten years. Results of the study revealed a negative direct link between profitability and firm value. Furthermore, a higher dividend policy ratio strengthens the relationship between profitability and firm value. However, based on the findings of this study, they suggested that the regulatory authorities develop post-dividend payment legislation that can effectively contribute to the firm's dividend policy decision. Their findings highlight the importance of profitability and dividend policy in maximizing corporate value in the banking industry.

Apete, *et al* (2022), tried to ascertain the relationship between value relevance accounting information and share price of listed manufacturing companies in Nigeria. They employed Ex-Post Facto research design for the study, while the sample of the study comprised of twenty-one (21) quoted consumer goods manufacturing firms listed on the Nigerian Stock Exchange. The study also utilized Ordinary Least Square (OLS) estimate using panel data covering a period of nine (9) years. The study found that there is a significant negative relationship between Book Value of Equity per Share and Share Price of manufacturing firms listed on NSE. While earnings per share has a significant positive relationship with Share Price of the manufacturing firms listed on NSE. Based on the findings, the study therefore, recommended among others that listed manufacturing firms on the Nigerian Stock Exchange should display their Book Value per Share conspicuously in their presentation to investors and analysts which will, in the long run, assist financial analysts and other interested parties in easy determination of firm's value and share prices.

Wasiu, *et al* (2020) conducted a comparative study on the value relevance of accounting information in the Oil and Gas and manufacturing sector using five quoted companies which were randomly selected from each of these sectors. Their study covered a period of 4 years and data were generated from the annual financial reports of the selected companies. In their study they hypothesized that Value relevance in the oil sector do not have more significant effect on the earnings per share as it is seen in the manufacturing sector, they also found out in their study that Value relevance in the oil sector do not have more significant effect on the market price per share than in the manufacturing sector. The study recommends that the regulators of the market should carry out yearly Cross-sectional studies to ascertain the trend and include this comparison requirement as one of the yardsticks of measuring performance.

Aliyu, *et al* (2020), examined moderating effect of leverage on the value relevance of accounting information in the Nigerian listed Oil and Gas sector. The study used correlational research design and data were extracted from the published annual financial reports of the firms. The data for the dependent variable were collected from Nigerian stock exchange website and a sample size of six firms were used for a period of eight years. The data were analyzed using multiple regression analysis. Findings from the analysis showed that earnings per share, and leverage are value relevant. Additionally, the study reveal that leverage moderated the relationship of both book value per share and earnings per share. Based on their findings, the study recommends that listed oil and gas firms in Nigeria should strategize to

improve their earnings. Furthermore, they should also find way of managing their book value, as any unnecessary investment means negative effect on share price. Additionally, listed oil and gas firms should maintain an appropriate level of leverage so that the cheap cost of leverage will reduce the weighted average cost of capital and subsequently increase value to investors. Finally, the explanatory power of the moderated variables are more than the ones not moderated.

Harnovinsah & Sustari (2020), examined the mediation influence of value relevance of accounting information, investment decision and dividend policy on the relationship between profitability and company value. The samples for the study were taken by purposive sampling technique on a population of all listed companies on the IDX Kompas 100 index for the period of four years. They employed Path Analysis as an analytical tool to examine the data obtained. Results from this study shows that value relevance of accounting information has significant and negative influence on the company's value while Dividend policy has no significant but positive influence on company's value; they therefore conclude that value relevance of accounting information, and dividend policy have not been able to mediate the influence of profitability on company's value.

Chukwu and Udochukwu (2019) conducted a study on modeling dividend policy and firm's value relations in Nigeria, their study made use of 24 quoted companies selected from 10 sectors of the Nigerian economy for the period of six years and utilized the secondary method of data collection. The researchers fitted the three conventional models of panel data analysis and found earnings exerting positive and significant influence on the firms' value, whereas dividend per share insignificantly impacts firms' value.

Yousef, (2019), examined the moderating effects of dividend policy on the impact of financial disclosure towards corporate value of the Jordanian industrial companies listed in Amman Stock Exchange (ASE) adopting a sample size of 61 industrial firms, while using secondary method of data collection. Findings from the study revealed that the total and direct effects between the variables were positively significant, however the moderating effects of dividend policy proved to be insignificant. The study recommended that, Jordanian listed industrial firms should consider a full disclosure of their financial transaction since accountability and transparency attracts potential investors and creditors.

Theoretical Structure

Different studies (Harnovinsah & Sustari 2020; Wasiu *et al* 2020; etc) have adopted different theories that are relevant in any discussion relating to value relevance of accounting information, investment decision and firm value of companies, however, they viewed it from different perspectives depending on the context of their study.

Dividend Relevance Theory

Gordon (1962); Walter (1956) and Lintner, (1956) are considered to be the major authors that are first linked with the dividend relevance theory. These authors opined that a well reasoned dividend policy can positively influence a company's position in the stock market. Gordon proposed a model which suggests that dividends are relevant and that the dividends of a company influence its value. This model is one of the most familiar mathematical models to calculate the market value of the company using its dividends policy. Because shareholders prefer current dividends earnings rather than expected higher income in the future so as to eliminate the risk associated with future capital gain. Gordon, (1962) and Walter, (1956) models are based on the assumptions that: The company is an equity company, internal rate of return of the company does not change, cost of capital of the firm does not change regardless of the change in the risk profile of the company, there is no outside financing and only retained earnings are used for investment, finally, corporate tax does not exist. Gordon's conclusions about dividend policy are similar to the conclusion of Walter. The similarity is due entirely to the assumptions adopted by both scholars. Walter, (1956), argued that the choice of dividend policy always affects the value of the enterprise. His models show the importance of the relationship between the company's internal rate of return (R) and its cost of capital (K) in determining the dividend policy that will maximize the wealth of shareholders'.

Signaling Effect Theory

Dividend signaling effect theory is based on the asymmetric information where managers (insider) have better access to private information about the current and future condition of the company, than outsider (investors). It refers to the idea that managers send information to shareholders to present the company's financial position and to build strong relationship (Ullah *et al.*, 2012). Here, managers are thought to have the incentive to communicate this information to the market. Bhattacharya (1979) state that information asymmetric between firms and outside shareholders may induce a signaling role for dividends. He shows that dividend payments communicate private information in a fully revealing manner. The most important elements in this theory is that firms have to pay out funds regularly. Managers may use changes

in dividend policy to communicate information to the market about the future prospects of the company. Constant or increase in dividends pay-out signals positive message about the future prospects of the company. However, not paying or decrease in dividends pay-out might be received negatively by shareholders and potential investors, this consequently will result in a decline in the numbers of investor investing in the company. Information provided may affects the decision-making processes used by individuals, business organizations, government and institution. Individual decision making is influenced by public information. Unfortunately, corporate information's are available to only a subset of the public which are the management.

3. Methodology

This study employed correlational research design in examining the relationship between value relevance of accounting information, dividend payout and firm value of listed oil and gas companies in Nigeria. Correlational research design is used to establish meaningful relationship between variables by determining the impact of independent variables on the dependent variable and how the moderating variable can influence the relationship. The population of the study consists of nine (9) oil and gas companies listed on the Nigerian Exchange groups as at 31st December, 2024. This study employed the criterion sampling approach in determining the sample size for the study which include eight out of the nine listed oil and gas company as at 31st December, 2023. Data for the study are collected through secondary source from published annual report of the oil and gas companies listed in the Nigerian exchange group for the period of twelve years from 2012 – 2023 and analyzed using multiple regression.

Model Specification

$$TQ_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 EPS_{it} + \beta_3 LEV_{it} + \beta_4 FS + e_{it} \dots \dots \dots 1$$

$$TQ_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 EPS_{it} + \beta_3 LEV_{it} + \beta_4 DPR_{it} + \beta_5 FS + e_{it} \dots \dots \dots 2$$

$$TQ_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 EPS_{it} + \beta_3 LEV_{it} + \beta_4 DPR_{it} + e_{it} + \beta_5 BVE_{it} * DPR + \beta_6 EPS_{it} * DPR + \beta_7 LEV_{it} * DPR + \beta_8 FS + e_{it} \dots \dots \dots 3$$

Where:

TQ = Tobin's Q

BVE = Book value of Equity

EPS = Earnings per Share

LEV = Leverage

DPR = Dividend payout Ratio

FS = firm Size

β_0 = constant or intercept

β_1 - β_5 = Beta coefficients to be estimated

e_{it} = Error term

4. Result and discussions

This chapter presents and analyzes the data collected for the study on the value relevance of accounting information, dividend payout, and firm value of listed oil and gas companies in Nigeria.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
TQ	96	18.51	40.67	0.02	33.10
BVE	96	0.12	0.18	0.20	01.10
EPS	96	5.12	18.1	- 44.1	144
LEV	96	12.21	21.90	0.91	10.59
DPR	96	0.68	10.2	6.68	28.8
FS	96	7.71	0.85	5.74	9.27

Source: STATA Output (2025)

Table 4.1 presents the detail account of the descriptive statistics for the variables of this study. The mean Tobin's Q value of 18.5 suggests that, on average, the market value of the firms is significantly greater than their asset replacement costs. However, the high standard deviation 40.67 indicates a wide disparity among the firms, this variation may come from different competitive advantages among firms, varying profitability rates, or investor sentiment. Certain firms may possess unique resources or strategic positioning that improves their market value, while others might be constrained by market challenges or operational inefficiencies. The minimum value of 0.02 suggests that some firms are valued very low relative to their asset costs, while the maximum of 33.10 indicates that some firms are valued incredibly high, highlighting a potential bubble in the market for some companies. The average for book value of equity (BVE) which is at 0.12 suggests a relatively low equity position overall among the firms in this sector. The standard deviation of 0.18 shows a moderate level of variability in the book values, the disparity in book values can be attributed to varying degrees of asset intensity, different operational models, or strategic resource allocation across firms. Additionally, it could reflect fluctuations in asset depreciation or valuations that may impact financial reporting differently, with some firms having a book value as low as 0.2, which indicates potential financial difficulties or significant intangible assets not reflected on the balance sheet. The maximum of 1.10, while higher than the average, indicates that a few firms have a substantial book value relative to their total assets.

An average EPS of 5.12 indicates that the firms are generating positive earnings on average. However, the vast standard deviation (18.1) showcases a significant variance in earnings performance, this variation in EPS can be attributed to different operational efficiencies, market conditions, and strategic decisions among the companies. Economic cycles, fluctuating oil prices, and operational disruptions could significantly impact earnings, causing a wide range from losses to high profitability with a minimum value of -44.1 indicating substantial losses for some firms and a maximum of 144 signifying very high earnings for others. Leverage (LEV) has an average of 12.21 indicating that, on average, these firms are using a significant amount of debt to finance their operations. The high standard deviation of 21.90 suggests extreme variation. This variation in leverage could be due to firms' varied approaches to capital structure, risk tolerance, or industry-specific financial strategies. For instance, firms in expansion phases may rely more on debt, while others may focus on reducing debt levels to minimize risk with some firms demonstrating very low leverage suggested by the minimum of 0.91 and others utilizing exceptionally high leverage 10.59, which raises concerns about financial stability.

The mean for the dividend payout ratio is 0.68 suggesting that, most of these firms are retaining earnings rather than distributing them as dividends, or facing significant losses prompting a cut in dividends. The standard deviation of 10.2 indicates considerable variability in how much firms are paying in dividends, the variation in dividend payouts can result from differing profitability levels, financial strategies, reinvestment priorities, and constraints on cash flow. Firms may be choosing to reinvest earnings for growth rather than distribute them to shareholders, particularly in a capital-intensive sector like oil and gas. The maximum payout ratio of 28.8 and a minimum that of 6.68, the implication of this result suggest that some firm pay as low as 6.68 as dividend while some pay as high as 28.8 which may suggest the different dividend policies adopted by this firms. The mean for firm size (FS), shows a value of 7.71, reflecting a generally moderate-sized market presence compared to the sector. The standard deviation of 0.85 suggests less variability among firm sizes relative to other metrics, showing that most firms fall fairly close to the mean. The relatively tighter range may suggest that most companies in the oil and gas sector in Nigeria are similarly sized, possibly due to market entry barriers or competitive dynamics that allow only firms of a certain size to effectively operate in this sector.

Correlation Analysis

Table 4.2: Correlation Matrix

Variable	TQ	BVE	EPS	LEV	DPR	FS
TQ	1.00					
BVE	0.35	1.00				
EPS	0.07	0.37*	1.00			
LEV	0.31*	-0.36*	-0.04	1.00		
DPR	0.18	0.10	-0.04	-0.23*	1.00	
FS	-0.34*	0.46*	0.02	-0.71*	0.01	1.00

Source: STATA Output (2025)

The results in table 4.2 indicate that Tobin’s Q (TQ) has a positive correlation and insignificant relationship with book value of equity (BVE) at 0.35 (35%) the implication of this result is that as TQ increases BVE of the sampled firm is expected to increase vice versa.. the table also revealed that there is a positive and insignificant relationship of 0.07 (7%) between Tobin’s Q and Earnings per share (EPS) while there was a positive and significant relationship with Leverage (LEV) 0.31 (31%) respectively the result also suggest that as TQ increase EPS and LEV is expected to increase in the same direction . Similarly, the result revealed that TQ has a positive and insignificant relationship of 0.18 (18%) with DPR this result also suggest that as TQ increases DPR of the firm is expected to also increase in the same direction. on the other hand the result also revealed that TQ has a negative and significant relationship of -0.34 (-34.00%) with firm size (FS) the implication of the result is that as TQ increases the firm size of the sampled firm is expected to also decrease. On the relationship between book value of equity (BVE) the result reveals that BVE has a positive and significant relationship of 0.37 (37%) with Earnings per share (EPS) similarly the result also revealed a positive and insignificant relationship of 0.10 (10%) with DPR on the other hand revealed a positive and significant relationship of 0.46 (46%), with FS. The implication of this result is that as BVE increases EPS, and FS, are expected to increase in the same direction as well. On the contrary, the result revealed that BVE has a negative and significant relationship with Leverage (LEV) at -0.36 (-36%) this implies that as BVE increases, the company’s leverage is expected to decrease in the opposite direction.

In addition EPS reveals a negative and insignificant relationship of -0.04 (-4%) with Leverage (LEV), and DPR each. The implication of this result is that as the firm’s earnings per share increases their LEV, and DPR are expected to decreases in the opposite direction and vice

versa. On the other hand the result revealed a positive and insignificant relationship between EPS and FS at 0.02 (-2%). However, the indication of this result is that as EPS increases by 1% FS is expected to decrease by 2% vice versa. Furthermore, leverage (LEV) exhibits a negative and significant relationship of -0.23 (-23%) with DPR, the result also revealed that LEV has a negative and significant relationship of -0.71 (-71%) with FS. The implication of this result is that as the firm's LEV increases their DPR, and FS is expected to decrease in the opposite direction and vice versa. On the other hand, DPR revealed a positive and insignificant relationship of 0.01(1%) with FS the indication of this result suggests that as DPR increases FS is expected to increase in the same direction.

Multicollinearity Test

Multicollinearity refers to the situation where two or more independent variables are highly correlated, which can distort the estimation and interpretation of regression coefficients. Severe multicollinearity inflates standard errors, reduces statistical power, and makes it difficult to ascertain the individual effect of each variable on the dependent variable. Md et al (2023), suggest that a VIF value greater than 10 indicates potential multicollinearity issues, while values below this threshold suggest that multicollinearity is not a concern.

Table 4.3: Multicollinearity Test

Variable	VIF	1/VIF
FS	2.28	0.42
LEV	2.22	0.45
BVE	1.53	0.65
EPS	1.19	0.84
DPR	1.12	0.89
Mean VIF	1.67	

Source: STATA Output (2025)

The VIF values for all variables in Table 4.4 are below the threshold of 10%, with the highest being 2.28 for Firm Size (FS). This suggests that multicollinearity is not a concern in this model. The mean VIF of 1.67 further supports this, indicating that the variables are sufficiently independent. Therefore, the regression results are not likely to be affected by multicollinearity. Supported by 1/VIF tolerance. Md et al(2023) suggested that a VIF tolerance value below 0.1 is generally considered a sign of serious multicollinearity and also a tolerance value below 0.2 may also warrant concern. From table 4.3 the highest 1/VIF is 0.89 while the rest are far above

0.2 which further supports the VIF to suggest the absence of multicollinearity amongst the predictor variables.

Regression Result

This section presents the results of the regression analysis conducted to examine the relationship between Tobin’s Q (TQ), a measure of firm value, and key explanatory variables, including book value of equity (BVE), earnings per share (EPS), leverage (LEV), dividend payout ratio (DPR), and the moderating effects of interactions (BVE*DPR, EPS*DPR, LEV*DPR). Three regression models were analyzed to evaluate these relationships.

Table 4.4: Regression Analysis for All The Models

Variable	Model One	Model Two	Model Three
	Coef. (P-Value)	Coef. (P-Value)	Coef. (P-Value)
BVE	71.60 (0.04)	64.76 (0.05)	17.34 (0.67)
EPS	- 0.01 (0.99)	0.01 (0.98)	- 0.18 (0.52)
LEV	0.05 (0.13)	0.09 (0.03)	0.09 (0.01)
DPR	-	1.18 (0.02)	4.09 (0.01)
BVE*DPR	-	-	- 52.91 (0.03)
EPS*DPR	-	-	3.29 (0.01)
LEV*DPR	-	-	- 0.01 (0.05)
FS	- 19.66 (0.02)	- 14.97 (0.08)	- 6.18 (0.46)
Cons	44.51 (0.649)	100.40 (0.15)	35.29 (0.60)
R-squared	0.24	0.30	0.35
F-statistic	4.86 (p = 0.000)	5.43 (p = 0.000)	4.25 (p = 0.000)

Source: STATA Output (2025)

Model One: Effect of Dividend Payout Ratio on Firm Value

Table 4.4 revealed the results from Model One depicting an R-squared value of approximately 0.24%, indicating that approximately 24% of the variability in share price is explained by the independent variables included in the model (BVE, EPS, LEV, and FS). The remaining variance of 76% is attributed to other factors not captured by this model. The overall F-statistic for the model is 4.86, with a p-value of 0.000, signifying that the independent variables collectively have a statistically significant effect on share firm value. Book Value of Equity (BVE) demonstrates a positive and statistically significant coefficient of approximately 71.60 (p = 0.04). This indicates that a 1% increase in BVE leads to a 71.60% increase in firm value. The p-value of 0.04 suggests BVE has a significant effect on firm value leading to the rejection of the null hypothesis one of this study. On the other hand, Earnings Per Share (EPS) shows a

negative but statistically insignificant effect of approximately -0.01 ($p = 0.99$). This implies that the variations in earnings per share do not significantly impact firm value leading to the acceptance of the null hypothesis two of this study. Leverage (LEV) also exhibits a positive and insignificant effect of approximately 0.05 ($p = 0.13$). This suggests that while leverage may have an upward impact on firm value, the effect is not strong enough to be statistically conclusive leading to the acceptance of the null hypothesis three of this study. On the other hand, the control variables Firm Size (FS) is statistically negative but significant with a coefficient of approximately -19.66 ($p = 0.02$). This suggests that the size of a firm has a notable direct influence on how investors value the firm.

Model Two: Effect of Dividend Payout Ratio on Firm Value

Model Two incorporates the dividend payout ratio (DPR) as an additional explanatory variable, has a negative and insignificant effect with a coefficient of approximately 1.18 and a ($p = 0.02$) which is below the normal threshold of 0.05% level of significant leading to the rejection of the null hypothesis four of this study. The R-squared value increases slightly to 0.30 , indicating that the model explains 30% of the variation in SP while the remaining 70% are explained by factors not captured in the model. The F-statistic of approximately 5.43 ($p = 0.00$) confirms that the independent variables, taken together, have a statistically significant effect on firm value.

Model Three: Moderating effect of Dividend Payout on the relationship between Value Relevance of Accounting Information and Firm Value

In Model Three, the inclusion of interaction terms sheds light on the moderating role of dividend payout ratio (DPR) in the relationships between book value of equity (BVE), earnings per share (EPS), leverage (LEV), and SP (firm value). The explanatory power of the model improves, with an R-squared value of approximately 0.35% , indicating that 35% of the variability in SP is explained by the independent variables and their interactions while 65% is explained by other variable not included in the model. The statistically significant F-statistic of 4.25 ($p = 0.000$) confirms that the model is fit and the variables are well selected and combined.

The interaction between book value of equity and dividend payout ratio (BVE*DPR) produces negative and significant coefficient of -52.91 ($p = 0.03$). This finding indicates that dividend

payouts negatively but significantly has an effect on book value of equity as it affects firm value. Under the first model, the results depict book value of equity to have a positive significant effect on firm value of the sampled firm. In addition, when moderated with DPR there was a slight increase in the significant level from the first model however, the coefficient changed to negative while maintaining the significant level as seen in Table 4.4. Therefore, this finding is in line with Fairchild and Mackinnon (2009) who opined that a moderator is expected to either strengthen or weaken the direction of the relationship between the dependent variable and the independent variables. This however, implies that DPR can significantly moderate the relationship between BVE and firm value of listed oil and gas companies in Nigeria. Furthermore, the interaction between earnings per share and dividend payout ratio (EPS*DPR) has a positive and statistically significant coefficient of 3.29 ($p = 0.01$). This implies that dividend payout significantly strengthens the relationship between EPS and firm value. The result from the first model showed an improvement from a negative and insignificant relationship to a positive and significant value after moderation in the third model. These result shows that DPR has a moderating effect on EPS and firm value while maintaining a significant relationship. On the other hand, the interaction between leverage and dividend payout ratio (LEV*DPR) reveals a positive and insignificant effect with a coefficient of -0.01 ($p = 0.05$). This suggests that dividend payout create a negative impact on leverage in relationship with firm value however, it possesses significant impact on investors perception of the firm value. However, the interaction between the moderator DPR and LEV result in a change in the level of the relationship from the result of the first model which revealed that LEV has a positive and insignificant effect on Firm value to a negative but significant effect on firm value. Consequently, the significance of the interaction between (BVE*DPR, EPS*DPR and LEV*DPR) underscores that while dividends payout may have a standalone positive and significant effect, it plays a crucial moderating role in enhancing the value relevance of key accounting metrics leading to the rejection of the null hypothesis five of this study.

5. Conclusion and recommendation

The study came up with findings that are of salient importance to scholars investigating value relevance of accounting information, dividend payout and firm value of listed oil and gas companies in Nigeria. Based on the first hypotheses, the study observed that BVE has significant effect on firm value of listed oil and gas companies in Nigeria.

Based on the findings from the second hypotheses, of the study revealed that EPS has no significant effect on firm value of listed oil and gas companies in Nigeria. Similarly, based on the third hypotheses, the study observed that that LEV has no significant effect on firm value of listed oil and gas companies in Nigeria.

Findings from the fourth hypotheses, of the study revealed that DPR has a positive and significant effect on firm value of listed oil and gas companies in Nigeria. Similarly, in the fifth hypotheses, the interaction between DPR and the explanatory variables (BVE*DPR, EPS*DPR, LEV*DPR) revealed that DPR has significant moderating effect on the relationships between the value relevance of accounting information, and firm value listed oil and gas companies in Nigeria. Based on the findings, the study recommends that oil and gas companies in Nigeria should use dividend policies strategically in communication to highlight their role in enhancing the relationship between accounting information and firm value.

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