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Ownership Structure and Value of Listed Manufacturing Companies in Nigeria Moderated by Dividend Pay-Out

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Abstract

This study evaluated ownership structures on the value of listed manufacturing companies in Nigeria, with dividend payout as a moderating variable. Thus, an ex-post facto research design was used, and panel data were collected from the financial statements of the sampled listed manufacturing companies. The population of this study comprised 46 companies across four sub-sectors (agricultural, consumer goods, health, and industrial goods), of which 35 were sampled from 2012 to 2023 on the Nigerian Exchange (NGX). Data were analysed using descriptive statistics and generalised method of moments (GMM) regression. The results of the GMM showed that, although ownership structures and dividend payouts have positive impacts on firm value independently, their interactions—specifically, managerial, institutional, and foreign ownership with dividends—lower their combined effect. There was a complex relationship between ownership structure and dividend payouts in Nigeria's manufacturing sector, as evidenced by these negative coefficients. This study recommends that management cultivate the practice of regularly paying dividends, no matter how small, to institutional and foreign shareholders. Nevertheless, management should demonstrate a commitment to creating long-term value for shareholders, rather than simply paying dividends to institutional and foreign owners.

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1. Introduction

The problem of Nigerian manufacturing companies' dwindling firm value in spite of the different ownership structures is affecting investors' confidence in the Nigerian manufacturing sector. Shareholder wealth is supposed to increase as a result of businesses. This is accomplished by identifying the demands of the market, creating a system to satisfy those needs, determining the resources required, and securing funding to finance the purchase of those resources, either from angel investors or shareholders (Awen et al., 2022). Consequently, the value of a company is created by effectively and efficiently managing and utilising the resources invested by shareholders to satisfy the needs that have been recognised through increasing the company's returns.

The manufacturing industry plays a critical role in any nation's economy because it transforms raw materials into finished products. Considering the challenge of firm value decline, the federal government of Nigeria plans to inject N868.56 billion into the industrial sector through the 2021 to 2025 National Development Plan (NDP) in December 2021 to help the manufacturing sector survive in the years ahead.

The value of a company is one of the essential factors when evaluating its financial standing or market value. According to Rachmi and Heykal (2020), a company's value is the real sum per share of its common stock that would be acquired if all of its assets were to be sold for market value. The higher the stock price of a company's shares, the higher the value of the company. However, events in the capital market, starting from 2008, have further undermined investors' confidence in how the capital market functions (Adeniji, 2022). These events include the delisting of companies from the capital market, inconsistent earnings reporting, the fluctuation in firm value, the collapse of corporate bodies, inconsistent dividend payments, low capitalisation, and rising financing costs. Following the aforementioned events, shareholders have questioned the management's ability to create financial and investment strategies that can enhance a company's value.

One of the factors that encourages existing shareholders to invest more capital into a company's operations and attract potential investors is dividend payout. Investors put their money into a company in the hopes that it will grow in value, and then they want a cut of the profits. Dividends are generally paid to current shareholders as a reward for their financial investment.

Listed manufacturing businesses have institutional, foreign, ownership concentration, employee, managerial, family, state, agent, float, and individual ownership structures (Apochi et al., 2022; Tnushi et al., 2023). These ownership structures are in the form of insiders' and outsiders' ownership structures of a company.

Because of the model adopted by this study, the availability of data, and prior literature that pertains to the proxies, this study will focus on managerial ownership, institutional ownership, and foreign ownership.

Orjiakor (2022) reports that most Nigerian enterprises, which were once beneficiaries of large-scale economies, are now seeing a fall in productivity and firm value. Most Nigerian manufacturing companies are unable to attract investors due to their inability to make capital gains and pay dividends to shareholders. As a result, the value of these companies has been declining, even though there have been ongoing policy efforts to attract credit to the manufacturing sectors in Nigeria.

Evidence from past studies conducted on the concept of ownership structure and firm value of listed manufacturing companies, both in developed and emerging countries, showed that previous studies have left with mixed and contradicting results. Several of these studies have been conducted by different researchers in different countries, in different economic sectors, and using different measures of variables and data, which could explain this contradiction. The dividend payout did not serve as a moderating variable, which was an encouraging factor for attracting investors and increasing the firm's value. This study empirically analyzed the ownership structure and value of

listed industrial companies in Nigeria using dividend payout as a moderating variable.

This study explores how dividend payout moderates ownership structure and value of Nigerian listed industrial enterprises. We tested the following null hypotheses based on the study's goal:

Drawing on the study's purpose, we conducted tests to determine whether the following was true: This research will use some resources to ascertain the effect of ownership structure on the firm value of listed Nigerian manufacturing companies as a function of dividend payout. Everyone, from shareholders to market regulators to specialists to potential investors to upper-level executives, is in this category.

2. Literature review

2.1. Firm value

The value of a company is an economic concept that reflects the real amount that investors are willing to pay for a company when it is being sold. The value of a company is determined by its current managers, institutional and foreign shareholders, and potential investors. Companies that issue shares on a stock market are valued based on the value of those shares, which is determined by the market's liquidity and transparency (Rachmi and Heykal, 2020). This approach provides arguably the most detailed in-depth assessment of the company's market position and the summary of investor views on the company as a whole and its future prospects (Cristiawan and Dan, 2007).

An increase or decrease in the net worth of a company's owners can be tracked by calculating its firm value. When the value of a firm's net worth is increasing, it demonstrates to the existing shareholders the stability of the firm and forms the basis of attraction to potential investors. Akinyomi and Adebayo (2013) found that stock prices directly correlate to a rise in a company's worth. The share price of a company like the manufacturing company reflects the value of the company.

2.2. Ownership structure

Shareholders and other stakeholders own a company according to its ownership structure. The owners of a company are the primary financiers who put their resources into creating value for the operational function of the company. Several shareholders make up a company's ownership structure. Ownership structure is determined by the way the company is structured legally and financially among the shareholders. The ownership structure defines the rights, obligations, and how the net profit is distributed between the owners, the obligations of each individual involved in the company, and how the company is managed and controlled.

There are many types of ownership structures in a company, including managerial ownership, institutional ownership, foreign ownership, family ownership, government ownership, agent ownership, and individual ownership (Arthurs et al., 2008; Vintila and Gherghina, 2015; Santoso and Muda, 2020; Oyedokun et al., 2020; Bataineh, 2021; Apochi et al., 2022; Tnushi et al., 2023).

Lopez-Iturriaga and Rodriguez-Sanz (2012) proposed that ownership structure can be viewed as the fraction of shares held by the company's largest shareholders. An ownership structure is defined by the interplay among concentrated, managerial, and institutional ownership, as described by Sahut and Gharbi (2010). Further, Alipour and Amjadi (2011) stated that a company's ownership structure includes institutional and individual shareholders.

2.2.1. Managerial ownership

The term "managerial ownership" refers to the ownership stake held by a company's top executives, who also happen to play an integral role in making major business decisions. It is

possible to create a favorable business environment, encourage effective decision-making, and boost the enterprise's value when a managerial owner's interests are aligned with those of shareholders. Management shareholding is defined as the percentage of the total number of shares issued by the company that is owned by directors. CEOs, board members, and top executives are all considered members of the management team when it comes to shareholding (Andow and David, 2016). Furthermore, according to Laiho (2011), a company's management consists of the board of directors and the executive staff.

2.2.2. Institutional ownership

Companies that are held by larger entities, such as banks, insurance companies, or investment firms, are known as having institutional ownership. It is possible to create a favorable environment for business, encourage effective decision-making, and boost the enterprise's worth when a managerial owner's interests are aligned with those of shareholders. Companies in this category include insurance agencies, banks, mutual funds, pension funds, and investment firms. The first definition given by Roberts and Yuan (2006) is institutional ownership, which includes all institutional investors' stock holdings. The second definition is institutional block investors, which includes the top five or ten institutional investors' holdings. This means that the majority of a publicly listed company's stock is owned by professional financiers, who are known as institutional owners.

2.2.3. Foreign ownership

According to Gambo et al. (2019), any board member whose credentials indicate that they are a citizen of a country other than the company's home country is deemed to have foreign ownership. This study defines foreign ownership as the percentage of a company's ownership control held by non-residents. The company that receives the investment from outside is called a subsidiary, according to Malik (2015). As a result, foreign ownership occurs when multinational corporations that operate across borders make sustained investments in a foreign nation, typically through acquisitions or direct foreign investment.

2.3. Dividend payout

Dividend payout is when a corporation distributes a specified percentage of its net profit to its shareholders at the end of the fiscal year. The majority of shareholders use dividend payout to assess how well an organisation is performing in terms of an increase or decrease in value. Essentially, a dividend refers to the distribution to shareholders of the company's net profits, based on their shareholding (Al-Gharaibeh et al., 2013). The share of net profits allotted to shareholders, in accordance with the number of shares they own, is known as a dividend (Sunariyah, 2004).

2.4. Control variables

The study's control variables include leverage, profitability, and company size. Tien et al. (2013), Adiputra and Hermawan (2020), and Yahaya (2022) are just a few of the studies that supported the selection of these factors for this study due to their proven impact on company value.

2.5. Conceptual framework

Dividend payout moderating the influence of ownership structure on the value of listed manufacturing companies in Nigeria is demonstrated by the conceptual framework of this study. The study also shows the effect of leverage, profitability, and firm size on the value of a company. The conceptual model for the study is shown in Figure 1.

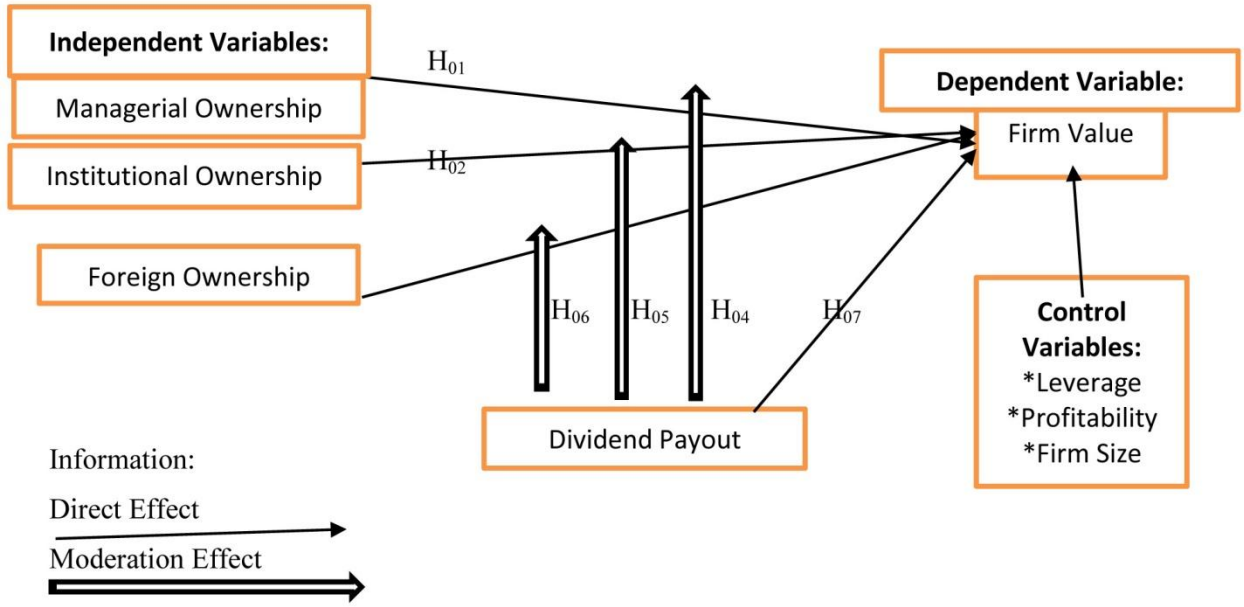

Figure 1. Conceptual framework

2.5.1. Effect of managerial ownership on the value of the company

Lintner (1956) initially put forth the bird-in-the-hand hypothesis, which states that a strong incentive to recruit new investors and promote a higher degree of corporate ownership is to pay dividends to shareholders regularly. Evada and Isnurhadi (2012), Vo and Nguyen (2014), Putranto and Kurniawan (2018), and Irdha et al. (2019) found that managerial ownership has a significant effect on the value of the firm. Managerial ownership is a form of ownership structure that can influence business management to provide an excellent outcome for the majority of shareholders. Many enterprises offer managers insider ownership of the company for managers to perform better (Connelly et al., 2010). Allowing managers to make decisions or establish policies that might boost a company's worth is one benefit of managerial ownership. Applying the theoretical basis and the above-mentioned research results, the first hypothesis is formulated as follows:

H_{01}: Managerial ownership has a significant effect on the value of listed manufacturing companies in Nigeria.

2.5.2. Effect of institutional ownership on the value of the company

Lintner (1956) The bird-in-the-hand theory emphasises that the regular payment of dividends to shareholders serves as a powerful incentive for attracting more investments and keeping existing shareholders, such as institutional owners. Clay (2001), Xiong (2016), and Doğan (2020) examined the effect of institutional ownership on the firm value of companies and found a significant relationship. However, Sari and Patrisia (2019) and Andhika and Muhyarsyah (2021) found that a negative relationship exists between institutional ownership and firm value. This result has shown conflicting results on the relationship that exists between institutional owners of a company and the firm's value.

Monks and Minow (2001) opined that institutional shareholders undertake all necessary measures to safeguard the value of a company's wealth, including watching the enterprise's management and market activities in which they have their investments. The following second hypothesis is formulated based on the theoretical basis and the research results discussed above:

H_{02}: Institutional ownership has a significant effect on the value of listed manufacturing

companies in Nigeria.

2.5.3 Effect of foreign ownership on the value of the company.

Al-Khouri et al. (2004), Rely and Arsjah (2019), and Ryu et al. (2021). However, Khasawneh and Staytieh (2017) and Rohim et al. (2019) found that foreign ownership has a significantly negative relationship with firm value. The industry in which a company operates is important, and when it comes to the impact of the services industry in particular, it is discovered that the impact of foreign ownership on firm value is always statistically significant. Based on the theoretical basis and the research results discussed, the following third hypothesis is proposed:

H_{03}: Foreign ownership has a significant effect on the value of listed manufacturing companies in Nigeria.

2.5.4. Effect of dividend payout on the value of the company

The bird-in-the-hand theory, developed by Lintner (1956), is one of the major theories on the impact of dividends on company value. This theory is one school of thought that backs up the dividend relevance. A number of studies have shown that dividends significantly impact business value. Triani and Tarmidi (2019), Morovvati Siboni and Pourali (2015), and Egbeonu Oliver et al. (2016). A company's dividend capability is a significant signal of its survival and success and the holy grail for efficient and effective operations and performance monitoring (Bhabatosh, 2015). This leads us to our fourth hypothesis, which is based on the previously mentioned study and the theoretical groundwork:

H_{04}: Dividend payout has a significant effect on the value of listed manufacturing companies in Nigeria.

The contradictory conclusions of existing research led us to explore how divided payout moderates the link between managerial, institutional, and foreign ownership of Nigerian listed manufacturing companies:

H_{05}: Dividend payout has a significant moderating effect on managerial ownership and the value of listed manufacturing companies in Nigeria.

H_{06}: Dividend payout has a significant moderating effect on institutional ownership and the value of listed manufacturing companies in Nigeria.

H_{07}: Dividend payout has a significant moderating effect on foreign ownership and the value of listed manufacturing companies in Nigeria.

2.6. Theoretical review

Due to its applicability to this study, the bird-in-the-hand theory was adopted. The bird-in-the-hand idea put forth by Lintner (1956) is one of the main frameworks that attempts to explain how dividends affect shareholder value. The dividend relevance theory has the backing of this and other theoretical traditions. Every shareholder argues that if a dividend were paid out today, it would be worth more than any potential future capital gains or share appreciation, according to the bird-in-the-hand theory. The saying "a bird in the hand is worth two in the bush" served as the foundation for the bird-in-the-hand theory.

2.7. Empirical review

According to Oyedokun et al. (2020), ownership structure and firm value in Nigeria were examined by using selected quoted consumer goods firms. A number of factors have a direct and significant impact on the value of firms, including managerial ownership, institutional ownership, and foreign ownership.

Vo and Nguyen (2014) found that managerial ownership had an inverse effect on leverage ratio and dividend policies. Xiong (2016) examined the relationship between institutional investors and firm value in Chinese listed firms. The study found that institutional investors influence corporate value.

The study by James et al. (2021) focused on the effects of managerial ownership, institutional ownership, and foreign ownership on firm value. The study found a strong correlation between managerial ownership, institutional ownership, and foreign ownership and the firm's valuation. Lucky and Uzokwe (2019) conducted research on dividend policy and firms' value, finding that all independent variables were significant with a direct impact on firms' values.

3. Methodology

To determine the connection between the ownership structure and the value of listed manufacturing companies in Nigeria, this study used the ex-post facto research approach. The moderating variable in this relationship was dividend payout. A sample of 35 manufacturing companies listed on the Nigerian Exchange Group between 2012 and 2023 was selected using judgmental sampling and filtering methods. The companies' products range from agricultural goods to consumer goods, healthcare goods, and industrial goods. Our secondary data comes from audited financial statements and accounts of selected manufacturing companies listed on the Nigerian Exchange Group (NGX).

3.1. Model specification

This study adapts Oyedokun et al.'s (2020) model. The basic model of Oyedokun et al (2020) is stated as: Tobin $Qit = \beta 0 + \beta 1INSTOit + \beta 2MGRLOit + \beta 3FORNOit + \beta 4OWCit + \beta 5FSIZEit + \mu it. \ldots . i$

Where Tobin $Q_{\beta 0}$ is Market capitalisation, INSTO presents Institutional ownership, MGRLO denotes Managerial ownership, FORNO represents Foreign ownership, OWC indicates Ownership concentration, and FSIZE shows Firm Size (Control Variable), β0 illustrates Constant/Intercepts, β_1, β_2, β_3 and β_4, present Parameters of determination, $\boldsymbol{\mu t}$ states Stochastic Variable (Error term)

In achieving the stated hypotheses 1 to 7 of this study, Oyedokun et al (2020) model was modified. The econometric form of the model is specified as follows:

$$FIRMV = \beta 0 + \beta 1MAGRIOit + \beta 2INSTUOit + \beta 3FOREINOit + \beta 4MAGRIO * DIDPit + \beta 5INSTUO * DIDPit + \beta 6FOREINO * DIDPit + \beta 7DIDPit + \beta 8LEVit + \beta 9PROFit + \beta 10FSit + eit$$

Where FIRMV is Firm Value, *MAGRIO*=Managerial ownership, *INSTUO*=Institutional ownership, *FOREINO* indicates Foreign ownership, $MAGRIO * DIDP$ presents Moderating effect of dividend payout and managerial ownership, $FOREINO * DIDP$ shows Moderating effect of dividend payout and foreign ownership, $INSTUO * DIDP$ represents Moderating effect of dividend payout and institutional ownership, *DIDP* denotes Dividend payout, LEV shows Leverage, PROF is Profitability, FS indicates Firm size, β_0 presents Constant, β_1 to β_7 shows Regression coefficients, e indicates Error term, i denotes Observation, t presents Year of observation.

4. Results and discussions

This section presents the outcome of this study based on the hypotheses formulated. The result of descriptive statistics is presented in Table 2.

Table 1. Variables definition, measurement, and sources

S/N	Variables	Proxy	Definition	Measurement	Sources
1	Dependent Variable Firm value	FIRMV	This is the economic measure reflecting the market value of a business.	Measured as the ratio of market capitalization to the book value of total assets	Oyedokun et al. (2020), and Mukaria et al. (2020)
2	Independent Variables Managerial Ownership	MAGRIO	The percentage of equity stake held by board members of the total number of shares in issue by the company	Measured as a percentage of shares held by the management of the total number of shares in issue.	Jusoh and Che-Ahmad (2014), Abdulfatah et al. (2022), and Irom et al. (2023).
3	Institution Ownership	INSTUO	Over the total number of issued shares of a Listed Company, the percentage of outstanding shares owned by huge fund managers	The percentage of shares held by institutional investors (i.e., the cumulative percentage of shares held by institutions with more than 5% of shares in issue) to total shares outstanding	Jusoh and Che-Ahmad (2014), Mukaria et al. (2020), Apochi et al. (2022) and Tnushi et al. (2023)
4	Foreign Ownership	FOREIO	Ownership control of a company held by individuals or entities who aren't citizens of the country where the company is located	Foreign ownership is measured as the cumulative percentage of shares held by foreigners of the total number of shares in issue.	Jusoh et Che-Ahmad (2014), Mukaria et al. (2020), Tnushi et al. (2023), Gambo et al. (2019).
5	Moderation Variable Dividend Payout	DIDP	Dividends distributed to shareholders, usually in cash or stock, are the company's net profit.	Measured as a percentage of the annual dividend paid to net income	Akinleye and Ademiloye (2018), Abdulfatah et al. (2022), Yahaya (2022).
6	Control Variables Leverage	LEV	The ability of a company to meet its short-term obligations of indebtedness.	Measured as a ratio of total debt to total assets	Yahaya and Awen (2020) and Yahaya (2022).
7 8	Profitability	PROF	How well a company can generate income from operational processes and ensure the continuity of the company in the future.	Measured as a ratio of net income to total assets	Rochmah and Ardianto (2020), Yahaya (2022)
	Firm Size	FS	Represent the size of the company.	Measured by the natural logarithm of total assets	Mamaro and Tjano (2019) and Usman and Yahaya (2023).

Source: Researcher's Compilation (2024)

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FIRMV	420	2.225	5.951	0.040	64.176
MAGRIO	420	0.102	0.150	0.000	0.647
INSTUO	420	0.389	0.294	0.000	0.948
FOREIO	420	0.153	0.276	0.000	0.843
DIDP	420	0.359	1.394	-3.078	22.171

The firm value (FIRMV) mean is found to be 2.225 with a standard deviation of 5.951. In addition, the minimum and maximum values of the sampled firms are 0.040 and 64.177, respectively. Firm values in Nigerian listed manufacturing companies are characterized by high standard deviations due to structural imbalances. The value of the companies varies greatly due to differences in market capitalisation, revenue generation, and asset base. As far as independent variables are concerned, the average managerial ownership (MAGRIO) is 0.102. This showed that managers of the sampled companies, on average, own 10.2 per cent of the shares of the companies in the pool. On average, institutional investors own 39 percent of the sampled companies, according to the Institutional Ownership (INPUT) ratio of 0.390. This means that institutional shareholders have a high presence in the sampled listed manufacturing companies in Nigeria. This result is in line with the study of Adamu and Harunal (2020), who reported that institutional shareholders have 51.3% of shareholdings using data from twenty non-financial firms' service firms. Nigerian-listed manufacturing companies with foreign investors own an average of 15.3% of shares, according to the foreign ownership (FOREIO) mean ratio of 0.153. The minimum and maximum are 0.000 and 0.844, respectively. This suggests that foreign investors have invested heavily in specific companies that are of interest to them. The mean dividend distribution (DIDP), which is the moderating variable of the study, is 0.360 in Table 2. This means that companies typically distribute 36% of their net profits to their shareholders as dividends. Some of the companies in the sample pay out dividends that are higher than their profits, while others pay out a smaller percentage of their net profit. The range is from -3.079 to 22.172, which suggests that both scenarios are possible. Olayinka and Adekola (2022) opined that the instability in dividend payments to shareholders in the trend analysis of the annual reports of some companies is a result of harsh economic situations.

4.1. Diagnostic test

The normal distribution of residues was determined by the Shapiro-Wilk W test for panel data collection. In this study, w = 0.59352 and p-value = 0.0000, suggesting that there is sufficient evidence to support a null hypothesis of normality. To prove this study hypothesis, the researchers introduce a robust estimation of standard errors using a generalised method of moments (GMM) regression model. Due to the fact that this issue violates the normality assumption, GMM is suitable to address it. The VIF was used to measure multicollinearity to consider how much of the variance of the estimated regression coefficients is due to multicollinearity. The Variance Inflator Factor (VIF) in this study ranged from 5.41 to 1.01, with an average of 2.73. As a rule of thumb, none of the variables in the VIF exceeds 10 per cent, which means that there is no sign of multicollinearity. The Breusch-Pagan heteroscedasticity test was used to verify the existence of heteroscedasticity. In this study, the t-test (chi-square) was 943.04, and the p-value was 0.0000. To adjust the regression model in this study for heteroskedasticity, the researchers introduced a reliable estimation of standard errors, i.e., a generalised method of moments (GMM) regression model, to ensure the validity of the inference.

4.1.1. GMM regression output of direct effect before moderation

Table 3. Dynamic panel-data estimation, one-step system GMM

FIRMV	Coef.	Robust (Std. Err.)	t	P>|t|__
MAGRIO	-9.502	2.315	-4.100	0.000
INSTUO	2.601	0.989	2.630	0.009
FOREIO	3.262	1.002	3.250	0.001
LEV	0.001	0.014	0.090	0.931
PROF	0.286	0.330	0.870	0.385
FS	-3.269	0.790	-4.130	0.000
/b0	11.786	3.264	3.610	0.000
Number of obs = 420		Number of groups = 35		
Number of instruments = 19		Obs per group = 12		
F (5, 34) = 3.50		Prob > F = 0.012		
GMM weight matrix: Robust				
Arellano-Bond test for AR (1) in first differences: z = -1.28 Pr > z = 0.201				
Arellano-Bond test for AR (2) in first differences: z = -0.95 Pr > z = 0.342				
Hansen test of overid. restrictions: chi2(12) = 17.05 Prob > chi2 = 0.148				
(Robust, but can be weakened by many instruments.				

The outcome in Table 3 indicates that managerial ownership (MAGRIO) exhibits a negative coefficient of -9.502 with a p-value of 0.000. This signifies that, ceteris paribus, a 1% increase in managerial ownership will lead to a -9.502-unit reduction in the firm value of the sampled listed manufacturing companies in Nigeria. This suggests that management may not always act in the interests of shareholders as the company's agent, but tends to take opportunistic actions that may result in a reduction in the company's value, and which in turn results in a conflict of interest for the company. Mokaya and Jagongo (2015) and Mukaria et al. (2020) found this to be true. It is estimated that for every 1% increase in institutional ownership among the listed manufacturing companies in the sample, firm value rises by 2.601, with a p-value of 0.009. When institutional investors have a lot of expertise with a firm, they are able to keep an eye on how it's doing and make decisions based on that information, which increases the value of the company. The outcome is consistent with what Oyedokun et al. (2020) and Mukaria et al. (2020) found. A 3.262 positive coefficient and a 0.001 p-value indicate that the foreign ownership index is statistically significant. This equates to a 3,262% rise in value for each 1% increase in foreign ownership of the companies included in the sample. This suggests that the long-term high investment and the oversight role of foreign owners help to sustain and secure the company's growing value. James et al. (2021) and Khasawneh and Staytieh (2017) both find similar results, which this investigation affirms. Firm value is not positively affected by leverage (LEV), a control variable with a positive coefficient of 0.001 and a non-statistically significant p-value of 0.931. With a p-value of 0.385 and a positive coefficient of 0.286, profitability (PROF) does not statistically substantially impact the business value. Firm size (FS) shows a negative coefficient of -3.269 and a p-value of 0.000, meaning that firm size has a significant effect on the firm value. This implies that the size of a large company does not always translate into a high value for the company, as large companies may be reluctant to make new investments in expansion before their debts are paid off, which leads to a decline in the value of the company.

4.1.2. GMM regression output with moderating variable effect

Table 4. Dynamic panel-data estimation, one-step system GMM

FIRMV	Coef.	Robust (Std. Err.)	t	P>|t|
MAGRIO	-0.865	1.009	0.860	0.005
INSTUO	1.334	0.665	2.00 0	0.045
FOREIO	1.924	0.680	2.830	0.005
DIDP	1.143	0.582	1.960	0.050
MAGRIO*DIDP	-3.131	1.492	-2.100	0.036
INSTUO*DIDP	-1.317	0.756	-1.740	0.081
FOREIO*DIDP	-1.588	0.927	-1.710	0.087
LEV	1.844	0.316	5.820	0.000
PROF	3.429	2.000	1.710	0.086
FS	-0.313	0.197	-1.580	0.001
/b0	2.315	2.105	1.100	0.001
Number of obs = 420		Number of groups = 35		
Number of instruments = 24		Obs per group = 12		
F(9, 34) = 3.06		Prob > F = 0.009		
GMM weight matrix: Robust				
Arellano-Bond test for AR(1) in first differences: z = -1.28 Pr > z = 0.199				
Arellano-Bond test for AR(2) in first differences: z = -0.94 Pr > z = 0.349				
Hansen test of overid. restrictions: chi2(12)= 15.40 Prob > chi2 = 0.220				
(Robust, but can be weakened by many instruments.)				

The results in Table 4 show that managerial ownership (MAGRIO) has a negative coefficient of -0.865 and a p-value of 0.005. This means that a 1% increase in managerial ownership will cause the value of the firm to drop by -0.865 units. This agrees with the findings of Mokaya and Jagongo (2015) and Mukaria et al. (2020). Institutional ownership (INSTUO) has a positive coefficient of 1.334 and a p-value of 0.045. This means that, everything else being equal, a 1% increase in institutional ownership is linked to a 1.334 unit rise in company value. This study's outcome aligns with the findings of Mukaria et al. (2020) and Oyedokun et al. (2020). Foreign ownership (FOREIO) has a positive coefficient of 1.924 with a p-value of 0.005; this result is in line with Khasawneh and Staytieh (2017) and James et al. (2021). A 1-unit increase in dividend payout (DIDP) increases company value by 1.143 units, according to a coefficient of 1.143 and a p-value of 0.050. Managerial ownership and dividend payout (MAGRIO*DIDP) on firm value (FIRMV) has a -3.135 beta and 0.036 p-value. Consequently, when dividend payments and managerial ownership both rise, firm value falls. The preference for reinvestment over dividend payments by managers who hold stock could be a consequence of agency conflict, which would allow them to retain control and resources. As a result, dividend payments are less advantageous in companies with a high level of managerial ownership. The entrenchment hypothesis, which holds that managers utilise company resources for personal gain if they are not adequately monitored, is consistent with this result. Institutional ownership and dividend payout (INSTUO*DIDP) on firm value (FIRMV) shows a negative coefficient of -1.317 and a p-value of 0.081. This result is not statistically significant. Foreign ownership and dividend payout (FOREIO*DIDP) on firm value (FIRMV) has a coefficient of -1.588 and a p-value of 0.087. This result is not statistically significant. Leverage (LEV) has a positive coefficient of 1.844 with a p-value of 0.000, indicating that leverage is a positive determinant for firms' value. The profitability coefficient is 3.429, with a p-value of 0.086, indicating that profitability has a positive and insignificant effect on firm value, meaning that a 1% increase in profitability is associated with a 3.429 increase in firm value. Firm size (FS) showed a negative coefficient of -0.313 and a p-value of 0.001, indicating that firm size has a significant effect on the firm value.

The findings of the GMM result show that, while ownership structures and dividend payout have a positive influence on firm value independently, only managerial ownership interacts with

dividend shows a positive relationship with firm value in Nigeria's manufacturing sector.

4.2. Diagnostic test

The Arellano-Bond test for AR (1) in first differences of this study is: z = -1.28, Pr > z = 0.199, suggesting that there is not enough evidence to suggest the presence of first-order autocorrelation.

The Arellano-Bond test for AR (2) in first differences of this study is: z = -0.94, Pr > z = 0.349, suggesting that the first-differenced GMM model is appropriately specified and there is insufficient evidence to suggest the presence of second-order autocorrelation in the first-differenced errors of the model.

To assess the validity of the instruments used in this study model, the Hansen diagnostic test of overidentifying restrictions was with $chi^2(12) = 15.40$ while the p-value = 0.220 at 5%, indicating that there is not enough evidence to suggest that the instruments used in the GMM estimation are invalid, and the model does not suffer from overidentifying restrictions.

5. Conclusion and recommendations

In conclusion, this study evaluated the dynamics of the effect of ownership structure on the value of listed manufacturing companies in Nigeria, with dividend payout as the moderating variable, including leverage, profitability, and firm size as the control variables. The study utilized descriptive statistics and the Generalised Method of Moments (GMM) regression model. It was found that management, institutional, and foreign ownership each have a significant effect on the value of a company. A significant impact on firm value was also exerted by the interacting relationship between managerial ownership and dividend payout. The overall findings suggested that the presence of dividend payout moderates the effect of ownership structure on firm value, particularly for managerial ownership. Based on the findings, this study recommends that management should cultivate the practice of regular payment of dividends, no matter how little it may be, to institutional and foreign shareholders to demonstrate the sustainability capacity of their company. Management should commit to long-term shareholder value creation beyond dividends paid to institutional and foreign shareholders by expanding the business, following best corporate governance practices, and implementing best corporate governance practices.

5.1. Suggested Areas for Further Studies

This study suggests that future researchers should investigate other variables that may affect the relationship between ownership structures and the value of a company. For example, the impact of family ownership, employee-agent ownership, organisational culture, or individual ownership can be examined on the value of listed companies.

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