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Ownership Structure and Firm Value of Industrial Goods Companiesin Nigeria: Moderated by Audit Quality

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ABSTRACT

This study examines the moderating influence of Audit Quality on the relationship between ownership structure and firm value among listed industrial goods firms in Nigeria. Ownership Structure is represented by proxies such as managerial Ownership, Institutional Ownership, Foreign Ownership and Concentrated Ownership. Purposive sampling was employed to select 12 out of 13 listed industrial goods firms as of December 31, 2022. Secondary data were gathered from the annual reports of these firms spanning from 2013 to 2022. Hypotheses were tested using Moderating Regression Analysis conducted with STATA 13 software. The study finding indicates that Audit Quality has a positive (0.364) and significant (0.000<0.05) impact on the relationship between Managerial Ownership and firm value. Conversely, Audit Quality exhibits an insignificant (0.130>0.05) effect on the relationship between Institutional Ownership and firm value. Furthermore, Audit Quality is found to have a positive (0.935) and significant (0.000<0.05) influence on the relationship between Foreign Ownership and firm value. However, the result reveals a negative (-0.496) yet significant (0.000<0.05) impact of Audit Quality on the relationship between Concentrated Ownership and firm value across all sampled firms. In conclusion, Audit Quality significantly influence the relationship between Institutional Ownership and firm value, positively impacts the link between Foreign Ownership and firm value, but negatively affects the association between Concentrated Ownership firm value. Thus, shareholders are encouraged to invest in Audit Quality by prioritizing engagement with reputable audit firms and fostering a culture of compliance to enhance audit effectiveness. Additionally, management should promote ownership diversification to attract diverse ownership beyond managerial and concentrated structures, thereby increasing transparency and reducing the risk of managerial entrenchment.

INTRODUCTION

The motive behind establishing businesses is to create value for the owners and stakeholders. This involve striving to add value to immediate surrounding, customers and society by creating valuable products and services with the hope that it will lead to a positive leap-back loop, where increase value for customers and society lead to increase value for the firm itself (Nelson et al., 2021). Firm value is an important measure of a firm's success and its survivability in the marketplace, reflecting its ability to generate wealth for its shareholders over time (Karim et al., (2022). For industrial goods firms, this standard takes on particular significance due to the sector's role in manufacturing, production, and distribution of goods (Eshemokha et al. 2023). The value of a firm reflects not only its tangible assets but also intangible factors such as reputation, brand equity and managerial effectiveness (Oyedokun et al., 2020). Moreover, firm value serves as a key determinant of a firm's access to capital, its ability to attract and retain talent and its capacity to pursue strategic initiatives and investments (Guiso et al. 2015). Thus, enhancing firm value remain a central objective for businesses across industries, including those operating within the industrial goods sector.

Ownership structure emerges as a crucial factor influencing the value of industrial goods firms, shaping their governance mechanisms, decision-making processes, and strategic orientation (Maulina, 2023). Ownership

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structure refers to the distribution of ownership right and control among various stakeholders, including shareholders, management and other interested parties (Onuora et al., 2022). Within the context of listed industrial goods firms in Nigeria, ownership structure encompasses various structures, ranging from concentrated ownership by founding families or institutional investors to dispersed ownership among a broad base of shareholders (Ntim, et al., 2012). These varying ownership arrangements exert a profound influence on firm behavior and performance, affecting its risk profile, investment decisions and overall competitiveness in the market.

The correlation between ownership structure and firm value continues to be a topic of on-going research, primarily due to contradictory findings and the lack of a clear definition for ownership structure. While some research indicates a positive impact of ownership categories like managerial, institutional, foreign and concentrated ownership on firm value, others reveal neutral or adverse effects. For instance, studies conducted by Irom et al., (2023); Onuora et al., (2022); Nelson et al., (2021) and Oyedokun et al., (2020) assert that these ownership types can enhance corporate governance, reduce agency costs and ultimately boost firm value. Conversely, research by Eshemokha et al. (2023); Karim et al., (2022); and Ogaluzor, (2019) report potential drawbacks such as conflict of interest and entrenchment, which may negatively influence firm value. The absence of consensus implies that other factors could moderate the relationship between ownership structure and firm value (Maulina, 2023), with audit quality emerging as a potential moderating factor. High-quality audits have the potential to alleviate information asymmetry between shareholders and managers, as well as detect and prevent financial fraud, thus potentially mitigating the adverse effects of certain ownership structure on firm value.

Audit quality emerges as a critical moderating factor shaping the relationship between ownership structure and firm value, influencing the transparency, reliability and credibility of financial reporting processes (DeFond & Zhang, 2014). Audit quality encompasses various dimensions, including auditor independence, expertise and diligence, all of which play a crucial role in safeguarding shareholder interests and enhancing investor confidence (Francis et al., 1999). Within the Nigerian context, where corporate governance practices and regulatory oversight may vary, audit quality assumes heightened importance as a mechanism for mitigating agency costs, reducing information asymmetry and enhancing market efficiency (Oyer & Schaefer, 2005). By moderating the relationship between ownership structure and firm value, audit quality serves as a safeguard against managerial opportunism, ensuring that shareholders' interests are protected and value creation is maximized in the industrial goods firms.

The industrial goods firms in Nigeria encompasses a wide range of businesses involved in the manufacturing, production and distribution of machinery, equipment, construction materials and other essential components of the economy. This sector plays a pivotal role in driving economic growth, job creation and industrial development within Nigeria, contributing significantly to the country's Gross domestic Production (GDP) and export earnings (Anita & Yulianto, 2016). However, industrial goods firms in Nigeria encounter a wide range of difficulties, stemming from structural insufficiencies, regulatory constrain and market dynamics (Onuora et al. 2022). These challenges often result in poor firm performance, limited access to capital and increasing competitive pressures, impeding their ability to maximize value creation and sustain long-term growth (Adewumi et al. 2023). With this background, the problem statement revolves around the central issue of firm value and its determinants within the context of industrial goods firms in Nigeria. Firm value represents a key performance indicator (KPI) and viability that reflects the market's perception of a firm's future cash flows and earning potential (Abubakar et al. 2020). However, achieving and enhancing firm value continue to pose a significant obstacle for many industrial firms in Nigeria, necessitating a deeper understanding of the factors that influence it (Eshemokha et al. 2023).

Hence this study, is set to determine the moderating role of Audit Quality on the relationship between ownership structure and firm value of listed Nigerian Industrial Goods Companies. Specifically, it will examine the effect of managerial ownership, institutional ownership, foreign ownership and concentrated ownership on firm value of listed Nigerian Industrial Goods Companies, and examine whether these relationships are moderated by audit quality. As no prior research has explored the moderating role of audit quality in this context. To achieve these objectives, the following null hypotheses are formulated:

Ho_1: Managerial ownership, Institutional ownership, foreign ownership and concentrated ownership have no significant effect on firm value of listed Nigerian Industrial goods companies.

Ho_2: Audit quality has no significant moderating effect on the relationship between managerial ownership, Institutional ownership, foreign ownership and concentrated ownership on firm value of listed Nigerian Industrial goods companies.

This study is carried out considering existing studies on the relationship between ownership structure and firm value by previous studies across various industries and nations. This study will be significant in many respects including policy recommendations and academic literature. The scope of the study covers a 10-years periods between 2013 - 2022 and mainly secondary data was utilized which was obtained from the Nigerian Exchange portal. The remaining sections of the study are as follows: Literature review, methodology, presentation, and analysis of data, then, conclusion and recommendations.

LITERATURE REVIEW

The conceptual framework of this study in Figure 1, proposes that ownership structure, comprising Managerial Ownership (MANO), Institutional Ownership (INSO), Foreign Ownership (FORO) and Concentrated Ownership (CONO), serves as the proxies of the Ownership Structure, while firm value, will be measured using Tobin's Q, serves as the Dependent Variable. Then, audit quality is introduced as a Moderating Variable (MV), influencing the relationship between ownership structure and firm value.

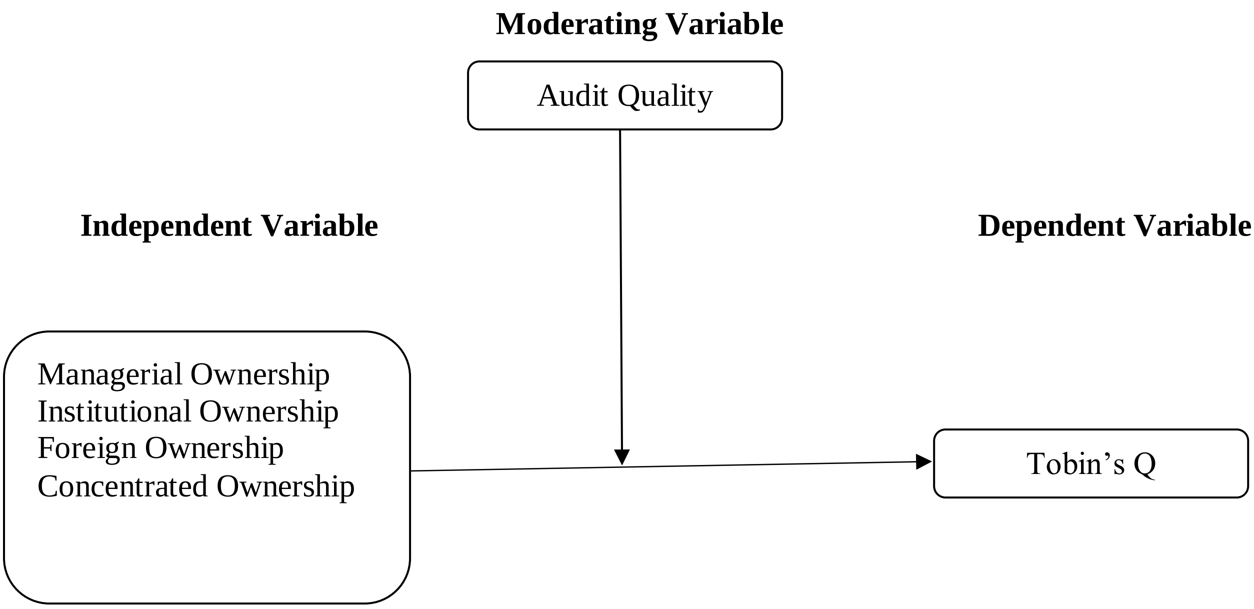

Figure 1: Conceptual Framework

Source: Researcher’s 2022, Compilation

Conceptual review

The conceptual review provides a theoretical foundation for understanding the key concept and relationships underpinning the study’s research framework. Central to the study are three main concepts: ownership structure, audit quality and firm value.

Firm Value

Firm value represents the market’s assessment of a company’s worth and future prospects. It reflects the present value of expected cash flows and is influenced by factors such as profitability, growth prospects, risk profile and governance quality. Various definitions have been proposed for firm value, each emphasizing different aspects of the concept. Sampurna & Romawati (2019), define firm value as the amount a potential buyer would be willing to pay for the company if it were to be liquidated. This definition emphasizes the notion of fair market value and the willingness to pay for the company's underlying assets and business operations. Also, Gharaibeh & Abdul Qader, (2017), recognize the dual nature of firm value, suggesting that it is determined by both endogenous and exogenous factors. Endogenous factors refer to internal aspects of the company, such as its management practices, financial performance, and competitive advantage. Exogenous factors, on the other hand, encompass external influences, such as economic conditions, industry trends, and technological advancements. Besides, Santioso et al. (2020), emphasizes the link between firm value and the bargaining power of a company's stock. According to Santioso et al. (2020), firm value can be observed through the market value or book value of the company's equity. Market value reflects the current market sentiment towards the company's future prospects, while book value represents the historical accounting value of the company's equity. More recently, Eshemokha et al. (2023) define firm value as the market capitalization of a firm divided by its total assets. This definition highlights the relationship between firm value and the market's perception of the company's efficiency in utilizing its assets.

Ownership Structure

Ownership structure refers to the distribution of ownership rights and control among various stakeholders within a firm. It encompasses the ownership concentration, ownership identity (e.g., managerial, institutional, foreign), and governance mechanisms that shape decision-making processes and influence firm behavior. Sugosha & Artini, (2020) define ownership structure as the distribution of share ownership in a company. This definition highlights the importance of shareholding patterns in determining ownership structure. It encompasses the identification of individuals or entities that hold shares in a company and the proportion of ownership they possess. Again, as per Adewumi et al., (2023) define ownership structure as the distribution of equity ownership among a company's shareholders. This definition aligns with the broader concept of equity ownership, encompassing both common and preferred stock.

Managerial Ownership

Managerial ownership refers to the proportion of a firm’s shares that are owned by its managers and executives. This form of ownership is distinct from external ownership such as ownership by institutional investors or individual shareholders, as it represents a direct stake held by those individuals responsible for the day-to-day management and operation of the firm. Managerial ownership aligns the interests of managers with those of shareholders, creating a sense of ownership commitment and incentivizing managerial actions that aim to enhance shareholder value.

Several definitions of managerial ownership exist. Anita & Yulianto, (2016) defines managerial ownership as the proportion of shares owned by management at the end of the year relative to the total number of outstanding shares. This definition focuses on the direct ownership of shares by managers. In addition, review by Santioso et al. (2020), emphasize the active participation of management shareholders in corporate decision-making. This definition highlights the importance of managerial ownership not just as a financial stake but also as a reflection of managers' commitment to the company's success. Moreover, in light of Abubakar et al. (2020), further broaden the definition to encompass not only direct ownership but also indirect ownership through proxies or representatives.

Institutional Ownership

Institutional ownership refers to the ownership of a firm’s stock by institutions such as mutual funds, pension funds, insurance companies and hedge funds. These institutions invest on behalf of their clients or beneficiaries and typically hold large blocks of shares in publicly traded companies. Institutional ownership plays a significant role in corporate governance, capital markets and the overall functioning of the economy.

Institutional ownership can be commonly defined as the proportion of a company's shares held by institutional investors. However, the definition of institutional ownership has been approached from different perspectives by various scholars. Onuora et al. (2022) and Peter et al. (2022) highlight the institutional nature of ownership, referring to the involvement of large financial organizations and pension funds. They defined Institutional ownership as the amount of a company's shares owned by large financial institutions, pension funds, or endowments.

Foreign ownership

Foreign ownership refers to the ownership of a firm's shares by individuals, institutions, or entities based outside the country in which the firm is incorporated or operates. Foreign ownership can take various forms, including direct investment by foreign individuals or corporations, investments by foreign institutional investors such as sovereign wealth funds/pension funds and cross-border mergers and acquisitions. Setiany et al. (2021) conceptualize foreign ownership as the proportion of common stock of firms owned by foreign individuals, legal entities, governments and their overseas portion. This definiton underscores the relationship between ownership structure, governance mechanisms and cross-border investments.

Concentrated Ownership

Concentrated ownership refers to a scenario in which a significant portion of a firm’s shares is held by a single individual, a group of related individuals or a specific entity, thereby consolidating control and decision-making power in a limited number of hands. This form of ownership stands in contrast to dispersed ownership. Irom et al. (2023) characterize ownership concentration as absolute, where a single shareholder holds majority control, typically exceeding 50% ownership, thereby dictating corporate strategy and decision-making. Conversely, Abdulfatah et al. (2021), associate ownership concentration with block holding, as ownership exceeding 5% equity stake, aligning with regulatory frameworks such as Nigerian Securities and Exchange Commission (SEC).

Audit Quality

Audit quality refers to the reliability, credibility and effectiveness of the auditing process in providing assurance on the accuracy and integrity of financial statements. High audit quality enhances investor confidence, reduces information asymmetry and promotes market efficiency. The agency theory also applies to audit quality, as auditors act as external monitors tasked with safeguarding shareholder interests and ensure managerial accountability.

Wijaya (2020) Highlight the importance of audit quality for stakeholders, defining it as a very important aspect for those directly or indirectly related to the substance of the company's financial statements. This implies that a high-quality external audit enhances the credibility and quality of financial statements, benefiting a wide range of stakeholders. Besides, in the light of Gadi et al. (2021), highlighted the external auditing role in ensuring the veracity of financial statements, defining audit quality as the external auditing task that ensures the financial statements presented by the management are truthfully stated and are presented in accordance with the necessary reporting and legal frameworks.

Integrating these conceptual frameworks, the study seeks to explore how ownership structure influences firm value, with audit quality moderating this relationship. By examining the relationship between ownership dynamics, governance mechanisms and audit effectiveness, the study aim to provide valuable insights into the determinants of firm value and the efficacy of corporate governance practices within the Nigerian industrial goods sector.

Theoretical Review

This study will be anchored with Agency theory, this is because at the heart of corporate finance lies the

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intricate relationship between ownership structure and firm value. Agency theory is concerned with resolving two problems (problem of risk sharing and agency problem) that can occur in the agency relationship (Miles pp34, 2012). Agency theory, is a fundamental pillar in economic thought, it provides a conceptual framework to examine corporate governance relationship. It posits that within a firm, an inherent conflict of interest exists between shareholders (principals) and managers (agents). Shareholders, driven by the pursuit of financial returns, entrust managers with the responsibility of maximizing shareholder value. However, managers may possess distinct motivations, such as maximizing their own compensation or wielding greater control within the organization. This misalignment of interests can manifest into agency problems, where managers' actions deviate from the optimal path for shareholder wealth creation. Equity ownership by managers can help align the interests of owners and managers (Jensen & Meckling, 1976).

REVIEW OF EMPIRICAL STUDIES

Ownership structure and firm value

Study by Nelson et al., (2021). Examines the impact of managerial ownership, institutional ownership, and foreign ownership on firm value within the consumer goods manufacturing sector listed on the Nigeria Stock Exchange from 2011 to 2020. Utilizing an ex-post facto research design, the study analyzes data from twenty-eight publicly traded consumer products manufacturing companies, selected through purposeful sampling. Findings reveal a significant relationship between ownership structure and firm value, suggesting that managerial ownership, institutional ownership, and foreign ownership play crucial roles in determining firm value.

Moreover, studies by Irom et al. (2023); Onuora et al. (2022) and Oyedokun et al. (2020), also found a positive influence of ownership structure on firm value. They found out that certain types of ownership can improve corporate governance, reduce agency costs, and ultimately enhance firm value. Conversely, studies by Eshemokha et al. (2023); Karim et al. (2022); Jia et al. (2020) and Ogaluzor and Omesi (2019); found no effect or even negative effect of certain ownership types on firm value. These studies highlight potential downsides, such as conflicts of interest, entrenchment, and other issues that can negatively impact firm value.

METHODOLOGY

This section presents the methodology that is adopted for the study, which encompasses the study population, sample size determination, modeling approach, variable definitions and measurements, data collection sources and analysis methods. The study population comprises 13 industrial goods firms listed on the Nigerian Exchange (NGX) from January 1, 2013 to December 31, 2022, covering all firms engaged in industrial goods production activities listed on NGX within the specified timeframe. A filter rule based on the criteria outlined in table 1 was employed to select the sample for analysis.

Table 1 Sample Selection Criteria

Criteria			Number of firms
Initial population			13
Firms listed beyond 1st January, 2013			0
Firms delisted within the study period			0
Firms with incomplete required study data			1
Sample size			12
Year of observation			10
Number of observations			120
Source: Researcher's 2022, Compilation			

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After employing purposive sampling, 12 industrial goods firms were selected as the research sample. Secondary data for the study were sourced from the annual reports of these firms spanning from 2013 to 2022. The study utilized secondary data collection to achieve its objectives and all research hypotheses were tested using Moderating Regression Analysis (MRA) conducted with STATA 13 software. Results were interpreted in light of both theoretical framework and empirical studies to address the research objectives and validate existing theory and prior research. The findings were then used to draw conclusion and offer recommendations for future research endeavors.

The model utilized in this study is inspired by Mukaria et al. (2020) and Eshemokha et al. (2023) and is presented in two steps. First, the model is expressed as follows:

$FV_{it} = f\,(MANO_{it}, INSO_{it}, FORO_{it}\,CONO_{it})$ ………………………………………………….(i)

Secondly, the model is expanded to include audit quality (AUQU) as a moderator, resulting in the following equation:

$FV_{it} = \beta_0 + \beta_1 MANO_{it}{*}AUQU_{it} + \beta_2 INSO_{it}{*}AUQU_{it} + \beta_3 FORO_{it}{*}AUQU_{it} + \beta_3 CONO_{it}{*}AUQU_{it} +$

$FIMS_{it} + e_{it}$ …………………………………………………………………………….(ii)

Where:

FV = Firm Value,

MANO = Managerial Ownership,

INSO = Institutional Ownership,

CONO = Concentrated Ownership,

AUQU = Audit Quality,

FIMS = Firm Size,

e = Error term,

i = Number of companies to be observed

t = Period (index of time period).

β_0 = constant.

β_1 to β_4 = regression coefficients.

Model 1 examines the effect of ownership structure on firm value, controlling for firm size. Model 2, on the other hand, explores the moderating influence of audit quality on the association between ownership structure and firm value. In equation (ii) the term AUQU represents the interaction variable, serving as a moderator in the relationship between the dependent and independent variables. A significant $\boldsymbol{\beta_4}$ coefficient at a 5% significance level indicates that AUQU acts as a significant moderator, influencing the relationship between ownership structure and firm value.

RESULT AND DISCUSSION

In this section, we present the results of the data analysis and hypothesis testing. We begin by discussing the descriptive statistics findings which provide a comprehensive overview of the collected data. Descriptive statistics employ statistical methods to transform raw data into clear and understandable information. However, table 2 below displays the results of the descriptive statistical tests, offering insights into the key characteristics and trends observed in the dataset.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FIMV	120	0.13	0.087	0.011	0.416
MANO	120	0.167	0.24	0.001	0.787
INSO	120	0.51	0.28	0	1
FORO	120	0.2	0.28	0	0.811
CONO	120	0.61	0.2	0.3	0.97
AUQU	120	0.61	0.49	0	1
FIMS	120	9.74	0.98	8.239	11.914

Table 2 reveals that the mean statistics for firm value is 0.13 which mean that on average all the listed industrial firms in Nigeria have by mean standard total asset of at least 13% of their market capitalization. This is however not an absolute true as standard deviation of 0.087 was seen in the data set which indicate that there is a minute level of variation among the companies. This is further affirmed by the relatively huge gap between the 0.011 minimum firm value and the 0.416 maximum firm value. Managerial ownership however, revealed a mean value of 0.167 lower than its standard deviation (of 0.240) which indicate that the level of volatility in the dataset is huge and must need further confidence interval test to diagnose the variable even crystally.

The 0 minimum value of institutional ownership indicate a total absence of foreign shareholders in some of the company while the maximum value of 1 also indicate their presence in some of the sampled companies. However, their extent of presence or not is explained by the mean value of 0.51 which suggests that they are in more than 50% of the sampled companies. This is quite an interesting illustration of foreign direct investment in Nigeria amongst industrial firms. The mean value of audit quality (0.61) suggests that more than half of the sampled firms have on average the big four auditors as their external auditors which explains the dare need of these companies in search for transparency and reliable audit investigation. The result of the normality test is further presented in table 3.

Table 3: Shapiro-Francia W' Normality Test

Variable	Obs	W'	V'	z	Prob > z
e	120	0.92674	7.754	4.096	0.00002

Table 3 reveal that the p value of the error terms is 0.00002 which is quite lower than the 0.05 level of significance. Therefore, there is no sufficient evidence to conclude that the error term is normally distributed, thence this study conclude that the error term is not normally distributed. Moreover, further diagnostics are presented in table 4.

Table 4: Diagnostic Tests

Statistics	Value	P-value
VIF (Mean)	1.76	-
Heteroskedasticity	74.83	0
Xttest0	2.31	0.064
Skewness	28.21	0.0001

Table 4 show that the mean VIF is 1.76 which indicate that the level of collinearity among the independent variables is minimal and can be tolerated. This is further complemented by the pair wise correlation result of multicollinearity, see appendix 2. The table further shows that the p-value of the Cameron Trivedi Imtest for heteroskedasticity test is 0.000 which suggests that the error terms are not homogeneously distributed along the regression line. This calls for a further robust regression to account for the uneven distribution of the residual terms across the regression line. The Breusch and Pagan Lagrangian multiplier test for random effects presented in table 4 further shows that the p-value of the Xttest is 0.064 which is greater than the level of significance indicating that there is minimal panel effect and therefore suggesting nary need for Hausman specification test. To account for all the above tests, the panel correlated robust standard error regression is presented in table 5.

Table 5 Regression Result

Variable	**Coef.**	**PCSE**	**z**	**P > z**
Mano	-0.466	0.094	-4.95	0
Inso	0	0.045	-0.01	0.994
Foro	-0.054	0.044	-1.23	0.218
Cono	0.294	0.109	2.69	0.007
Auqu	0.171	0.069	2.47	0.013
Mano*auqu	0.464	0.12	3.88	0
Inso*auqu	0.082	0.054	1.51	0.13
Foro*auqu	0.935	0.152	6.17	0
Cono*auqu	-0.496	0.133	-3.73	0
Fims	0	0.012	-0.03	0.98
_Cons	0.042	0.13	0.33	0.744

Table 5 shows that the number of observations is 120 which consists of 12 companies and a period of 10 years. The F statistics (0.000) suggests that the model is statistically significant, this is complemented by the R squared of 0.506 which suggests that 50.6% variation in the firm value of these sampled companies is explained by the explanatory variables contained in this study. Further to that, managerial ownership reveals an inverse relationship with firm value as it has a negative regression coefficient of -0.466 and a p-value of 0.000 <0.05 which imply that as managerial ownership increases by 1%, the firm value decrease in opposite direction by 46.6%. This relationship is statistically significant as affirmed by the p-value of 0.000 which is way lesser than the 0.05 level of significance.

The table 5 further reveal that concentrated ownership has a positive (0.294) and significant (0.007 < 0.05) effect on the firm value of the sampled companies. The moderating variable which is audit quality also has a significant (0.013 < 0.05) and positive (0.171) effect on the firm value of the sampled companies.

In an attempt to test the moderation hypotheses, audit quality was found to have a positive (0.364) and significant (0.000 < 0.05) effect on the relationship between managerial ownership and firm value of the listed companies. Conversely, the audit quality exhibits an insignificant (0.130 > 0.05) effect on the relationship between institutional ownership and firm value, this effect was as much expected since the institutional ownership on its own also did not have a significant effect on the firm value and so does the interaction with the moderator variable. On the other flip, the audit quality was found to have a positive (0.935) and significant (0.00 < 0.05) effect on the relationship between foreign ownership and firm value of the sampled firms. This is a followed by another important moderation as the table 5 finally reveal that audit quality has a negative (-0.496) yet significant (0.000 < 0.05) effect on the relationship between concentrated ownership and firm value of the sampled firms.

CONCLUSION

The findings from table 5 revealed significant insights into the relationship between ownership structure, audit quality and firm value in the listed industrial goods firms in Nigeria. The study model demonstrates statistical significance with explanatory variables collectively explaining a substantial portion of firm value variance as indicated by the F-statistic (0.000) and R squared value (0.506). Managerial ownership exhibits an inverse relationship with firm value, while concentrated ownership shows a positive and significant effect. Higher audit quality is associated with higher firm value and it moderates the positive relationship between managerial ownership and firm value. However, audit quality's effect on the relationship between institutional ownership and firm value is significant, consistent with institutional ownership's limited impact alone. Audit quality positively influences the relationship between foreign ownership and firm value but negatively impacts the link between concentrated ownership and firm value. These findings stress the importance of ownership structure and audit quality for enhancing firm value and competitiveness in the Nigerian industrial goods firms.

RECOMMENDATION

Based on these findings regarding ownership structure, audit quality and firm value in the listed industrial goods firms in Nigeria, the following recommendations are put forward: (i) the regulatory authority should enhance corporate governance practices by implementing measures such as independent board oversight and transparent disclosure policies to mitigate agency conflicts and improve governance effectiveness. (ii) Management should promote ownership diversification to attract diverse ownership beyond managerial and concentrated structures, thereby increasing transparency and reducing managerial entrenchment risk. (iii) Shareholders should invest in audit quality by prioritizing engagement with reputable audit firms and fostering a culture of compliance to enhance audit effectiveness. (iv) Policy maker should strengthen regulatory oversight by enforcing robust regulatory frameworks to promote transparency and accountability in financial reporting and auditing practices. (v) Educational authority should enhance investor education and engagement to empower investors with knowledge about the impact of ownership structure and audit quality on firm value, fostering transparency and trust. Accordingly, these recommendations aim to enhance governance practices, strengthen investor confidence and improve firm value, thereby fostering sustainable growth and competitiveness in Nigerian industrial goods sector.

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APPENDIX A

Table 2: Variables, Definitions, Measurements and Sources

S/N	Variables	Definition	Type	Measurement	Source
1	FIMV	Firm Value	Dependent	Market capitalization to book value of total assets ratio	Eshemokha et al. (2023)
2	MANO	Managerial Ownership	Independent	Number of shares owned by Board of directors + Management + Commissioner divided by Total shares outstanding	Ismantara et al. (2022) and Putranto Kurniawan (2018)
3	INSO	Institutional Ownership	Independent	Number of shares owned by the Institutions divided by the total number of shares outstanding	Ismantara et al. (2022) and Sutrisno (2020)
	FORO	Foreign Ownership	Independent	Measured as dummy variable (1 if present while 0 is otherwise)	Kim et al. (2018)
4	CONO	Concentrated Ownership	Independent	Percentage of shares owned by small number of large shareholders divided by 100	Irom et al. (2023)
5	AUQU	Audit Quality	Moderator	Measured as dummy variable (1 represents Big4 audit firm while 0 is for otherwise)	Ejeagbasi et al. (2015)
6	MANO*AUQU	Managerial Ownership multiply by Audit Quality	Independent by Moderator	Measured by multiplying estimated value of managerial ownership with audit quality	Eshemokha et al. (2023)
7	INSO*AUQU	Institutional Ownership by Audit Quality	Independent and Moderator	Measured by multiplying estimated value of Institutional ownership with audit quality	Eshemokha et al. (2023)
	FORO*AUQU	Foreign Ownership by Audit Quality	Independent and Moderator	Measured by multiplying foreign ownership with audit quality	Eshemokha et al. (2023)
8	CONO*AUQU	Concentrated Ownership by Audit Quality	Independent and Moderator	Measured by multiplying the percentage of shares owned by small number of large shareholders with Audit quality	Eshemokha et al. (2023)
9	FIMS	Firm Size	Control	Measured as natural log of total assets	Ismantara et al. (2022)