

## **Audit Committee Attributes and Financial Reporting Quality of Listed Industrial Goods Companies in Nigeria**

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### **Abstract:**

*This study investigates the impact of audit committee attributes on the financial reporting quality of listed industrial goods companies in Nigeria, focusing on audit committee independence (ACIDP), audit committee gender diversity (ACGD), and audit committee meetings (ACM). Additionally, it examines company size (CSIZE) as a control variable. Utilizing a sample of 16 industrial goods companies from 2009 to 2023, the study employs descriptive statistics, correlation analysis, and multiple regression analysis to evaluate these relationships. The findings reveal that audit committee independence and gender diversity have significant positive effects on financial reporting quality, indicating that independent and gender-diverse audit committees enhance the accuracy and transparency of financial disclosures. Conversely, the frequency of audit committee meetings does not significantly impact financial reporting quality, suggesting that meeting quantity alone is insufficient for improving reporting standards. Moreover, company size is found to have a significant negative effect on financial reporting quality, highlighting the complexities larger firms face in maintaining high reporting standards. These results underscore the importance of promoting independence and diversity within audit committees and implementing robust internal controls for larger firms. The study's limitations include its focus on a single sector and geographic region, and its cross-sectional design. Future research should explore these relationships across different sectors and regions, employ longitudinal data, and consider additional audit committee characteristics. This research contributes to the corporate governance literature by providing empirical evidence on the crucial role of audit committee attributes in enhancing financial reporting quality.*

**Keywords:** *Audit Committee Gender, Audit Committee Meeting, Financial Reporting Quality, monitoring, Corporate Governance, Regulatory Compliance, Ethical Financial Practices.*

## 1. Introduction

The mechanism widely used globally to oversee the financial reporting process is the audit committee, composed of independent directors. The appointment of audit committees is mandatory, and members must possess adequate financial expertise. This serves as an effective tool for ensuring treasury management aligns certified financial statements with the auditor's opinion (Financial Reporting Council of Nigeria, 2018). Financial statements, which include the income statement, balance sheet, and cash flow statement, represent the financial results of an organization made available to the public. For companies listed on the Nigerian Stock Exchange, this reporting function is supported by the audit committee. Businesses must continuously create value to remain going concerns. This requires strict adherence to corporate governance principles. The audit committee, established by the board of directors, oversees the company's accounting, financial reporting processes, and the audit of its financial statements. It was created to enhance firm value through the provision of fair, trustworthy, and reliable financial information to stakeholders. Historically, the United States has the longest tradition of audit committees, dating back to the 1900s (Al-Hamad, 2018).

The primary purpose of the audit committee is to perform an oversight function, ensuring that financial statements are prepared in accordance with company policies, corporate governance guidelines, and that they present a true and fair view of the company's affairs to shareholders. This aligns with Ekumankama and Uche (2009), who noted that audit committees examine financial statements for material misstatements and compliance with legal and ethical requirements.

Recurrent corporate failures and financial crises have eroded investor confidence, leading to significant investment losses and economic damage. Despite various interventions by the Central Bank of Nigeria (CBN) and the Securities and Exchange Commission (SEC) such as management changes, capital injection, asset management companies for non-performing loans, bridge banking, refinancing, and stricter regulations (Oyewole & Adegoke, 2018) failures in the financial sector persist. Given the critical role of financial institutions in any economy, there is a need to strengthen internal controls and oversight mechanisms. This study therefore empirically examines the influence of audit committee attributes (size, expertise, activity, independence, and gender diversity) on the financial reporting quality and value of listed industrial goods companies in Nigeria.

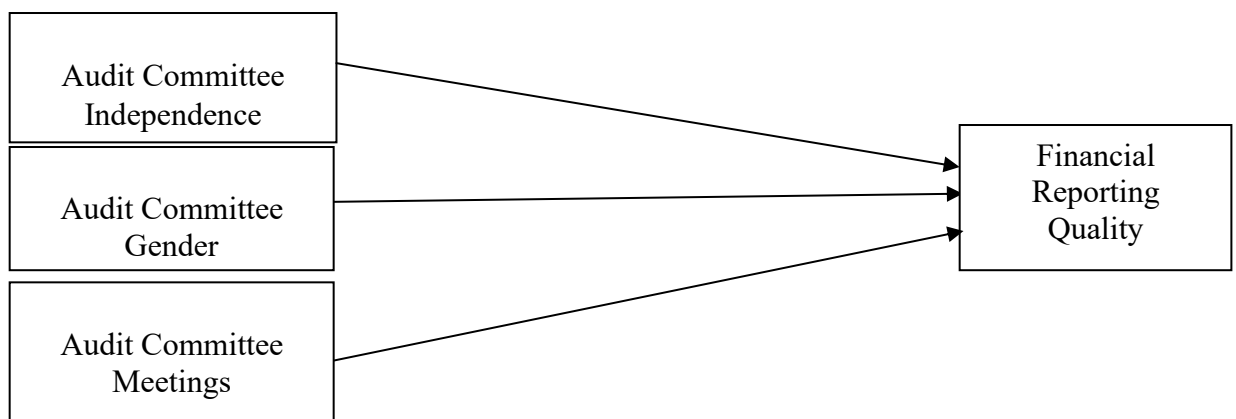
Ernst and Young (2017) observed that challenging economic conditions and rising risks of unethical behaviour have increased reliance on audit committees. Concerns about the quality and reliability of financial

statements have grown, especially after several high-profile corporate collapses following the publication of seemingly healthy results. This has prompted tighter regulations and revisions to corporate governance mechanisms.

In Nigeria, listed companies are required under the Companies and Allied Matters Act (CAMA, 2004) to establish audit committees to safeguard the integrity of financial statements and monitor accounting systems. The audit committee acts as a link between the board, management, internal auditors, and external auditors. While the effectiveness of audit committees has been widely studied globally (Wilds, 2016), few empirical studies in developing countries, particularly Nigeria, have comprehensively examined audit committee characteristics such as size, gender diversity, independence, and frequency of meetings, especially within the industrial goods sector. Previous Nigerian studies (Owolabi et al., 2010; Ofo, 2010; Ojeka, Kanu & Owolabi, 2013; Uwuigbe, 2013; Ojeka, Iyoha & Obigbemi, 2014; Ojeka, Iyoha & Asaolu, 2015) largely focused on the banking sector and left gaps in understanding how these attributes influence financial reporting quality in the industrial goods sector. This study aims to address this gap.

## 2.1 Literature Review

In this section the conceptual framework that guides this study was presented in figure 1. This figure shows how audit committee is likely to influence FRQ. The detail discussion of the concepts is then explained seriatim:



**Figure 1:** *Conceptual Framework of the Study*

**Source:** *Field Work (2023)*

The conceptual framework that guides this study illustrates how audit committee attributes (such as independence, gender diversity, expertise, size, and meeting frequency) are likely to influence financial reporting quality (FRQ) of listed industrial goods companies in Nigeria. Financial reporting quality

represents the accuracy with which financial reporting conveys information about the company's operations, particularly its expected cash flows, to inform equity investors (Ogaluzor & Ohaka, 2019). The International Accounting Standards Board (IASB, 2015) posits that FRQ is determined by fundamental qualitative characteristics (relevance and faithful representation) and enhancing qualitative characteristics, including comparability, verifiability, timeliness, and understandability. According to Ogaluzor and Ohaka (2019), financial reporting quality pertains to the accuracy, transparency, and reliability of a company's financial statements. Reliability assures that the information is reasonably free from error or bias and truly represents what it is intended to represent (Shehu, 2013). Karajeh and Ibrahim (2017) defined FRQ as the degree to which financial statements provide fair and authentic information about the financial position and performance of an enterprise.

The main function of an audit committee is monitoring the firm's financial performance and financial reporting. In this sense, audit committees strongly affect the selection, removal and remuneration of auditors, the content and extent of audit work, auditor independence, and the resolution of disputes between auditors and executive management. They also review and agree upon chosen accounting policies, influence the company's approach to financial reporting, levels of disclosure, adherence to standard practice, and ensure compliance with corporate legal and ethical standards, including preventive fraud controls (David & Ibrahim, 2021). Audit committee independence refers to the composition of more non-executive directors than executive directors in the audit committee. The existence of audit committee independence signals the firm's commitment to better corporate governance practices (Bassegy-John, 2022). Independent audit committees are more likely to be free from management influence and thus ensure the quality and credibility of the reporting process, reducing information asymmetry (Mangena & Pike, 2015).

Audit committee gender diversity refers to the composition and representation of both males and females within the audit committee members. Gender diversity promotes balanced and comprehensive decision-making by incorporating diverse perspectives, leading to more thorough examination of financial statements, robust risk identification and mitigation, and enhanced integrity and reliability of financial reporting. Audit committee meetings refer to the frequency or number of times the audit committee meets in a period to deliberate on issues affecting the entity. Frequent meetings provide members with sufficient time to perform their monitoring duties effectively (Siam, Idris & Alokdeh, 2018). Audit committees that meet more frequently are more likely to

accomplish their monitoring role, offering greater opportunities for discussing and evaluating financial reporting practices (Karamanou & Vafeas, 2015; Li et al., 2012; Xie et al., 2013). These meetings enhance transparency, accountability, and the overall quality of financial reporting (Ishaka et al., 2023b).

Empirical studies on audit committee attributes and FRQ show mixed findings. Sadiq and Emmanuel (2017) investigated the relationship between audit committee attributes and financial reporting lag in the Nigerian banking sector and found that audit committee independence had a significant relationship with financial statements, while audit committee gender had no significant relationship. Qader et al. (2023) examined the effect of audit committee characteristics on FRQ in Iraqi companies using questionnaires and Partial Least Squared Structural Equation Modelling; the results showed that audit committee size, independence, and expertise positively and significantly relate to FRQ, contributing to literature in a developed economy context and highlighting a gap that this Nigerian industrial goods study fills. Ola and Ijwo (2023) investigated the effect of audit committee characteristics on the quality of financial statements of listed cement companies in Nigeria (2011–2022) using multiple regression and found that audit committee gender diversity insignificantly reduces earnings management, concluding no statistically significant overall effect; this sector-specific finding creates a gap addressed by the present study's focus on industrial goods firms.

David and Ibrahim (2021) examined the effects of audit committee characteristics on FRQ among quoted industrial goods companies in Nigeria (2017–2020) using data from 21 listed firms and multiple regression; they found that audit committee gender had no significant relationship with FRQ and recommended recruiting more accounting and finance specialists. Udisifan and Akeem (2019) studied the impact of audit committee attributes on FRQ of selected listed companies (2009–2018) and found that audit committee busyness had a positive significant effect while size had a negative significant effect on FRQ. Ishaka et al. (2023) examined the moderating role of ownership concentration on audit characteristics and audit report lag among listed industrial goods companies (2012–2021) using PCSEs regression on 15 firms; the findings revealed that audit committee meetings have a positive significant effect on audit report lag, but a significant negative effect when moderated by ownership concentration. This recent study improves methodology but is limited by sample size, a gap this present research addresses through broader sampling and extended periods.

This study is underpinned by several theories. Agency theory (Jensen & Meckling, 1976) explains the separation of ownership and control, where audit committees with independent directors align the interests of principals (shareholders) and agents (managers) through effective oversight, reducing agency costs (Kantudu & Alhassan, 2022; Bassey-John, 2022). The policeman theory positions the audit committee as responsible for detecting and preventing fraud, acting like law enforcement to verify financial information (Turley & Zaman, 2004; Salehi et al., 2010). Lending credibility theory asserts that audited financial statements enhance user confidence in management's reports and support better investment decisions (Hayes et al., 1999). Disclosure theory views financial information as an unbiased reflection of economic variables, with market reactions serving as measures of its usefulness (Bushman et al., 1999). The theory of inspired confidence (Limperg, refined by Hayes et al., 1999; Solomon, 2007) requires that audit committees and auditors meet reasonable public expectations to instill confidence in the reliability and high quality of financial statements.

### 3. Methodology

#### Research Design

#### 3.2 Population and Sample Size of the Study

The population for this study includes the 21 industrial companies listed on the Nigerian Exchange Group (NGX) as of December 31, 2023. Sample size of sixteen (16) companies were used for this study using the census sampling technique in conjunction with filters. These include, companies with complete financial data and annual reports for the period under study. The population is as shown in Table 1.

**Table 1**

*Population of Listed Industrial Goods Company on NGX as at December 31<sup>st</sup> 2023*

S/N	Company	YOL	YOI
1	Bua foods plc	2022	2005
2	Cadbury Nigeria plc.	1976	1965
3	Champion brew. Plc.	1983	1974
4	Dangote sugar refinery plc	2007	2005

5	Dn tyre & rubber plc	1961	1961
6	Flour mills Nig. Plc.	1978	1960
7	Golden guinea brew. Plc.	1965	1962
8	Guinness Nig plc	1965	1950
9	Honeywell flour mill plc	2009	1985
10	International breweries plc.	1994	1971
11	Mcnichols plc	2009	2004
12	Multi-trex integrated foods plc	2010	1999
13	N Nig. Flour mills plc.	1978	1971
14	Nascon allied industries plc	1992	1973
15	Nestle Nigeria plc.	1979	1969
16	Nigerian brew. Plc.	1973	1946
17	Nigerian enamelware plc.	1979	1960
18	P z cussons Nigeria plc.	1972	1948
19	Unilever Nigeria plc.	1973	1923
20	Union dicon salt plc.	1993	1991
21	Vitafoam Nig plc.	1973	1962

**Source: Nigerian Exchange (NGX) Group 2024.**

The sample size of the study comprised sixteen (16) industrial goods company selected using the purposive sampling technique. Thus, this non-probabilistic sampling technique allows for the use of filters to exclude companies that do not meet the researcher's criteria.

**Table 2**

*Sample Size of Listed Industrial Goods Company in Nigeria*

S/N	Company	YOL	YOI
1	Cadbury Nigeria plc.	1976	1965
2	Champion brew. Plc.	1983	1974
3	Dn tyre & rubber plc	1961	1961

4	Flour mills Nig. Plc.	1978	1960
5	Golden guinea brew. Plc.	1965	1962
6	Guinness Nig plc	1965	1950
7	International breweries plc.	1994	1971
8	N Nig. Flour mills plc.	1978	1971
9	Nascon allied industries plc	1992	1973
10	Nestle Nigeria plc.	1979	1969
11	Nigerian brew. Plc.	1973	1946
12	Nigerian enamelware plc.	1979	1960
13	P z cussons Nigeria plc.	1972	1948
14	Unilever Nigeria plc.	1973	1923
15	Union dicon salt plc.	1993	1991
16	Vitafoam Nig plc.	1973	1962

**Source: Nigerian Exchange (NGX) Group 2024.**

**3.3 Model Specification**

This study adopted and modified the model of Kantudu and Alhassan (2022)  $DA_{it} = \beta_0 + \beta_1 ACSZE_{it} + \beta_2 ACFE_{it} + \beta_3 ACSHit + \beta_4 FSZE_{it} + \beta_5 FAGE_{it} + \epsilon_{it}$ . The adapted model of the study as presented below explains the multiple linear regression between audit committee attributes and financial reporting quality. The control for the effect of firm size in the model. The dependent variable is a linear function of the independent variables, and the error term as represented in the equation below.

$$DA_{it} = \beta_0 + \beta_1 ACSZE_{it} + \beta_2 ACFE_{it} + \beta_3 ACSHit + \beta_4 FSZE_{it} + \beta_5 FAGE_{it} + \epsilon_{it} \dots \dots \dots (1)$$

$$FRQ_{i,t} = \beta_0 + \beta_1 ACIDP_{i,t} + \beta_2 ACGD_{i,t} + \beta_3 ACM_{i,t} + \beta_4 CSIZE_{i,t} + \epsilon_{i,t} \dots \dots \dots (2)$$

Where:

- FRQ = Financial Reporting Quality
- ACIDP = Audit committee independence
- ACGD = Audit committee Gender Diversity
- ACM = Audit committee Meetings

CSIZE = Company Size (Control variable)  
 $\alpha_0$  = Constant coefficient  
 $\alpha_1 - \alpha_4$  = Explanatory coefficient of independent variables  
 $e$  = term error or noise term.

**3.4 Methods and Sources of Data Collection**

This study used secondary data from published annual reports and accounts of companies listed on the NGX for relevant years to analyze audit committee size, audit committee gender composition and audit committee meeting as well as FRQ.

**3.5 Techniques of Data Analysis**

The study utilized descriptive statistics to compute summary statistics for both dependent and independent variables. The panel multiple regression analysis was used to examine the effect of audit committee attributes on FRQ of listed industrial goods company in Nigeria. This technique is chosen due to its ability to predict and explain expected variation in FRQ due to audit committee attributes. The dataset has both time series and cross-sectional attributes, due to the panel nature, Fixed Effect (FE) and Random Effect (RE) regression techniques were used to analyze the data.

**3.6 Variable Definition and Measurement**

The modified Jones (1991) Model was used to measure FRQ, using discretionary accruals to proxy FRQ. There are two ways for calculating discretionary accruals: the statement of financial position approach and the cash-flow approach. The cash flow approach will be adopted in this study because it is the easiest. Under this approach, discretionary accruals (DACC) are calculated as earnings before interest and taxes (EBIT) minus the operating cash flows from continuing operations (CFO).

$$TACC = EBIT - OCF \dots\dots\dots (3)$$

Where:

TACC is Total Accruals of a of company *i* in year *t*.

NI is the Net Income and is the profit after tax of company *i* in year *t*.

CFO is the cash flow from operating activities of company *i* in year *t*.

To separate discretionary accruals from non-discretionary accruals the modified jones model was used as follows:

$$TACC_{it}/A_{it-1} = \alpha_t(1/A_{it-1}) + \beta_{1i}[(\Delta REV - \Delta REC)/A_{it-1}] + \beta_{2i}[(PPE_{it})/A_{it-1}] + \epsilon_{it} \dots\dots\dots (4)$$

Where:

TACC = Total Accruals (NI – OCF)

$\Delta REV$  = Change in Revenue

- $\Delta REC$  = Change in Receivable
- PPE = Property, Plant and Equipment
- $A_{it-1}$  = Year-end assets for company I in year t-1
- $\epsilon_{it}$  = error term/residual

All variables have been scaled by lagged total assets to reduce heteroscedasticity.  $\epsilon_{it}$  is included as an error term. The error term,  $\epsilon_{it}$ , is the estimate of the discretionary accruals. Thus, non-discretionary accrual is:

$$NDACC_{it}/A_{it-1} = \alpha_t(1/A_{it-1}) + \beta_{1i}[(\Delta REV - \Delta REC)/A_{it-1}] + \beta_{2i}[(PPE_{it})/A_{it-1}] \dots\dots\dots (5)$$

To measure discretionary accruals (abnormal accrual), this study used the difference between total accruals and non- discretionary accruals indicated in model (6).

$$FRQ_{i,t} = DACC_{i,t} = TACC_{i,t} - NDACC_{i,t} \dots\dots\dots (6)$$

**Table 3**  
*Variable Definition and Measurement*

Variables	Acronym	Measurement	Source
Dependent variable	FRQ= Financial Reporting Quality.	<i>The discretionary accruals.</i>	Equation (v)
Independent variable	ACIDP= Audit Committee Independence	Ratio of non-executive directors on the audit committee to total board size.	Adeyemi, Okpala & Dabor (2012).
Independent Variable	ACGD =Audit Committee Gender	The number of female among the audit committee members.	Berger, Kick & Schaeck (2012).
(Independent variable).	ACM = Audit Committee Meetings	The number of times the committee meets during the financial year end.	Adeyemi, Okpala & Dabor (2012).

Control variable	CSize = Companies Size	This will be measured by the log of industrial companies' total assets.	Enofe, Mgbame & Abadua (2013).
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**Source: Compiled by Researcher, 2024**

### 3.7 Diagnostic Checks

This study utilizes multiple regression as a model, which requires certain assumptions to be met for the results to be reliable, acceptable, or validly extrapolated to the population.

## 4.0 Data Presentation, Analysis and Interpretation

### 4.1 Descriptive Statistics

The nature of the variables used in the study is revealed by the descriptive statistics results. The data generated was based on the defined variable measurements. The results shows the observations, mean value, standard deviation, minimum and maximum values.

**Table 3**

*Descriptive Statistics*

Variable	Obs	Mean	Std. Dev.	Min	Max
FRQ	272	.012	.027	0	.36
ACIDP	272	.526	.083	.167	.833
ACGD	272	.147	.184	0	.659
ACM	272	3.879	.679	1	6
CSize	272	21.738	3.721	9.015	26.637

**Source: Extracted from STATA 16 Output, 2024**

Table 3 presents descriptive statistics for the variables. Financial reporting quality (FRQ) has a low mean of 0.012 (SD = 0.027), ranging from 0 to 0.36, indicating generally poor quality with moderate variability across listed industrial goods companies. Audit committee independence (ACIDP) shows low variability (SD = 0.083), with values ranging from 0.167 to 0.833. Audit committee gender diversity (ACGD) records a low mean of 0.147 (14.7% female representation, SD = 0.184), ranging from 0 to 0.659, revealing limited but highly varied gender inclusion. Audit committee meetings (ACM) average 3.879 per year (SD = 0.679), ranging from 1 to 6, suggesting adequate frequency with

moderate variation. Company size (CSIZE) has a mean of 21.738 (SD = 3.721), ranging from 9.015 to 26.637, indicating substantial diversity in firm scales.

#### 4.2 Hypotheses Testing

*Ho<sub>1</sub>: Audit committee independence has no significant effect on financial reporting quality of listed industrial goods companies in Nigeria.*

The regression analysis reveals a coefficient of 0.017 for audit committee independence (ACIDP), with a standard error of 0.005. The t-value is 3.18, and the p-value is 0.001, which is well below the conventional significance level of 0.05. This indicates a statistically significant positive relationship between audit committee independence and financial reporting quality. The 95% confidence interval for the coefficient ranges from 0.007 to 0.028, further confirming the robustness of this finding. This finding is consistent with recent studies, such as Garcia-Sanchez et al. (2020), which argue that independent audit committees are more effective in overseeing financial reporting and reducing the likelihood of earnings management. Thus, we reject the null hypothesis and accept the alternative hypothesis that audit committee independence has a significant positive effect on financial reporting quality.

*Ho<sub>2</sub>: Audit committee gender diversity has no significant effect on financial reporting quality of listed industrial goods companies in Nigeria.*

The regression results show a coefficient of 0.016 for audit committee gender diversity (ACGD), with a standard error of 0.005. The t-value is 3.20, and the p-value is 0.001, indicating a statistically significant relationship at the 1% level. The 95% confidence interval ranges from 0.006 to 0.026. This positive relationship suggests that increased gender diversity within the audit committee improves financial reporting quality. Recent studies, such as Gonzalez, Molina, Pablo, and Rosso (2017), also demonstrate that gender-diverse audit committees are more diligent and effective in their oversight roles, leading to better financial reporting quality. Additionally, Nekhili, Nagati, Chtioui, and Rebolledo (2022) found that the presence of women on audit committees is associated with lower earnings management and higher quality financial reporting. Therefore, we reject the null hypothesis and accept the alternative hypothesis that audit committee gender diversity significantly enhances financial reporting quality.

*Ho<sub>3</sub>: Audit committee meetings has no significant effect on financial reporting quality of listed industrial goods companies in Nigeria.*

The coefficient for audit committee meetings (ACM) is -0.001, with a standard error of 0.001. The t-value is -0.69, and the p-value is 0.487, indicating that the relationship is not statistically significant. The 95% confidence interval ranges from -0.003 to 0.002, showing that the effect of the number of meetings on financial reporting quality is negligible. These results suggest that merely increasing the frequency of audit committee meetings does not significantly impact financial reporting quality. This finding is consistent with the study by Kusnadi and Srijanto (2020), which found that increasing the number of meetings does not necessarily improve financial reporting quality unless the meetings are productive and focus on key issues. Thus, we fail to reject the null hypothesis, indicating that the frequency of audit committee meetings does not have a significant effect on financial reporting quality.

### 4.3 Correlation Matrix

The direction and strength of association between the independent and dependent variables of the study can be assessed by the correlation results. In addition, the correlation statistics shows the association among the independent variables themselves.

**Table 4**

*Pairwise Correlations*

Variable s	FRQ	ACIDP	ACGD	ACM	CSIZE
FRQ	1.000				
ACIDP	0.099 (0.103)	1.000			
ACGD	0.278* (0.000)	0.017 (0.780)	1.000		
ACM	0.028 (0.642)	0.156* (0.010)	0.037 (0.541)	1.000	
CSIZE	-0.431* (0.000)	-0.099 (0.103)	-0.346* (0.000)	-0.090 (0.139)	1.000
*** $p < 0.01$ , ** $p < 0.05$ , * $p < 0.1$					

**Source: Extracted from STATA 16 Output, 2024**

The correlation matrix in Table 4 shows that financial reporting quality (FRQ) has a weak positive but insignificant correlation with audit committee independence (ACIDP) at 0.099, and an insignificant correlation with audit committee meetings (ACM) at 0.028. However, FRQ has a significant positive

correlation with audit committee gender diversity (ACGD) at 0.278. Company size (CSIZE) exhibits a significant negative correlation with FRQ (-0.431), while ACGD also shows a significant negative correlation with CSIZE (-0.346). ACM is positively correlated with ACIDP (0.156). These results highlight the importance of gender diversity in enhancing FRQ and suggest that larger companies may require stronger financial reporting improvements.

#### 4.4 Diagnostic and Post Estimation Test

These test are conducted to ensure that a robust model is developed. This ensures that the coefficients of each variable is the Best Linear Unbiased Estimator (BLUE). These tests include, Normality test, Multicollinearity test, Heteroskedasticity test, Hausman Specification test and Autocorrelation tests.

##### 4.4.1 Normality Test

**Table 5**

*Shapiro-Wilk W test for Normal Data*

Variable	Obs	W	V	z	Prob>z
FRQ	272	0.217	153.061	11.753	0.000
ACIDP	272	0.899	19.692	6.962	0.000
ACGD	272	0.729	52.972	9.274	0.000
ACM	272	0.986	2.816	2.419	0.008
CSIZE	272	0.894	20.800	7.090	0.000

**Source: Extracted from STATA 16 Output, 2024**

The Shapiro-Wilk test results indicate that none of the variables in the study follow a normal distribution. Financial reporting quality (FRQ) has a Shapiro-Wilk W value of 0.217 and a p-value of 0.000, indicating a significant departure from normality. Audit committee independence (ACIDP) also shows significant non-normality with a W value of 0.899 and a p-value of 0.000. Audit committee gender diversity (ACGD) exhibits substantial non-normality with a W value of 0.729 and a p-value of 0.000. The number of audit committee meetings (ACM)

has a *W* value of 0.986 and a *p*-value of 0.008, indicating a slight deviation from normality but still statistically significant. Lastly, company size (CSIZE) shows significant non-normality with a *W* value of 0.894 and a *p*-value of 0.000. These results suggest that the variables do not adhere to a normal distribution, necessitating the use of non-parametric statistical methods or transformations to address the non-normality in subsequent analyses.

#### 4.4.2 Multicollinearity Test

The Multicollinearity Test results indicate the absence of Multicollinearity concerns among the independent variables in the study. Multicollinearity occurs when independent variables are highly correlated with each other, which can lead to inflated standard errors, unstable coefficients, and difficulty in interpreting the model.

**Table 6**

*Variance Inflation Factor*

	VIF	1/VIF
CSIZE	1.153	.867
ACGD	1.137	.88
ACIDP	1.033	.968
ACM	1.031	.97
Mean VIF	1.088	.

**Source: Extracted from STATA 16 Output, 2024**

The Multicollinearity test results, indicated by the Variance Inflation Factor (VIF), suggest that Multicollinearity is not a significant concern in this study. All variables exhibit VIF values well below the commonly accepted threshold of 10, with company size (CSIZE) showing the highest VIF at 1.153 and the lowest 1/VIF at 0.867. Audit committee gender diversity (ACGD) has a VIF of 1.137 and 1/VIF of 0.88, audit committee independence (ACIDP) has a VIF of 1.033 and 1/VIF of 0.968, and audit committee meetings (ACM) has a VIF of 1.031 and 1/VIF of 0.97. The mean VIF of 1.088 further confirms the absence of Multicollinearity issues, indicating that the independent variables are not highly correlated with each other and thus suitable for inclusion in the regression analysis without risking inflated standard errors and unreliable coefficient estimates.

### 4.4.3 Heteroskedasticity Test

**Table 7**

*Cameron & Trivedi's decomposition of IM-test*

Source	chi2	df	p
Heteroskedasticity	73.140	14	0.000
Skewness	18.870	4	0.001
Kurtosis	1.220	1	0.269
Total	93.230	19	0.000

**Source: Extracted from STATA 16 Output, 2024**

The heteroskedasticity test results indicate the presence of heteroskedasticity in the dataset, as evidenced by the chi-squared (chi2) value of 73.140 with 14 degrees of freedom (df) and a p-value of 0.000, which is highly significant. This suggests that the variance of the residuals is not constant across observations, potentially leading to inefficient estimates and biased standard errors in the regression analysis. Additionally, the skewness test shows a chi2 value of 18.870 with 4 df and a p-value of 0.001, indicating significant skewness in the data distribution. However, the kurtosis test is not significant, with a chi2 value of 1.220 and a p-value of 0.269, implying that the tails of the distribution are not excessively heavy. The total chi2 value of 93.230 with 19 df and a p-value of 0.000 further confirms the overall presence of heteroskedasticity in the model, suggesting that corrective measures, such as robust standard errors or transformation of variables, should be considered to ensure the reliability of the regression results.

### 4.4.4 Hausman Specification Test

The Hausman Specification Test results assess whether the fixed effects model or the random effects model is more appropriate for the regression analysis. The test compares the coefficients from both models and examines whether the differences between them are statistically significant.

**Table 8**

*Hausman (1978) specification test*

	Coef.
Chi-square test value	8.92
P-value	.063
<b>Source: Extracted from STATA 16 Output, 2024</b>	

The Hausman Specification Test results in Table 8 indicate an insignificant difference between the fixed effects and random effects models, with a chi-square value of 8.92 and a p-value of 0.063, suggesting that the choice of

model specification is critical in accurately capturing the relationship between the independent and dependent variables in the regression analysis. Given that the p-value is not significant, the appropriate model is the random effect model. Hence the random effect model was estimated and interpreted. However, the langragian multiplier test for random effect further supports the appropriateness of the model with a chi value of 1.78 and corresponding p-value of 0.0935 (*see appendix A*).

#### 4.5 Regression Results

The regression results of the study provide valuable insights into the relationship between firm attributes and financial reporting timeliness of listed manufacturing firms in Nigeria.

**Table 9**

*Summary of Regression Results (Robust)*

FRQ	Coef.	St.Err	t-value	p-value	[95% Conf	Interval]	Sig
ACIDP	.017	.005	3.18	.001	.007	.028	***
ACGD	.016	.005	3.20	.001	.006	.026	***
ACM	-.001	.001	-0.69	.487	-.003	.002	
CSIZE	-.003	.001	-2.39	.017	-.006	-.001	**
Constant	.071	.03	2.35	.019	.012	.129	**
Mean dependent var							
0.012		SD dependent var		0.027			
Overall r-squared		0.207		Number of obs		272	
Chi-square		17.972		Prob > chi2		0.001	
R-squared within		0.086		R-squared between		0.678	
*** $p < .01$ , ** $p < .05$ , * $p < .1$							
<b>Source: Extracted from STATA 16 Output, 2024</b>							

The overall R-squared of the model is 0.207, indicating that approximately 20.7% of the variability in financial reporting quality is explained by the independent variables in the model. The within R-squared value of 0.086 and between R-squared value of 0.678 suggest that the model explains more variation between different companies than within the same company over time. The chi-square value of 17.972 with a p-value of 0.001 indicates that the model is statistically significant overall. The constant term has a coefficient of

0.071, with a standard error of 0.03. The t-value is 2.35, and the p-value is 0.019, indicating statistical significance at the 5% level. The 95% confidence interval ranges from 0.012 to 0.129. This suggests that when the independent variables are held at zero, the baseline level of financial reporting quality is 0.071.

#### **4.6 Discussion of Findings**

The regression analysis investigates the impact of various audit committee attributes on the financial reporting quality (FRQ) of listed industrial goods companies in Nigeria. The results provide several significant insights into these relationships.

#### **5.0 Conclusion**

In line with the findings of the study, the following conclusions are made with regards the effect of audit committee attributes and financial reporting quality of listed industrial goods companies in Nigeria.

- i. The study concludes that greater audit committee independence significantly enhances financial reporting quality. This indicates that independent audit committees are more effective in monitoring and overseeing financial reporting processes, reducing the likelihood of misstatements and ensuring more accurate and transparent financial disclosures.
- ii. The study finds that increased gender diversity within audit committees significantly improves financial reporting quality. Gender-diverse committees bring varied perspectives and enhance the decision-making process, leading to more diligent and effective oversight.
- iii. The study concludes that the frequency of audit committee meetings does not have a significant impact on financial reporting quality. This implies that simply holding more meetings is not sufficient to enhance the quality of financial reporting. Instead, the focus should be on the effectiveness and substance of these meetings.

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