AUDIT COMMITTEE CHARACTERISTICS AND FINANCIAL REPORTING QUALITY OF QUOTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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ABSTRACT

Despite the regulatory frameworks and guidelines established to enhance financial reporting quality, discrepancies and shortcomings in financial disclosures continue to undermine investor confidence and the integrity of financial statements. This has raised questions about the effectiveness of corporate governance mechanisms, particularly the role of audit committees in ensuring high-quality financial reporting. Based on this, the study, audit committee characteristics and financial reporting quality of quoted industrial goods firms in Nigeria, covering, 2012 to 2023. The population consists all the 13 quoted industrial goods firms in Nigeria as at 31st December, 2023 while filtering criteria was used to arrive at a sample size of ten (10) industrial goods firms in Nigeria. The hypotheses were tested using the logistic regression model after conducting some diagnostics tests. The result showed that audit committee financial expertise has a significant positive effect on audit quality of quoted industrial goods firms in Nigeria. However, the results further showed that audit committee frequency of meeting and audit committee gender diversity have insignificant positive effects on audit quality of quoted industrial goods firms in Nigeria. The study recommended among others, that quoted industrial goods firms in Nigeria should establish and adhere to a robust schedule of regular audit committee meetings. These meetings should be structured to facilitate timely discussions on critical financial and audit-related issues. Furthermore, firms should evaluate the agenda and effectiveness of these meetings to ensure that they contribute positively to enhancing audit quality. The study also recommended that industrial goods firms in Nigeria should ensure that their audit committees comprise members with relevant financial expertise. Firms should prioritize appointing individuals with strong backgrounds in finance, accounting, or auditing to the audit committee.

Keywords: *Audit Committee Characteristics, Audit Committee Frequency of Meetings, Audit Committee Gender Diversity, Audit Committee Financial Expertise and Audit Quality.*

INTRODUCTION

Globally, the importance of financial reporting quality has gained increasing attention from regulators, investors, and other stakeholders due to its critical role in ensuring transparency and accountability within firms. High-quality financial reporting is essential for maintaining investor confidence and ensuring that markets function efficiently (DeFond & Zhang, 2014). In Africa, the challenges related to financial reporting quality are amplified by various factors, including weaker regulatory environments, limited enforcement of corporate governance codes, and varying levels of financial expertise among audit committee members. Nevertheless, the role of audit committees in enhancing financial reporting quality is increasingly recognized across the continent (Adegbie *et al*., 2021).

In Nigeria, the industrial goods sector plays a significant role in the economy, contributing to employment, infrastructure development, and overall economic growth (Okafor *et al*., 2023). Given the sector's importance, the quality of financial reporting by quoted industrial goods firms is of paramount importance. However, the effectiveness of audit committees in ensuring high-quality financial reporting is still a concern, driven by issues related to the frequency of meetings, gender diversity, and financial expertise. Audit committees serve as a key mechanism for overseeing the financial reporting process, ensuring that financial statements are prepared in accordance with relevant accounting standards and that the auditing process is carried out effectively (Gyapong *et al*., 2021). The effectiveness of an audit committee, however, is largely influenced by its characteristics, including the frequency of meetings, gender diversity, and the financial expertise of its members (Dhaliwal *et al*., 2020).

The frequency with which audit committees meet is an indicator of their diligence and commitment to fulfilling their oversight responsibilities. Regular meetings allow the committee to stay updated on financial matters, address issues promptly, and ensure that the financial reporting process is continuously monitored (Mohammed & Shuaibu, 2021). The impact of frequent meetings on audit quality is a pertinent area of study, particularly in the Nigerian context, where regulatory scrutiny and the need for transparency are growing (Olayiwola *et al*., 2022).

Gender diversity within the audit committee is another characteristic that has gained attention in corporate governance literature. Diverse perspectives can lead to more comprehensive discussions, better decision-making, and ultimately, higher audit quality (Pucheta-Martínez *et al*., 2022). The inclusion of women in audit committees may contribute to a more balanced approach to oversight, potentially leading to enhanced financial reporting quality (Oyerogba & Ajibola, 2023). This study seeks to explore the impact of gender diversity within audit committees on the audit quality of quoted industrial goods firms in Nigeria.

The financial expertise of audit committee members is crucial for the effective oversight of the financial reporting process. Members with strong financial backgrounds are better equipped to understand complex financial issues, question management effectively, and work with external auditors to ensure high-quality financial reporting (Hassan & Farouk, 2023). In Nigeria, where the industrial goods sector involves significant capital investments and complex financial transactions, the financial expertise of audit committee members is likely to play a crucial role in ensuring audit quality (Adewuyi, Akinsanya, & Adeyemi, 2021).

This study aims to contribute to the existing literature by examining how these specific characteristics of audit committees—frequency of meetings, gender diversity, and financial expertise—affect audit quality in the context of quoted industrial goods firms in Nigeria. By understanding these relationships, the study will provide insights that could help enhance corporate governance practices and ultimately improve the financial reporting quality within the sector.

The quality of financial reporting has become a major concern for stakeholders in the corporate environment, particularly in the industrial goods sector of Nigeria, where the need for transparency and accuracy in financial statements is critical. Despite the regulatory frameworks and guidelines established to enhance financial reporting quality, discrepancies and shortcomings in financial disclosures continue to undermine investor confidence and the integrity of financial statements (Okafor *et al*., 2023). This has raised questions about the effectiveness of corporate governance mechanisms, particularly the role of audit committees in ensuring high-quality financial reporting.

The audit committee is a crucial component of corporate governance, tasked with overseeing the financial reporting process and the external audit function. However, the effectiveness of audit committees in fulfilling these responsibilities has been subject to debate, especially in the context of their specific characteristics such as the frequency of meetings, gender diversity, and the financial expertise of committee members (Mohammed & Shuaibu, 2021). Research suggests that frequent meetings of the audit committee can enhance its ability to monitor and address financial reporting issues promptly, thereby improving audit quality (Olayiwola *et al*., 2022). However, there is a dearth of empirical evidence on how this dynamic plays out within the Nigerian industrial goods sector.

Similarly, gender diversity in audit committees has been identified as a potential driver of improved decision-making and audit quality, as diverse perspectives can lead to more thorough discussions and better oversight (Pucheta-Martínez *et al*., 2022). Nonetheless, the extent to which gender diversity within audit committees impacts financial reporting quality in Nigeria remains underexplored, particularly in the industrial goods sector, where traditional gender roles may influence boardroom dynamics (Oyerogba & Ajibola, 2023).

Furthermore, the financial expertise of audit committee members is critical for the effective monitoring of the financial reporting process. Members with substantial financial knowledge are better positioned to understand complex financial issues and work effectively with external auditors (Hassan & Farouk, 2023). Despite this, there is limited research focusing on how the financial expertise of audit committee members affects audit quality in Nigeria's industrial goods sector, where the financial transactions are often complex and substantial (Adewuyi *et al*., 2021).

Given these gaps in the literature, this study seeks to examine the impact of audit committee characteristics specifically the frequency of meetings, gender diversity, and financial expertise on the quality of financial reporting in the industrial goods sector in Nigeria. Addressing these issues is crucial for enhancing corporate governance practices and restoring confidence in the financial disclosures of firms in this sector.

The review of empirical studies has shown that most of the recent works in this area were done more outside the country than Nigeria environment. Even the few studies for example Moses *et al.* (2024) and Shehu and Afeez (2024) carried out in Nigeria combined the data from both the pre and post-IFRS implementation in Nigeria which may affect the reliability of their finding because of the changes brought into financial reporting courtesy of the implementation of international financial reporting standards in Nigeria. These identified gaps in literature call for further study in this area, the need for this study: audit committee characteristics and financial reporting quality of quoted industrial goods firms in Nigeria, to update the data up to 2023, use appropriate panel regression technique, cover only the periods of IFRS implementation in Nigeria.

The broad objective of this study is to examine audit committee characteristics and financial reporting quality of quoted industrial goods firms in Nigeria. The specific objectives are to: (i) evaluate the effect of audit committee frequency of meetings on audit quality of quoted industrial goods firms in Nigeria; (ii) assess the effect of audit committee gender diversity on audit quality of quoted industrial goods firms in Nigeria; and (iii) know the effect of audit committee financial expertise on audit quality of quoted industrial goods firms in Nigeria. Based on the above stated specific objectives, these hypotheses are formulated thus: Ho1: Audit committee frequency of meetings has no significant effect on audit quality of quoted industrial goods firms in Nigeria. Ho2: Audit committee gender diversity has no significant effect on audit quality of quoted industrial goods firms in Nigeria. Ho3: Audit committee financial expertise has no significant effect on audit quality of quoted industrial goods firms in Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Framework

The conceptual framework for this comprises three proxies (audit committee frequency of meetings, audit committee gender diversity and audit committee financial expertise) representing proxies of the independent variable and a proxy (financial reporting quality) as a dependent variable.

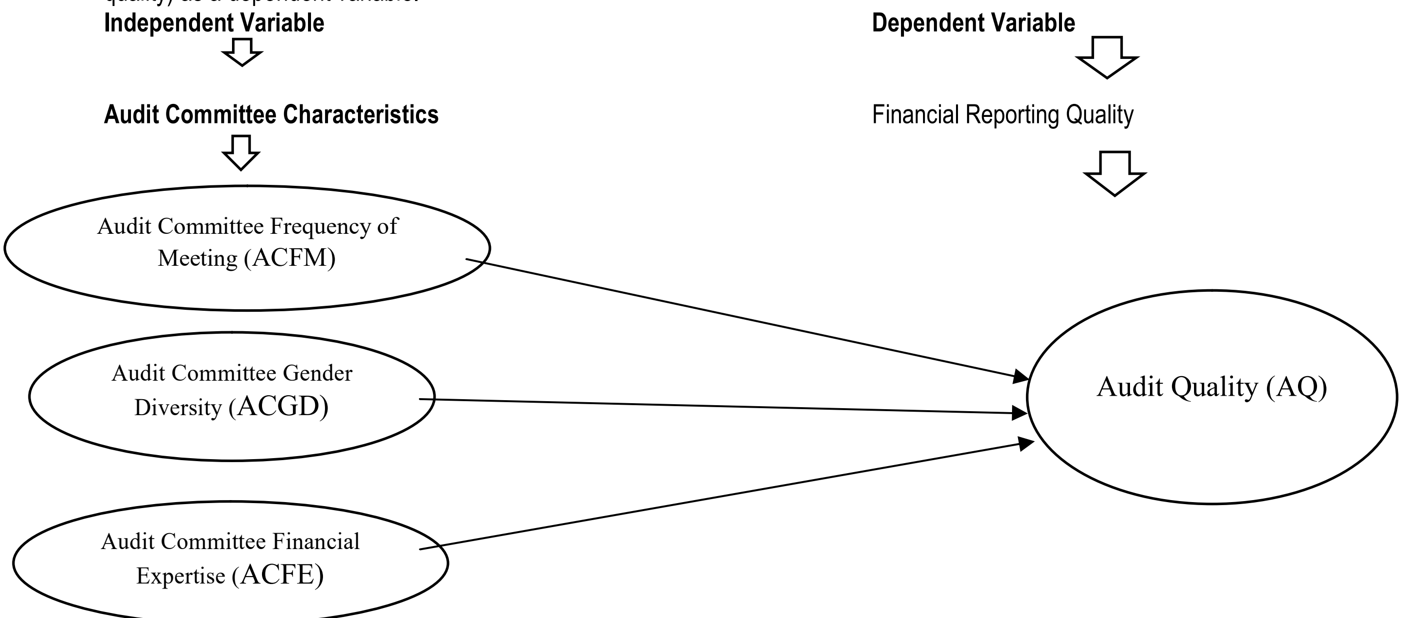


Figure 1 shows the Conceptual Framework
Source: Researcher's Conceptual Framework (2024)

Financial Reporting Quality

Financial reporting quality (FRQ) refers to the extent to which financial statements accurately reflect a firm's financial performance and position. It encompasses key attributes such as accuracy, reliability, transparency, comparability, and decision usefulness (Zhang et al., 2021; Brown & Green, 2022; Davis & Collins, 2020). High-quality financial reporting ensures that financial information is free from material misstatements, faithfully represents economic reality, and reduces information asymmetry between firms and stakeholders. It also enhances users' ability to make informed decisions by providing relevant, consistent, and comparable information across periods and firms (Nguyen & Tran, 2023; Khan & Ahmed, 2021). In this study, financial reporting quality is defined as the degree to which financial reports are comparable across periods and consistent with industry standards.

Audit quality, on the other hand, refers to the auditor's ability to detect and report material misstatements and provide independent assurance on the credibility of financial statements (Li & Wang, 2021; Brown & Davis, 2022). It is influenced by factors such as auditor independence, expertise, experience, and the robustness of audit processes. Prior studies suggest that Big Four audit firms (Deloitte, PwC, EY, and KPMG) are generally associated with higher audit quality due to their global reputation, technical expertise, and extensive resources, while non-Big Four firms may vary in quality depending on capacity and client complexity (Jones & Smith, 2023; Nguyen & Tran, 2020; Khan & Ahmed, 2024). Overall, audit quality plays a critical role in enhancing the credibility and reliability of financial reporting.

Audit Committee

An audit committee is a specialized sub-committee of the board of directors responsible for overseeing financial reporting, internal controls, and audit processes. It ensures the accuracy and integrity of financial statements, compliance with regulatory requirements, and the independence of both internal and external auditors (Adebayo & Adedoyin, 2024; Okafor & Oke, 2021). As a key corporate governance mechanism, the committee—typically composed of non-executive and financially knowledgeable members—monitors financial disclosures, reviews audit activities, and ensures that identified issues are promptly addressed (Njoroge et al., 2022; Udeh et al., 2023). Overall, it plays a critical role in safeguarding stakeholders' interests and enhancing financial reporting credibility (Mohammed & Suleiman, 2020). In this study, the audit committee is defined as a governance structure that oversees financial reporting and audit functions to ensure transparency and accountability.

Audit Committee Frequency of Meetings

The frequency of audit committee meetings refers to the number of times the audit committee convenes within a financial year to review financial reporting, internal controls, and risk management issues (Smith & Jones, 2021; Nguyen & Tran, 2020). It is widely regarded as an indicator of the committee's commitment to effective oversight, as more frequent meetings enhance monitoring, facilitate timely resolution of reporting issues, and improve engagement with management and external auditors (Brown & Davis, 2022). Additionally, frequent meetings support proactive risk management and are associated with a lower likelihood of financial misstatements, reflecting stronger governance practices (Khan & Ahmed, 2023; Davis & Smith, 2024). In this study, the frequency of audit committee meetings is defined as the regularity with which the committee meets to perform its oversight responsibilities.

Audit Committee Gender Diversity

Audit committee gender diversity refers to the inclusion of both male and female members—particularly women—within the audit committee (Nguyen & Tran, 2021; Khan & Ahmed, 2023). It is often measured by the proportion of female members on the committee and is considered an important governance attribute that enhances decision-making, oversight, and financial reporting quality (Brown & Davis, 2022). Gender-diverse audit committees bring varied perspectives, reduce groupthink, and improve risk identification and ethical judgment, thereby strengthening corporate governance and stakeholder confidence (Smith & Jones, 2020; Zhang et al., 2024). In this study, audit committee gender diversity is defined as the proportion of female members on the audit committee.

Audit Committee Financial Expertise

Audit committee financial expertise refers to the presence of members with significant knowledge and experience in accounting, finance, or auditing (Nguyen & Tran, 2021; Smith & Jones, 2024). It reflects the committee's ability to effectively oversee financial reporting, monitor compliance with accounting standards, and challenge management decisions (Brown & Davis, 2022). Financially knowledgeable members enhance corporate governance by improving risk assessment, detecting irregularities, and curbing earnings management practices (Khan & Ahmed, 2023; Zhang & Li, 2020). In this study, audit committee financial expertise is defined as the presence of audit committee members with relevant accounting and financial knowledge.

Theories underpinning the study

Agency Theory was postulated by Michael C. Jensen and William H. Meckling in 1976. The theory was introduced in their seminal paper titled "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Agency theory suggests that there is a separation of ownership (shareholders) and control (management) in corporations, leading to potential conflicts of interest. The audit committee serves as a monitoring mechanism to reduce information asymmetry between management and shareholders. Frequent audit committee meetings are essential in ensuring continuous oversight, which can mitigate agency problems by providing timely and rigorous monitoring of management's actions, ultimately enhancing audit quality.

Resource Dependence Theory was postulated by Jeffrey Pfeffer and Gerald R. Salancik in 1978. The theory was introduced in their book titled *"The External Control of Organizations: A Resource Dependence Perspective."* Resource dependence theory posits that organizations depend on external resources and the expertise of individuals to manage these dependencies. In the context of audit committees, gender diversity is viewed as a valuable resource that brings a range of perspectives, skills, and problem-solving abilities. Gender-diverse audit committees can enhance the breadth and depth of discussions, leading to more effective monitoring and decision-making, which positively impacts audit quality.

Human Capital Theory was primarily developed by economists Gary Becker and Theodore Schultz in the 1960s. The theory focuses on the idea that individuals' investments in their own education, training, and health can enhance their productivity and economic value. Human capital theory emphasizes the value of individuals' knowledge, skills, and expertise as critical resources that contribute to organizational performance. The financial expertise of audit committee members is a form of human capital that is crucial for understanding complex financial reports, identifying potential risks, and ensuring accurate and reliable financial reporting. This expertise is essential for improving audit quality, as knowledgeable members can provide more effective oversight and guidance.

Empirical Review

Recent empirical studies provide mixed evidence on the relationship between audit committee characteristics, audit quality, and financial reporting quality. For instance, Mominur (2024), using Malaysian data and advanced panel techniques, finds that diverse audit committee expertise significantly improves audit quality. Similarly, Hamad (2024) reports that financial expertise is the only audit committee attribute significantly linked to financial reporting quality, while audit firm size (Big4) also enhances audit outcomes. In Nigeria, Moses et al. (2024) show that audit committee size and independence have positive but insignificant effects on financial reporting quality, while meetings and board size are negatively insignificant. Shehu and Afeez (2024) further reveal weak relationships between audit committee attributes and discretionary accruals. Evidence on gender diversity is more consistent, as Johnson et al. (2021) find that audit committee gender diversity significantly improves financial reporting quality, while Oradi and Izadi (2020) show that female representation reduces financial restatements.

Other studies also highlight variations across contexts and methodologies. Alhababsah and Yekini (2021) find that audit committee industry expertise improves audit quality, whereas legal expertise and gender diversity are insignificant. Shahanif et al. (2020) report that financial expertise and meeting frequency positively influence financial reporting quality, while independence and size are insignificant, with audit quality moderating the relationship. Earlier evidence by Osariemen et al. (2018) indicates that audit committee attributes such as size, meetings, and expertise positively influence audit quality, though only some are significant. Despite the use of robust analytical techniques, many of these studies are either conducted outside Nigeria or rely on outdated datasets, limiting their generalizability and underscoring the need for more current, Nigeria-focused evidence.

METHODOLOGY

This study adopts *ex post facto* research design using cross-sectional data extracted from annual reports and audited accounts of sample listed industrial goods firms in Nigeria from (2012-2023) to explore the effect of independent variables (audit committee frequency of meetings, audit committee gender diversity and audit committee financial expertise) on the dependent variables (audit quality). The population of this study is made up of all the thirty (13) industrial goods firms quoted on the floor of the Nigerian Exchange group as of 2023. This study adopted a filtering technique as stated below: These conditions were specified to determine a specific sample size for the research: (i) The industrial goods firm must be actively operating in Nigeria; (ii) The industrial r goods firm must have been quoted on the Nigerian Exchange Group (NGX) for at least one year prior to the implementation of International Financial Reporting Standards (IFRSs) in 2012 and (iii) The consumer goods firm must be quoted on the Nigerian Exchange Group (NGX), and its shares must have been regularly traded on the exchange throughout the periods covered by the study. Because of this, ten (10) listed industrial goods firms were sampled size for the study while twelve (12) years period is chosen to have an up-to-date data. Secondary data was used for the study and the data were sourced from the annual reports and audited accounts of the sampled industrial goods firms in Nigeria. Binary logistic regression was used to analyse the audit committee characteristics and audit quality of quoted industrial goods firms in Nigeria.

The choice of Maximum Likelihood (ML) binary logistic regression model is based on the inability of the ordinary least square multiple regression model to yield reliable coefficients and inference statistics in a situation where the dependent variable is binary (0 and 1). Thus, the binary logistic regression model unlike others is based on the use of a dichotomous dependent variable. A study by Hamad (2024) has provided empirical justification for use of a dichotomous variable. Therefore, a dummy value of 1 is used if a firm is audited by big4 audit firms (Deloitte, Pricewaterhousecoopers, Ernst &Young and KPMG) with the reporting period, if not, 0. Logistic regression was analysed with the aid of Stata 15 software. Different tests were conducted for the study, such as independent observations, Correlation and Variance Inflation Factor.

Model Specification

$$LOGIT_{it} = \ln \left(\frac{AQ_{it}}{1-AQ_{i}} \right) = \beta 0 + \beta_1 ACFM_{it} + \beta_2 ACFE_{it} + \beta_3 ACGD_{it} + \beta_4 FS_{it} + \mu_{it}$$

Where:

AQ	=	Audit Quality of firm i at time t
β0	=	Constant term (intercept);
$\beta_1 - \beta_3$	=	Coefficients for the independent variables
FS	=	Firm Size,
ACFM	=	Audit Committee Frequency of Meeting,
ACFE	=	Audit Committee Financial Expertise

ACGD = Audit Committee Gender Diversity
μ = Error Term
A-priori expectations: β_1, β_2, β_3 and β_4

Measurement of Variables

Variables	Acronym	Measurement	Source
Audit Quality (Dependent Variable)	AQ	If an industrial goods firm is audited by big4 audit firms (Deloitte, Pricewaterhousecoopers, Ernst&Young and KPMG) score 1 if otherwise score 0.	Alhababsah and Yekini (2021) and Mominur (2024).
Independent Variables	Audit Committee Frequency of Meeting (ACFM)	This is the total number of meetings held by audit committee of industrial goods firms in a year.	Shahanif *et al*. (2020), Osariemen *et al.* (2018) and Moses *et al*. (2024).
	Audit Committee Financial Expertise (ACFE)	This is the ratio of the audit committee members with finance and accounting knowledge in the audit committee composition.	Mominur (2024), Hamad (2024) and Alhababsah and Yekini (2021).
	Audit Committee Gender Diversity (ACGD)	This is the ratio of women in the audit committee.	Johnson *et al.* (2021) and Alhababsah and Yekini (2021).
Control Variable	Firm Size (FS)	This is the log of total assets.	Muhammad *et al*. (2020) and Issa *et al*. (2020).

Source: Researchers' Computation (2024)

RESULTS AND DISCUSSION

The data of ten (10) industrial goods firms regarding audit quality (AQ), audit committee frequency of meeting (ACFM), audit committee financial expertise (ACFE), audit committee gender diversity (ACGD) and firm size (FS) are presented in appendix C. The data were analysed with the aid of Stata 15 software using Descriptive Statistics, Independent Observation Test, Variance Inflation Factor test and logistic regression model based on the data attached in appendix C.

Descriptive Statistics

Table 1 summarises the descriptive statistics of the entire data set.

Variable	Obs	Mean	Std. Dev.	Min.	Max.
AQ	120	0.458	0.500	0	1
ACFM	120	4.008	0.761	2	5
ACFE	120	0.240	0.133	0.05	.60
ACGD	120	0.198	0.102	0	.50
FS	120	8.491	0.908	6.79	9.85

Source: Researcher's Computation using STATA 15 software

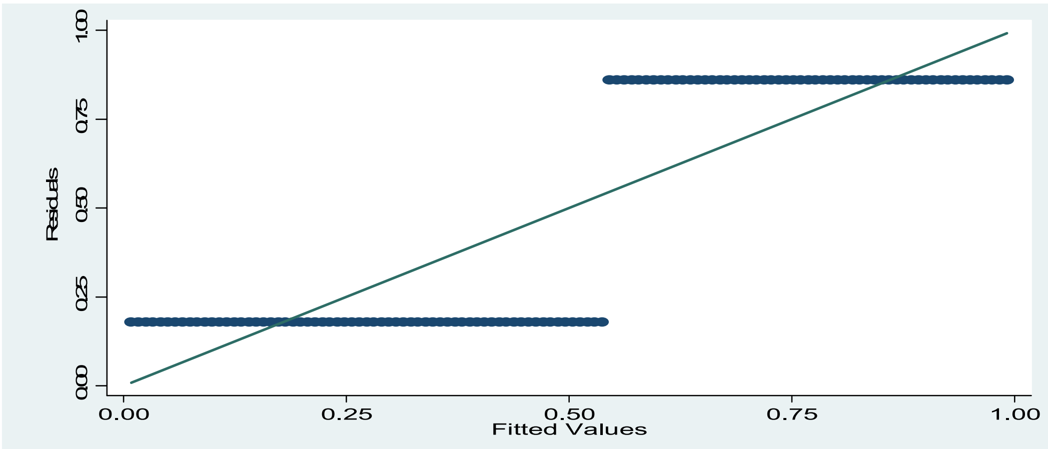
Table 1 shows that the audit quality (AQ) has a minimum value of 0, a maximum value of 1 and a mean value of 0.458 within the period studied. The table also reveals that (AQ) has a standard deviation of 0.500 which is more than the mean, which implies that it highly dispersed for the period under review. Table 1 equally shows that the audit committee frequency of meeting (ACFM) has a minimum value of 2, a maximum value of 5 and a mean value of 4.008 within the period studied. The table also reveals that (ACFM) has a standard deviation of 0.761 which is more than the mean, which implies that it is highly dispersed for the period under review.

Table 1 shows that the audit committee financial expertise (ACFE) has a minimum value of 0.05, a maximum value of 0.60 and a mean value of 0.240 within the period studied. The table also reveals that (ACFE) has a standard deviation of 0.133 which is less than the mean, which implies that it is slowly dispersed for the period under review. Table 1 also shows that audit committee gender diversity (ACGD) has a minimum value of 0, a maximum value of 0.50 and a mean value of 0.198 within the period studied. The table also reveals that ACGD has a standard deviation of 0.102 which is less than the mean, which implies that it is slowly dispersed during the period under review.

Test for Independent Observations

Logistic regression assumes that the observations in the dataset are independent of each other. That is, the observations should not come from repeated measurements of the same individual or be related to each other in any way. The result of a plot of residuals against time (i. e. the order of the observations) shows that there is a random pattern. Indicating that observations are independent that satisfy one of the assumptions of logistic regression as presented in figure 1 below.

Figure 1: Plot of Residuals against Time



Source: Researcher's Computation using STATA 15 software

Pearson Correlation

Table 2 below is the Pearson correlation matrix for the data set to show the extent of Associations between the variables.

	AQ	ACD	ACFE	ACFE	ACFE
AQ	1				
ACFM	-0.0542	1			
ACFE	0.1274	-0.1143	1		
ACGD	0.1841	0.0067	-0.0033	1	
FS	0.2232	0.2497	-0.0986	0.0885	1

Source: Researcher's Computation using STATA 15 software

The correlation matrix determines the degree of relationships between the proxies of an independent variable and the dependent variable. It is also used to show whether there are associations among the proxies of independent variables themselves, to detect if a multicollinearity problem exists in the model. The result from table 2 shows that there exist 5% negative and weak relationship between audit committee frequency of meeting (ACFM) and audit quality (AQ) of quoted industrial goods firms in Nigeria from the correlation coefficient of -0.0542. The table also shows that there is approximately 13% positive and weak relationship between audit committee financial expertise (ACFE) and audit quality (AQ) of quoted industrial goods firms in Nigeria from the correlation coefficient of 0.1274. Furthermore, the table shows 18% positive and weak relationships between audit committee gender diversity (ACGD) and audit quality (AQ) of quoted industrial goods firms in Nigeria from the correlation coefficient of 0.1841. Also, the table shows 22% positive and weak relationships between firm size (FS) and audit quality (AQ) of quoted industrial goods firms in Nigeria from the correlation coefficient of 0.2232.

Variance Inflator Factor (VIF) Results

Table 3: Variance Inflator Factor (VIF)

Variable	VIF	I/VIF
FS	1.08	0.925151
ACFM	1.08	0.929299
ACFE	1.02	0.981694
ACGD	1.01	0.991896
Mean VIF	1.05	

Source: Researcher's Computation using STATA 15 software

In a bid to further test the absence of multicolinearity problem among the exogenous variables, colinearity diagnostics test were observed as the Variance Inflation Factors (VIF) and the Inverse Variance Inflation Factors (1/VIF) values portray no multicolinearity problem in the data as their values are less than 10 and 1 respectively (Gujarati, 2003) as presented in table 3. This point to the fact that the variables are well selected and can fit in the same regression model because there is the absence of a multicolinearity problem in the model, which is one of the requirements for logistic regression analysis.

Audit Committee Characteristics and Audit Quality of Quoted Industrial Goods Firms in Nigeria Using Logistic Regression Model

Table 4 below is showing the Logistic Regression Model conducted for the estimation of this model.

Variable	Odds Ratio	z-value	Prob.
Cons.	0.005	-2.57	0.010
ACFM	9.658	1.55	0.122
ACFE	1.815	2.60	0.009
ACGD	33.093	1.83	0.067
FS	0.744	-1.11	0.265
Pseudo chi2	0.4820		
LR chi2	113.58		
Prob. >F	0.0088		

Source: Researcher's Computation using STATA 15 software

From the results in Table 4, the LR Chi-squared statistic of 113.58 is significant at 1% level of significance. This indicates a good fit and correctness of the distributional assumption of the component error term. This means that the logistic model used to estimate the audit committee characteristics and audit quality is an adequate representation of the data. The pseudo Chi2 of 0.4820 confirms that a large portion of the changes in the audit quality is attributed to the explanatory variables included in the model. This means that 48.2% of the variation in audit quality is explained by the variables included in the model.

Test of Hypotheses

To examine the audit committee characteristics and audit quality of quoted industrial goods firms in Nigeria, the following hypotheses were tested using the Logistic Regression Technique.

Ho_1: Audit committee frequency of meeting has no significant effect on audit quality of quoted industrial goods firms in Nigeria

Table 3 shows the result of the z-statistic value of 1.55 and the corresponding sig. level of 0.122 which is not significant at all levels of significance indicating that audit committee frequency of meeting has an insignificant effect on audit quality of quoted industrial goods firms in Nigeria. Based on this, the null hypothesis one, which says, audit committee frequency of meeting has no significant effect on audit quality of quoted industrial goods firms in Nigeria, is accepted.

Ho_2: Audit committee financial expertise has no significant effect on audit quality of quoted industrial goods firms in Nigeria

Table 3 also shows that the result of the z-statistic value of 2.60 and the corresponding significant level of 0.009 which is within 1% level of significance, indicated that audit committee financial expertise has a significant effect on audit quality of quoted industrial goods firms in Nigeria. Based on this, null hypothesis two, which says, audit committee financial expertise has no significant effect on audit quality of quoted industrial goods firms in Nigeria is rejected.

Ho_3: Audit committee gender diversity has no significant effect on audit quality of quoted industrial goods firms in Nigeria

Table 3 shows the result of the z-statistic value of 1.83 and the corresponding sig. level of 0.067 which is not significant at all levels of significance indicating that audit committee gender diversity has an insignificant effect on audit quality of quoted industrial goods firms in Nigeria. Based on this, the null hypothesis three, which says, audit committee gender diversity has no significant effect on audit quality of quoted industrial goods firms in Nigeria, is accepted.

Discussion of Results

The study revealed that the audit committee frequency of meeting has an insignificant positive effect on audit quality of quoted industrial goods firms in Nigeria, indicating that an increase in audit committee frequency of meeting will increase the log odds in favour of audit quality of quoted industrial goods firms in Nigeria by 9.658. The finding is in line with the a priori expectation of the researcher because audit committee frequency of meeting has a positive effect on audit quality of quoted industrial goods firms in Nigeria. The finding is also in line with the agency theory because theory suggests that there is a separation of ownership (shareholders) and control (management) in corporations, leading to potential conflicts of interest. The audit committee serves as a monitoring mechanism to reduce information asymmetry between management and shareholders. Frequent audit committee meetings are essential in ensuring continuous oversight, which can mitigate agency problems by providing timely and rigorous monitoring of management's actions, ultimately enhancing audit quality. The audit committee frequency of meeting has an insignificant positive effect on audit quality of quoted industrial goods firms in Nigeria. for the period under review. This finding is in line with the findings of Moses *et al.* (2024), Hamad (2024) and Shehu and Afeez (2024). However, the finding disagrees with the findings of Shahanif *et al*. (2020) and Osariemen *et al.* (2018).

The study further revealed that the audit committee financial expertise has a significant positive effect on audit quality of quoted industrial goods firms in Nigeria, indicating that audit committee financial expertise will increase the log odds in favour of audit quality of quoted industrial goods firms in Nigeria by 1.815. The finding is in line with the a priori expectation of the researcher because audit committee financial expertise has a significant positive effect on audit quality of quoted industrial goods firms in Nigeria. The finding is also in line with the human capital theory because the theory emphasizes the value of individuals' knowledge, skills, and expertise as critical resources that contribute to organizational performance. The financial expertise of audit committee members is a form of human capital that is crucial for understanding complex financial reports, identifying potential risks, and ensuring accurate and reliable financial reporting. This expertise is essential for improving audit quality, as knowledgeable members can provide more effective oversight and guidance. The audit committee financial expertise has a significant positive effect on audit quality of quoted industrial goods firms in Nigeria for the period under review. This finding is in line with the findings of Alhababsah and Yekini (2021), Hamad (2024), Mominur (2024), Osariemen *et al.* (2018) and Shahanif *et al*. (2020).

The study finally revealed that the audit committee gender diversity has an insignificant positive effect on audit quality of quoted industrial goods firms in Nigeria, indicating that an increase in audit committee gender diversity will increase the log odds in favour of quality of quoted industrial goods firms in Nigeria by 33.093. The finding is in line with the a priori expectation of the researcher because audit committee gender diversity has positive effect on quality of quoted industrial goods firms in Nigeria. The finding is also in line with resource dependence theory because the theory posits that organizations depend on external resources and the expertise of individuals to manage these dependencies. In the context of audit committees, gender diversity is viewed as a valuable resource that brings a range of perspectives, skills, and problem-solving abilities. Gender-diverse audit committees can enhance the breadth and depth of discussions, leading to more effective monitoring and decision-making, which positively impacts audit quality. The audit committee gender diversity has an insignificant positive effect on audit quality of quoted industrial goods firms in Nigeria for the period under review. This finding is in line with the finding of Alhababsah and Yekini (2021). However, the finding disagrees with the finding of Johnson *et al.* (2021).

CONCLUSION AND RECOMMENDATIONS

Frequent audit committee meetings strengthen oversight by enabling timely review of financial reporting issues, risk identification, and improved audit quality, which enhances stakeholder confidence and regulatory compliance. Additionally, audit committee financial expertise improves the committee's ability to detect irregularities, ensure adherence to accounting standards, and conduct rigorous evaluations, thereby supporting reliable financial reporting. Furthermore, gender diversity enriches decision-making through varied perspectives and ethical considerations, promoting greater accountability and transparency.

Consequently, firms with frequent meetings, financially knowledgeable members, and gender-diverse audit committees are more likely to achieve higher audit quality.

(i) The study recommended that quoted industrial goods firms in Nigeria should establish and adhere to a robust schedule of regular audit committee meetings. These meetings should be structured to facilitate timely discussions on critical financial and audit-related issues. Furthermore, firms should evaluate the agenda and effectiveness of these meetings to ensure that they contribute positively to enhancing audit quality.
(ii) The study also recommended that industrial goods firms in Nigeria should ensure that their audit committees comprise members with relevant financial expertise. Firms should prioritize appointing individuals with strong backgrounds in finance, accounting, or auditing to the audit committee.
(iii) The study further recommended that quoted industrial goods firms in Nigeria should actively promote gender diversity within their audit committees to leverage the benefits of varied perspectives and improved decision-making. Firms should adopt policies that encourage the inclusion of women with the requisite financial and auditing expertise on their audit committees.

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