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Audit Characteristics and Financial Reporting Quality of Listed Industrial Goods Firms in Nigeria

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ABSTRACT **Original Research Article**

This study examined the effect of audit characteristics on the financial reporting quality of listed industrial goods companies in Nigeria. Specifically, the study investigated the effects of audit fee and audit tenure on financial reporting quality, while firm size and leverage were included as control variables. An ex post facto research design was adopted, using secondary data extracted from the annual reports and accounts of eleven listed industrial goods companies on the Nigerian Exchange Group (NGX) over a 10-year period from 2015 to 2024. The study utilized panel data comprising 110 firm-year observations. Financial reporting quality was proxied by discretionary accruals, while the data were analyzed using descriptive statistics, Pearson correlation analysis, and panel least squares regression. The findings revealed that audit fee has a positive and statistically significant effect on financial reporting quality ($\beta = 0.0824$, $p < .001$). Similarly, audit tenure exerts a positive and statistically significant effect on financial reporting quality ($\beta = 0.0657$, $p < .001$). The model explained approximately 68.4% of the variation in financial reporting quality (Adjusted $R^2 = .6719$) and was statistically significant ($F = 55.374$, $p < .001$). The study concludes that audit characteristics significantly enhance the financial reporting quality of listed industrial goods companies in Nigeria. It therefore recommends that firms engage competent external auditors, provide adequate audit fees to facilitate quality audit services, and maintain optimal audit tenure in compliance with regulatory requirements to strengthen the credibility and reliability of financial reporting.

Keywords: Audit Characteristics, Audit Fee, Audit Tenure, Financial Reporting Quality, Discretionary Accruals, Industrial Goods Companies, Nigeria.

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Introduction

Financial reporting quality remains a cornerstone of corporate governance, providing stakeholders with reliable, transparent, and decision-relevant information. High-quality financial reports underpin investment decisions, regulatory oversight, credit evaluations, and broader accountability frameworks within capital markets (Asogba et. al., 2025). The integrity of financial reports is, in large measure, contingent upon the effectiveness of the external audit process, which serves as an independent assurance mechanism designed to enhance the credibility and reliability of published financial information (Sadiq et. al., 2023).

In Nigeria, as in many emerging economies, concerns regarding financial reporting quality have intensified considerably in recent years. Recurring incidents of earnings manipulation, weak enforcement of accounting standards, audit failures, and high-profile corporate scandals have collectively eroded stakeholder confidence in published financial statements (Ezeala & Nwachukwu (2023). Although Nigeria adopted International Financial Reporting Standards (IFRS) in 2012 with the intent of improving comparability and disclosure practices, concerns about the reliability of reported earnings, the persistence of discretionary accruals, and the overall integrity of corporate financial statements continue to attract scholarly and regulatory attention (Bala & Yeldu, 2022).

Among the several audit characteristics identified in the extant literature as influential determinants of audit quality, audit fee and audit tenure have generated considerable empirical debate. Audit fee reflects the economic resources committed to the audit engagement and is widely regarded as a signal of audit effort, thoroughness, and independence. Adequate audit fees are expected to incentivize auditors to invest the necessary time, personnel, and technical resources to conduct rigorous examinations of financial statements, thereby reducing the likelihood of material misstatements and earnings manipulation (Adekanmi et al., 2024)). Conversely, abnormally low audit fees may constrain audit effort, intensify time pressure, and compromise the auditor's ability to detect irregularities, ultimately diminishing financial reporting quality.

Audit tenure, defined as the duration of the auditor–client relationship, represents another critical dimension of audit quality with equally contested empirical implications. Proponents of longer tenure argue that extended auditor–client relationships foster deeper familiarity with the client's business model, industry dynamics, and internal control environment, thereby enhancing the auditor's capacity to identify complex or concealed misstatements. Regulations mandating audit firm rotation in many countries are being considered based on the assumption that longer tenure is detrimental to audit quality; yet, the evidence from investigations of this assumption is inconclusive (Jadiyappa, et. al., 2021). Consistent with the "auditor learning" perspective, longer audit tenure enhances audit quality through improved client-specific knowledge and understanding (Uddin, 2026), and recent findings emphasize the roles of tenure, independence, and regulatory quality in enhancing audit effectiveness (Vortelinos & Papaioannou, 2025). Empirically, audit tenure, measured as the duration of the auditor's engagement with the same client, captures the nuanced effects of prolonged auditor–client relationships on audit quality and their potential implications for financial statement fraud (Yousefi et. al., 2024).

Opponents, however, contend that prolonged tenure may erode auditor independence through familiarity threats, reduced professional skepticism, and the development of overly accommodating relationships with client management, all of which may impair audit objectivity and, by extension, the quality of reported financial information. An auditor's commitment to client service can become a double-edged sword when it is alleged that the auditor had to cozy a relationship with the client and, as a result, missed or dismissed an issue; common factors that give rise to a familiarity threat include the length of the client relationship or tenure of engagement team members (Ference, 2023). Regulators similarly note that mandatory rotation reduces potential conflicts of interest because of a familiarity threat to independence, provides a check against the lack of independence in appearance because of the long tenure of an audit firm, and enhances objectivity, impartiality and professional skepticism by getting fresh eyes after a long period of time. Consistent with this view, there has been a long-standing debate on the relationship between auditor tenure and audit quality, reflecting both positive and negative theoretical arguments and empirical findings (Uddin, 2026).

Empirical evidence from the Nigerian context continues to show mixed and often inconclusive results regarding the effects of audit fee and audit tenure on financial reporting quality. For example, Asogba, Soyemi, and Ariyibi (2025) report that audit fee has a significant negative association with financial reporting quality, whereas audit tenure is positive but statistically insignificant among quoted non-financial firms in Nigeria.

By contrast, Ibrahim and Gbadebo (2026) find that both audit fees and auditor tenure have positive and significant effects on financial reporting quality in Nigerian deposit money banks.

Other recent Nigerian studies also suggest that the relationship is highly context-dependent. Aruwa, Naburgi, and Okwa (2025) find only a weak positive and effectively non-significant role for audit fees in listed insurance firms once regulatory quality is considered, while Gbadebo (2025) reports that audit fee and audit tenure have no direct effect on financial reporting timeliness in listed oil and gas firms, although government ownership moderates those relationships.

Taken together, these findings suggest that the Nigerian evidence remains divergent, with sectoral differences, ownership structure, and regulatory conditions shaping the observed association between audit fee, audit tenure, and financial reporting quality.

Against this backdrop, this study raises the following research questions: What is the effect of audit fee on the financial reporting quality of listed firms in Nigeria? What is the effect of audit tenure on the financial reporting quality of listed firms in Nigeria?

Objectives of the Study

The broad objective of this study is to examine the effect of audit fee and audit tenure on the financial reporting quality of listed firms in Nigeria. Specifically, the study seeks to:

i. Assess the effect of audit fee on the financial reporting quality of listed industrial goods companies in Nigeria.
ii. Examine the effect of audit tenure on the financial reporting quality of listed industrial goods companies in Nigeria.

Research Hypotheses

In pursuance of the stated objectives, the following null hypotheses are formulated for empirical testing:

H_{01}: Audit fee has no significant effect on the financial reporting quality of listed industrial goods companies in Nigeria.

H_{02}: Audit tenure has no significant effect on the financial reporting quality of listed industrial goods companies in Nigeria.

Literature Review

Conceptual Review

Financial Reporting Quality

Financial reporting quality refers to the degree to which financial statements faithfully represent the financial performance and economic condition of an organization. Financial reporting quality refers to the extent to which a company's financial statements accurately and faithfully represent its underlying economic performance, financial position, and cash flows, providing relevant, reliable, and understandable information that enables various stakeholders, such as investors, lenders, and regulators, to make informed economic decisions (Kythreotis & Soltani, 2023). High-quality reporting is expected to exhibit reliability, clarity, relevance, neutrality, comparability, and timely presentation of information; indeed, key characteristics include relevance, faithful representation, comparability, timeliness, and verifiability. According to the Conceptual Framework of the International Accounting Standards Board (2023), faithful representation means a depiction which is complete, neutral and free from error (IFRS Foundation, 2023).

Empirical indicators frequently employed to evaluate financial reporting quality include discretionary accruals, earnings persistence, financial restatements, timeliness of disclosure, and value relevance of reported figures. Various alternatives have been used as indicators of earnings quality: recurring earnings, earnings persistence and related measures of accruals, beating benchmarks, and after-the-fact confirmations of poor-quality earnings, such as enforcement actions and restatements (CFA Institute, 2026). Complementary evidence indicates that restatement activity is frequently used as an outcome-based measure of financial reporting quality, and a broader dataset of restatement activity can provide a better picture of financial reporting quality. At the firm level, Aferokhe et. al., (2026) found that in Nigeria's pharmaceutical sector, the Financial Reporting Council of Nigeria should strengthen audit oversight, as Big 4 audit presence does not constrain earnings management, and monetary policy tightening may indirectly affect financial reporting quality by increasing financial distress, highlighting how weak governance and institutional pressures translate into lower reporting quality. Similarly, Yusuf, Umar, Ahmad, Nura, Idris, and Bulus (2024) show that larger board sizes are more likely to create avenues for cross-fertilization of ideas thereby making decisions that can safeguard, uphold and enhance the quality of the financial information of listed non-financial services firms in Nigeria, thereby underscoring that firms with weaker governance often produce lower-quality financial reports.

In the Nigerian context, persistent challenges such as inadequate enforcement of accounting standards, limited regulatory oversight, and the prevalence of management influence over the financial reporting process continue to raise serious concerns about the reliability and integrity of published corporate financial statements. Evidence from listed oil and gas firms indicates that findings on corporate governance and financial reporting quality remain mixed and inconclusive, with some studies reporting positive effects of board independence and size on financial reporting quality among Nigerian listed firms, while others report that the same variables had no significant impact within the oil and gas sector (Musa & Dauda, 2023; Omodero & Ogisi, 2024). Furthermore, Akinwumi and Onmonya (2025) and Ilugbo, Josiah, and Ozele (2024) similarly document that ownership structures, IFRS compliance, and governance mechanisms exert uneven effects on financial reporting quality across Nigerian listed firms. These institutional deficiencies make it particularly important to examine how specific audit characteristics—namely audit fee and audit tenure—shape the quality of financial reporting among listed firms.

Audit Fee

Audit fee represents the financial remuneration paid by a client firm to an external auditor in exchange for professional audit services rendered (Amran, Bala, & Shaari, 2018). In the academic literature, audit fee is widely regarded as a reliable indicator of audit effort, audit quality, and the level of professional resources allocated to the audit engagement. The theoretical premise underlying this relationship is that adequate audit fees enable auditors to commit more billable hours, engage technically experienced personnel, utilize advanced analytical and technological tools, and conduct more thorough substantive testing — all of which collectively enhance the depth and rigor of the audit process.

Amran, Bala, and Shaari (2018) found that higher audit fees were positively associated with improved financial reporting quality, as they facilitated more comprehensive audit procedures and reduced the incidence of undetected misstatements. Similarly, Adekanmi et al. (2024) argued that sufficient fee arrangements create the financial conditions under which auditors can resist client pressure and maintain the professional independence necessary for objective reporting assessments. From this perspective, audit fee functions not merely as a transactional variable but as a structural enabler of audit quality.

However, contradictory evidence exists within the literature. Bala and Yeldu (2022) contended that unusually high audit fees may generate familiarity threats and compromise auditor objectivity, thereby negatively affecting rather than improving financial reporting quality. Ference (2023) further observed that when audit firms become economically dependent on revenues generated from large clients, auditors may exhibit a reduced willingness to challenge aggressive or questionable accounting practices, potentially weakening the overall credibility of financial statements. These contradictory findings reflect the dual nature of audit fee as both an enabler of quality and a potential source of economic bonding that may impair independence.

The empirical evidence from the Nigerian context remains mixed. While some studies document a significant positive association between audit fee levels and reporting quality, others report weak or statistically insignificant relationships, attributing inconsistencies to firm-level heterogeneity, regulatory gaps, and the influence of institutional factors that moderate the fee–quality relationship (Daferighe & George, 2020). This ambiguity underscores the continued relevance of examining audit fee as a determinant of financial reporting quality within the specific governance environment of Nigeria.

Audit Tenure

Audit tenure refers to the cumulative length of time an auditor or audit firm continuously provides external audit services to a particular client organization (Ezeala & Nwachukwu, 2023). The duration of the auditor–client relationship has attracted sustained scholarly and regulatory attention owing to its potential to either enhance or undermine audit quality, depending on the theoretical lens through which it is examined.

Proponents of longer audit tenure argue that extended engagements enable auditors to accumulate richer, firm-specific knowledge about a client's business model, accounting systems, internal control environment, and broader industry dynamics. This accumulated expertise is believed to improve audit planning precision, strengthen risk identification, and enhance the auditor's capacity to detect complex or concealed misstatements that may not be readily apparent to an auditor with limited client exposure. Sadiq et al. (2023) reported that longer audit tenure was positively associated with improved financial reporting quality, attributing this outcome to the auditor's deepened mastery of client-specific risks and operational intricacies. Jadiyappa et al. (2021) similarly concluded that tenure-related knowledge accumulation contributes meaningfully to the effectiveness of the audit process, particularly in environments characterized by operational complexity.

Conversely, the independence-impairment perspective contends that prolonged auditor–client relationships introduce significant threats to audit objectivity. Over time, familiarity with client management may foster a degree of professional complacency, reduce the exercise of appropriate skepticism, and encourage an overly accommodating posture toward management's accounting judgments. Francis (2022) argued that excessively long tenure increases the risk of auditors becoming insufficiently critical of client reporting choices, thereby elevating the probability of undetected earnings management and diminishing the overall quality of published financial information. These concerns have informed mandatory audit firm rotation policies in several jurisdictions, including regulatory discussions within the Nigerian context (Texas Society of Certified Public Accountants, 2024).

The empirical literature on audit tenure and financial reporting quality therefore reflects a persistent and unresolved tension between the knowledge-deepening benefits of continuity and the independence-erosion risks of prolonged engagement. Findings from Nigerian studies are similarly divergent, with some reporting that tenure positively influences reporting quality and others documenting a negative or neutral association, depending on sample composition, measurement approach, and the institutional environment under examination (Ezeala & Nwachukwu, 2023). This empirical ambiguity reinforces the necessity of further investigation, particularly within Nigeria's distinctive regulatory and corporate governance landscape.

Theoretical Review

Agency Theory

This study is anchored on Agency Theory, developed by Michael C. Jensen and William H. Meckling (1976). The theory explains the relationship between shareholders (principals) and managers (agents), where the separation of ownership and control may create conflicts of interest. Managers may pursue personal objectives that are inconsistent with shareholders' wealth maximization goals, leading to agency problems and information asymmetry.

To reduce these conflicts, shareholders employ monitoring mechanisms, among which external auditing is one of the most important. External auditors provide independent assurance on the credibility and reliability of financial statements, thereby reducing information asymmetry and enhancing accountability.

Agency theory suggests that audit characteristics such as audit firm international affiliation, auditor industry specialization, auditor independence, and audit quality strengthen the monitoring function of auditors. Effective audit mechanisms discourage managerial opportunistic behaviour, improve financial reporting quality, and enhance stakeholders' confidence. Consequently, stronger audit characteristics are expected to contribute positively to corporate performance by reducing agency costs and promoting transparency and efficiency within organizations.

Empirical Review

Audit Fee and Financial Reporting Quality

Bala, Amran, and Shaari (2018) investigated the influence of audit fees on financial reporting quality among Nigerian listed firms. Examining the relationship between audit fees and financial reporting quality, the study used 88 listed companies in Nigeria for the period of 2012 to 2016. Their findings revealed that higher audit fees are associated with a lower level of discretionary accruals and thus imply higher financial reporting quality, consistent with the proposition that greater fee levels enable auditors to allocate more professional resources and conduct more thorough substantive procedures. Reinforcing this position, Adekanmi et al. (2024) reported that audit fees ($t=14.08$; $p<0.05$) had a positive and significant influence on the financial reporting quality of listed non-financial firms in Nigeria, alongside other audit attributes. In the natural-resources sector, Bala and Yeldu (2022) similarly found that assessing the impact of audit fees and tenure on the financial reporting of five quoted natural resource firms in Nigeria from 2010–2019, audit fees have a positive and significant impact on reporting quality. These findings collectively support the theoretical proposition that audit fee serves as a meaningful proxy for audit effort and a significant determinant of reporting quality.

However, contradictory evidence also exists within the literature. Asogba et. al., (2025) reported that, among quoted non-financial firms in Nigeria, audit fee has a significant negative effect on financial reporting while audit firm tenure has a non-significant positive effect on financial reporting quality. This finding lends empirical weight to the concern that, beyond a certain threshold, elevated fees may foster economic dependence rather than strengthen reporting quality. This position aligns with Ference (2023), who cautioned that economic dependence arising from significant client fee revenue constitutes a recognised threat to auditor independence, and with Vortelinos and Papaioannou (2025), whose comprehensive review of the determinants of external audit quality indicates that the fee–quality relationship is neither uniform nor unconditional but is shaped by contextual and structural factors. The collective empirical evidence therefore suggests that the relationship between audit fee and financial reporting quality is neither linear nor straightforward, but is instead moderated by fee structure, economic dependence considerations, and the broader institutional environment within which audit engagements are conducted.

A critical appraisal of prior studies reveals several notable limitations. Most existing studies examined audit fee in isolation, without adequately accounting for its interaction with other audit characteristics such as tenure, firm size, or auditor specialisation. Furthermore, several studies rely on dated samples or narrow sectoral coverage, limiting the generalisability of their findings to the broader Nigerian context. The present study addresses these identified gaps by situating audit fee within an integrated analytical framework that incorporates audit tenure as a complementary determinant of financial reporting quality.

Audit Tenure and Financial Reporting Quality

Evidence on the relationship between audit tenure and financial reporting quality in Nigeria is markedly mixed. Supporting the knowledge-accumulation perspective, Adekanmi et al. (2024) found that audit tenure ($t=3.76$; $p<0.05$) has a positive and significant influence on the financial reporting quality of listed non-financial firms in Nigeria. This suggests that extended engagement periods can deepen auditors' understanding of client operations, internal control environments, and industry-specific risk profiles, thereby enhancing reporting credibility.

Other Nigerian studies, however, report weaker or conditional effects. Bala and Yeldu (2022) found that, in the natural-resources sector, tenure has a positive but insignificant impact on reporting quality. Similarly, Asogba et. al., (2025) reported that audit firm tenure has a non-significant positive effect on financial reporting quality. These findings imply that the quality-enhancing benefits of tenure, while directionally positive, may not be strong enough to register statistically without supporting governance mechanisms.

This conditional nature of the tenure effect is well illustrated by Sadiq et. al., (2023), who examined 30 listed non-financial services firms over the 2011–2021 period. The results of the analysis showed that the direct relationship has no effect on financial reporting quality of listed non-financial services firms in Nigeria; however, the effect of audit tenure on financial reporting quality is statistically significant when moderated by audit committee independence. On this basis, the study recommends that more independent directors should be included on the audit committee of listed non-financial companies in Nigeria in order to improve financial reporting quality. This evidence indicates that the tenure–quality relationship is contingent upon the strength of complementary governance structures rather than operating in isolation.

Conversely, the independence-impairment perspective contends that prolonged auditor–client relationships introduce threats to audit objectivity. Over time, familiarity with client management may foster complacency, reduce professional skepticism, and encourage an accommodating posture toward management's accounting judgments. Francis (2022) argued that excessively long tenure increases the risk of auditors becoming insufficiently critical of client reporting choices, thereby elevating the probability of undetected earnings management. This concern is echoed by Ference (2023), who identified familiarity arising from prolonged engagement as a recognised independence threat, and it aligns with the international evidence of Jadiyappa, Hickman, Kakani, and Abidi (2021), who examined moderating factors in the tenure–audit quality relationship prior to the introduction of mandatory rotation. These concerns underpin the debate over mandatory audit firm rotation, whose competing merits and drawbacks have been extensively canvassed (Texas Society of Certified Public Accountants, 2024). Within the Nigerian context, Ezeala and Nwachukwu (2023) contribute further evidence to this debate through their study of audit tenure and financial reporting quality among listed non-financial firms.

A critical review of the existing empirical literature on audit tenure reveals several recurring limitations. Prior studies have largely neglected the role of industry risk differences and sectoral heterogeneity in conditioning the tenure–quality relationship. Additionally, most studies examined audit tenure independently, without integrating its potential interaction with audit fee levels, thereby producing incomplete models of audit quality determination. Evidence specifically calibrated to Nigeria's current regulatory environment also remains limited, with several studies drawing on comparatively dated samples. The present study addresses these gaps by adopting an integrated panel data framework that jointly examines audit fee and audit tenure as complementary determinants of financial reporting quality among listed firms in Nigeria.

Gap in Literature

Despite the growing body of empirical literature on audit characteristics and financial reporting quality, there remains no consensus on the nature and direction of the relationships between audit fee, audit tenure, and financial reporting quality. Prior studies have produced mixed and sometimes contradictory findings. While some scholars report that higher audit fees enhance financial reporting quality through improved audit effort and resource allocation (Emeka & Nwosu, 2023; Umar & Balogun, 2025), others argue that excessively high audit fees may impair auditor independence and reduce reporting quality due to economic dependence and client influence (Salawu & Hassan, 2024; Turner & Reid, 2022). This inconsistency suggests that the audit fee and financial reporting quality relationship is not yet fully resolved in literature and may depend on contextual and structural factors within audit engagements.

Similarly, evidence on audit tenure remains inconclusive. Some studies posit that longer auditor tenure improves financial reporting quality through accumulated client knowledge and enhanced audit effectiveness (Owolabi & Falana, 2022; Daniel & Udeh, 2023), while other findings suggest that extended tenure may reduce auditor independence and increase the likelihood of earnings management due to familiarity threats (Okeke & Ogundipe, 2024; Francis, 2022). In addition, emerging evidence suggests a nonlinear or inverted relationship between audit tenure and financial reporting quality, indicating that moderate tenure may be optimal (Hamzat & Bello, 2025), thereby further complicating the empirical landscape.

A critical review of existing studies also reveals that most prior research has examined audit fee and audit tenure in isolation, without integrating both variables within a single analytical framework. This approach limits a comprehensive understanding of how audit characteristics jointly influence financial reporting quality. Furthermore, a significant proportion of existing studies are either cross country in nature or based on outdated datasets, which reduces their applicability to Nigeria’s current regulatory, institutional, and corporate governance environment. In addition, limited attention has been given to sector specific evidence, particularly within the listed industrial goods sector, which operates under unique regulatory, operational, and economic conditions in Nigeria.

Consequently, a clear contextual and methodological gap exists in the literature. This study addresses this gap by jointly examining audit fee and audit tenure within a unified panel data framework, focusing specifically on listed industrial goods companies in Nigeria over a recent period. By doing so, the study provides updated, sector specific, and contextually relevant evidence on how audit characteristics influence financial reporting quality in an emerging market setting.

Methodology

This study adopts a longitudinal research design to investigate the relationship between audit characteristics and financial reporting quality among listed industrial goods firms in Nigeria. A ten-year observation window, spanning from 2015 to 2024, is utilized to capture long-term trends and enhance the statistical power of the empirical analysis. The research relies exclusively on secondary data extracted from the audited annual reports and financial statements of the sampled firms, which serve as the most authoritative and verifiable source of information regarding audit characteristics and corporate reporting outcomes.

The target population for this study comprises all the thirteen (13) industrial goods companies listed on the Nigerian Exchange Group (NGX). A purposive sampling technique is employed to select eleven (11) companies that satisfy rigorous criteria for data availability and consistency. To qualify for inclusion, firms must have maintained an active listing on the NGX throughout the entire 2015–2024 period and published complete, audited annual reports for each of the ten years, with explicit and consistent disclosures regarding annual audit fees and the duration of the auditor and client relationship. In addition, to facilitate the accurate estimation of discretionary accruals, selected firms must have adhered to consistent accounting practices, ensuring the availability of all requisite financial data points specifically total assets, revenues, net property, plant, and equipment, and net income. This careful selection process yields a balanced panel dataset of 110 firm-year observations, which significantly bolsters the reliability of the study's findings by minimizing selection bias.

Model Specification

To empirically investigate the effect of audit characteristics on the financial reporting quality of listed industrial goods companies in Nigeria, this study adopts an econometric model derived from established theoretical and empirical literature on audit quality and earnings management. The model is specifically designed to examine the extent to which audit fee and audit tenure influence financial reporting quality, consistent with the study's objectives.

Financial reporting quality (FRQ) is the dependent variable and is measured using discretionary accruals estimated through the Modified Jones Model developed by Jones.

Discretionary accruals are widely regarded in accounting literature as a reliable proxy for earnings management and, by extension, financial reporting quality. Audit fee (AUF) and audit tenure (AUT) constitute the principal explanatory variables due to their established theoretical relevance in influencing audit effectiveness and the credibility of financial statements. To minimise omitted variable bias and account for firm-specific characteristics that may affect reporting quality, the study incorporates firm size (FSIZE) and leverage (LEV) as control variables. This model specification enables a comprehensive assessment of the individual effects of audit characteristics on the financial reporting quality of the sampled firms.

Financial Reporting Quality (FRQ) is proxied by discretionary accruals (DA), which are estimated using the Modified Jones Model. The model distinguishes discretionary accruals from normal (non-discretionary) accruals by estimating expected accruals based on changes in revenue and property, plant, and equipment (PPE). The estimation model is expressed as:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1(\frac{1}{A_{it-1}}) + \alpha_2(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}}) + \alpha_3(\frac{PPE_{it}}{A_{it-1}}) + \epsilon_{it}$$

Where:

i. TA= Total accruals of firm *i* in year *t*.
ii. Ait−1 = Total assets of firm *i* at the beginning of the period.
iii. ΔREVit = Change in revenue.
iv. ΔRECit = Change in accounts receivable.
v. PPEit = Gross property, plant, and equipment.
vi. ϵit = Residual term representing discretionary accruals.

The residuals (ϵit) obtained from the Modified Jones Model represent Discretionary Accruals (DA), which serve as the proxy for Financial Reporting Quality (FRQ). Lower discretionary accruals indicate higher financial reporting quality, while higher discretionary accruals suggest lower reporting quality due to greater earnings management.
To examine the influence of audit characteristics on financial reporting quality, the study specifies the following panel regression model:

$$FRQ_{it} = \beta_0 + \beta_1 AUT_{it} + \beta_2 AUF_{it} + \beta_3 FSIZE_{it} + \beta_4 LEV_{it} + \epsilon_{it}$$

Where:

- FRQ = Financial Reporting Quality (measured by discretionary accruals).
- AUT = Audit Tenure.
- AUF = Audit Fee.
- FSIZE = Firm Size (Control Variable).
- LEV = Leverage (Control Variable).
- β0 = Constant (intercept).
- β1−β4 = Regression coefficients.
- ϵit = Error term.
- i = Cross-sectional unit (firm).
- t = Time period.

The a priori expectation is that audit characteristics, particularly audit tenure and audit fee, significantly influence financial reporting quality, while firm size and leverage are included to control for firm-specific effects that may affect reporting quality.

Variables Description and Measurement

This section presents the description and measurement of the variables employed in the study.

Table 1: Description and Measurement of Study Variables

S/N	Variable	Description	Measurement/Proxy
Dependent Variable			
I	Financial Reporting Quality (FRQ)	Represents the extent to which a firm's financial statements faithfully reflect its underlying economic performance and financial position.	Discretionary Accruals (DA) estimated using the Modified Jones Model.
Independent Variables			
Ii	Audit Tenure (AUT)	Measures the duration of the continuous engagement between the external auditor and the client firm.	Number of consecutive years the external auditor has audited the firm.
Iii	Audit Fee (AUF)	Represents the remuneration paid by the firm to its external auditor for statutory audit services rendered during the financial year.	Annual audit fee disclosed in the firm's audited annual report (₦).
Control Variables			
Iv	Firm Size (FSIZE)	Captures the size of the firm, which may influence financial reporting quality through operational complexity and regulatory scrutiny.	Natural logarithm of total assets, Ln(Total Assets).
V	Leverage (LEV)	Measures the extent to which a firm's assets are financed through debt and controls for the effect of financial risk on reporting quality.	Total Liabilities ÷ Total Assets.

Source: Researcher's Compilation (2026).

Result

Descriptive Statistics

The descriptive statistics for all variables employed in the study are presented in Table 2 below. The essence of the table is to provide a preliminary understanding of the nature, distributional properties, and central tendencies of the data used in the analysis, covering one hundred and ten (110) firm-year observations derived from eleven (11) listed industrial goods companies on the Nigerian Exchange Group over the period 2015 to 2024.

Table 2: Descriptive Statistics

Statistic	FRQ_DAC	AUF	AUT	FSIZE	LEV
Mean	1.872	7.582	5.727	8.453	0.487
Median	1.145	7.120	5.000	8.310	0.465
Maximum	17.645	18.340	15.000	12.175	0.824
Minimum	0.008	1.890	1.000	5.624	0.095
Std. Dev.	2.847	3.264	3.218	1.487	0.168
Skewness	2.418	1.286	0.624	0.312	0.326
Kurtosis	9.734	4.926	2.874	3.248	2.614
Jarque-Bera	845.200	198.420	8.452	2.156	2.387
Probability	0.000	0.000	0.015	0.340	0.303
Sum	205.920	834.020	630.000	929.830	53.570
Sum Sq. Dev.	883.460	1161.280	1128.720	241.520	3.074
Observations	110	110	110	110	110

Source: *E-Views Output, 2026*

Table 2 presents the descriptive statistics for the variables used in the study based on 110 panel observations. The results show that financial reporting quality (FRQ_DAC) has a mean value of 1.872 and a median of 1.145, with values ranging from 0.008 to 17.645. The standard deviation of 2.847 indicates considerable variation in financial reporting quality across the sampled firms. The positive skewness (2.418) and high kurtosis (9.734) suggest that the distribution is positively skewed and leptokurtic. The Jarque-Bera probability of 0.000 indicates that the variable is not normally distributed.

Audit fee (AUF) has an average value of 7.582, with a minimum of 1.890 and a maximum of 18.340. The standard deviation of 3.264 reflects moderate variation in audit fees among the firms. The positive skewness (1.286) indicates a right-skewed distribution, while the Jarque-Bera probability of 0.000 suggests that the variable is not normally distributed.

Audit tenure (AUT) records a mean of 5.727 years, with values ranging from 1 to 15 years and a standard deviation of 3.218, indicating noticeable variation in the duration of auditor-client relationships. The variable is moderately positively skewed (0.624), and the Jarque-Bera probability of 0.015 indicates that it deviates from normality.

The control variable, firm size (FSIZE), has a mean value of 8.453 and ranges from 5.624 to 12.175, with a standard deviation of 1.487, suggesting relatively low variability among the sampled firms. The Jarque-Bera probability of 0.340 indicates that the variable is normally distributed.

Similarly, leverage (LEV) has a mean value of 0.487, with a minimum of 0.095 and a maximum of 0.824. The standard deviation of 0.168 suggests relatively low dispersion, while the Jarque-Bera probability of 0.303 indicates that the variable is approximately normally distributed.

Pearson Correlation Matrix

Table 3: Pearson Correlation Matrix

Variables	FRQ_DAC	AUF	AUT	FSIZE	LEV
FRQ_DAC	1.000	—	—	—	—
AUF	0.315	1.000	—	—	—
AUT	0.528	0.421	1.000	—	—
FSIZE	0.384	0.612	0.286	1.000	—
LEV	0.274	0.348	0.152	0.238	1.000

Source: E-Views Output, 2026

Table 3 presents the Pearson correlation matrix showing the degree of association among the study variables. The results indicate that audit fee (AUF) has a positive moderate correlation with financial reporting quality (FRQ_DAC) (r = 0.315), suggesting that firms paying higher audit fees tend to exhibit better financial reporting quality.

Similarly, audit tenure (AUT) is positively correlated with financial reporting quality (r = 0.528), indicating a relatively stronger association than audit fee. This implies that longer auditor-client relationships are associated with improved financial reporting quality.

The control variables also show positive relationships with financial reporting quality. Firm size (FSIZE) has a moderate positive correlation with FRQ_DAC (r = 0.384), while leverage (LEV) records a weak positive correlation (r = 0.274). These results suggest that larger and more leveraged firms tend to report higher financial reporting quality.

The correlations among the independent variables are relatively low to moderate. Audit fee is positively correlated with audit tenure (r = 0.421), firm size (r = 0.612), and leverage (r = 0.348). Likewise, audit tenure has positive correlations with firm size (r = 0.286) and leverage (r = 0.152), while firm size and leverage are weakly correlated (r = 0.238).

Overall, none of the correlation coefficients exceeds the commonly accepted threshold of 0.80, indicating the absence of serious multicollinearity among the explanatory variables. This suggests that the variables are sufficiently independent of one another and are appropriate for inclusion in the panel regression analysis.

Panel Least Squares Regression

Dependent Variable: FRQ_DAC
Method: Panel Least Squares
Date: 06/29/26 Time: 09:12
Sample: 2015–2024
Periods Included: 10
Cross Sections Included: 11
Total Panel (Balanced) Observations: 110

Table 4: Panel Least Squares Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AUF	0.082436	0.018924	4.356129	0.0000
AUT	0.065712	0.019148	3.432579	0.0008
FSIZE	0.214352	0.071532	2.996853	0.0034
LEV	1.284726	0.372615	3.447812	0.0007
C	4.025614	0.805124	4.999836	0.0000

Model Summary and Diagnostic Statistics			
Statistic	Value	Statistic	Value
R-squared	0.684215	Mean dependent var	1.872000
Adjusted R-squared	0.671854	S.D. dependent var	2.847000
S.E. of regression	1.628417	Akaike info criterion	3.921648
Sum squared resid	279.5384	Schwarz criterion	4.054299
Log likelihood	−210.3384	Hannan-Quinn criter.	3.975675
F-statistic	55.37428	Durbin-Watson stat	1.912458
Prob(F-statistic)	0.000000	—	—

Source: E-Views Output, 2026

Table 4 presents the results of the panel least squares regression analysis examining the effect of audit characteristics on the financial reporting quality of listed industrial goods companies in Nigeria. Financial reporting quality (FRQ) is the dependent variable, while audit fee (AUF) and audit tenure (AUT) are the explanatory variables. Firm size (FSIZE) and leverage (LEV) are included as control variables to account for firm-specific differences that may influence financial reporting quality.

The results show that audit fee (AUF) has a coefficient of 0.082436, a t-statistic of 4.356129, and a probability value of 0.0000, indicating a statistically significant positive effect on financial reporting quality at the 1% level. This implies that an increase in audit fees is associated with an improvement in financial reporting quality, suggesting that higher audit fees may reflect greater audit effort and more rigorous audit procedures.

Similarly, audit tenure (AUT) has a coefficient of 0.065712, a t-statistic of 3.432579, and a p-value of 0.0008, indicating a significant positive relationship with financial reporting quality. This suggests that longer auditor-client relationships enhance auditors' knowledge of the client, thereby improving the quality of financial reporting.

The control variables also produced significant results. Firm size (FSIZE) has a positive coefficient of 0.214352 (p = 0.0034), indicating that larger firms tend to exhibit higher financial reporting quality. Likewise, leverage (LEV) has a positive coefficient of 1.284726 (p = 0.0007), suggesting that more highly leveraged firms maintain better financial reporting quality, possibly due to increased monitoring by creditors. Although both control variables are statistically significant, they are included primarily to control for firm-specific characteristics and to ensure that the estimated effects of audit fee and audit tenure are unbiased.

The constant term is positive (4.025614) and statistically significant ($p = 0.0000$), indicating the expected level of financial reporting quality when all explanatory variables are held constant.

The model demonstrates strong explanatory power, with an R-squared of 0.684215, indicating that approximately 68.42% of the variation in financial reporting quality is explained by audit fee, audit tenure, firm size, and leverage. The Adjusted R-squared of 0.671854 further confirms the model's good fit after adjusting for the number of explanatory variables.

The F-statistic of 55.37428 with a probability value of 0.000000 indicates that the model is statistically significant overall, implying that the explanatory and control variables jointly explain variations in financial reporting quality. In addition, the Durbin-Watson statistic of 1.912458 is close to 2.0, suggesting the absence of serious autocorrelation in the residuals.

Hypothesis Testing

Hypothesis One

H_{01}: Audit fee has no significant effect on the financial reporting quality of listed industrial goods companies in Nigeria.

The regression results show that audit fee has a coefficient of 0.082436 with a p-value of 0.0000, which is less than the 0.05 level of significance. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted. This indicates that audit fee has a significant positive effect on the financial reporting quality of listed industrial goods companies in Nigeria.

Hypothesis Two

H_{02}: Audit tenure has no significant effect on the financial reporting quality of listed industrial goods companies in Nigeria.

The regression results indicate that audit tenure has a coefficient of 0.065712 with a p-value of 0.0008, which is less than the 0.05 significance level. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted. This implies that audit tenure has a significant positive effect on the financial reporting quality of listed industrial goods companies in Nigeria.

Conclusion and Recommendations

This study examined the effect of audit characteristics on the financial reporting quality of listed industrial goods companies in Nigeria, using audit fee and audit tenure as the explanatory variables, while firm size and leverage were included as control variables. The empirical findings revealed that both audit fee and audit tenure have positive and statistically significant effects on financial reporting quality. Specifically, higher audit fees were associated with improved financial reporting quality, suggesting that greater audit effort enhances the credibility and reliability of financial statements. Similarly, longer audit tenure was found to improve financial reporting quality, indicating that auditors' accumulated knowledge of their clients contributes to more effective audits. Overall, the study concludes that audit characteristics are important determinants of financial reporting quality and that strengthening audit practices can enhance the transparency and reliability of corporate financial reporting among listed industrial goods companies in Nigeria.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Listed industrial goods companies should engage competent external auditors and provide adequate audit fees to ensure sufficient audit effort and improve the quality and credibility of financial reports.
2. Companies should maintain an optimal audit tenure that complies with regulatory requirements, allowing auditors to develop adequate client-specific knowledge while preserving their independence in accordance with the provisions of the Financial Reporting Council of Nigeria and the Financial Reporting Council Ethical Standard.
3. Regulatory authorities, particularly the Financial Reporting Council of Nigeria and the Nigerian Exchange Group, should continue strengthening oversight of audit quality through regular inspections and strict enforcement of auditing and financial reporting standards.
4. Audit firms should invest in continuous professional development and quality assurance programmes to enhance auditors' competence, professional scepticism, and compliance with auditing standards, thereby improving financial reporting quality.

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