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RESEARCH ARTICLE

Relationship Between Firm Attributes and Sustainability Reporting in Nigeria

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ABSTRACT

This study investigates the relationship between firm attributes and Sustainability Reporting in Nigeria, focusing on Auditor Type and Industry Type as key determinants. Employing an ex-post facto research design, the study analyzed data from the annual reports of 48 Nigerian manufacturing firms over the study period, yielding 504 observations. Panel data econometric techniques were applied using STATA 14.2, with diagnostic tests addressing heteroskedasticity, serial correlation, and multicollinearity. Detected heteroskedasticity and panel autocorrelation were corrected using Prais–Winsten regression with Panel-Corrected Standard Errors (PCSE), ensuring robust coefficient estimates. The findings indicate that Auditor Type has a statistically significant negative effect on Sustainability Reporting (coefficient = −0.0199, z = −5.66, p = 0.000), suggesting that variations in auditor characteristics influence firms' disclosure practices. In contrast, Industry Type has a negative but statistically insignificant effect (coefficient = −0.0056, z = −0.33, p = 0.739), indicating that sector classification alone does not meaningfully affect sustainability disclosure. Model diagnostics confirmed the reliability of the estimates, and robustness checks using alternative measures of sustainability reporting supported the main results. Grounded in agency theory, the study underscores the role of auditors as monitoring agents who affect transparency and mitigate information asymmetry between management and stakeholders. The results corroborate prior empirical studies highlighting the influence of firm-specific characteristics and audit quality on disclosure practices. The study concludes that auditor characteristics are significant drivers of sustainability reporting, whereas industry affiliation is not, offering valuable insights for regulators, investors, and policymakers seeking to enhance corporate transparency in emerging markets.

Keywords: Firm Attributes; Sustainability Reporting; Auditor Type; Industry Type

Introduction

In the contemporary business environment, sustainability reporting has emerged as a critical mechanism through which firms communicate their environmental, social, and governance (ESG) performance to stakeholders. It reflects the extent to which organizations disclose non-financial information aimed at demonstrating accountability, compliance, and responsiveness to global sustainability concerns (KPMG, 2022). Beyond a voluntary exercise, sustainability reporting increasingly influences investment decisions, consumer trust, and firm legitimacy in global markets (Eccles & Klimenko, 2019; Alotaibi & Hussainey, 2021). As corporate stakeholders become more environmentally and socially conscious, firms are compelled to integrate sustainability into their reporting practices, especially in countries like Nigeria where institutional frameworks around sustainability reporting remain evolving.

An essential dimension of sustainability reporting lies in firm attributes, such as firm size, profitability, leverage, industry type, ownership structure, and board composition, which have been found to significantly shape the nature, extent, and quality of corporate disclosures (Eneh & Okoye, 2020; Odoemelam & Okafor, 2018). Larger firms, for instance, are more likely to engage in sustainability reporting due to greater stakeholder visibility and reputational concerns (Fifka, 2019). Similarly, profitable firms may have the financial strength to invest in comprehensive sustainability practices, while firms in environmentally sensitive sectors, such as oil and gas, may disclose more to manage legitimacy and regulatory scrutiny (Iredele & Ogunlowore, 2021). Thus, examining the influence of such firm-specific attributes is essential for understanding variations in sustainability reporting practices across Nigerian firms.

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In the Nigerian context, sustainability reporting has gained greater attention following the adoption of the Nigerian Code of Corporate Governance (NCCG, 2018) and the Nigerian Stock Exchange (NSE) Sustainability Disclosure Guidelines, which encourage listed firms to report on ESG issues. Despite these initiatives, evidence suggests significant variation in sustainability reporting across sectors and firms, raising questions as to what drives disclosure practices in the Nigerian business environment (Umar & Ibrahim, 2022). While some firms adopt extensive sustainability reporting to align with global standards, others limit disclosure to symbolic or compliance-based initiatives (Oba & Fodio, 2020). The relationship between firm attributes and sustainability reporting in Nigeria is particularly important, given the country's dependence on resource-based industries such as oil, gas, and manufacturing, which pose high environmental risks. Poor sustainability practices have led to resource depletion, pollution, community unrest, and reputational crises among firms (Odoemelam & Okafor, 2018). Therefore, exploring how specific firm characteristics influence sustainability reporting will provide insights into the determinants of transparency, accountability, and long-term organizational legitimacy within Nigeria's institutional environment. This study, therefore, seeks to examine the relationship between firm attributes and sustainability reporting in Nigeria, with a view to understanding the drivers of disclosure practices, bridging empirical gaps, and recommending strategies for enhancing sustainability accountability among Nigerian firms.

Statement of the Problem

In Nigeria, the growing emphasis on corporate social responsibility and environmental sustainability has underscored the importance of sustainability reporting among firms. However, despite the increasing demand for transparency regarding environmental and social impacts, the relationship between firm attributes such as size, profitability, industry type, and corporate governance and the quality and comprehensiveness of sustainability reporting remains underexplored.

Many firms in Nigeria exhibit varying levels of commitment to sustainability practices, influenced by their unique attributes. Larger firms often have more resources and may adopt more rigorous reporting standards, while smaller firms may lack the capacity or incentive to engage in thorough sustainability reporting. Additionally, the industry sector plays a crucial role, with firms in highly regulated sectors facing greater pressure to disclose sustainability information compared to those in less scrutinized industries. This study aims to investigate the relationship between firm attributes and sustainability reporting in Nigeria, identifying the factors that promote or hinder effective sustainability disclosures. By understanding these dynamics, the research seeks to provide insights that can enhance corporate transparency and foster a culture of accountability among Nigerian firms, ultimately contributing to national and global sustainability goals.

Objective of the Study

The main objective of this study is to examine the Relationship Between Firm Attributes and Sustainability Reporting in Nigeria. The specific objectives were to;

1. Examine the Relationship Between auditor type and Sustainability Reporting in Nigeria.
2. Evaluate the Relationship Between industrial type and Sustainability Reporting in Nigeria.

Hypotheses of the Study

1. There is no significant Relationship Between Auditor type and Sustainability Reporting in Nigeria.
2. There is no significant Relationship Between Industrial Type Sustainability Reporting in Nigeria.

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Review of Related Literature

Conceptual Review

Firm Attribute

The term "firm Attributes" is associated with a variety of terminologies. Its meaning and context differ across the industrial sector. Firm attributes can be described as the various types of information provided in the financial statements of business entities that serve as the predictors of the firms' quality of accounting information and performance. Firm attributes may also be defined as the behavioral patterns of a company's operations, which can assist them in fulfilling their objectives throughout the length of their operations (Amahalu & Ezechukwu, 2017). Firm Attributes, which impact sustainability implementation and disclosure, include firm size, age, leverage, and sales growth. These factors may have a moderating effect on the decision of oil and gas companies regarding whether or not to engage in sustainability reporting (Uyagu et al., 2017). Ali and Isa (2018) defined firm attributes as the distinctive characteristics that distinguish one company from another. It is possible to identify the characteristics of the company based on the pertinent information provided on the financial statements for a specific accounting period. Firm attributes relate to the numerous accounting information provided by firms in their financial statements for a certain accounting period, which might send a message to various stakeholders of firms about their performance. A company's features differ from one corporate entity to another. The company's characteristics can be identified based on the relevant information presented in its financial statements for a particular accounting period (Bunea & Dinu, 2020).

Sustainability Reporting

A sustainability report is a document released by a business or organization that details the social, environmental, and economic effects of its regular operations, according to the Global Reporting Initiative (2011). Therefore, Sustainability reporting is the practice of measuring, disclosing, and being accountable for an organization's social, environmental, and economic performance" (Global Reporting Initiative, 2013). The idea of sustainability reporting (SR) is very new. A sustainability report illustrates the connection between an organization's strategy and its dedication to a sustainable global economy, as well as presenting the organization's values and governance model. In addition to being helpful to stakeholders, sustainability reporting is a methodical way to compile and present the sustainability data required for the management process. In layman's terms, sustainability reporting, also known as triple bottom-line reporting, is a method of assessing and revealing an organization's performance in order to meet social, economic, and environmental parameters. However, when viewed from a broader angle, it encompasses all of the values, issues, and procedures that organizations must take care of in order to reduce the negative effects of their operations and, as a result, improve social, economic, and environmental values. The three lines stand for society, the economy, and the environment. According to research, the term "sustainable" is actually a translation of the term "sustainable development," which means continuity or perpetuity. The Arabic verb "perpetuate" has multiple meanings in the language, such as "slowness in something, requesting permanence and perseverance in it" (Al-Jajjawi & Al-Khafaji, 2020). Sustainability is about ensuring that the needs of the present are met without compromising the ability of future generations to meet their own needs, and that this is achieved in a way that is environmentally sustainable, socially responsible, and economically viable.

Auditors Type

An environmental auditor evaluates an organization's compliance with environmental regulations and sustainability practices. They review environmental policies and procedures. (Environmental auditing, 2011). Previous studies have represented the audit type using three parameters: the role of internal auditors in effective reporting, the impact of the audit committee, and the independence of the audit committee (Chariri et al., 2017); as well as the size of external auditors, particularly the influence of the BIG 4 (Tareq et al., 2017; Marwa et al., 2020). An internal auditor is a professional responsible for assessing and enhancing the effectiveness of risk management, control, and governance processes within an organization. They provide independent, objective assurance and consulting activities aimed at adding value and improving organizational operations. Internal audit is an independent management function involving ongoing evaluation to recommend improvements and strengthen governance, risk management, and internal controls. A forensic auditor specializes in investigating financial discrepancies and fraud, often preparing findings for legal proceedings. They utilize accounting, auditing, and investigative skills to detect fraud and crime in legal matters (Smith and Crumbley, 2019). An external auditor is an independent entity that

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examines a company's financial statements to assess their accuracy and compliance with accounting standards. They operate independently from the entity being audited. The quality of financial information in the annual report heavily depends on audit quality (El-Deeb et al., 2023; Bragg, 2025). A compliance auditor reviews an organization's adherence to regulatory requirements, internal policies, and procedures. They ensure the organization complies with applicable laws, regulations, industry standards, and internal policies (Compliance Institute, 2025).

Industry Type

Considering industry types, industries are classified as high-profile and low-profile based on their environmental disclosures (Ngozi & Ike, 2019). Numerous studies have examined the relationship between industry type and the level of corporate environmental disclosures in annual reports (Ikpor et al, 2019). Each industry has distinct characteristics influenced by competition, growth, political, legal, cultural, or historical factors. High-profile firms face more political and social pressures than low-profile industries because they operate in environmentally sensitive sectors (Nkwoji, 2021). Additionally, sectors with higher pollution levels and stricter regulations—such as chemical, mining, refinery, utility, and others—generally provide more environmental information. High-profile companies operate within industries that are highly sensitive to environmental issues, facing greater societal pressure due to their association with visible environmental concerns like pollution or potential environmental disasters (Monteiro & Aibar-Guzmán, 2010).

Theoretical Review

Adoption of Agency Theory

The agency theory focuses on the monitoring and oversight role of the board of directors. Among the various theories considered, this study is grounded in agency theory as it offers a pertinent framework for comprehending the link between firm attributes and sustainability disclosure practices. According to agency theory, factors such as firm size, leverage, and profitability play pivotal roles in shaping organizations' disclosure practices. Larger companies may demonstrate higher levels of sustainability disclosure owing to their greater resources and visibility, aiming to mitigate potential information disparities and conflicts of interest between management and shareholders. Conversely, companies with higher leverage may be motivated to enhance sustainability disclosure to reassure creditors and safeguard their reputation, thereby minimizing agency costs. By investigating these associations within the framework of agency theory, this research endeavors to elucidate the intricate dynamics between firm attributes and sustainability disclosure practices. Agency theory implies that business size, leverage, and profitability operate as major drivers affecting firms' disclosure practices. Larger organizations may exhibit higher degrees of sustainability disclosure due to their enhanced resources and visibility, attempting to offset potential information asymmetry and agency conflicts between management and shareholders.

Empirical Reviews

Udo (2019) conducted a study on Companies' financial attributes and environmental accounting disclosures of the oil and gas industry in Nigeria. The study aims to investigate the major determinants of environmental disclosure in the Nigerian oil and gas industry using an ex-post facto study design, and the population of the study, which used a census sampling technique, consisted of the ten (10) oil and gas firms listed on the Nigerian Exchange Group (NEG). Descriptive, correlation, and multiple regression statistical techniques were used to analyze the data. The results showed that the sampled oil and gas firms disclosed very little financial and nonfinancial environmental information in their annual reports, with minimum disclosure practices of 0.0283 and maximum disclosure practices of 0.2727. The study also found that as of 31st December 2018, the average disclosure level of the sampled firms' environmental disclosure stood at about 11.67%. The results showed that profitability had a considerable negative influence on environmental disclosure, while leverage and liquidity had significant positive influences, and long-term financing contribution had a negligible positive influence.

Erinoso and Oyedokun (2022) used an ex post facto study approach to examine how environmental disclosure and audits affected the profitability of oil and gas businesses listed between 2011 and 2020 on the Nigeria Exchange Group. Panel data regression techniques were used to examine the data from the research, which sampled eleven firms. Proxies of profitability included returns on equity (ROE), profits after tax (PAT), and returns on assets (ROA). According to the results, environmental audit and disclosure have a considerable positive impact on ROE but a non-significant effect on ROA. On the other hand, environmental disclosure significantly improves PAT while environmental audit has no effect on PAT.

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Salawu (2022) examined firm attributes and commitment to environmental disclosure by conglomerate firms in Nigeria to determine how they induce voluntary disclosure on environmental commitments of six (6) conglomerate companies listed on the Nigerian Exchange for a study period of nine (9) years (2012 – 2020). Environmental disclosure was measured on scores of disclosures or otherwise of eight (8) environmental protection operational measures. The result shows that Board size had no significant influence on a firm's commitment to environmental disclosure.

Amoako et al. (2023) used the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach and a sample of 1340 managers selected from industrial enterprises in Accra Metropolis, Ghana, to evaluate the impact of internal audit functions on environmental sustainability audit and reporting. Enactments, policies, standards, systems and procedures (EPS), sustainability sensitivity (SS), risk management practices (RMP), and internal audit effectiveness (IAE) were the four evaluation criteria that were examined in this study. The results demonstrated a strong positive correlation between sustainability audits and internal audit effectiveness, risk management procedure, and sustainability sensitivity.

Methodology

The study adopts an ex-post facto research design, which involves analyzing existing data without manipulating it. The data were obtained from annual reports and accounts of 48 Nigerian manufacturing firms over the period under study. Since the researcher does not control the data generation process, this design is appropriate for examining relationships among firm-specific characteristics and sustainability reporting.

The data were analyzed using STATA 14.2, employing panel data econometric techniques. Diagnostics and model selection tests were conducted to ensure that the estimation method addressed potential problems such as heteroskedasticity, serial correlation, and cross-sectional dependence.

Model Specification

The study examines the effects of auditor type and industry type on sustainability reporting, while controlling for firm-specific characteristics. The foundational model builds on the classical linear regression framework but is adapted to panel data. The general model is:

$$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_n X_{n+} \mu_t \quad - \quad - \quad - \quad (3.1)$$

Using the present research variables, the model in equation 3.1 above is presented as follows:

$$\mathrm{Sr}_{i_t} = \beta_o + \beta_1 fa_t + \beta_2 bc_t + \mu_t \quad - \quad - \quad - \quad - \quad - (3.2)$$

Where:

sr_{i_t}	=	Sustainability Reporting index on a rating scale approach at time t,
β_o,	=	Constants,
$\beta_1, \beta_2, \ldots, \beta_n$	=	Coefficient of the independent variables in the model,
at_t	=	Audit Type (If auditors are among the big four or not) at time t,
it_t	=	Industrial Type at time t,
μ_t	=	Stochastic error associated with the model.

Estimation Technique

Preliminary diagnostic tests were conducted:

1. Multicollinearity: Variance Inflation Factor (VIF)
2. Heteroskedasticity: Breusch–Pagan test
3. Serial Correlation: Wooldridge test

Results from the diagnostics indicated heteroskedasticity and panel autocorrelation, which were corrected using a Prais–Winsten regression with Panel-Corrected Standard Errors (PCSEs). This approach produces robust coefficient estimates for panel datasets with cross-sectional dependence and serial correlation.

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Robustness Test

To ensure the stability of results, a robustness check was conducted using alternative measurements of the Sustainability Reporting index. The robustness model is:

$$Sr_{it}^{score} = \beta_o + \beta_4 at_t + \beta_6 it_t + + \mu_t \quad (3.3)$$

Where Sr_{it}^{score} is the content-based score of sustainability reporting. The coefficients and significance levels from the robustness test were consistent with the main model, confirming the validity of the results.

Data Presentation and Results

Descriptive Statistics

Table 1: Descriptive Statistics

Variable	*Obs*	*Mean*	*Median*	*Std. Err.*	*Std. Dev.*	*Skew*	*Kurt*	*Min*	*Max*
sr	504	0.2247	0.2286	0.0016	0.0361	-0.0086	2.7458	0.1429	0.3143
at	504	0.6444	0.8000	0.0088	0.1968	-0.5059	1.3887	0.0000	0.8000
it	504	0.4679	0.4000	0.0064	0.1441	1.7554	4.2374	0.4000	0.8000

Source: *STATA 14.2 & Eviews 10.0 Outputs, 2024*

The collated figures of the pooled data set processed using relevant software depicted the values as shown on table 1 above. That is, the means of the nine entered variables made up of dependent and independent variables, a valuable measure of central tendency albeit prone to extreme values, of the quoted 48 manufacturing firms in 504 observations are shown. These are presumed to estimate the real population means of these sampled companies in Nigeria. It showcased that these sampled (manufacturing) firms possess diverse firm specific characteristics. This is a peculiar feature of heterogeneous (panel) data. The largeness is glaringly apparent given that the mean, standard deviation and standard error are measured using similar metrics.

As luck would have it, the standard errors of the means of variables, most valuable estimator, are quite small and conform to extant literature of becoming smaller as the sample size increases significantly in comparison to the true population. In the same vein, the trio exhibited exceptionally very high standard deviations. Further, the medians of all entered variables are quite close to the respective means excluding foreign association that is below the 75 percent at 65%. Range is the residual difference between minimum and maximum values of the distribution for the entered variables. It is 236.46 (131.08 – -105.38).

Pairwise Correlations

Table 2: Pairwise Correlation Matrix with P-values (in Italics)
141 Observations

	Sr	***at***	***it***
sr	1.000	-0.072	0.014
	—	*0.109*	*0.763*
at	-0.072	1.000	-0.018
	0.082	—	*0.684*
it	0.014	-0.018	1.000
	0.763	*0.684*	—

Source: STATA 14.2 Outputs, 2024

Pearson correlation coefficients measure degree of relationship between varied variables. Probability of each correlation coefficient is italized and P-values that are less than 5% confirm strong statistical significance. The table above showed a negative influence of the predictors (auditor type) on Sustainability Reporting. The connections between industrial type and Sustainability Reporting are all positive.

Auditor type -7.2% correlation, industry type 1.4% correlation, with Sustainability Reporting. There exist perfect relationships between explanatory variables (auditor type, and industry type). All these perfect relationships among

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explanatory variables indicate presence of colinearity. Being peculiar to panel dataset, it is usually corrected using colinearity diagnostics assuming non-existence of no lagged values and dummy variables.

Test for Heteroskedasticity

Table 3: Breusch-Pagan Test for Heteroskedasticity
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Test Statistic	*Value*	*Prob > χ^2*
$chi^2(1)$	0.38	0.5364

Null hypothesis (H_0): Constant variance
Variable tested: Fitted values of edi
Source: *STATA 14.2 Outputs, 2024*

Table 3 above shows the Breusch-Pagan test result for heteroskedasticity (non-constant variance) for the specified model given the set of entered variables. It proved that the variance of the error and disturbance terms in the model do not vary (Prob>Chi2 = 0.5364). Null hypothesis (H_0) is thus, accepted at 5% level of significance and rejection of Ho: heteroskedasticity. Absence of heteroskedasticity connotes unbiased standard errors and do not need correction using robust standard errors.

Test for multi-collinearity

Table 4: Variance Inflation Factor

Variable	*VIF*	*1/VIF*
it	1.13	0.8861
at	1.11	0.9044
Mean VIF	1.11	—

Source: STATA 14.2 Outputs, 2024

The above table indicates an absence of multi-colinearity (a characteristic of well collated panel data) between the predictor and control variables because the variable with the highest VIF. The mean VIF is 1.11. While the VIF measures degree of association between two or more independent variables, values above 5 denotes a weakly estimated regression model. The later may be caused by model misspecification, incorrect dataset and collection method(s), model constraints and so on. However, presence of colinearity is regrettably demonstrated between independent variables (see perfect relationships between independent variables on Pairwise Correlations). This is somewhat corrected by adjusting the value of Durbin Watson statistic to be as close as possible to 2.

Table 5: Model Selection Tests

Test	*Statistic*	*Probability*	*Decision*
Breusch–Pagan LM (RE vs Pooled OLS)	$\chi^2 = 5.37$	0.0205	Reject pooled OLS
Hausman Test (FE vs RE)	$\chi^2 = 1.84$	0.3972	Random Effects preferred

Source: STATA 14.2 Outputs, 2024

Table 5 presents the results of model selection tests to determine the most appropriate panel data model. The Breusch–Pagan Lagrange Multiplier (LM) test, which compares the Random Effects (RE) model against the Pooled OLS model, has a chi-square statistic of 5.37 with a p-value of 0.0205. Since the p-value is less than the conventional 5% significance level, the null hypothesis that pooled OLS is appropriate is rejected. This indicates that significant panel effects exist in the data, making the Random Effects model more suitable than pooled OLS.

The Hausman test, which compares Fixed Effects (FE) and Random Effects models, yields a chi-square statistic of 1.84 with a p-value of 0.3972. Because this p-value is greater than 0.05, the null hypothesis that the RE estimator is consistent and efficient cannot be rejected. This implies that the Random Effects model is statistically preferable to the Fixed Effects model for this dataset.

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Table 6: Test for Serial Correlation

Test	*Statistic*	*Probability*
Wooldridge Test for AR(1)	F(1,47) = 12.84	0.0008

Source: STATA 14.2 Outputs, 2024

Table 6 presents the results of the Wooldridge test for serial correlation in panel data. The test examines whether the residuals from the regression model are correlated across time, which violates the assumption of no autocorrelation. The reported F-statistic is 12.84 with a p-value of 0.0008. Since the p-value is less than the 0.05 significance level, the null hypothesis of no first-order autocorrelation (AR(1)) is rejected.

This result indicates the presence of serial correlation in the panel data model. Consequently, standard errors from ordinary estimation methods may be biased, and adjustments—such as using robust standard errors, Generalized Least Squares (GLS), or Panel-Corrected Standard Errors (PCSE)—are necessary to obtain reliable inference.

Table 7: Prais–Winsten Regression Results (PCSE)

Dependent Variable: Sustainability Reporting (sr)

Variable	*Coefficient*	*PCSE*	*z-Statistic*	*Prob. (z)*
Auditor Type (at)	−0.0199	0.0035	−5.66	0.000
Industry Type (it)	−0.0056	0.0169	−0.33	0.739
Constant	0.2487	0.0121	20.55	0.000

Model Statistics

Statistic	*Value*
Observations	504
Number of Firms	48
Wald χ^2 *(2)*	41.32
Prob > χ^2	0.0000
Durbin–Watson	1.98

Source: STATA 14.2 Outputs, 2024

Table 7 presents the results of the Prais–Winsten regression with Panel-Corrected Standard Errors (PCSE), examining the determinants of Sustainability Reporting (sr). The dependent variable is sustainability reporting, while the independent variables include Auditor Type (at) and Industry Type (it).

The coefficient for Auditor Type (−0.0199) is negative and statistically significant at the 1% level (p = 0.000), indicating that firms audited by different auditor types tend to report slightly less on sustainability, holding other factors constant. In contrast, the coefficient for Industry Type (−0.0056) is negative but not statistically significant (p = 0.739), suggesting that the industry classification does not have a meaningful effect on sustainability reporting in this sample. The constant term is positive and highly significant (0.2487, p = 0.000), representing the baseline level of sustainability reporting when other variables are zero.

The model statistics indicate that the regression is based on 504 observations across 48 firms. The Wald chi-square statistic of 41.32 with a p-value of 0.0000 confirms that the model as a whole is statistically significant. The Durbin–Watson statistic of 1.98 suggests minimal concern for first-order autocorrelation after applying the Prais–Winsten correction.

Table 8: Summary of Hypothesis Testing Results

Hypothesis	*Variable*	*Coefficient Sign*	*z-Statistic*	*P-Value*	*Decision*
H_1	Auditor Type (at)	Negative	−5.66	0.000	Reject H_o
H_2	Industry Type (it)	Negative	−0.33	0.739	Fail to Reject H_o

Table 8 presents the results of hypothesis testing for the relationship between Auditor Type, Industry Type, and Sustainability Reporting (sr) in Nigeria.

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Hypothesis One (H_1): Auditor Type

The null hypothesis (H_0) states that there is no significant relationship between Auditor Type and Sustainability Reporting, while the alternative hypothesis (H_1) posits that a significant relationship exists. The regression results show a negative coefficient for Auditor Type (−0.0199) with a z-statistic of −5.66 and a p-value of 0.000. Since the p-value is less than 0.05, the null hypothesis is rejected. This indicates that Auditor Type has a statistically significant negative effect on Sustainability Reporting in Nigeria, meaning that changes in auditor characteristics are associated with decreases in sustainability reporting levels.

Hypothesis Two (H_2): Industry Type

For Industry Type, the null hypothesis (H_0) states that there is no significant relationship between Industry Type and Sustainability Reporting, while the alternative hypothesis (H_1) suggests a significant relationship. The coefficient for Industry Type is negative (−0.0056) but not statistically significant, with a z-statistic of −0.33 and a p-value of 0.739. Because the p-value is greater than 0.05, the null hypothesis cannot be rejected. This implies that Industry Type does not have a significant influence on Sustainability Reporting in the Nigerian context.

Discussion of Findings

The findings of this study reveal differentiated effects of Auditor Type and Industry Type on Sustainability Reporting in Nigeria. Hypothesis One, which examined the influence of Auditor Type on Sustainability Reporting, was supported by the empirical analysis. The regression results indicate a negative and statistically significant relationship between Auditor Type and Sustainability Reporting (coefficient = 0.0199, z = 5.66, p = 0.000). This suggests that changes in auditor characteristics, such as whether a firm engages a Big Four or non-Big Four auditor, are associated with reductions in sustainability reporting levels. This finding aligns with the agency theory, which posits that monitoring mechanisms, represented by the auditor, affect firms' disclosure behaviors. Agency theory emphasizes the role of oversight in mitigating conflicts of interest between management and shareholders, suggesting that variations in auditing practices can influence the extent of sustainability disclosure. The observed negative relationship may reflect auditors' risk-averse approach, whereby stricter oversight limits the disclosure of information perceived as sensitive or potentially reputationally risky, thereby reducing the overall level of sustainability reporting.

Empirically, this result resonates with the findings of Udo (2019), who observed that firm characteristics such as profitability and leverage significantly influence environmental disclosure in Nigerian oil and gas firms. Similarly, Erinoso and Oyedokun (2022) demonstrated that environmental audits, which are closely related to auditing practices, have differential effects on firm performance indicators, implying that audit quality and oversight mechanisms can shape the nature and extent of disclosure. Amoako et al. (2023) further support this by showing that internal audit effectiveness significantly enhances sustainability audits and reporting, highlighting the broader influence of audit-related functions on disclosure practices. Taken together, these studies substantiate the finding that Auditor Type is a critical determinant of sustainability reporting, reflecting the role of professional oversight in shaping corporate transparency.

In contrast, Hypothesis Two, which investigated the effect of Industry Type on Sustainability Reporting, was not supported. The coefficient for Industry Type was negative but statistically insignificant (coefficient = 0.0056, z = 0.33, p = 0.739), indicating that the sector classification of a firm does not meaningfully influence sustainability reporting in the Nigerian context. This suggests that, regardless of whether a firm operates in high-visibility or high-impact industries, such as oil and gas versus manufacturing, industry affiliation alone does not drive differences in sustainability disclosure practices. This finding is consistent with Salawu (2022), who reported that board size and other firm attributes did not significantly affect environmental disclosure among Nigerian conglomerates, highlighting that certain organizational characteristics may have limited explanatory power in determining voluntary disclosure behaviors.

Theoretically, the lack of significance for Industry Type may be explained within the agency theory framework. While agency theory predicts that firm characteristics influence disclosure to reduce information asymmetry and agency costs, it does not inherently prescribe industry as a primary determinant. Instead, it emphasizes governance, oversight, and resource availability as drivers of disclosure practices. The non-significant effect of industry observed in this study suggests that other firm-specific factors, such as auditor type, firm size, and internal governance mechanisms, may exert stronger influence on sustainability reporting than industry affiliation per se.

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Conclusion

In conclusion, the relationship between firm attributes and sustainability reporting in Nigeria reveals significant insights into the dynamics of corporate transparency and accountability. The study highlights a statistically very significant and negative relationship between auditor type and sustainability reporting, suggesting that certain auditor characteristics may hinder the quality or extent of sustainability disclosures. This finding raises important questions regarding the role of auditors in promoting sustainable practices and indicates a potential area for policy intervention and improvement.

Conversely, the nonsignificant negative relationship between industrial type and sustainability reporting suggests that the sector in which a firm operates does not significantly influence its sustainability reporting practices. This could imply that firms across various industries face similar challenges or barriers in adopting comprehensive sustainability reporting frameworks.

Overall, these findings emphasize the need for a deeper examination of the factors influencing sustainability reporting in Nigeria. Addressing the implications of auditor type and fostering an environment conducive to sustainable practices can enhance the quality of sustainability disclosures, ultimately contributing to better corporate governance and environmental stewardship in the country. The study concluded that there is significant relationship between Firm Attributes and Sustainability Reporting in Nigeria.

Recommendations

The study's findings provide useful insights into how specific firm attributes influence sustainability reporting practices in Nigeria. Based on the evidence that auditor type has a statistically very significant and negative relationship with sustainability reporting, while industrial type exhibits a negative but nonsignificant relationship, the following recommendations are offered:

i. Given the significant negative relationship between auditor type and sustainability reporting, it is crucial to invest in training programs that emphasize the importance of sustainability disclosures. Auditors should be equipped with the knowledge and skills to assess and encourage robust sustainability practices among firms.

ii. Firms should foster closer collaboration with their auditors to understand the value of sustainability reporting. Workshops and seminars can be organized to facilitate discussions on best practices and the benefits of transparent reporting.

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