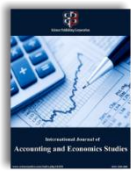
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Research paper



Sustainability Reporting Quality and Return on Assets Of Listed Financial Institutions in Nigeria

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Abstract

The research aims to determine if higher Sustainability Reporting Quality (SRQ) is linked to improved monetary performance, as indicated by the Return on Assets (ROA), among Nigerian financial institutions. An SRQ index of 0-6 was adopted to determine the extent to which SRQ affects ROA in these institutions, with the addition of Firm Size, Age, and Growth as controls. The research utilised an ex-post facto research design as data were obtained from yearly reports of 36 listed Nigerian financial institutions and other relevant sources. The data were collected from 2012 to 2024 and analysed using the Variance Inflation Factor, Pearson Correlation matrix, and Generalized Least Squares regression. Findings revealed that sustainability reporting quality index (SRQ 2, 3, 4, 6), together with firm size, had statistically significant effect on ROA. Listed firms should therefore integrate these sustainability practices into their core business strategies to enhance the financial relevance of sustainability reporting.

Keywords: *Firm Size; Listed Financial Institutions; Nigeria; Return on Assets; Sustainability Reporting Quality Index.*

1. Introduction

Financial performance is a fundamental measure of an organisation's ability to generate economic value, sustain operations, and achieve profitability. It serves as a benchmark for assessing the health and competitiveness of firms across industries, in line with high-level rules and regulations (Pitchandi & Muralikrishna, 2025; Tudose et al., 2022). Financial performance is not only vital for the firm's growth but also serves as an indicator of its capacity to meet stakeholder expectations. This includes anticipations from investors, customers, and employees (Licandro et al., 2024).

Over time, regulators and financial professionals are concerned about the integration of sustainability into the firm's strategy. As sustainability trends, there has been a need to account for it, given its economic, social, and environmental impact on the organisation (Ghardallou, 2022). Sustainability is not merely a passing trend; it reflects a fundamental reorientation of business practices for the modern era. The motivation of this study lies in the fact that companies are increasingly expected to embed sustainable practices at the core of their strategies, reflecting a broader societal demand for responsible growth and long-term value creation. Sustainability reporting quality is particularly crucial in expanding and emerging security markets, where investors rely primarily on annual financial statements as the most credible source of information (Rahad, 2025). Investors, together with other stakeholders, can comprehend, measure, and evaluate a company's social and economic governance, as well as its environmental performance, its set goals and strategies for more skillfully managed ecological change, if the company's devotion to a sustainable global economy is disclosed.

A key issue today influencing firms' financial performance is the growing demand for sustainability reporting (Cardillo & Basso, 2025). Globally, sustainability reporting has evolved from voluntary Corporate Social Responsibility (CSR) disclosures to mandatory ESG compliance frameworks, particularly among publicly listed institutions. However, in some developing countries, the reliability and quality of sustainability reporting issued by financial institutions remain questionable. Even though several studies have explored the effect sustainability reporting quality has on firms' financial performance (Attah-Botchwey et al., 2022; Mans-kemp & Van der Lugt, 2020), most existing literature has not adopted the 0-6 index as a measurement of sustainability reporting quality (SRQ) in relation to Return on Assets. Therefore, to fill this gap, this study adopted the SRQ indexed 0-6 because it recognises the disclosure of quantitative information.

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2. Literature Review and Theoretical Framework

2.1. Sustainability reporting quality and return on assets

Prior literature gave mixed results as regards the impact sustainability has on the performance of firms. For instance, Lawuyi (2025) revealed that CSR, a subset of firms' sustainability reporting, plays no significant role in the financial performance of those insurance firms, particularly in the short term. This is in contrast with Offiaeli et al. (2025), who showed sustainability reporting does have a significant relationship with the performance yardsticks of ROA and Tobin's Q. They were of the perspective that consumer goods sector benefits the most from social and environmental disclosures, given the high level of consumer sensitivity to environmental and ethical concerns.
Lee et al. (2023) obtained 6,519 samples sourced from the Global Reporting Initiative (GRI) report list across the reporting years 2009-2013. The results indicated that a greater Quality of Sustainability Reporting (QSR) leads to increased profitability and Corporate Financial Performance (CFP). Investment in QSR above a certain threshold, however, increases the firm's resource consumption, thus reducing total profitability. It showed how investment in long-term sustainability reporting and a negative profitability position affect the overall profitability of the firm, such as return on assets (ROA). Jadoon, et al. (2020) investigated how valuable sustainability reporting is, with regards to determining business sustainability performance criteria for value relevance. It was established that quality sustainability reporting and company sustainability performance, such as social, economic, and corporate governance dimensions, are valued by investors. They, however, noted that investors view the environmental aspect of corporate sustainability performance to be financially immaterial.
Return on Assets is a metric that evaluates an organisation's ability to make a profit from its total assets. ROA offers perceptions into operational competence, as it measures the income generated from each unit of asset invested. ROA indicates how effectively management utilizes available assets to generate returns, which is essential in sectors where assets such as loans, cash holdings, and investments are core to business operations. Higher ROA values indicate effective asset utilization, signaling that the institution can maximize returns from its asset base. Lower ROA, however, may suggest operational inefficiencies, underutilized resources, or an imbalance in resource allocation (Roffé & González, 2024).
Firm size is typically measured by total assets that are often logged to reduce skewness. In Olawale and Ezeala (2023), bigger firm size had a significant positive influence on ROA, implying that economies of scale and strong capital bases do improve performance. Firm age is typically measured as the timespan since incorporation or listing. Firm growth means the expansion of a company's operations, market presence, and profitability over time, and it is often a key indicator of a firm's success and adaptability (Mansikkamaki, 2023). Quality of sustainability reporting is essential in securities market development and growth, where the yearly financial report is the most reliable informant for the investor.
The asymmetric use of sustainability reporting standards in Nigerian companies, due to its voluntariness, introduces complexity in determining the relationship between SRQ and financial performance (ROA) in the Nigerian listed firms. This study, therefore, adopts a 0-6 scale to rate the quality of the sustainability reports. The 0-6 index reflects progressive stages of reporting evolvements, ranging from non-disclosure to assured sustainability reporting. This allows the study to detect threshold effects across different SRQ levels, offering stronger predictive insight into how distinct reporting attributes relate to legitimacy outcomes and financial performance.

2.2. Theoretical framework

Legitimacy theory, introduced by John Dowling and Jeffrey Pfeffer in 1975, was founded upon the belief that for any organisation to survive, it must be in accordance with the expectations and values of society and thus acquire societal legitimacy or acceptance. Legitimacy Theory has found extensive applications in social, environmental, and sustainability accounting research. Campbell et al. (2003) noted that "legitimacy theory is arguably the most applied theory to describe social, environmental, and sustainability disclosure." The theory proposes that business organizations provide information about their sustainable activities to demonstrate their compliance with society's norms; thus, along the way, they sustain or establish themselves in legitimacy. Hence, this disclosure is not merely about transparency but also about tactically managing perceptions centrally engaged in legitimizing the seemingly unchallenged activities of their organisation.
Legitimacy theory does not, however, exist without opposition. One school of thought argued that the theory can be neglectful regarding the extent to which organisations have the capacity to respond with varying degrees of initiative and creativity to outside pressure. They were of the view that it does not sufficiently consider the internal motivation or volitional driving forces which could direct organisations towards other more sustainable forms of acting (Yang, et al., 2019). In the context of this research, legitimacy theory offers a useful lens through which organisations' functions are viewed within the complex dynamic of social demands and economic performance. Good sustainability reporting is regarded as a tool by which organisations signal their commitment to social values and norms and hence attain legitimacy. This could further ensure the organisation's reputation, the trust of stakeholders, and the availability of resources, all of which are major drivers of economic performance.

3. Methodology

3.1. Data

This research utilized statistics extracted from the audited annual and sustainability reports of 36 listed Nigerian financial institutions spanning the years 2012–2024, along with other relevant data sources. The dependent variable in the model is ROA, which serves as a measure of financial performance. ROA represents a profitability indicator that evaluates a firm's efficiency in generating earnings from its total assets. The independent variable is Sustainability Reporting Quality, assessed using a 0–6 scale adopted from Oyerogba et al. (2024). The SRQ index is categorized as follows: 0 = absence of a sustainability report; 1 = existence of a report with insufficient details; 2 = inclusion of information covering the three scopes of SRQ; 3 = presence of quantitative data in the report; 4 = existence of an oversight committee for sustainability activities; 5 = report assured by a non-audit firm; and 6 = report assured by an audit firm.
The control variables in the model include firm size, age, and growth. Firm size can be determined by the logarithm of total assets. The age of firms is determinable by the logarithm of the difference between the financial reporting year and the firm's establishment year, and company's growth by the rate of change in revenue, calculated as (the current period revenue minus the previous period revenue) ÷ previous period revenue.

3.2. Model specification

The model given below specifies the connection existing between the variables as applicable in this study.

$ROA_{it} = \alpha_0 + \alpha_1 SRQ_{it} + \alpha_2 LnFIS_{it} + \alpha_3 LnFIA_{it} + \alpha_4 LnFGW_{it} + \varepsilon_{it}$

Where:
ROA_{it} = Return on Asset i at year t
SRQ_{it} = Sustainability Reporting Quality i at year t
FIS_{it} = Firm Size i at year t
FIA_{it} = Firm age i at year t
FGW_{it} = Firm growth in year t
α1, α2, α3, and α4 are the coefficients of the independent variable and control variables.
ε_{it} = Error Term

4. Results

4.1. Variance inflation factor (VIF)

In ensuring the dependability of the regression estimates, a VIF analysis was conducted, with results presented in Table 1. All VIF values fall well below the conservative tolerance level of 5. Specifically, VIF scores for the categorical dummy variables representing Sustainability Reporting Quality (SRQ 1 through SRQ 6, excluding the reference group SRQ 0 and the dropped category SRQ 5) range from 1.32 to 1.75, indicating minimal collinearity. These results confirm the statistical independence of the predictor variables and validate their result in subsequent regression models.

Table 1: Variance Inflation Factor

Variable	VIF	1/VIF
SRQ 1	1.32	0.76
SRQ 2	1.61	0.62
SRQ 3	1.75	0.57
SRQ 4	1.36	0.74
SRQ 6	1.67	0.60
Firm size	1.92	0.52
Firm age	1.46	0.68
Firm growth	1.05	0.95

Source: Researcher's computation (2025).

4.2. Breusch-pagan test

Table 2 presents the outcome of the test for heteroscedasticity, which revealed a chi-square statistic and probability chi-square figures of 38.58 (probability = 0.000), significant at 5% level of confidence. This diagnostic test result showed the existence of heteroscedasticity, which was later corrected using Generalized Least Squares, as it provides efficient and consistent estimates (Ohaegbulem & Iheaka, 2024).

Table 2: Breusch-Pagan test for Heteroscedasticity

Breusch-Pagan test for heteroscedasticity
Ho: Constant variance
$Chi^2(8) = 38.58$
Prob > chi2 = 0.0000

Source: Researcher's computation (2025).

4.3. Correlation matrix on return on assets

Pearson correlation matrix shown under Table 3, was done to test for the association between all the study's variables. It revealed that sustainability reporting quality is positively related to ROA (0.17). With regards to the controls, firm size and growth indicate a positive correlation with ROA, while firm age is negatively associated with ROA.

Table 3: Pearson Correlation Matrix on Return on Assets

	ROA	SRQ	Firm size	Firm age	Firm growth
ROA	1				
SRQ	.168**	1			
Firm size	0.003	.558**	1		
Firm age	-0.002	.240**	0.04	1	
Firm growth	0.058	-0.023	0.047	-0.045	1

** Correlation is significant at the 0.01 level (2-tailed).
Source: Researcher's computation (2025)

4.4. Generalized least squares (GLS) regression

This section displays the findings of the GLS regression exploring the effect of Sustainability Reporting Quality (SRQ) on financial performance, as measured by Return on Assets (ROA). The analysis controls for firm-specific attributes, including firm size, age, and growth. The reference category for the sustainability reporting quality variable is SRQ = 0, indicating the absence of any sustainability report. Table 4 reveals a statistically significant and non-linear association between varying levels of sustainability reporting quality and firm financial performance. Specifically, firms categorized under SRQ 1, those producing sustainability reports with inadequate information, are

associated with a 5.35 percentage decrease in ROA, with the result statistically insignificant at the 5% level (β = –0.0535, t = -1.6469, p = 0.0995). This suggests that the provision of low-quality sustainability disclosures does not significantly impact financial performance.
Conversely, the coefficients for SRQ 2, SRQ 3, SRQ 4, and SRQ 6 demonstrate a positive and significant relationship with ROA, with magnitudes increasing alongside reporting quality. For instance, SRQ 2, which reflects reports addressing all three core elements of sustainability (environmental, social, and governance), is linked with a 2.35 percentage point increase in ROA (β = 0.0235, t = 2.4006, p = 0.0163). Also, SRQ 3 (reports with quantitative information) is associated with a 3.61 percentage point increase in ROA (β = 0.0361, t = 3.6769, p = 0.0002). Similarly, SRQ 4 (reports with oversight by a dedicated committee) and SRQ 6 (the existence of sustainability assurance by an audit firm) are associated with 9.18 and 4.04 percentage point increases in ROA, respectively (β = 0.0918, t = 4.0699, p = 0.0000) and (β = 0.0404, t = 3.3949, p = 0.0006). These results indicate that higher-quality and more structured sustainability disclosures are positively related to firm performance, suggesting they may play a role in building investor confidence, enhancing transparency, and potentially contributing to improved operational efficiency. This finding is in line with Thayaraj and Karunarathne (2021) whose research outcome also indicated a positive influence sustainability reporting has on financial performance.
Amidst the control variables, firm size is negatively associated with ROA (β = –0.0153, t = -3.8717, p = 0.0001), suggesting that larger firms may experience diminishing returns on assets. In contrast, firm age does not significantly predict ROA (β = 0.0148, t = 1.1492, p = 0.2511) while firm growth shows a statistically insignificant effect on ROA (β = 0.0003, t = 1.0957, p = 0.2738).

Table 4: The Effect of Sustainability Reporting Quality on Return on Assets – Generalized Least Squares

Variables	Dependent ROA			
	Co-efficient (Std.Err.)	T-test	P-value	Obs
SRQ 1	-0.0535 (0.0325)	-1.6469	0.0995	31
SRQ 2	0.0235 (0.0097)	2.4006	0.0163	117
SRQ 3	0.0361 (0.0098)	3.6769	0.0002	100
SRQ 4	0.0918 (0.0225)	4.0699	0.0000	28
SRQ 6	0.0404 (0.0119)	3.3949	0.0006	30
Firm size	-0.0153 (0.0039)	-3.8717	0.0001	468
Firm age	0.0148 (0.0130)	1.1377	0.2552	468
Firm growth	0.0003 (0.0010)	0.3122	0.7549	468
Constant	0.1553 (0.0438)	3.5402	0.0004	468
R-squared	0.1028			
Adjusted R-squared	0.0872			
P-value	0.0000			

Source: Researcher's computation (2025).

The model explains approximately 10.28% of the variation in ROA (R^2 = 0.1.028), and it is statistically overall significant (p = 0.0000), which indicates an acceptable model fit for panel data in corporate governance research. The result, therefore, underscores the financial relevance of sustainability reporting quality, highlighting that not only the presence but also the depth and assurance of sustainability disclosures matter for firm performance.

4.5. Discussion of findings

The findings revealed a non-linear and statistically significant association between the quality of sustainability reporting and financial performance. There is no significant relationship between SRQ 1 and Return on Assets (ROA), but higher levels of SRQ (2, 3, 4, and 6) are significantly and positively related to improved ROA. This corroborates the assumption that high-quality sustainability reporting improves business performance through heightened investors' confidence and transparency, as well as possibly optimized efficiency. Since higher reporting quality is linked to improved asset-based performance, managers should invest in more detailed, quantitative, and independently assured sustainability reports to enhance operational efficiency and strengthen asset utilisation.
The results are also consistent with the legitimacy theory, as excellent disclosure practices are associated with improved perceptions among various stakeholders, thereby reducing regulatory burdens and improving ROA (Deharlie & Aminah, 2024). Quantitative sustainable disclosure demonstrates firms' efficiency and value creation (Emmanuel et al., 2023). A high level of sustainability reporting assurance (SRQ levels 5 and 6) encourages cognitive legitimacy because it enhances the credibility and reliability of disclosures, thereby making such reports more comprehensible and readily acceptable by stakeholders in their decision-making process (García-Meca, 2024). Also, the presence of sustainability oversight committees (SRQ 4) contributes to moral legitimacy by signaling formal governance commitment to ethical accountability and stakeholder-responsive decision-making that aligns with societal norms and values beyond mere compliance (AlHares, 2025). Furthermore, quantitative sustainability disclosures (SRQ 3) strengthen pragmatic legitimacy by providing stakeholders with measurable and useful information that directly addresses their economic interest and reduces information asymmetry (Di Chiacchio, 2025). The observations are consistent with both Thayaraj and Karunarathne (2021) and Nnedu (2025), whose research outcomes indicated a positive correlation between sustainability reporting and ROA. However, this result is dissimilar to Lee et al. (2023), which spelt out that sustainability reporting hurts the firm. Regarding the control variables, the size of the company is negatively related to ROA, suggesting the presence of diminishing returns for larger companies (Karim et al., 2025), while company age and growth are not significant.

5. Conclusion

This study evaluated the effect of sustainability reporting quality on the return on assets of the listed financial institutions for the period 2012 - 2024. It provided empirical and theoretical information on the subject matter, shedding light on the sustainability reporting quality

in Nigeria, especially in listed financial institutions. By the quantitative method of analysis using GLS, the regression results show that SRQ 2,3,4,6 and firm size have statistically significant effects on the return on assets. The study made use of a 0-6 matrix as measures of sustainability reporting quality within a time frame of 13 years and a sample size of 36 listed financial institutions in Nigeria. The study harnessed methodological implications that contribute to practice, emphasising the need for companies to enhance the quality of their sustainability reporting in order to boost their overall financial performance. Based on the findings of the study, regulators and industry associations are encouraged to promote comprehensive sustainability reporting beyond minimum disclosure, while boards of financial institutions should establish dedicated sustainability oversight committees to ensure effective monitoring and accountability in reporting practices.

Declaration of Interest Statement

No potential conflict of interest was reported by the author(s).

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Ethical Statement

No potential ethical issue was reported by the author(s).

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