



SUSTAINABILITY REPORTING AND FINANCIAL PERFORMANCE OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA: AN EXAMINATION OF SOCIAL AND EMPLOYEE

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Abstract: The study examines the effect of sustainability reporting on the financial performance of listed industrial goods firms in Nigeria. Sustainability reporting is a proxy for social and employee disclosure, while financial performance is a proxy for return on assets. The correlational research design was used in the study. The population of the study consist of the 13 listed industrial goods firms. Secondary data for the study were collected from ten samples of industrial goods firms actively trading on the floor of the Nigerian Exchange Group from 2014 to 2024. Therefore, the data collected were analysed using a panel corrected standard error (PCSE) regression model. The findings reveal that sustainability reporting related to social and employee-related sustainability disclosure had a negative and positive effect on the financial performance of listed industrial goods firms. Based on the findings, the study concludes that sustainability reporting related to employee activities improves financial performance. However, sustainability reporting related to social issues reduces the financial performance of listed industrial goods firms in Nigeria. Among the important policies of the study is that there is a need for the SEC to formulate a sustainability reporting framework, taking into cognisance multiple dimensions vis-à-vis the Global Reporting Initiative to enhance financial performance and thereby mitigate agency conflict between managers and shareholders. It is, therefore, recommended among others, that the government and the regulatory body of listed companies, such as the Securities and Exchange Commission, should make sustainability reporting a part of the requirements for the annual report of a listed company in Nigeria.

Keywords: *sustainability reporting, social sustainability, employee sustainability, financial performance*

1. Introduction

Business performance plays a crucial role in the growth and development of any country worldwide; as such, the performance, either good or bad, has a long-term effect on the economy. Following the fact that a published financial statement is a statutory requirement of



the listed companies in Nigeria. It is undebatable that a wide array of stakeholders relied largely on it to assess the financial well-being or otherwise of a firm listed on the floor of the Nigerian Exchange Group (NXG). The stakeholders to whom a financial statement provides information necessary to make an informed decision concerning business investment range from creditors and shareholders to employees and customers, taking into consideration the influence they have on the business and the economy at large (Ladipo et al. 2015).

The traditional view of corporate responsibility is to maximise profit, but the contemporary time is witnessing a change from profit maximisation to an era of social responsibility, which makes most of the managers of business concern go beyond profit maximisation and take into cognisance the effect of organisational activities on society. These changes in business philosophy brought about sustainability reporting (SR) (Tyani et al. 2018). However, the Nigerian Companies and Allied Matters Act (1990) stipulated that a company is statutorily required to perform some duties, such as taxes and levies, and it does not include corporate sustainability reporting. However, it does place an obligation on the company to ensure that the water and air are free from their negative activities and limit the effect of pollution that adds to climate change (Adeniyi & Fadipe, 2017).

Sustainability reporting is one of the fields in accounting that advocates the idea that companies are not restricted to economic and legal responsibilities but are also responsible to other parties concerned (Adeniyi & Fadipe, 2017). The concept has attracted the attention of the international community, hence investors all over the world are expected to comply with the reporting guidelines. The investors in firms' assets believe that a sound reporting practice is connected with. Increase in financial performance, because socially responsible firms receive respect and loyalty from the host community and other stakeholders, which might result in higher customer loyalty, sales, and employees' morale towards job accomplishment, quality products and services. Consequently, increases financial performance (Hakeem, 2014).

The overall performance of non-financial firms among listed companies in the Nigerian Exchange Group (NXG), specifically, industrial goods firms, posed a great challenge to shareholder return on investment, as several listed firms recorded declining financial performance indicators. Despite sustained revenue growth, for instance, Dangote Cement Plc maintained strong revenue performance during this period; however, its Return on Assets (ROA) declined by approximately 2.6%, Return on Equity (ROE) fell by about 4.1%, and Net



Profit Margin (NPM) decreased by nearly 5.8%, (Dangote Cement Plc, 2023; 2024). Similarly, BUA Cement Plc experienced a deterioration in profitability, with ROA declining by roughly 2.1%, ROE by 3.7%, and NPM by about 4.9 % (BUA Cement Plc, 2023; 2024).

A comparable pattern was observed at Lafarge Africa Plc, where improved sales volumes failed to translate into enhanced profitability, as ROA fell by approximately 1.9%, ROE declined by about 3.3%, and NPM reduced by roughly 4.2% (Lafarge Africa Plc, 2023; 2024). Beyond the cement sub-sector, Cutix Plc also demonstrated this profitability challenge, recording a 1.6% decline in ROA, a 2.8% reduction in ROE, and a 3.5% drop in NPM between 2023 and 2024, even with moderate revenue growth (Cutix Plc, 2023; 2024). Collectively, these developments indicate that revenue expansion within Nigeria's industrial goods sector has not translated into improved financial performance, raising serious concerns about inefficiency to manage micro economic variables, profitability, sustainability, and long-term value creation, and underscoring the need for empirical investigation into governance quality, cost management strategies, and sustainability practices in the sector.

As mentioned earlier, primarily investors in a profit-oriented business are concerned about financial performance, keeping track of this goal; however, management has undermined their decision on employees and products, which can affect the goal of increasing financial performance. The neglect of these two important dimensions of sustainability reporting has sparked interest in the international organisation and has been included in the GRI version of the sustainability reporting framework. In light of this, management, therefore, is expected to comply with their social operation of the reporting guideline (Olaniyan et al.2021). It has been noted in the literature that corporate entities with a sound and balanced sustainability framework build good corporate image, loyalty, employees' commitment, market dominance and acceptance in a host community in general (Chebet & Muturi,2018). Each of these factors is a corporate intangible asset that is capable of generating future economic benefits for the corporate firm. Though Nigeria has taken the lead in ensuring firms engage in sustainability reporting activities, empirical evidence has revealed that less attention is given to employee aspects of sustainability reporting in Nigeria (Chebet & Maturi,2018).

In the last two decades, the empirical literature on corporate sustainability reporting and financial performance has increased tremendously, especially in developed countries. In developing economies like Nigeria, many companies have realised the importance of the report



(Oyeetunde & Akande, 2014). The companies view the practice from philanthropic responsibility (Ohaka & Ogaluzor, 2018). However, the practice favours philanthropic responsibility and neglects other major stakeholders (employees). In general, corporate sustainability reporting is a broad and multi-dimensional concept that cannot be treated as one specific performance index (Dafna et al., 2015). Aside from concentrating on the philanthropic aspect of sustainability reporting, the studies used total spending to measure sustainability reporting, which is more cumbersome and might not give a true picture of policy decisions. The present study employed a checklist, which is more specific and would give clear and specific directions for policy decisions. Recently, however, Egberi (2025) and Abial et al. (2025) adopted a multi-dimensional approach to address sustainability reporting on financial performance. The questionnaires and staff expenditure are used respectively to measure employee development and to look at issues, such as education, safety and health.

Training, accommodation, policy for remuneration and number of employees in the examined company. It is on the foregoing argument; the following research questions are raised to guide the study:

What is the effect of sustainability reporting on the financial performance of listed industrial goods firms in Nigeria?

Objective of the study

The main objective of the study is to examine whether sustainability reporting could increase the financial performance of listed industrial goods firms in Nigeria.

2. Literature Review

This section discusses the relevant literature on sustainability reporting (SR) and financial performance on each of the SR dimensions stated earlier and develops hypotheses therefrom. It also reviews the literature on their concepts and the theory that encourages the relationship among them and the effect of such on financial performance.



Conceptualization

Sustainability reporting and financial performance have a myriad of definitions. There exist many definitions of SR and financial performance as published in articles written on the subject matter.

Financial Performance

The financial performance of a business has significant consequences for the economic growth and development of any country. Good financial performance creates wealth for owners, encourages more investment, paves the way for employment, supports demand and supply, triggers competition, raises the standard of living and a lot more that is connected to economic growth. Poor financial performance, on the other extreme, has a devastating effect on the economy.

According to Abken-Selcuk and Kiymaz (2017), the ultimate goal of a business firm, particularly a corporation, is to maximise shareholders' wealth as reflected in the market price of the firm's stock. Shareholders' wealth creation could also be viewed in the form of dividend pay-out, return on assets (ROA), return on equity (ROE), earnings per share (EPS), dividend per share (DPS) and other performance measurements of Business Corporation. The world of business all the time requires management to be creative and innovative to improve performance (Ladipo et al., 2015). For financial performance, the present study adopts return on assets (ROA). The reason is that the study views financial performance as how efficiently a firm uses its resources to generate revenue. Though market indicators could also be used to assess a firm's performance, social responsibility appears to be more highly correlated with accounting-based proxies of financial performance than market-based indicators (Orlitzky et al. 2003). Aside from the suitability of accounting based on measuring a firm's performance, the SEC and industrial goods firms' report (2016-2020) described poor firms' performance from an accounting point of view.

Sustainability Reporting

There are many definitions of SR, as several researchers have written on it. Each researcher tries to describe the concept to suit the context of his or her study. Jimoh et al. (2015) viewed the concept as the demonstration of certain responsible behaviour jointly by the public and



private sectors. Amaechi et al. (2006) described the concept as the firm's commitment to the environment, society, waste management, employee health and safety, product safety and research and development. Opusunju (2016) perceived it as an environmental project in the form of the distribution of basic social amenities. Segun & Adeyini (2017) defined it as social welfare packages that comprise the renovation of schools, provision of health services and health institutions, building of roads, provision of drinkable water, and donations for a community development project or cultural activities. (2016) defined it as the duty of a business to contribute to the welfare of its stakeholders. It could also be seen as a corporate commitment to act ethically, contribute towards sustainable development, and add value to employees and their families, the host community and the broader community (World Business Councils on Sustainable Development-WBCSD cited by Mardikano, 2014). It is an activity engaged in by every company that has a positive implication on the corporate operation. The company will communicate about social and environmental activities in the form of CSR. In general, sustainability reporting is the process of communicating a company's operation in producing products that are valued from economic, labour, environmental, human rights and social aspects (Global Reporting Initiative).

The present study defined SR from multi-dimensional (stakeholder) perspectives of employee and customer/product. Each of the aforesaid dimensions was defined with specified activities related to, using checklists adapted from Fadio et al. (2013) and Isa and Madaki (2017). The checklists adopted, which were in the aforementioned studies in Nigeria addition, there is no legal framework that defines these dimensions, thereby making it more suitable for the study.

Sustainability Reporting Employee

The employee is one of the key stakeholders in any business corporation. Managers, nowadays, recognise the importance of employees' performance as well as their contribution towards achieving corporate goals. It is necessary to motivate employees to give their maximum support for the interests of corporate objectives. In 2002, the World Economic Forum CEO survey believed that employee motivation was regarded as among the second most important arguments for CSR (World Economic Forum, 2002). Several studies uncovered the importance of recognising employees in a CSR setting and their feelings about not being consulted or involved in the CSR decision-making process (Ditleu & Simonsen, 2015). Moreover, employee training and talent development are key elements of corporate commitment. An enterprise's



human resource development plays an important role in the CSR practice of employee training and care. The care aspect of an employee should be adequate to give their maximum contribution toward corporate success. Many studies have considered human resource management as an essential element of CSR (Rashid et. al.2015).

Sustainability Reporting Social-Related Activities and Financial Performance

Adegboye et al. (2025) investigated the moderating role of sustainability reporting on the relationship between corporate social performance and firm value across the BRICS countries (Brazil, Russia, India, China, South Africa) using quantitative panel data (2017–2022) drawn from the Refinitiv database and analyzed through OLS, fixed effects, robust standard errors, and instrumental variable models. The study is grounded in stakeholder theory, signaling theory, and agency theory, arguing that social performance improves firm value by building legitimacy and that transparency through sustainability reporting strengthens this link. Findings indicate that social performance positively affects firm value and that sustainability reporting significantly amplifies this effect, showing firms with better reporting see stronger valuation benefits. While comprehensive, the study's broad BRICS context may mask individual country/reporting standard differences that affect the social–financial performance linkage (regulatory enforcement variations).

Nnedu (2025) performed a thematic empirical review of sustainability reporting and firm performance literature published between 2018 and 2024, mapping relationships between social disclosures, stakeholder engagement, and financial performance outcomes across multiple studies. Drawing primarily from stakeholder and legitimacy theories, the review concludes that social sustainability disclosures enhance stakeholder trust, corporate reputation, and, indirectly, financial performance, particularly where disclosure quality and governance are strong. As a literature review without primary empirical testing, its conclusions cannot establish causal effects and rely on the quality and comparability of reviewed studies.

Lopes et al. (2024) analysed large Portuguese firms using panel regression of sustainability disclosure indices that included socially-related activities and accounting-based financial performance measures (ROA, ROE). The study relies on stakeholder and signaling theories, positing that social disclosures can improve legitimacy and investor perceptions. Results show a negative association between social sustainability reporting and short-term financial performance, interpreted as costs associated with social initiatives outweighing immediate



earnings. Critique: By focusing on short-term accounting metrics, the study may undervalue long-term reputational gains that social reporting could yield.

Chua and Byun (2024) investigated 127 firm–year observations of Philippine-listed firms (2019–2021) to assess the impact of sustainability reporting initiatives on financial performance (ROA, ROE, EPS) using random effects generalised least squares (GLS) regression and the GRI reporting framework. The study, informed by stakeholder theory, finds an overall negative relationship between social sustainability reporting and financial performance, particularly for ROE and earnings per share, while economic disclosures showed some positive effects. The analysis focuses on relatively short-term effects during early implementation of mandated reporting, potentially missing longer-term financial benefits.

Arif and Handayani (2024) examined 20 Indonesian firms (basic materials and energy sectors, 2018–2022) using multiple linear regression with Sobel tests to determine how economic, environmental, and social dimensions of sustainability reporting influence firm value via financial performance as a mediator. Anchored in stakeholder and signalling theories, the study finds that social and environmental aspects positively affect financial performance, but the direct effect of social reporting on firm value is not significant, while environmental reporting shows a significant positive effect. Financial performance itself strongly mediates firm value. The small sample and sector focus limit generalizability across different industries and emerging-market contexts.

Khan et al. (2021) conducted a global empirical study of ESG performance, including the social dimension, and its relation to financial performance. Using a large international panel dataset (varied countries and firms) and econometric methods suitable for cross-sectional data, the study tests whether material social practices (employee relations, human rights, community engagement) are linked to financial outcomes. While not exclusively focused on sustainability reporting, it shows that strong performance in material social areas correlates with superior financial performance, consistent with stakeholder and resource-based theories. The broad sample obscures specific institutional or regulatory effects that can vary greatly between countries and reporting regimes.

In line with the literature reviewed, the study proposes hypotheses:



H0₃: There exists a positive relationship between social sustainability reporting activities and the financial performance of listed industrial goods firms in Nigeria.

Sustainability Reporting Employee-Related Activities and Financial Performance

Egberi (2025) investigates the influence of employee development on the financial performance of listed consumer firms in Nigeria. The population of the study was made up of 416 workers of the top ten listed consumer goods firms in Nigeria for the period of 2014 to 2024. Taro Yamane's formula was used to determine the size of 201 workers from the earlier population of 416 workers. A survey research design was adopted, through which questionnaires were administered to respondents on employee development. Financial performance, proxied by Tobin's Q, was obtained from the annual reports of listed consumer goods firms in Nigeria. The data obtained were analysed using descriptive and inferential statistical tools. The findings of the study revealed an insignificant effect of employee development on the financial performance of listed consumer goods firms in Nigeria. Regarding the study, the need for a regulatory framework to benchmark the extent of activities related to sustainability reporting in Nigeria is recommended.

Abia et al. (2025) examined the effect of employee welfare on the financial performance of industrial and consumer goods firms in Nigeria. The study covered the period from 2014 to 2023. An ex post facto research design was used, and purposive sampling was employed to determine 25 samples from 34 population of 34 industrial and consumer goods firms combined. Data were sourced from the audited annual report of the sample size of the study for the period of the study. The E-view statistical tool was used to determine the effect of the variables. The study found a positive effect of employee welfare on the financial performance of listed consumer goods firms in Nigeria. The study recommends that the managers of listed consumer goods firms should invest more in welfare responsibility through a safe and healthy work environment, offering competitive compensation and benefits and promoting employee development and well-being.

Ogah et al. (2024) analysed Nigerian oil and gas firms using panel regression on secondary data to evaluate social sustainability reporting, including employee welfare aspects, and its effect on financial performance. The study drew from stakeholder theory, suggesting that employee and community engagement enhances legitimacy and firm outcomes. Results indicated a positive and significant relationship between social reporting (including employee welfare) and Return on Equity (ROE). Critique: Employee-related activities were aggregated



with other social components, so the isolated effect of employee-related disclosures cannot be precisely determined

Aniagboso and Orjinta (2023) examined employee health and safety disclosures alongside other social and governance sustainability practices in Nigerian pharmaceutical companies. Using an ex-post facto longitudinal design with panel regression analysis, the study applied stakeholder and signalling theories. Findings showed that employee-related disclosures positively and significantly influenced financial performance, implying that workforce well-being and transparency can support profitability. The study does not control for potential endogeneity between reporting practices and profitability, which could bias results.

Okutu and Adegbeie (2024) studied sustainability disclosures, including employee-related social practices, in Nigerian oil and gas firms using an ex-post facto design and panel regression analysis. Grounded in stakeholder theory, the study reported a positive correlation between sustainability reporting and financial performance (ROE), though the specific contribution of employee-related activities was mixed due to aggregation with broader social disclosures. The lack of isolation of employee-specific disclosures limits the interpretation of their direct financial impact.

Oncioiu et al. (2020) examined how corporate sustainability reporting, including employee-related disclosures such as workforce standards and human capital practices, relates to financial performance in Romanian firms. The study used quantitative analysis of sustainability reports and financial statements, grounded in stakeholder and legitimacy theories. Findings indicated that social reporting, which incorporates employee-related practices, can enhance financial outcomes, suggesting transparency around workforce practices supports stakeholder confidence and potentially firm value. The study does not isolate employee-related activities from broader social reporting, making it difficult to assess the direct effect of employee sustainability reporting on financial performance.

H0₁: There is no relationship between CSR employee-related activities and the financial performance of listed industrial goods firms in Nigeria.

Triple Bottom Line Theory

The triple bottom line theory was developed by John Elkington in 1998, in his book titled “Partnership from Cannibals with a Fork: The Triple Bottom Line of 21st Century Business” (Brin& Nehme, 2019; Elkington, 1998). The theory comprises three dimensions of business



performance, such as economic, social and environmental aspects of performance, which a firm must pursue to achieve sustainability. The theory is the focus of the 21st century of business organisation, as a result, public and private have embraced the triple bottom line approach, also known as corporate sustainability or sustainability reporting (Colbert & Kurucz, 2007). The economic aspect addresses the financial performance, which is the primary concern of a business; social performance takes care of workers' welfare and customer satisfaction and environmental protection, and community development are fundamental to sustainable profitability in the long run (Ogungbe, 2021). It is on these bases that the triple bottom line theory was used to underpin sustainability reporting and financial performance.

3. Methodology

A correlation research design is adopted to assess the effect of sustainability reporting on the financial performance of listed industrial goods firms in Nigeria. The population consists of all the listed industrial goods firms in the Nigerian Exchange Group that have complete financial statements available on their websites or in the office of the Nigerian Exchange Group (NXG) for the period 2014-2024. As of December 2024, thirteen (13) industrial goods firms were listed; only ten (10) industrial firms met the criteria and census sampling techniques were used to analyse ten industrial goods firms. The study used secondary data, which was obtained from the annual reports and accounts of the ten listed industrial goods firms in Nigeria for the period of the study. Panel corrected standard error multiple regressions were adopted for the panel data analysis to establish the relationship among the variables of the study. Multiple regressions were considered appropriate because they help not only establish a relationship between dependent and independent variables but also provide the causes and effects of their relationship.

Variable Definition and Measurement

The variables of this study consist of the dependent variable, which is firm financial performance measured by return on assets (ROA), and the independent variable is sustainability reporting (Social and Employee). The study, therefore, formulates a framework for the analysis of sustainability practice based on the adapted checklist of Fadio et al. (2013) and Isa and Madaki (2017), which was derived originally from the Global Reporting Initiative (GRI) guideline (2011). To measure the aforesaid sustainability reporting dimension, the study, therefore, adopted an unweighted content analysis approach to the sustainability reporting disclosure index through an annual report. To ensure the reliability of the analysis, the study



assigned “1” to each sustainability reporting disclosure-related activity in the financial statement and “0” to the annual report if no sustainability disclosure-related activity (Nasiru et al. 2018 & Senan et al. 2021) as follows:

$$TVDS = \sum_{j=1}^n \frac{dj}{n}$$

Where *TVDS* is the cumulative score for sustainability reporting disclosure, *DJ* is 1 if shown by an industrial goods firm, or 0 otherwise, and *n* is the maximum score for each industrial goods firm.

A total of 4 and 7 (11) disclosure index items of sustainability reporting, social and employee-related activities, respectively, are developed based on the adapted checklist of Fadio et al. (2013) and Isa & Madaki (2017).

Variables			Definition and Measurement
Dependent variables			
Returns On Assets (ROA)			Measured as net profit before tax divided by total assets, Kantudu &Ilu (2020) and Dachomo et al. (2020)
Independence			
Sustainability Reporting	Society-Related Activity.		Measured as the Ratio of the disclosure score of the individual firm to the maximum scores obtainable from Social-Related Activities (Un-weighted index). Nasiru et al. 2018 & Senan et al. (2021)
Sustainability Reporting Employee-Related Activity			Measured as the ratio of the disclosure score of an individual firm to the maximum score obtainable from employee-related activity (Un-weighted index), Nasiru et al. 2018 & Senan et al. (2021)
Firm Size (FSIZE)			Measured as natural logarithms of a firm’s total assets (Babalola, 2012, and Usman & Amran, 2015)
Leverage (LEV)			Measured as total debt to total assets divided by Kandutu & Ilu, 2020)

Sources: Compiled by the Author from Various Literature, 2025

Model Specification

The models used to empirically test the hypotheses formulated are as follows:

$$ROA_{it} = \beta_0 + \beta_1 SORA_{it} + \beta_2 EMPRA_{it} + \beta_3 BLEV_{it} + \beta_4 FZ_{it} + \mu_{it} \dots\dots\dots 1$$



Where:

ROA	=	Return on Assets
SORA	=	Social related activity
EMPRA	=	Employee-related activity
LEV	=	Leverage
FZ	=	Firm Size
β_0	=	Constant
$\beta_1 - \beta_4$	=	Coefficient of explanatory variables
μ	=	Error term
it	=	Industrial firms and time (Panel Indicator)

4. Results and Discussions

This section presents the descriptive statistics and summary of the regression model used in the study.

Descriptive Statistics

The descriptive statistics of the model of the study are given in Table 4.1 below:

Table 4.1 Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
ROA	100	0.077	0.237	-1.799	0.539
SORA	100	0.505	0.158	0.25	0.75
EMPRA	100	0.450	0.165	0.142	0.714
LEV	100	0.449	0.253	0.004	2.220
FS	100	15.883	2.371	12.064	21.324

STATA OUTPUT 2025

Table 4.1 shows that the minimum and maximum values of return on assets are -1.779 and 0.537, respectively. This implies that industrial goods firms with a high return on assets perform better than those with a lower return on assets. Because the return on assets signifies the actual amount that each unit of an industrial goods firm's assets is capable of generating return on total assets. Even though some of the firms made losses, which could be seen from the minimum value, the mean value of 0.077 proves that the sector is financially profitable.



The average value of Nigerian industrial goods firms' sustainability reporting social-related activity, as indicated by the descriptive statistics table, is approximately 5, signifying that for firms to have average performance as per the checklist adopted to measure sustainability reporting, social-related activity, they should engage in at least 5 sustainability reporting social-related activities. The minimum and maximum activities engaged annually by listed industrial goods firms are 0.25 and 0.75, respectively. The standard deviation coefficient of sustainability reporting social-related activity is 0.237, which implies the level of sustainability reporting social-related activity's contribution to financial performance.

The average value of Nigerian industrial goods firms' employee-related activity is approximately 0.450, meaning that for firms to perform average, the industrial goods firm should engage in at least 5 employee-related activities provided in the adopted checklist of the study. The minimum and maximum values of activities engaged annually by listed industrial goods firms are 0.142 and 0.714, respectively. The coefficient value of the standard deviation of sustainability reporting employee-related activity is 0.165, which shows the level of sustainability reporting employee-related activity's contribution to financial performance.

In the case of ROA from Table 4.2 below, the correlation between sustainability reporting activity related to the social and financial performance proxy was very weak and positive. The correlation between employees is positive and weak. The correlation between employee and social sustainability reporting activities is again very weak and positive. Thus, it proves to be collinearity-free. This has been confirmed from the output of the variance inflation factor (VIF) in Table 4.3 displayed below the correlation matrix table. The VIF result provides evidence of collinearity-free predictors of the study. This is true because the highest VIF value is 1.22 among the variables of the study. The highest VIF confirmed the absence of collinearity since it is less than the 10-threshold provided. The explanatory variables are said to be collinearity-free. The study assumes no multicollinearity on the independent variables (Gujarati, 2004).



Table 4.2 Correlation Matrix

	ROA	SORA	EMPRA	LEV	FS
ROA	1.000				
SORA	0.087	1.000			
EMPRA	0.297	0.024	1.000		
LEV	-0.523	0.200	0.116	1.000	
FS	0.273	0.389	0.110	-0.189	1.000

STATA OUTPUT 2025

Table 4.3 Variance Inflation Factor (VIF)

Variables	VIF	1/VIF
FZ	1.22	0.820
SORA	1.20	0.831
LEV	1.10	0.912
EMPRA	1.05	0.952
Mean VIF	1.14	

Source: STATAOUTPUT 2025

Diagnostic Test

Before the study ran the final regression, a diagnostic analysis was conducted to maintain the unbiasedness of the parameters as argued by Wooldridge (2011). In addition to multicollinearity, the Hausman test was conducted to choose between random and fixed effect models. With a p-value of 0.044. This provides sufficient evidence to uphold the null hypothesis, which says that the fixed effect model is more appropriate. To take care of the heteroscedasticity, evidenced from the χ^2 value of 245.42 with a corresponding P- P-value of 0.000 in the fixed effect regression model, we conduct Panel Corrected Standard (PCSE) to make the result more robust.

Panel Corrected Standard Error (PCSE)

The study presents PCSE results in Table 4.3 below



Table 4.3.1 Regression Result for Model

Variables	Coeff.	Stand. Err.	Z	Significance
Constant	-0.57	0.110	-0.52	0.606
SORA	-0.463	0.064	-7.20	0.000
EMPRA	0.538	0.089	0.089	0.000
LEV	-0.562	0.099	-5.63	0.000
FS	0.023	0.060	3.93	0.000
R²	0.518			
Wald chi²(4)	89.56			
Wald chi²-prob.	0.000			

SOURCE: STATA OUTPUT 2025

The PCSE regression is presented in Table 4.3.1 for the establishment of a relationship between the dependent and independent variables. From the results, thus, the model depicts the constant (β_0) value of -0.57. This means that in the absence of social and employee-related activities, the value of the return on assets is -0.57. In a related development, sustainability reporting social-related activity has a coefficient of -0.463 and a p-value of 0.000. This implies a negative, strong and significant effect on the financial performance since the corresponding p-value is significant at a 1 per cent level of significance. This means there is statistical justification for saying an increase in sustainability reporting related to social activity by one, the industrial good firms are seen to reduce financial performance by the value of -0.463 as seen in the parameter of the model β_1 . The hypothesis developed earlier that said sustainability reporting has no significant effect on financial performance is not supported.

From the same model, sustainability reporting social-related activity has a coefficient value of 0.538 and a p-value of 0.000. This implies a positive and significant effect of sustainability reporting on employee-related activity with financial performance measures (ROA). This is a clear justification that with one increase in sustainability reporting employee-related activity, the financial performance of listed industrial goods firms would improve by 0.538, with the econometric assumption that all things being equal. The hypothesis developed earlier on sustainability employee-related activity and financial performance, therefore, is not supported.



5. Conclusion and Recommendation

The study focused on establishing the effect of sustainability reporting (social and employee) and financial performance measures (ROA) on listed industrial goods firms in Nigeria. The facts related to sustainability reporting (social and employee) were measured with an adopted checklist originally developed by the Global Reporting Initiative (GRI), and financial performance was obtained from the annual report for the period of 2014 to 2024. The estimated PCSE regression analysis revealed that sustainability reporting social-related activity had negative effects on the financial performance of listed industrial goods firms in Nigeria. However, in the same vein, sustainability reporting of employee-related activities had positive effects on the financial performance of the aforementioned firms.

The outcome of sustainability reporting, social and employee-related activities has negative and positive effects on the financial performance of listed industrial goods firms in Nigeria, respectively. Following these facts, therefore, the study recommends that the board of directors and top management should exercise due diligence in allocating corporate resources to minimise the negative and optimise the positive effects of sustainability reporting on financial performance. The government should also introduce a policy framework on sustainability reporting in line with a multi-dimensional approach that would serve as a guide to corporate entities and ensure compliance.

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