



IMPACT OF ENVIRONMENTAL ACCOUNTING ON PERFORMANCE OF LISTED INDUSTRIAL GOODS COMPANIES IN NIGERIA

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Abstract

The study examined the impact of environmental accounting on the performance of listed industrial goods firms in Nigeria. The study adopted the ex-post research design and data was collected from the Nigerian Exchange Group Plc website. Descriptive analysis was used to summarize the data while the panel least squares regression was used to draw inference on the phenomenon studied. The result from the inferential statistics revealed that that environmental remediation cost has positive and significant effect on the performance of listed industrial goods companies in Nigeria. Furthermore, the study revealed that community development cost has negative and significant impact on the performance of listed industrial goods companies in Nigeria. Nevertheless, the result of the study revealed that employee health, safety, and welfare costs have no significant positive impact on the performance of listed industrial goods companies in Nigeria. The study concluded that environmental accounting has impact on performance of listed industrial goods firms in Nigeria. The study recommended that Industrial goods firms should sustain the current financing on environmental remediation to sustain investors' confidence, especially socially responsible investors.

Keywords: environmental remediation costs, community development costs, employee, health and safety costs, industrial goods firms, financial performance

1. Introduction

In today's economic or business world, environmental concerns have become a significant discussion because businesses need the environment to function. Ordinarily, one cannot perform business without resources from the environment and without being in the environment itself. There is a rise of ethical investors, raging host communities, and government concerns, which also affect the survival of businesses.

Accountability in all aspects, especially environmental-wise, of a business has increasingly become more essential for their long-term survival (sustainability). Accountability creates an opportunity to analyse the performance and lifeline of a business which also creates an opportunity for better decision-making, and increased efficiency and benefits other parties to the business as well.

According to the Ministry of Environment (2002), environmental accounting as stated in the environmental accounting guidelines refers to a system of accounting designed to promote

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sustainable development, foster positive community relations, and support efficient environmental protection efforts. This form of accounting helps organizations identify the environmental costs associated with their routine operations, recognize the resulting benefits, and establish effective ways to measure and report these outcomes quantitatively (Okudo & Amahalu, 2023). Accurate and transparent reporting of environmental accounting data is a critical component of corporate accountability (Okudo & Amahalu, 2021).

Environmental accounting as a tool can be said to be a more substantive and tangible aspect of sustainability reporting and corporate social responsibility, as it deals with environmental costs. Environmental costs can be any cost incurred for the sake of the environment, which can include the cost of complying with environmental laws, environmental remediation, pollution control and preventing environmental degradation.

The environment, being a multifaceted concept can be divided into the natural which includes natural resources and media, the man-made which includes artificial structures made by humans, and the human which includes human social, economic and living conditions (Salter, 1994). These divisions are used in the making of environmental laws in some European countries. The focal environmental costs in this study are environmental remediation cost which is consistent with the natural environment, community development cost which is consistent with both the man-made and human environment, and employee health, safety and welfare cost which is consistent the human environment.

The unavailability of standardised frameworks might be to blame as this problem also stretches globally. Although the Ministry of Environment has provided guidelines for environmental accounting, there is still difficulty in comparability as consistent methods have yet to be established for certain areas like the costing methods, inconsistent categorisation of the costs, formulas and measurement scales, and even reporting procedures, so even if all companies follow these guidelines in establishing reports and information it might be difficult to compare them. This has also created difficulty for researchers to perform conclusive studies on them.

Several studies have been carried out due to the rising interest in environmental issues and their relation to the performance and survival of businesses. Several of these studies that have been carried out focused on the oil and gas sector, mining, agriculture, industrial in Nigeria. Therefore, there is limited information on how environmental accounting affected the market-based performance of listed industrial goods companies.

The main aim of this research is to evaluate how certain environmental accounting expenses disclosed in annual reports influence the performance of listed industrial goods firms in Nigeria. The specific objectives of the study are as follows:

- (i) To examine the impact of environmental remediation expenses on the performance of listed industrial goods firms in Nigeria.
- (ii) To assess the influence of community development expenditures on the performance of listed industrial goods firms in Nigeria.
- (iii) To analyse the effect of employee health, safety, and welfare costs on the performance of listed industrial goods firms in Nigeria.

Against this backdrop, the following research questions are raised:

- (i) What is the effect of environmental remediation costs on the performance of listed industrial goods companies in Nigeria?

- (ii) What is the effect of community development costs on the performance of listed industrial goods companies in Nigeria?
- (iii) What is the effect of employee health, safety, and welfare costs on the performance of listed industrial goods companies in Nigeria?

In line with the objective of the study the following hypotheses were formulated in null form:

H₀₁: Environmental remediation costs has no significant effect on the performance of industrial goods companies in Nigeria.

H₀₂: Community development costs has no significant impact on the performance of industrial goods companies in Nigeria.

H₀₃: Employee health, safety, and welfare costs has no significant impact on the performance of industrial goods companies in Nigeria.

2. Literature Review

Conceptual Review

Environmental Accounting

Environmental accounting is a specialized field of accounting that focuses on evaluating both economic and environmental data to support informed decisions regarding resource utilization and associated expenditures. At the organizational level, it encompasses a range of activities dedicated to measuring, analyzing, and reporting a company's environmental performance to relevant internal and external stakeholders (Stasiskiene, 2020).

Commonly referred to as Green Accounting, this approach integrates environmental costs into conventional accounting frameworks. These costs typically arise from business activities that affect environmental quality, especially as companies aim to achieve sustainability and practice responsible resource management (Salavia et al., 2024). The core objective of environmental accounting is to promote sustainable development, enhance transparency through public disclosure, and support efficient and effective environmental conservation initiatives (Ministry of Environment, 2002).

In reality, the principle of this branch of accounting lies in “polluter pays” which holds organisations accountable for their actions in degrading the environment (Ahmad & Pandey, 2024) and the state of its inhabitants therefore, creating room for environmental regulatory compliance and innovation which leads to the involvement of businesses in achieving global sustainability goals [SDG's](Audina & Trisnarningsih, 2024).

Environmental accounting also measures impact (financial and non-financial) on the environment and benefits (financial and non-financial) derived from imputing costs and activities that support the conservation of the environment, hence informing internal decisions of organisations. These are actions taken for the prevention, reduction and removal of negative environmental impact and the restoration and compensation that will follow suit due to such impacts. These actions may include all or a combination of recycling, energy use reduction, waste management, clean-up activities, environmental loss compensation, safety measures and resource use control, all of which incur costs and derive benefits. (Ministry of Environment,2002).

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Environmental conservation costs refer to investments made, measured in monetary terms, and allocated for the purpose of reducing and preventing environmental effect negatively and extinction of such effect and rebuilding and compensation that might follow suit due to the impact. (Ministry of Environment, 2002). In light of this study, the costs to be utilized include:

Environmental Remediation Costs

These are costs associated with restoring and cleaning up a site or area that has been contaminated by pollutants caused by the company's activities. In other words, it is the costs incurred in an effort to restore a site or area to its original quality and safe state. These costs may show up in financial statements in the form of provisions or actual expenses.

Employee health and safety costs

Employee health and safety costs refer to the expenses incurred by an organisation to ensure the well-being of its workforce, keeping in mind that labour is an exhaustible but renewable resource of a company, by preventing accidents, injuries, and illnesses in the workplace, it also includes treating and compensating for any mishap or illness caused to an employee while operating in the workplace. These costs can be divided into direct and indirect categories, and they are associated with activities, equipment, and practices that promote a safe and healthy work environment.

Community development costs

Community development costs in the context of this study are all costs incurred by an industrial company to add to, contribute to or improve the state of community infrastructure and social amenities and the general well-being of the community in which they operate. These costs may appear in financial statements as donations and corporate social responsibility costs towards community development.

Financial Performance

Profitability is a common indicator used to assess a company's performance. As noted by Iswaita (2007), organizational performance can be classified into two categories: financial and non-financial. Financial performance primarily deals with elements reflected in financial statements, with profitability serving as a key metric. Profitability refers to the efficiency with which a company turns its expenditures into earnings for its shareholders (Xero, n.d.). It is widely recognized as a measure of a firm's financial strength and is often employed to benchmark performance either among firms within the same industry or across different industries over time.

Shaw (2024) highlights that achieving optimal profitability requires firms to manage both internal and external financial resources effectively, minimize risks, and adapt to evolving market dynamics through strategic cost management. While achieving profit is vital for any business, an exclusive focus on profitability can result in short-sighted decisions. As emphasized by Ihenyen and Ikejina (2023), firms should also consider broader objectives like sustainability and stakeholder interests to foster long-term growth and stability in an increasingly competitive environment.

Shan (2024) outlines that a company's profitability can be assessed from three distinct perspectives. The first is productivity, which relates to how efficiently the company transforms its inputs into outputs. The second dimension is the actual profitability, reflecting the extent to which the company's revenues exceed its expenses. The third dimension is the market premium, which

represents the degree to which a company's market valuation surpasses its book value. This final aspect is often associated with "firm value," typically measured using Tobin's Q ratio.

Tobin's Q serves as an indicator of firm value in relation to its financial performance, especially from the standpoint of the market. According to Chigiole and Nestor (2023), the company's image and reputation—shaped by its transparency and accountability—significantly influence its financial and market performance, as perceived by stakeholders. Furthermore, Soetan et al. (2024) emphasized that Tobin's Q is a reliable tool for evaluating corporate performance from a market-oriented perspective, since it captures the reactions and expectations of market participants. This market-based evaluation framework contributes to a firm's long-term sustainability and success, as Tobin's Q reflects not just current profitability but also anticipates future financial performance.

Theoretical Review

Social Contract Theory

This research is grounded in the social contract theory, which holds that a company's existence and operations are legitimized by the society in which it functions. According to this theory, society grants legal status to businesses, enabling them to operate as separate legal entities. In doing so, society permits firms to utilize natural and human resources—such as land and labor—drawn from the community. As a result, companies bear an implicit responsibility not only to generate profits but also to contribute positively to the overall welfare of the society that sustains them.

The social contract theory has been notably influenced by numerous economists and philosophers, including contributions from thinkers like John Rawls and contractual moralists such as Bowie and Donaldson. John Maynard Keynes, particularly noted for his work "The End of Laissez Faire," which explores the relationship between government, law, and business in the context of the social contract and does this by emphasising the idea that purely self-interested actions are not enough to ensure a just and stable society and an agreement among individuals and to form societies and government that protect the collective interests of the public.

Lilian in 2022 and Lorenzo in 2013, are economists, who contributed to the study of social contract theory in corporate governance, presenting it as a model of extended fiduciary duties towards all stakeholders and emphasising the importance of a fair distribution of corporate surpluses. Modern corporations are encouraged to act as proactive participants in the social contract, balancing economic goals with social ethics (Shan, 2024).

This encourages the creation of laws and frameworks that consider society. The evolution of corporate governance necessitates a readjustment of laws to reflect collective interests and social justice, as highlighted by Moncrieff (2022). While the social contract theory provides a robust framework for corporate governance, some argue that moral obligations may not strictly emerge from a social contract but rather be sustained by it, suggesting a more nuanced understanding of corporate ethics (Inusah & Gawu, 2021).

Empirical Review

Several studies have been done to examine the effect of environmental accounting on the performance of companies across different sectors and industries in Nigeria, and their findings are equivocal:

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Emmanuel Chinan et al. (2024) explored how the disclosure of environmental accounting information influences shareholders' investment decisions in listed oil and gas firms in Nigeria, particularly focusing on its effects on market share value and market capitalization. The study adopted an ex post facto design and relied on secondary data extracted from the annual reports of eight companies spanning 18 years (2005–2022). Using panel regression analysis through the Random Effect Model and Driscoll-Kraay standard errors for both models, the study found that environmental accounting disclosures had a significant positive effect on both market share value and market capitalization. Based on these findings, the researchers concluded that transparent environmental reporting meaningfully impacts shareholder investment decisions. They recommended strict enforcement and compliance with existing environmental regulations, especially within Nigeria's oil and gas sector.

Similarly, Soetan et al. (2024) investigated how different components of corporate environmental reporting affected the growth of return on capital employed (ROCE) among Nigerian listed manufacturing firms. Using an ex post facto design, the study utilized secondary data from 39 listed manufacturing firms over a 10-year period (2010–2019). Multiple regression analysis revealed that while non-financial environmental disclosures had no significant effect on ROCE, financial and performance-related environmental information significantly and positively influenced ROCE. Furthermore, when environmental reporting components were combined, they had a statistically significant positive impact on ROCE growth. This highlights the importance of comprehensive environmental reporting in enhancing firm performance.

Etale et al. (2024) conducted a case study on Conoil Plc to examine the link between environmental accounting and financial performance. The ex post facto design was used, relying on secondary data from annual reports, Nigerian Exchange Group (NXG) downloads, and corporate websites covering the years 2008 to 2022. Data analysis was carried out using descriptive statistics, correlation analysis, and OLS regression with EViews 9 software. Findings showed a negative correlation between environmental restoration costs (ERC) and both profit after tax (PAT) and return on assets (ROA), while PAT and ROA were positively correlated. Regression results indicated that ERC negatively impacted ROA significantly, though neither ERC nor health, safety, and environmental (HSE) costs had a significant effect on PAT. The study recommended regular environmental audits and investments in renewable energy as strategic measures to enhance compliance and sustainability.

Eke et al. (2024) evaluated how environmental disclosures affect the financial performance of brewery firms in Nigeria. They focused on disclosures related to employee health and safety, waste management, and environmental protection, using cash value added (CVA) as the measure of performance. An ex post facto design was applied with data from four brewery firms collected between 2013 and 2022. Descriptive statistics and EViews 9.0 were used for data analysis. Results showed that employee health and safety disclosures significantly impacted CVA, whereas waste management and environmental protection disclosures did not. Based on these results, the researchers recommended that brewery firms develop robust health and safety cost frameworks to foster a productive and conflict-free work environment.

Jimoh et al. (2023) analyzed how environmental accounting practices affect the market value of Nigerian oil and gas companies. Using the Global Reporting Initiative checklist and secondary financial data within an ex-post facto design, they purposively selected 12 firms out of

18 listed ones. Employing panel data multiple regression, their findings indicated that sound environmental accounting significantly enhances firm value. They advised managers to prioritize robust environmental accounting to strengthen stakeholder confidence and improve company valuation.

Chijioke and Nestor (2023) explored the relationship between environmental accounting and the profitability of listed oil and gas firms on the Nigerian Stock Exchange between 2011 and 2021. They examined the influence of waste management, community development, employee health and safety, and environmental remediation costs on net profit margin, using Pearson correlation and panel least squares regression via STATA 13. Results revealed significant positive impacts of all environmental cost components on profitability. The authors suggested that firms integrate environmental remediation into accounting systems to accurately reflect real costs and support strategic decisions.

Akpan (2023) investigated the impact of green accounting on shareholder value in Nigerian consumer goods firms from 2012 to 2021. Employing ex-post facto design and least square dummy variable regression, a random sample of 20 firms was selected using the Taro Yamane method. Variables such as biodiversity, emission, waste, water and effluent disclosures, and compliance with environmental laws were used as proxies for green accounting, while shareholder value added (SHVA) was the performance metric. Findings showed that biodiversity, water and effluents, and compliance disclosures significantly influenced shareholder value. The study recommended mandatory green accounting practices to enhance stakeholder perception and firm value.

Ihenyen and Ikegima (2023) examined the effect of environmental accounting on financial performance metrics—ROA, ROE, and profit margin—of listed Nigerian industrial firms. Using secondary data and canonical correlation analysis with SPSS v26, they found a significant association between environmental accounting indicators (waste management, community development, and employee health and safety costs) and firm performance. They recommended mandatory environmental accounting disclosures in annual reports to improve transparency.

Olushola et al. (2023) studied the influence of environmental accounting on the financial performance of Nigeria's aviation sector, focusing on environmental R&D, pollution control policy, and waste management. All five listed aviation firms formed the study sample. Using OLS regression, findings revealed that R&D and waste management negatively and significantly affected ROA, whereas pollution control policies had a positive significant effect. The study emphasized the need for better management of environmental expenditures to improve financial outcomes.

Etale (2023) explored the link between green accounting and corporate viability using data from selected oil firms between 2010 and 2022. Restoration, redemption, and compensation costs were used to represent green accounting, while return on investment was used as a viability measure. Although the relationship was positive, it lacked statistical significance. The study advocated for the adoption of standardized green accounting disclosure frameworks among publicly traded firms.

Abdullahi and Muhammad (2023) investigated the impact of community development cost and cost of administration on accounting (return on assets) and market-based (Tobin's Q) financial performance indices of industrial goods firms in Nigeria from 2012-2021. The study arrived at a

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significant and positive effect on their accounting-based indices but an insignificant and negative effect on their market-based indices despite speculations of positive impact on stakeholder's interest but his recommendations included that, management should employ environmental costs with components that cater for all stakeholders' interests. This study aims to include other environmental cost variables (as aforementioned) that might contain elements that cater for stakeholder interest and may produce a more significant and positive effect on stakeholders' interest.

Meanwhile, the study performed by Ezekiel and Ernest (2022), which only focused on ROA as the index, concluded that accounting for environmental did not significantly affect ROA of listed industrial goods companies in Nigeria from 2010-2021. This shows the inconclusiveness of various studies done on environmental accounting and its effect on this sector of the economy, creating room for further research to discover new areas that may show new results.

As apparent from the studies reviewed, there is limited information and study done on sectors like the industrial goods companies, and the few studies reviewed were quite equivocal, especially from a market perspective, as far as observation goes. Therefore, current certainty and relevance has not been achieved, showcasing the need to update knowledge in the area. This study will build upon previous work on environmental accounting by exploring market based financial performance and seeing how it affects Industrial goods firms listed in Nigerian Exchange group considering years 2010-2024.

3. Methodology

Research Design

Ex-post facto research design was employed in this research to analyse the effects of environmental accounting on how quoted industrial goods firms in Nigeria will perform. An ex post facto approach is adopted because of the historical nature of the data, therefore leaving no room for data manipulation. The research population was all the listed industrial goods companies on the Nigerian Exchange Group, which is thirteen (13) as at December 31st, 2024. Therefore, the sample size consists of the entire 13 listed industrial goods companies, making this a census sampling. This research also made use of information generated from financial results of the quoted industrial goods companies listed in the Nigerian Exchange Group. The data is confirmed valid and reliable because it has been assured by external auditors.

Method of Data Analysis

The analysis in this research made use of multiple regression analysis, specifically the panel data (longitudinal) regression. The study will also conduct preliminary analysis and tests including descriptive statistics, the Hausman test, which was used to determine the option fixed effect (FE) or a Random effect (RE) regression technique and a Pearson correlation matrix to measure and display the linear relationships between the multiple variables in the dataset. The analysis will be executed with the help of STATA 13 statistical software.

Model Specification

The following research model was formulated in line with the research hypotheses in order to empirically determine the effect of environmental accounting on profit of energy firms and was adapted from the work of Chijioke & Nestor (2023). The model was expressed as:

$TQ_{it} = \beta_0 + \beta_1 ERC_{it} + \beta_2 EHSC_{it} + \beta_3 CDC_{it} + \beta_4 LEV_{it} + \mu_i + \lambda_t + \varepsilon_{it}$; where: TQ_{it} is Tobin's Q of firm i in period t; ERC_{it} is Environmental Remedial Cost of firm i in period t; $EHSC_{it}$ is Employee Health and Safety Cost of firm i in period t; CDC_{it} is Community Development Cost of firm i in period t; LEV_{it} is Leverage of firm i in period t; I is firm identifier (13 firms); t is time variable; β_0 is intercept; $\beta_1, \beta_2, \beta_3, \beta_4$ is regression coefficients for each independent variable; μ_i is firm-specific effect (Fixed or Random Effect); λ_t is time-specific effect; ε_{it} is error term.

Variables Measurements, Description and Sources

The summary of the variables, their nature, description, source and A priori expectations are given in the table below:

Table 1

Summary of Variables in Study

S/N	Variable	Nature	Description	Source	A priori Expectation
1	TQ	Dependent Variable	Tobin's Q= Total market capitalisation+ Total long-term debt/ Total Assets	Financial statements	
2	ERC	Independent Variable	Environmental remediation costs	Financial statements	$\beta_1 < 0$ (Negative)
3	EHSC	Independent Variable	Employee health and safety costs	Financial statements	$\beta_2 > 0$ (Positive)
4	CDC	Independent Variable	Community development costs	Financial statements	$\beta_3 > 0$ (Positive)
5	LEV (this will only be applied if deemed necessary in the process of data analysis)	Control Variable	Leverage= Total debt/Total Equity (used to control the impact of debt servicing on corporate performance and wealth creation)	Financial statements	$\beta_4 < 0$ (Negative)

Source: Author's Compilation (2025)

Decision Rule: The hypothesis of this study will be tested at 5% (0.05) of significance. Accept the null hypothesis when $p > 0.05$ and reject the null hypothesis when $p < 0.05$.

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4. Results and Discussions

Descriptive Statistics

Table 2

Descriptive Statistics

	TQ	ERC	EHSC	CDC	LEV
Mean	0.994136	15.12294	75.10110	123.3322	0.019397
Maximum	1.609958	37.40000	218.0000	169.2000	0.337257
Minimum	0.599708	0.000000	20.99911	63.55000	0.000971
Std. Dev.	0.147460	3.333448	36.12229	24.44984	0.126212

Source: Author's Computation, 2025

Table 2 shows a descriptive statistic of variables used in the study. The mean of Tobins Q stood at 0.994136. The minimum and maximum value of Tobins Q in the study was 0.599708 and 1.609958 respectively, with a standard deviation of 0.147460 exhibiting considerable clustering around the mean. The mean of the independent variables – ERC, EHSC and CDC stood at 15.12294, 75.10 110 and 123.3322 respectively. The standard deviation of all independent variables exhibited considerable clustering around the mean, The mean of leverage stood at 0.019397.

Table 3

Correlation Matrix

	TQ	ERC	EHSC	CDC	LEV
TQ	1.000000				
ERC	0.305638	1.000000			
EHSC	0.198229	-0.009116	1.000000		
CDC	-0.291521	-0.032222	-0.203011	1.000000	
LEV	-0.100662	-0.370315	-0.130604	-0.260773	1.000000

Source: Author's computation, 2025

The linearity of variables (correlation matrix) in Table 3 shows that the variables exhibited both positive relationships. This is seen in the association between ERC and TQ (0.305638), EHSC and TQ (0.198229), CDC and TQ (-0.291521). The strength of association between variable were above the threshold of 0.80 suggesting the presence of the problem of multicollinearity in the predictor variables (Studenmund, 2014). However, to further validate the veracity of this result, the Variance Inflation Factor test was done

Diagnostics Statistics

We carried out various diagnostics test in order to fulfil the basic assumptions of regression. Some of the diagnostics test we did was autocorrelation test, serial correlations test, constant residual error (Heteroskedasticity), normality and model misspecification test. All the test reported positive.

Table 4

Random Effect Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.996351	0.091256	10.91819	0.0000
ERC	0.004171	0.001882	2.216775	0.0304
EHSC	0.000471	0.000406	1.159285	0.2509
CDC	-0.001328	0.000625	-2.123775	0.0378
LEV	-0.051617	0.143944	-0.358589	0.7212
R-squared	0.896100	Mean dependent var		0.954136
Adjusted R-squared	0.762506	S.D. dependent var		0.114460
S.E. of regression	0.105991	Akaike info criterion		-1.577126
Sum squared resid	0.674042	Schwarz criterion		-1.409866
Log likelihood	56.25660	Hannan-Quinn criter.		-1.511131
F-statistic	3.659026	Durbin-Watson stat		1.081333
Prob(F-statistic)	0.009859			

Source: Author's Computation (2025)

Table 4 presents the outcome of the random effects panel least squares regression analysis conducted for the study's model. The independent variables used in the analysis were found to significantly influence the performance of listed industrial goods firms in Nigeria between 2020 and 2024. This inference is supported by the F-statistic value of 3.659026 and a corresponding p-value of 0.009859, which is less than the 0.05 significance level.

Additionally, the adjusted R-squared value of 0.762506 indicates that approximately 76.3% of the variation in firm performance can be explained by the explanatory variables included in the model. The remaining 23.7% of the variation is attributed to other factors not captured in the model but accounted for by the standard error of the regression (SE = 0.105991).

Result of Hypotheses Test

H₀₁: Environment Remediation Cost has no significant effect on the Performance of Listed Industrial Goods Companies in Nigeria.

Based on the findings in table 4, environmental remediation cost was found to have a positive and statistically significant effect on firm performance, with a coefficient (β_1) of 0.004171, standard error (SE) of 0.001882, and a p-value of 0.0304, which is less than 0.05. Therefore, the null hypothesis is rejected, and the alternative hypothesis—which posits a significant positive effect—is accepted.

H₀₂: Community Development Cost does not significantly impact the Performance of Industrial Goods Companies in Nigeria

The regression results from table 4 show that community development cost has a negative and statistically significant effect on performance, with a coefficient (β_1) of -0.001328, SE = 0.000625, and a p-value of 0.0044, which is also below the 0.05 threshold. Consequently, the null hypothesis is rejected.

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H₀₃: Costs related to Employee Health, Safety, and Welfare do not significantly affect the Performance of Industrial Goods Firms in Nigeria.

The analysis in table 4 indicates that this cost component does not have a statistically significant impact on performance, with a coefficient (β_1) of 0.000471, SE = 0.000406, and a p-value of 0.2509, which exceeds 0.05. Therefore, the null hypothesis is retained.

Discussion of Findings

The findings indicate that environmental remediation costs exert a positive and statistically significant influence on the performance of industrial goods firms in Nigeria. This outcome contrasts with the study by Etale et al. (2024), which reported a negative association between environmental restoration costs and firm performance. However, the results align with those of Chijioke and Nestor (2023) and Olushola et al. (2023), who observed a positive relationship between environmental restoration costs and firm performance.

Furthermore, the study showed that community development expenses have a negative and significant impact on the performance of industrial goods firms in Nigeria. This contradicts the findings of Etale et al. (2024), who reported a positive relationship, as well as those of Chijioke and Nestor (2023) and Ihenyen and Ikegima (2023), who also found a positive effect. In contrast, Abdullahi and Muhammad (2023) found no significant relationship between community development cost and firm performance.

The study revealed that employee health, safety, and welfare costs do not have a significant impact on firm performance. This result is inconsistent with previous findings by Etale et al. (2024), as well as Ihenyen and Ikegima (2023), who reported a positive relationship. Similarly, Eke et al. (2024) also found that such costs positively affect firm performance.

5. Conclusion and Recommendations

This research assessed the effect of environmental accounting on the performance of listed industrial goods firms in Nigeria over the period 2020–2024. Based on the findings, it was concluded that environmental remediation costs significantly and positively affect firm performance. In contrast, community development costs were found to have a significant but negative impact, while employee health, safety, and welfare costs had no significant influence on firm performance.

In line with findings of study, the following were recommended:

- (i) Industrial goods firms should sustain the current financing on Environmental Remediation to sustain investors' confidence, especially socially responsible investors.
- (ii) There should be increased investment by industrial goods firms on community development to boost financial performance.
- (iii) The welfare of staff of industrial goods firms should be taken seriously, as they are key factor to achieving improved financial performance.

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