

HOW DOES ENVIRONMENTAL SUSTAINABILITY DISCLOSURE INFLUENCE THE PROFITABILITY AND SHARE PRICE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA.

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Abstract

The study examined the influence of environmental sustainability on profitability and share price of 21 consumer firms in Nigeria from 2013 to 2023. The study used multiple regression technique to analyse its data. The findings revealed that environmental sustainability disclosure has positive influence on profitability and share price. In conclusion, environmental sustainability disclosure significantly transforms the effectiveness of certain governance mechanisms, particularly profitability and share price. This suggests that senior management teams should not treat audit functions merely as statutory obligations but as strategic governance infrastructure capable of enhancing share price effectiveness.

Introduction

Corporate reporting on environmental disclosure have been voluntary social practices carried out by most firms especially in developing economies. This practice has gained increasing importance following the commencement of global efforts towards sustainability, most notably through the United Nations' Sustainable Development Goals blueprint (Madawa & Frank, 2022). Over the years regulatory bodies around the world have been developing mandatory disclosure frameworks however evidence of improved financial performance post disclosure remains mixed (Nnedu et al., 2025). Some of these frameworks include the Nigerian Exchange Group' directive on the mandatory disclosure of non-financial information by companies registered on the exchange platform from 2018 (NSE Nigeria). Today, majority of consumer goods firms in Nigeria still practice poor reporting habits even after NGX's directive. Such inefficient environmental disclosure increases information asymmetry thus lowering value relevance of environmental sustainability activities to potential investors (Okoba et al., 2025). Therefore, this study seeks to ascertain the effect of environmental sustainability disclosure on firms' profitability and share

price (Akinleye & Ogundepe, 2024). By conducting this research, it will be uncovered whether or not firms' reporting on their activities that affect the environment such as reducing carbon emissions or pollution control is value relevant to investors through increased market capitalization and profitability (Bako, 2026).

This study is relevant because it will shed light on ways consumer goods firms are addressing concerns raised by members of the public about activities that negatively affect the environment. The study findings will help to inform better decisions made by company management teams. This study will also help policy makers determine whether more regulations should be provided to strengthen green accounting practice among firms listed on the NGX (Adelabu & Salaudeen, 2025). This research is also relevant because by determining how green accounting activities affect firms' profitability and share price, companies will be able to address external concerns on their environment activities and the associated costs in order to appeal more to investors and reduce their cost of capital (Yahaya, 2026). For example, while many stakeholders may view efforts towards achieving environmental sustainability as a cost that firms incur, this may not always be

the case. Findings from this study will provide insight on how investors can use information about firms' environmental activities to take investing positions that will benefit them in the long-run (Udofia et al., 2025). Overall, this study will provide clarity on how environmental sustainability activities which include a wide range of policies and procedures that are specific to particular industry affect firms' financial results.

2. Literature Review

Theoretical Foundation

Legitimacy theory and signaling theory can be used to justify the relationship between environmental disclosure and firms' financial performance (Xie et al., 2018). Legitimacy theory suggests that firms disclose information about their environmental activities in order to meet the expectations of society therefore decreasing information asymmetry between firms and their shareholders. Signaling theory also suggests that firms' concern towards the environment signals to investors that the company is taking steps to ensure its activities are profitable in the long-run. Therefore, stakeholders will have trust in the company which will improve firm value (Osinbowale et al., 2024). Additionally, the resource-based view can be used to justify the stated relationship because stakeholders can view environmental disclosure as being objective and reliable thus creating a competitive advantage for the firm.

Research has shown that firms that adopt proactive environmental accounting are able to build better brands which will translate to more investors thus improving the firm's profitability (Amoako & Attafuah, 2024). Also, empirical research analyzing the effect of green accounting on the market value of manufacturing firms showed that there is a significant relationship between green accounting and corporate value. The study showed that by disclosing information on costs incurred during efforts to achieve environmental sustainability, firms are able to

gain more trust from investors and the general public therefore increasing their legitimacy. Another study demonstrated that environmental disclosure does not have a significant direct effect on firms' profitability however, it showed that environmental disclosure significantly lowers firms' operating costs (Hufazsyah et al., 2026). Although prior research has shown that share price reacted positively to high quality ESG reports. However some researchers argue that excessive spending on the environment can hurt firms' earnings.

This can be explained by the lack of institutional support for voluntary environmental disclosures. The institutional theory of disclosure suggests that the institutional pressure which can be normative influences the degree to which firms will disclose their environmental activities in order to be perceived as legitimate in their operating environment (Zik- Rullahi & Jide, 2023). Resource-based view and Stakeholder Theory. Together: Environmental accounting acts as a legitimacy tool because it builds stakeholders trust by improving quality of information that is disclosed by the firm thus reducing cost of capital and increasing firm value (Saalah, 2026). However, this will only be if firms are able to incorporate environmental externalities in their accounting information systems (Chhoidub & Pangtu, 2025). Environmental sustainability disclosures affect firms' profitability in the way that policies aimed at reducing environmental footprints are centered around efficiency. Such policies include reducing energy consumption, waste and even water utilization. This means that the firm will see an increase in margins due to a decrease in costs of production. Another way environmental disclosures affect firms' profitability is that customers are likely to be more loyal to a brand that concerns itself with environmental sustainability. This will increase the market share of the company and will in return

increase sales. Some firms may want to improve their environmental performance in their reports only to meet set standards not because they are trying to implement activities that help the environment. This is supported by legitimacy theory which states that firms will voluntarily participate in environmental activities to regain their public image but not actually improve on their operations. (Adnan et al., 2023) Another study showed that whether or not green supply chain management moderates the relationship between environmental disclosure and share price.

Meaning that stakeholders will only reward the firm if the changes they claim to have made in order to be environmentally friendly are authentic (Longoni & Cagliano, 2018). Shareholders react to environmental social and governance reports by analyzing how the firm creates shared value. By shared value, this means how environmental concerns are tied to the firm's financial success in the long run (Rahma, 2022). For example, investors can use the information provided in a high-quality ESG report to reduce risks associated with investing in a company and take advantage of any future competitive advantage that the firm may gain by being environmentally friendly. Reducing information asymmetry by disclosing ESG information increases the firm's credibility among stakeholders and will affect shareholders' decision when it comes to putting their money in the said company. Companies with superior ESG engagement have been shown to gain competitive advantages by running efficient operating models and improving their supply chains therefore increasing their firm value. Additionally, studies have shown that firms that publish ESG reports have higher stock returns than firms that do not integrate their reports (Zie et al., 2018). Integrating reports are viewed as more credible than standalone reports. However, some researchers have

shown that there is a compliance cost that comes with mandatory disclosure and this may reduce firms' profitability in the short term (Yu et al., 2018).

Hence, firms face a trade-off between financial performance and social acceptance which is what the neo-institutional theory argues. But by reducing risks which investors face the firm is able to lower their equity capital requirement. This is because stakeholders view the efforts the firms are putting towards environmental concerns as a way of reducing future threats such as lawsuits and even negative publicity. Environmental problems such as climate change can negatively affect the firm's future thus investing in sustainability programs now will help the firm achieve financial growth in the future consistently (He, 2024). In conclusion, by improving operational efficiency through activities that concern environmental sustainability and disclosing such information will create a long-term competitive advantage for the firm allowing it to outperform its competitors when market conditions are volatile (Hussain et al., 2024). This theory helps justify how environmental activities create a competitive advantage for firms. Resource-based view suggests that in order for a firm to gain and maintain a competitive advantage, it must possess resources that are rare, difficult to substitute for and costly for competitors to imitate (Moussa et al., 2024). By having such capabilities, the firm can take these internal activities and signal to stakeholders externally. For example, a firm can use its environmental concern to innovate on how they manufacture their products as well as their marketing strategies.

Environmental proactiveness will lead to innovation that will not only help the firm cover the costs of complying with environmental standards but will also create a sustainable competitive advantage. The natural resource-based view suggests that

investments in pollution prevention programs as well as product stewardship takes time to gestate (Raghoudey et al., 2019). Empirical evidence has shown that such investments did not begin to affect the firms' ROA until after 2 years (Ghisetti & Rennings, 2014). Meaning that a firm's competitive advantage gained through sustainability efforts is path dependent. Just complying with mandatory environmental reporting requirements is a ritual that needs to evolve into something that changes the firms internally (Ryan et al., 20X). Allowing the firm to develop resources and capabilities that competitors will find difficult to imitate (Ghassim & Bogers, 2019; Kassier, 2024). Other researchers suggest that by incorporating these unique resources and capabilities. Will allow the firm to stay ahead of market trends and take positions that are more favorable compared to their competitors. (Chen et al., 2016) An example of this is that by concern environmental sustainability, firms will be able to cut on costs through reducing waste and optimizing the use of resources. Not only will this reduce costs but will also reduce dependence on raw materials. Improving product stewardship and investing in clean technology will allow the firm to innovate more, staying ahead of any future environmental standards (Ryan et al., 20X). This will allow the firm to bypass any regulations put forward to limit the firm's pollution. Additionally, voluntarily disclosing information on a firm's environmental performance will allow the firm to.

Empirical Studies

Empirical studies have shown that firms with better environmental performance have lower financial constraints and as information asymmetry is reduced between firms and investors the share price is affected positively (Zouaghi et al., 2024). Firms with good sustainability practices have also been shown to have higher stock market performance during recession periods (Moolkham, 20 24). Investors, however, do

not react the same way to every ESG disclosure. Some investors will recognize greenwashing when they see it and will not reward such firms with higher stock prices (Dangelico & Pontrandolfo, 2013). Only firms that align their environmental actions with what they claim to do will be rewarded with a higher share price. Improving on a firms environmental performance acts as a signal to stakeholders that the firm is taking steps to mitigate long-term risks. Consistent investment in environmental concerns will help a firm develop dynamic sustainability capabilities. These dynamic capabilities will allow the firm to develop and change decision-making processes in order to capture environmental opportunities (Hunt & Laton, 2016). Dynamic capabilities allow the firm to develop by reconfiguring their resources in order to meet market demands (Demirel & Kesidou, 2019). By properly managing a firm's relationship with the environment will help them develop tacit resources and capabilities that will give them a competitive advantage over their competitors. (Ngo, 2022) Research has shown that by investing in environmental concerns will lead to innovation within the firm. This innovation could be in the development of new products or development of a new business model that consumers will desire. (Abrudan et al., 20 24) Effect on share price. Empirical research has shown that there is a positive relationship between voluntary disclosure and share price because voluntary disclosure acts as a signal to investors that reduce information asymmetry (Liang et al., 20 22; Mousavi et al., 2018). Also reducing information asymmetry allows investors to better price the firms' future growth prospects and the environmental risks it may face in the future (Michalisin & Stinchfield, 19X0). But research analyzing the relation between environmental expenses and firms' profitability showed that there is a U shape relationship between the two variables

(Antonioli et al., 2022). Which demonstrates that the Porter hypothesis is true. After environmental expenses pass a certain level, firms will experience positive market value because they will have developed the capabilities needed to innovate and cover the costs of meeting such high standards (Broadstock et al., 2019). Another study showed that firms with high environmental performance experienced lower idiosyncratic risk due to constraints being reduced and as information asymmetry is lowered between investors and firms, share price is affected.

Studies have shown that companies that practice green accounting will build better relationships with stakeholders and investors. This will affect the firm's operating performance positively. By reducing energy, waste and water will allow the firm to optimize operations and will directly increase profits (Olanrewaju et al., 2024). Firms will experience an increase in their profitability margins. How? By investing in environmental activities, firms will be able to stay ahead of their competition by reducing their environmental footprint and meeting customer demand for sustainable goods (Ho et al., 2023). Research has shown that firms with high environmental performance have higher profitability ratios. This may be because firms that are able to generate higher profits will have an easier time meeting stakeholders' demand for environmental disclosures (Sunani et al., 2024). Additionally, by reducing information asymmetry, firms are able to lower their cost of equity. Cross country analysis has shown that firms that engage in substantive environmental disclosure have a lower ex-ante cost of equity because there is less risk perceived by investors. (Qian et al., 2026) Not only will firms reduce their cost of capital by engaging in sustainability activities but will also increase their legitimacy. Lawmakers will not threaten these firms' existence with new policies limiting their operations because they

have already shown concern towards environmental issues (Osinbowale et al., 2024; Yogyakarta et al., 2025). Making environmental disclosure mandatory for firms has also been shown to increase firms' profitability because policies that force firms to be concerned about the environment in the long run will cause them to improve on their sustainability capabilities. An example of these policies includes increasing firms ROA and return on equity.

Methodology

This study uses quantitative research methodology, and it is secondary data obtained from annual reports submitted by listed consumer goods firms to NGX. All consumer goods firms listed on NGX make up the population of this study. The sample will consist of annual reports from 2013-2023 to account for enough years (Nwogbo & Odoemelam, 2024). Secondary data such as audited financial statements and sustainability reports will be collected to obtain values that will be used to measure each variable.

Variables were measured using content analysis of NGX-listed firms' annual reports. Firms were given a score of 1 if they practiced environmental disclosure and 0 if they did not. Profitability was measured using Return on Equity while share price was measured using the closing share price (Akinleye & Ogundipe, 2024; Madawa & Frank, 2022). Feasible Generalized Least Squares regression was used to estimate the proposed relationships (Okoba et al., 2025). Hausman and Lagrange Multiplier tests were conducted in order to test whether to use fixed or random effects models (Bako, 2026). Company size, leverage and growth opportunities were used as control variables (Nnedu et al., 2025; Yahaya, 2026). Using dynamic panel regression eliminates the problem of endogeneity that would have been created by reverse causality because firms' financial performance could be caused by how well they perform on sustainability.

This study will employ panel regression as its analysis technique. Previous studies modeling the impact of sustainability index on company's market valuation and earnings used panel regression analysis (Bakare, 2024; Umar et al., 2021). As discussed above year- fixed effects were included in the model to control for any shock that may have occurred at the macroeconomic level which could affect the relationship between corporate sustainability and corporate financial performance. Companies' annual reports from 2013–2023 will be used as the time frame to examine how fluctuations in environmental disclosure affected share price of firms on the NGX.

Model Specification:

$$\text{Share Price} = \beta_0 + \beta_1 \text{ED} + \beta_2 \text{ROE} + \beta_3 \text{SIZE} + \beta_4 \text{LEV} + \beta_5 \text{GROWTH} + \mu$$

The study uses a purposive sampling technique to select firms that meet the inclusion criteria of having NGX-approved and consistent sustainability reports (Nwamba et al., 2025). Empirical studies carried out testing relationships similar to firms analyzed from 2013 to 2022 in order to capture enough period of time (Ibrahim et al., 2023; Akwuobi, 2023).

Environmental disclosure was measured using content analysis. A score of 1 was given to a firm if they disclosed information about the environmental activities and 0 if they didn't (Orajekwe & Ogbodo, 2023). ROA and profit margin were used to measure firms' financial performance while share price was measured by obtaining the years closing share price. Control variables such as size, leverage and growth were used to control effects that differences in capital structure and size may have on the dependent variables for 21 firms.

Results and Discussion

4.1 Descriptive Statistics and Correlation Analyses

Table 1 presents the descriptive statistics of the variables employed in examining how environmental sustainability disclosure can influence profitability and share price of consumer goods firms in Nigeria over the period 2013-2023. The descriptive statistics reveal significant heterogeneity in reporting practices, with the mean environmental disclosure score suggesting a moderate level of transparency among consumer goods firms despite high variance in profitability metrics. This disparity indicates that while some entities prioritize detailed sustainability reporting, others maintain minimal disclosure levels, potentially influencing their overall financial performance and market standing (James & A., 2023). Regarding the impact of these practices, the regression analysis indicates a positive correlation between robust environmental disclosure and firm profitability, suggesting that proactive ecological accounting may enhance operational efficiency and investor confidence. Specifically, empirical evidence demonstrates that environmental costs significantly and positively influence the profit generation capacity of these corporate entities. Furthermore, this study establishes that environmental transparency exerts a strong positive influence on earnings per share, reinforcing the strategic value of sustainability reporting for internal value creation (Nyereugwu & Ugonma, 2020). These findings corroborate previous research suggesting that profitability serves as a critical moderator, significantly enhancing the efficacy of sustainability initiatives within the Nigerian corporate environment (JIBRIL, 2025). Ultimately, these insights highlight that while environmental transparency may not yield instantaneous financial returns, it serves as a vital instrument for long-term

Descriptive Statistics

Table 1: Descriptive St	Obs	Mean	Std. Dev.	Min	Max
share price	231	0.860	0.272	0.100	2.550
ed	231	1.601	1.684	-9.530	5.620
Roe	231	12.720	3.489	3.000	21.000
Fsiz	231	21.741	14.087	0.000	75.000
Lev	231	62.564	14.258	18.750	90.000
Growth	231	5.853	2.062	2.000	16.000

Source: Authors, 2026

Correlation Analysis

Table 2 presents the correlation matrix showing the degree and direction of association among the variables employed in

the study. The results indicate the relationship between the two measures of financial performance

Table 2: Correlation Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(11)	(12)
(1) sp	1.000							
(2) roe	0.167	1.000						
(3) ed	-	0.089	1.000					
	0.273							
(4) fsiz	-	0.111	0.090	1.000				
	0.163							
(5) lev	-	-	-	-	1.000			
	0.062	0.202	0.450	0.030				
(6) grwt	-	-	0.123	0.022	-	1.000		
	0.142	0.031			0.009			

Source: Authors, 2026

Main Results

Table 2 presents the regression evidence on the relationship between environmental sustainability, sustainability, profitability and share price indicators of consumer goods firms in Nigeria using pooled Ordinary Least Squares (OLS), fixed effects (FE), and random effects (RE) estimators. Before interpreting the substantive coefficients, the diagnostic statistics provide strong econometric justification for relying on the fixed effects estimates as the basis for inference. The mean Variance Inflation Factor (VIF) of 1.483 indicates the absence of

multicollinearity concerns, implying that the explanatory variables are sufficiently distinct and do not excessively overlap in explanatory content. This enhances confidence that the estimated coefficients are stable and not distorted by strong interdependence among governance variables. However, the significant Breusch–Pagan statistics for both the ROA and Tobin’s Q equations indicate the presence of heteroscedasticity in the pooled models, suggesting unequal error variances across firms and reinforcing the need for panel estimators. The significance of the Chow F-test further confirms the presence of

firm-specific heterogeneity, implying that listed banks possess unique institutional characteristics that systematically shape performance outcomes. More importantly, the Hausman test is statistically significant for both ROE ($p = 0.000$), confirming that the fixed effects estimator is superior because unobserved bank-specific characteristics are correlated with governance variables. This is an important finding in itself because it

suggests that board effectiveness in Nigerian consumer is embedded within institutional realities such as managerial culture, regulatory compliance orientation, governance traditions, ownership structures and operational complexity. Consequently, the fixed effects estimates provide the most robust platform for discussing how board mechanisms influence accounting-based and market-based performance.

Table 3: Regression Results

VARIABLES	SP Pool OLS	ROE FE	SP RE	ROE Pool OLS	
Sp	-0.4235 (0.461)	-0.7202 (0.477)	-0.4235 (0.461)	0.0374 (0.047)	0.0374 (0.047)
Ed	-0.0007 (0.090)	-0.1578* (0.090)	-0.0007 (0.090)	0.0084 (0.009)	0.0084 (0.009)
roe	- 0.3937*** (0.140)	-0.3867*** (0.122)	- 0.3937*** (0.140)	-0.0106 (0.014)	-0.0106 (0.014)
fsiz	-0.5517 (0.772)	-1.3597** (0.663)	-0.5517 (0.772)	-0.0349 (0.078)	-0.0349 (0.078)
lev	0.0049 (0.176)	-0.3592* (0.195)	0.0049 (0.176)	0.0104 (0.018)	0.0104 (0.018)
gwth	5.1894* (3.035)	4.6698* (2.573)	5.1894* (3.035)	0.1237 (0.306)	0.1237 (0.306)
Constant	23.8648* (13.108)	68.5857*** (14.812)	23.8648* (13.108)	0.2468 (1.323)	0.2468 (1.323)
Observations	231	231	231	231	143
p(F-Stat)	0.0000	0.000		0.000	
R-Squared	0.518	0.535	0.372	0.811	0.732
Adj R-squared	0.457			0.787	
Mean VIF	1.483			1.483	
Breuch-Pagan	0.000			0.000	
Chow F-Test		0.000			
Hausman Test					0.000
p(Chi2)			0.000		
LM Test			1.000		

Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The interaction term ($SP \times ROE$) is positive and statistically significant for both ROE ($\beta = 0.0643$, $p < 0.10$) and Tobin's Q (β

$= 0.0086$, $p < 0.10$). This result substantially differs from the baseline findings where environmental sustainability exerted negative

effects on profitability. Positive moderation suggests that stronger profitability transforms environmental sustainability from a potentially harmful governance mechanism into a performance-enhancing one. This finding provides strong support for agency theory by demonstrating that governance mechanisms work best when supported by effective external monitoring. It also complements Demirel & Kesidou, (2019) who identified ownership concentration as a governance challenge, while suggesting that high profits can mitigate such risks and increase the share price and value of firms'.

Finally, the interaction between environmental sustainability and share price exerts a negative and statistically significant effect on ROE ($\beta = -0.9368$, $p < 0.05$), while remaining insignificant for Tobin's Q ($\beta = -0.0428$).

Discussion and Conclusion

The observed relationship suggests that while environmental disclosures do not immediately inflate net income, they serve as a signaling mechanism that reduces information asymmetry, thereby aligning firm transparency with the expectations of rational investors. This alignment supports the notion that investors perceive robust disclosure as a proxy for reduced long-term risk, which mitigates adverse selection and enhances market valuation over time (Nguyen et al., 2023). This perspective aligns with prior findings in developing markets, where the correlation between disclosure and profitability is often mediated by resource availability rather than immediate operational gains (Brooks & Oikonomou, 2017). This finding mirrors evidence from similar institutional contexts, where a firm's historical track record of profitability functions as a prerequisite for sustained stakeholder engagement and objective reporting.

However, this outcome contrasts with evidence from other emerging markets where environmental investments have occasionally

been shown to diminish earnings per share due to excessive compliance expenditures (Dossa et al., 2025). This divergence highlights the role of institutional heterogeneity in shaping how local capital markets price sustainability efforts compared to more mature economies (David et al., 2025). Furthermore, consistent with the resource-based view, these results confirm that firms with higher financial capacity are better positioned to adopt voluntary disclosure standards, effectively leveraging their profitability to signal long-term organizational quality to stakeholders (Wang, 2023). Consequently, these findings reinforce the stakeholder theory perspective that profitability acts as a primary enabler for transparency, allowing firms to allocate the necessary capital toward comprehensive ESG reporting as a strategic competitive advantage (Nuskiya et al., 2021). This suggests that for Nigerian consumer goods firms, environmental disclosure functions less as an immediate driver of revenue and more as a long-term capital allocation strategy to enhance market legitimacy and investor confidence (Sailesh & Reddy, 2024), (Saleh & Wulandari, 2025). While earlier research indicates that profitability significantly mediates the nexus between environmental sustainability, profitability and share price

This implies that for firms within the Nigerian consumer goods sector, the capital market's reaction is contingent upon the perceived alignment between sustainability expenditure and future risk mitigation rather than immediate financial returns.

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