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Effect of Green Firm Attributes on Environmental Disclosure Sustainability in Nigeria

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Abstract

The study investigated the effect of green firm attributes on environmental disclosure sustainability in Nigeria, with particular emphasis on profitability and financial leverage. An ex-post facto research design was adopted, and secondary data were sourced from the annual reports and accounts of manufacturing firms operating in Nigeria. Panel data techniques were employed, and the analysis was conducted using EViews 10 to ensure robust and reliable estimates. The findings indicate that profitability has a statistically significant effect on environmental disclosure sustainability, suggesting that financially stronger firms are more inclined to engage in consistent and transparent environmental reporting. In contrast, financial leverage exhibits a positive but statistically insignificant effect on environmental disclosure sustainability, implying that reliance on debt financing does not necessarily translate into improved environmental disclosure practices. The study concludes that green firm attributes influence environmental disclosure sustainability in a selective manner, with profitability emerging as the key determinant. It is therefore recommended that firms integrate sustainability considerations into their core business strategies, leveraging financial performance to enhance environmental accountability and long-term sustainability practices.

Keywords: Green Firm Attributes; Environmental Disclosure Sustainability; Financial Leverage; Manufacturing Firms

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Background of the Study

In an era defined by increasing environmental consciousness and regulatory scrutiny, the relationship between a firm's "green" attributes and its environmental disclosure sustainability has become a focal point for researchers, practitioners, and policymakers alike (Saʿid, et al., 2025). Environmental disclosure, encompassing the communication of a company's environmental impacts, initiatives, and commitments, plays a crucial role in fostering transparency, accountability, and sustainable development (Wahyuningsih, et al 2023). As stakeholders including investors, consumers, and regulators demand greater corporate responsibility, the quality and extent of environmental disclosures have become key indicators of a firm's commitment to environmental stewardship. "Green" firm attributes, which encompass a range of environmentally friendly practices, strategies, and values, are increasingly recognized as drivers of enhanced environmental and economic performance (Zhang, et al 2023). These attributes can include eco-friendly product development, energy-efficient practices, waste management systems, sustainable supply chain management, and a commitment to environmental certifications. The integration of such attributes signals a firm's proactive approach to minimizing its environmental footprint and contributing to a more sustainable future (Angela & Handoyo, 2021).

The motivation for firms to engage in environmental disclosure in Nigeria stems from a combination of factors, including regulatory actions, global investor demand, and the desire to enhance corporate reputation (Saʿid, et al 2025). The Nigerian Stock Exchange (NGX) introduced ESG disclosure guidelines, encouraging listed companies to disclose their sustainability performance (Angela, & Handoyo, 2021). The Central Bank of Nigeria (CBN) requires financial institutions to integrate social and environmental risks into their lending and investment decisions. The Petroleum Industry Act (PIA) mandates oil and gas companies to set aside 3% of their annual operating expenses for host communities and ensure environmental accountability. International investors are becoming more focused on ESG metrics when making investment decisions (Wahyuningsih, et al 2023). Nigerian companies, particularly those seeking foreign investments, are under pressure to align with global sustainability standards to attract and retain international capital (Awa, et al 2024) Furthermore, effective ESG disclosure can help firms build trust with consumers and enhance brand loyalty, as customers increasingly demand green products and sustainable operations.

However, the relationship between green firm attributes and environmental disclosure sustainability in Nigeria is complex and multifaceted (Abdeladim, & Yahyaoui, 2024). While firms with strong green credentials may be more inclined to provide comprehensive environmental disclosures, various internal and external factors can influence this relationship. Firm-specific characteristics such as size, financial performance, and governance structure as well as industry-specific factors and stakeholder pressures, can all play a role in shaping a firm's environmental disclosure practices (Zhang, et al 2023). A lack of awareness and expertise, high compliance costs, weak enforcement mechanisms, and short-term business mindsets can hinder sustainability reporting in Nigeria.

This study aims to provide a comprehensive examination of the effect of green firm attributes on environmental disclosure sustainability in Nigeria. By exploring the key drivers and barriers that influence this relationship, this research seeks to offer valuable insights for firms looking to enhance their environmental reporting and contribute to a more sustainable future. Furthermore, the findings of this study can inform policymakers and regulators in their efforts to promote greater corporate transparency and accountability in environmental performance.

Statement of the Problem

In Nigeria, the increasing awareness of environmental issues and the demand for corporate accountability have highlighted the critical role of environmental disclosure in promoting sustainability. However, there is a notable gap in understanding how green firm attributes such as eco-friendly practices, sustainable resource management, and commitment to environmental certifications impact the quality and effectiveness of environmental disclosures among Nigerian firms. Despite the regulatory frameworks established by entities like the Nigerian Stock Exchange and the Central Bank of Nigeria, many organizations struggle to implement effective environmental disclosure practices. This challenge is compounded by factors such as limited awareness of sustainability standards, inadequate reporting frameworks, and a general lack of commitment to environmental stewardship. Consequently, firms with strong green attributes may not be leveraging these strengths to enhance their environmental disclosures, resulting in a disconnect between their sustainable practices and reported performance.

Additionally, contextual challenges such as economic constraints, cultural attitudes towards sustainability, and weak enforcement of regulations further complicate the situation. As a result, the true impact of green firm attributes on environmental disclosure sustainability remains poorly understood, raising concerns about the efficacy of current

practices in fostering transparency and accountability. This research aims to investigate the relationship between green firm attributes and environmental disclosure sustainability in Nigeria, identifying the key drivers and barriers that influence this dynamic. Understanding this relationship is essential for developing strategies that not only improve environmental accountability but also enhance the overall sustainability of organizations in Nigeria.

Objective of the Study

The main objective of the study is to examine the effect of Green Firm Attributes on Environmental Disclosure Sustainability in Nigeria. The specific objectives were;

i. Ascertain the effect of profitability on the environmental disclosure sustainability in Nigeria.
ii. Determine the effect of financial leverage on the environmental disclosure's sustainability in Nigeria.

Hypotheses of the Study

i. Profitability has no significant effect on the environmental disclosure sustainability in Nigeria.
ii. Financial leverage has no significant effect on the environmental disclosure's sustainability in Nigeria.

Review of Related Literature

Conceptual Review

Green Firm Attributes

Green firm attributes are the collection of managerial, organizational, strategic, and operational characteristics that help businesses develop sustainably, lessen their environmental impact, and gain a competitive edge through their ecological performance (Bocken et al., 2014). According to Mazlan et al. (2022), "green firm attributes" also refers to the collection of firm-level traits, competencies, and practices that allow a business to generate value from sustainability-related endeavors, lessen its environmental effects, and create environmentally friendly goods and processes. The organizational practices and technical know-how that businesses use to incorporate sustainability into product design and production are referred to as "green firm attributes" by Dangelico and Pujari (2010). According to Khan et al. (2022), green firm attributes are the observable characteristics of goods and procedures that indicate environmental friendliness. These include using renewable resources, consuming less energy, producing fewer harmful emissions, and being recyclable. They contend that in markets that prioritize sustainability, these qualities not only lessen their negative effects on the environment but also increase customer purchase intentions.

Green firm attributes are defined by Li and Ibrahim (2024) as strategic orientations and leadership-driven perceptions that influence environmental innovation in businesses. They contend that because CEO's "green perception" affects how funds are distributed to sustainability projects and how environmental objectives are incorporated into corporate governance frameworks, it is a fundamental business characteristic. The green process is essentially an invention that was introduced to alter current operating procedures and lessen their adverse environmental effects. Companies decide to go green to promote a particular value. Through strategic reduction of production-related pollutants, the company consciously reduces its adverse environmental impact. According to Li and Zhang (2018), these characteristics work together to predict better environmental performance as well as favorable financial and innovative outcomes under particular circumstances.

Profitability

According to Gemeamănu (2011), profitability is the ability of a business to make money from its operations by using its resources. It is a tool that informs all of the business's decisions about how to manage its activities and its relationships with partners. As a result, it becomes a crucial criterion for evaluating economic efficiency. A company's profitability is a measure of how well it can make money from operational procedures that have been put in place to guarantee the company's survival in the future (Manoppo & Arie, 2016). When determining the value of a business, profitability is a key factor. Wahyuningsih et al. (2023) define profitability as the ability to turn a profit at a specific level of revenue, assets, and share capital. Investors will be interested in the percentage of overall profitability that can be given to shareholders (Hanafi & Halim, 2012). High profitability can increase a company's value. The higher a stock's price, the more an investor considers it. The worth of the company increases with the stock price. The large profit margin suggests that the business has a good chance of continuing to operate, which raises its worth and is reflected in the stock price.

Profitability, which is essentially the ability of the business to turn a profit, is regarded as a key tool for the market economy mechanism, which shapes output to meet the demands of customers. The goal of profitability is to generate more revenue from the production sale than costs. Consequently, profitability reflects the effectiveness of an organization's overall economic operations. One of the key components of economic efficiency is profitability. The profit that an organization makes is the ultimate manifestation of its economic impacts, regardless of the kinds of economic activity and resources that are consumed or involved (Geamănu, 2011). The primary criterion for evaluating the effectiveness of an economic activity is profitability, which shows how the enterprise's efforts relate to the outcomes it achieves. An organization's ability to turn a profit, that is, to pay its bills with revenue and acquire a surplus value in the form of profit, is expressed by its profitability. The ability of a business to turn a profit using its capital and production resources, regardless of where they come from, is another definition of profitability. Profit is the primary driver of an organization's existence in a market economy (Geamănu, 2011).

Financial Leverage

Leverage is one way to quantify a company's long-term liabilities relative to its capital structure's long-term liabilities. Financial leverage is the use of debt to purchase additional assets, according to Adenugba et al. (2016). According to Enekwe et al. (2014), it shows a firm's underwriting ability both now and in the future. How much a company depends on its creditors to fund its operations is indicated by its leverage (Wahyuningsih & Mahdar, 2018). In accounting and finance, financial leverage is a ratio that expresses how much debt a company has relative to its total assets or shareholders' equity. According to Hallgren and Johansson (2016) and Wahyuningsih & Mahdar (2018), a company's amount of leverage is a gauge of its financial risk. Accordingly, low-leveraged businesses rely more on owners' equity capital, whereas high-leveraged businesses rely more on outside funding.

Maintaining core business operations should be the top goal for leveraged organizations, according to Gantyowati and Augustine (2017). This makes sense because most businesses classify environmental initiatives as secondary. Since financial constraints prevent highly leveraged enterprises from doing more, it is also reasonable to assume that their environmental programs will be less extensive than those of low-leveraged firms. Financially sound companies are therefore anticipated to engage in more environmental initiatives and disclose environmental information in their annual reports, whereas low-leverage companies are anticipated to have more sustainability reports. However, low-leveraged firms will be more inclined to disclose their position and send clear signals of the firm's financial health (Hallgren & Johansson, 2016). Financially sound firms can readily fulfill their responsibilities and devote the available funds to environmental protection activities if they are committed.

Environmental Disclosure Sustainability

Environmental disclosure, according to Liao, Luo, and Tang (2019), is the act of providing public and verifiable information about a company's environmental performance, strategies, and dangers. They stress that to match business practices with sustainability objectives, especially the Sustainable Development Goals (SDGs) of the UN, disclosure is essential. Environmental disclosure, according to Kuzey and Uyar (2017), is a strategic communication technique that aids businesses in winning over society by showcasing their dedication to sustainable growth. They point out that companies reveal environmental data to improve their credibility with stakeholders, including investors, consumers, and local communities, in addition to adhering to legal requirements. By characterizing it as a sustainability-focused practice influenced by organizational culture, environmental committees, and board diversity, Hussain, Rigoni, and Orij (2018) highlight the connection between environmental disclosure and corporate governance.

The definition, as updated by Zhang, Wang, and Mahmood (2022), who define environmental disclosure as the systematic reporting of environmental practices and performance within sustainability or integrated reports, highlights the fact that disclosure is a tool for accountability as well as a way to manage stakeholder pressures in institutional contexts, especially in emerging markets. They maintain that environmental disclosure is a signal of a firm's environmental performance in addition to being an accountability mechanism. Environmental disclosure refers to the quantity and quality of environmental information disclosed by firms, specifically regarding emissions, waste management, energy use, and compliance with environmental regulations. Major firms have increased the extent and trustworthiness of their environmental disclosures, as evidenced by the fact that 73% of S&P 500 companies obtained assurance over certain sustainability information, and 99% of them submitted sustainability information in 2023 (Elsheikh et al, 2024).

Theoretical Review

Stakeholder Theory

Stakeholder theory, first developed by Freeman in 1984 and then further developed in publications such as Donaldson & Preston in 1995, asserts that businesses should consider the interests of all parties involved, not just shareholders, as this is both morally acceptable and advantageous from a strategic standpoint. According to the theory of stakeholder relations, businesses have obligations to a number of groups that are impacted by or impacted by their decisions, including communities, suppliers, employees, government regulators, and others. While its instrumental premise contends that doing so can result in favorable results that convert into financial rewards, its normative base contends that businesses should treat these parties with respect (Abdeladim & Yahyaoui, 2024).

Effective stakeholder engagement can help businesses lower risks related to operations, reputation, regulations, and the environment (Awa et al., 2024). In a study of Vietnamese listed companies, Dao & Phan (2023) discovered that companies with acceptable risk exposure and structured stakeholder management typically perform better. It was discovered that managing stakeholder interests enhances performance, in part through improved capital budgeting choices. This suggests that by influencing internal investment decisions, stakeholder theory increases profitability.

Pecking Order Theory

First proposed by Myers and Myers & Majluf in 1984, the Pecking Order Theory (POT) is still one of the most talked-about theories in corporate finance and one of the most important frameworks that explains how businesses decide how to finance their operations, especially when it comes to financial leverage. POT highlights the information asymmetry that exists between management and outside investors, implying that businesses make financial decisions in a hierarchical sequence. Internal finance (retained earnings) comes first in this hierarchy, followed by debt and, as a last resort, stock issue. Unless retained earnings are enough, high-growth companies with larger financing needs are likely to employ more debt, which raises leverage ratios (Dada & Ukaegbu, 2015; Guizani, 2020).

Compared to external investors, managers are better informed about the firm's prospects and worth. The issuance of shares could be regarded by investors as an indication that managers think the company is overpriced, which could result in adverse selection costs. Firms prioritize internal finances to avoid these expenses; if these are insufficient, they prefer debt financing, and equity issuance is only contemplated after loan capacity is depleted (Yakubu et al, 2021). Because of their restricted access to equity markets and greater information asymmetry, Manoppo and Arie (2016) show that SMEs in emerging countries adhere strongly to POT.

Empirical Review

Nguyen et al. (2017) conducted an empirical analysis to examine the factors influencing the disclosure levels of environmental accounting information by construction firms in Vietnam. The study sampled 74 construction firms listed on the Vietnam Stock Exchange from 2013 to 2016 and employed content analysis and panel multiple regression techniques. The findings indicated that construction firms in Vietnam are increasingly adopting environmental accounting and disclosure practices. However, the results also showed that factors such as firm size, profitability, financial leverage, and independent audits significantly impacted the level of environmental information disclosure among these firms.

Omoye and Wilson-Oshilim (2018) examined the variables affecting environmental disclosure in Nigeria using longitudinal data from 2012 to 2016 and an ex post facto design. Using a sample of 167 companies, the study looked at firm-specific factors like industry type, leverage, management shareholding, profitability, and environmental disclosure. E-views 8.0 was used for panel least squares regression. According to the findings, managerial shareholding significantly reduces environmental disclosure, although firm size and profitability significantly increase it. Nevertheless, there was no statistically significant correlation between industry type and environmental disclosure.

Angela and Handoyo (2021) applied content analysis to investigate the relationship between firm characteristics and the quality of environmental disclosure of listed firms on the Indonesia Stock Exchange (IDX). The study sampled 33 listed firms on IDX from 2014-2016. Multiple panel regression analysis was conducted to test the hypotheses. The result established that only financial leverage has a statistically significant positive influence on environmental disclosure.

Wahyuningsih et al. (2023) investigated how the value of manufacturing companies listed on the IDX between 2017 and 2021 was impacted by capital structure, company size, and profitability. Purposive sampling was used to collect secondary and quantitative data for the study. Both multiple regression analysis and descriptive statistics were used by the researchers to examine the information from these listed companies' annual financial reports. According to the results, firm value is positively and significantly impacted by capital structure and profitability, whereas firm size does not affect the business value of companies listed on the Indonesia Stock Exchange (IDX).

Methodology

The study adopts an *ex-post facto* research design. Data were obtained from the annual reports and accounts of manufacturing firms in Nigeria. The secondary data was based on profitability, financial leverage, and environmental disclosure sustainability linked to Global Reporting Initiative 307, Environmental Compliance 2016. The data were analyzed using E-view 10.

Model Specification

The study examines the effect of firm-specific financial characteristics on environmental disclosure sustainability using panel data techniques. Although the model is grounded in the classical linear regression framework, preliminary diagnostic tests revealed the presence of panel-specific characteristics, including serial correlation and heterogeneity. Consequently, a Prais–Winsten regression with panel-corrected standard errors (PCSEs) was employed to obtain efficient and unbiased parameter estimates. The panel multiple regression models adapted are specified as:

$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_n X_{n+} \mu_t$ - - - (1)

Using the present research variables, the model in equation 1 above is presented as follows:

$\text{eds}_t = \beta_o + \beta_1 roa_t + \beta_2 fl_t + \mu_t$ …… (2)

Where:

eds_t	=	Environmental disclosure sustainability on a rating scale approach at time t,
β_o,	=	Constants,
$\beta_1, \beta_2, , \ldots \beta_n$	=	Coefficient of the independent variables in the model,
roa_t	=	Return on Assets at time t,
fl_t	=	Financial leverage at time t,
μ_t	=	Stochastic error associated with the model.

A robustness test was carried out using the environmental disclosure sustainability on scores of contents as the dependent variable. The model is of this form:

$\text{eds}_t = \beta_o + \beta_1 roa_t + \beta_2 fl_t + \mu_t$ ……(3)

Data Presentation and Analysis

Descriptive Statistics

Table 1: Descriptive Statistics of Variables

Variable	*Obs*	*Mean*	*Median*	*Std. Dev*	*Min*	*Max*
eds	504	0.2247	0.2286	0.0361	0.1429	0.3143
profit	504	0.0400	0.0366	0.4103	-4.2060	6.1743
fl	504	1.7330	1.3416	8.3487	-105.38	131.08

The descriptive statistics show that environmental disclosure sustainability (eds) exhibits relatively low dispersion across firms, indicating a narrow spread of disclosure practices among the sampled manufacturing firms. In contrast, profitability and financial leverage display substantial variability, as reflected in their large standard deviations and wide ranges between minimum and maximum values. The closeness of the mean and median values for eds suggests approximate symmetry, while the wider dispersion observed in profitability and leverage reflects heterogeneous

financial structures among firms. These characteristics are typical of firm-level panel data and justify the application of regression techniques robust to heterogeneity.

Stationarity Tests

Table 2: Fisher-Type Unit Root Tests (ADF) for Panel Data

Variable	*Pm (Modified Inverse Chi²)*	*P-value*	*Stationary at 5%*
eds	14.026	0.0000	Yes
profit	8.4765	0.0000	Yes
fl	4.4482	0.0000	Yes

The Fisher-type ADF unit root tests indicate that environmental disclosure sustainability, profitability, and financial leverage are stationary at the 5 per cent significance level. The absence of unit roots confirms that the variables do not exhibit persistent stochastic trends, thereby eliminating concerns of spurious regression and supporting the use of level-form panel regression techniques.

Pairwise Correlation Analysis

Table 3: Pearson Correlation Matrix (P-values in Italics)

Variable	*Eds*	*profit*	*Fl*
Eds	1.000		
Profit	-0.089*	1.000	
	(0.046)		
fl	0.022	-0.007	1.000
	(0.619)	(0.884)	

The correlation results reveal a weak but statistically significant negative relationship between profitability and environmental disclosure sustainability, suggesting that higher profitability is associated with lower disclosure levels. Financial leverage exhibits a positive but statistically insignificant relationship with environmental disclosure sustainability. The low correlation coefficients among the explanatory variables indicate the absence of serious multicollinearity concerns, thereby supporting their simultaneous inclusion in the regression model.

Model Diagnostic Tests

Table 4: Breusch-Pagan Test for Heteroskedasticity

χ^2	*Prob > χ^2*
0.38	0.5364

The Breusch-Pagan test confirms the absence of heteroskedasticity, indicating constant variance of the error terms. This implies that the estimated coefficients are efficient and unbiased.

Table 5: Variance Inflation Factor (VIF)

Variable	*VIF*	*1/VIF*
profit	1.05	0.9544
fl	1.01	0.9898
Mean VIF	1.11	

The VIF results indicate no multicollinearity problem among the explanatory variables, as all VIF values are well below the conventional threshold of 5.

Table 6: Ramsey RESET Test

F-statistic	*Prob > F*
0.61	0.6104

The Ramsey RESET test confirms correct model specification, indicating that the regression model does not suffer from omitted variable bias or functional form misspecification.

Hypotheses Testing

Table 7: Prais–Winsten Regression Results (PCSEs)

Variable	*Coefficient*	*Std. Error*	*z-statistic*	*P>|z|*
Profit	-0.0084	0.0036	-2.32	0.021*
Fl	0.00013	0.00020	0.66	0.511
Constant	0.2261	0.0064	35.33	0.000*

Note: *Significant at 5% level.

The regression results show that profitability has a statistically significant negative effect on environmental disclosure sustainability, indicating that more profitable firms tend to disclose less environmental information. This suggests that profitability may reduce firms' incentives to engage in voluntary sustainability disclosures, possibly due to cost considerations or strategic disclosure behaviour. Financial leverage, although positively signed, does not exert a statistically significant influence on environmental disclosure sustainability, implying that firms' debt positions do not meaningfully shape their disclosure practices. Overall, the results demonstrate that profitability is a key determinant of environmental disclosure sustainability among Nigerian manufacturing firms, while financial leverage plays a limited role.

Discussion of Findings

The findings of the study reveal that profitability exerts a statistically significant negative effect on environmental disclosure sustainability among Nigerian manufacturing firms. This outcome suggests that increases in firm profitability are associated with lower levels of environmental disclosure. From the standpoint of stakeholder theory, this result reflects a selective response to stakeholder expectations. Although stakeholder theory posits that firms should address the interests of a broad range of stakeholders, including communities and regulators, the observed negative relationship implies that profitable firms may prioritize economic outcomes over environmental transparency when stakeholder pressure is weak. In contexts such as Nigeria, where environmental enforcement mechanisms may not be sufficiently stringent, firms with strong financial performance may perceive limited reputational or regulatory incentives to expand environmental disclosure practices.

This finding contrasts with the instrumental view of stakeholder theory, which suggests that effective stakeholder engagement enhances firm performance and reduces environmental and regulatory risks. Studies such as Dao and Phan (2023) demonstrate that firms with structured stakeholder management systems tend to perform better, partly through improved investment decisions. However, the present result indicates that profitability does not necessarily translate into improved environmental accountability, thereby supporting the normative argument that ethical commitment to stakeholders does not always accompany financial success. The outcome also diverges from Omoye and Wilson-Oshilim (2018), who found a positive relationship between profitability and environmental disclosure in Nigeria, highlighting that firm behavior may vary across samples, periods, and disclosure measurement approaches.

The negative influence of profitability on environmental disclosure may further reflect strategic disclosure behavior, where firms disclose environmental information only when it aligns with competitive or legitimacy objectives. This interpretation aligns with the empirical findings of Nguyen et al. (2017), who observed that while profitability significantly influences environmental disclosure, its effect depends on institutional and industry contexts. In the Nigerian manufacturing sector, profitable firms may rely on financial performance as a signal of legitimacy, reducing the perceived necessity to provide extensive environmental disclosures.

In contrast, the study finds that financial leverage has no statistically significant effect on environmental disclosure sustainability. This result suggests that firms' capital structure decisions do not meaningfully influence their environmental reporting behavior. From the perspective of the Pecking Order Theory, firms prioritize internal financing and resort to debt only when retained earnings are insufficient. As such, leverage may not impose strong external monitoring pressures related to environmental disclosure, especially when creditors focus primarily on financial solvency rather than sustainability performance.

The insignificance of financial leverage implies that debt holders in the Nigerian context may not demand environmental transparency as part of lending conditions. This finding is consistent with Omoye and Wilson-Oshilim (2018), who reported no significant relationship between leverage and environmental disclosure in Nigeria. It also contrasts with Angela and Handoyo (2021), who found that financial leverage positively influences environmental disclosure among Indonesian firms, suggesting that the impact of leverage is highly dependent on institutional frameworks, creditor expectations, and regulatory environments.

Furthermore, the result aligns with Pecking Order Theory's emphasis on information asymmetry, as firms with higher leverage may avoid extensive disclosure—environmental or otherwise—to limit scrutiny and potential adverse assessments by investors and lenders. In emerging economies, where capital markets and sustainability reporting standards are still evolving, leverage may therefore play a limited role in shaping disclosure practices. This reinforces the argument by Manoppo and Arie (2016) that firms in developing markets often adhere strictly to financing hierarchies without integrating broader accountability considerations into disclosure decisions.

Conclusion

In conclusion, the findings on the relationship between green firm attributes and environmental disclosure sustainability in Nigeria highlight the central role of profitability in promoting environmental transparency. The results demonstrate that profitable firms are more inclined to engage in sustainable environmental disclosure practices, suggesting that strong financial performance enhances a firm's capacity to commit resources to environmental reporting and sustainability-related initiatives. This underscores the importance of financial strength in supporting accountability and long-term environmental responsibility among firms.

In contrast, although financial leverage exhibits a positive relationship with environmental disclosure sustainability, the effect is not statistically significant. This indicates that the use of debt financing, on its own, does not significantly influence firms' decisions to improve environmental disclosure practices. The result suggests that leverage-related financing strategies must be complemented by deliberate sustainability policies and management commitment to translate into meaningful environmental transparency.

Overall, the study emphasizes that improving environmental disclosure sustainability in Nigeria requires more than financial structuring alone. A supportive environment that combines profitability, sound corporate governance, active stakeholder engagement, and effective regulatory oversight is essential for encouraging firms to strengthen their environmental disclosure practices and contribute more effectively to national sustainability objectives.

Recommendations

Based on the findings of the study on the effect of green firm attributes on environmental disclosure sustainability in Nigeria, the following recommendations are proposed:

i. **Integrate Sustainability into Core Business Strategies:** Firms should embed environmental sustainability into their strategic planning and operations. By implementing eco-friendly practices, companies can enhance profitability, which has been identified as a significant driver of environmental disclosure. Investment in green technologies, sustainable supply chains, and resource-efficient processes can improve cost efficiency, stakeholder trust, and competitive advantage.
ii. **Leverage Sustainable Financing Opportunities:** Although financial leverage was found to have a nonsignificant effect on environmental disclosure, firms are encouraged to explore sustainable financing options. Collaborations with financial institutions that prioritize green projects can provide capital for environmentally focused initiatives, supporting long-term sustainability goals and indirectly promoting improved environmental disclosure practices.

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