

DETERMINANTS OF ENVIRONMENTAL INFORMATION  
DISCLOSURES OF LISTED FIRMS IN NIGERIA: AN EMPIRICAL  
ASSESSMENT

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**ABSTRACT:** This study employed a quantitative approach to explore the determinants of environmental information disclosure of listed firms in Nigeria. The primary objective was to examine how various firm-specific attributes influence environmental information disclosure. The independent variables incorporated into the model were firm size, directors' independence, ownership structure, and profitability. Secondary data encompassing a ten-year period (2014-2023) was collected from listed service firms on the Nigerian Exchange Group (NXG). Descriptive statistics provided a foundational understanding of the data, while inferential statistical tools were employed to delve deeper into the relationships between variables. Random effect regression served as the primary hypothesis testing technique. The results revealed that firm size, directors' independence and ownership structure have significant effect on environmental disclosure of listed firms in Nigeria. On the other hand, profitability exhibited negative insignificant effect on environmental information disclosure of listed firms in Nigeria. The study recommended that larger firms should prioritize robust environmental information disclosure practices. Strengthening

directors' independence through the appointment of qualified and environmentally conscious directors can further enhance transparency and accountability regarding environmental performance

**Keywords:** *Environmental Information Disclosure, Firm Size, Directors' Independence, Ownership Structure, Profitability.*

## 1.1 Introduction

In today's environmentally conscious world, corporations face growing pressure to disclose their impact on the environment. This pressure stems from a confluence of factors, including growing public concern about climate change, resource depletion, and pollution (Bebbington, Fairbass & Matthews, 2018; Bello & Ogungbenle, 2022). **Environmental information disclosure (EID)**, encompassing data on pollution levels, resource consumption, and waste management practices (Deegan & Rankin, 2015), has emerged as a critical tool for promoting corporate accountability and transparency. Increased EID fosters informed decision-making by stakeholders, including investors, consumers, and regulatory bodies (Cho, Cho & Michelon, 2012; Atang & Eyisi, 2020).

The global landscape of EID, however, paints a multifaceted picture. Developed nations like the United States and the European Union have witnessed significant strides in EID practices (Islam, Uddin & Hossain, 2024). Regulatory frameworks mandating sustainability reporting standards, such as the Global Reporting Initiative (GRI) guidelines, have played a pivotal role in this advancement (Gallego-Álvarez, Delgado-Marquez & Merino-Sanchez, 2015). The GRI guidelines provide a comprehensive framework for companies to report on their environmental, social, and economic impacts, fostering comparability and transparency across industries (Global Reporting Initiative, 2023).

However, the picture remains more nuanced across developing economies. Voluntary approaches to EID often prevail in these regions, leading to a wider disparity in disclosure practices (Guthrie, Petty & Riccaboni, 2008). Several factors contribute to this disparity. First, developing economies might prioritize economic growth over environmental concerns, leading to a lower emphasis on EID (Alade & Odugbemi,

2021). Second, regulatory frameworks for EID might be less developed or enforced less stringently compared to developed economies (Deegan & Unerman, 2011). Finally, limited stakeholder pressure and a lack of awareness about the benefits of EID in developing economies can further hinder its adoption (Ioannou & Awaysheh, 2013).

Understanding the factors influencing a firm's decision to disclose environmental information is crucial for promoting sustainable business practices. Extant research has identified a multitude of determinants, including firm size, profitability, industry type, and ownership structure (Aerts, Cormier & Magnan, 2014; Ioannou & Awaysheh, 2013). Studies by Wang, Li and He, (2016) and Yu, Yu and Zhang (2017) suggest that larger, more profitable firms are more likely to engage in EID, presumably due to greater public scrutiny and access to resources. Additionally, industry sectors with a higher environmental footprint, such as manufacturing and energy, tend to exhibit higher levels of disclosure (Deegan & Rankin, 2015). Ownership structure also plays a role, with Chi & Liu (2016) finding that firms with greater state ownership display lower levels of EID, potentially due to reduced pressure from external stakeholders.

Despite this valuable body of research, a gap persists in our understanding of EID practices in developing economies like Nigeria. Prior studies examining the Nigerian context have yielded mixed results. For instance, Aje, Ojo and Adebisi (2014) and Ohidoa, Omokhudu and Oserogho (2016) found a positive association between firm size and EID, while Ezejoh, Adiegwu and Ezenwaka (2017) reported no such connection. These discrepancies highlight the need for further investigation tailored to the unique characteristics of the Nigerian business environment.

This study aims to address this lacuna by exploring the determinants of EID amongst listed firms in Nigeria. We depart from previous research by focusing all sectors of the Nigerian economy. By examining various sectors, this study aims to contribute valuable insights to the ongoing dialogue on corporate environmental responsibility in Nigeria.

## **2.1 Literature Review**

### 2.1.1 Environmental Information Disclosure

Environmental information disclosure (EID) refers to a corporation's practice of publicly reporting data on its environmental impact. This data encompasses a broad spectrum of information, including pollution levels, resource consumption, and waste management practices (Deegan & Rankin, 2015). Companies disclose the amount and type of pollutants they emit, allowing stakeholders to understand a firm's environmental footprint. EID reports also detail resource use, such as energy and water consumption, and how companies handle and dispose of waste (KPMG, 2023).

Transparency in EID plays a crucial role in promoting responsible corporate behavior and fostering a sustainable business environment. EID reports hold corporations accountable for their environmental impact. Public scrutiny incentivizes companies to adopt more sustainable practices to improve their environmental performance (Cho et al., 2012; Usiomon & Iyoha, 2024). Stakeholders, such as investors, also benefit from EID. These reports enable them to assess a firm's environmental risk profile and align their investments with sustainability goals (KPMG, 2023). Furthermore, EID reports can foster a culture of environmental awareness within corporations, encouraging them to set ambitious sustainability targets and track progress towards achieving them (Bebbington et al., 2018; Enudi, Chizoba & Amahalu, 2024).

The Nigerian Context: EID practices are more advanced in developed economies with mandatory sustainability reporting standards. However, the concept is gaining traction in developing economies like Nigeria. The Nigerian Stock Exchange (NSE) has introduced Sustainability Disclosure Guidelines, encouraging listed companies to voluntarily disclose environmental information (Nigerian Stock Exchange, 2023; Ladini, Orbunde & Kayode, 2024). Challenges remain, such as limited stakeholder pressure, underdeveloped regulatory frameworks, and a lack of awareness about the benefits of EID (Jerry, Teru & Musa). Despite these hurdles, EID presents a valuable opportunity for Nigerian firms to demonstrate their commitment to environmental stewardship. Increased EID can not only enhance a company's reputation but also attract environmentally conscious investors and contribute to a more sustainable Nigerian economy.

### 2.1.2 Firm Size and Environmental Information Disclosure

The influence of firm size on environmental information disclosure (EID) amongst listed firms in Nigeria presents a complex and debated topic. Some studies suggest a positive correlation, with larger firms tending to disclose more environmental information (Aje et al., 2014). This can be attributed to several factors. Larger firms often operate under greater public scrutiny and are more likely to face pressure from stakeholders, including environmentally conscious investors, to demonstrate their environmental responsibility through comprehensive EID reports (Cho et al., 2012). Additionally, larger firms typically possess greater financial resources, allowing them to invest in dedicated sustainability teams and sophisticated environmental management systems that facilitate robust EID practices (Wang et al., 2016). However, other studies have yielded less conclusive results, suggesting no significant relationship between firm size and EID in the Nigerian context (Ezejoh et al., 2017).

*H<sub>01</sub>: there is no significant effect of firm size on environmental information disclosure of listed firms in Nigeria.*

### 2.1.3 Profitability and Environmental Information Disclosure

The relationship between profitability and environmental information disclosure (EID) amongst listed firms in Nigeria remains a topic with contrasting viewpoints. Some researchers posit a positive association, suggesting that more profitable firms engage in greater EID (Atang & Eyisi, 2020). This perspective hinges on the notion that profitability enhances a firm's capacity to invest in sustainability initiatives and sophisticated environmental management systems, ultimately leading to more comprehensive EID reports (Deegan & Rankin, 2015). Additionally, profitable firms might face less pressure from stakeholders to improve their environmental performance, allowing them to leverage EID strategically to enhance their reputation and attract environmentally conscious investors seeking positive social impact alongside financial returns (Chi & Liu, 2016). However, conflicting evidence exists. Studies by Usiomon and Iyoha (2024) report no significant correlation between profitability and EID in Nigeria.

*H<sub>02</sub>: profitability has no significant effect on environmental information disclosure of listed firms in Nigeria.*

#### **2.1.4 Ownership Structure and Environmental Information Disclosure**

Ownership structure presents a fascinating lens through which to examine environmental information disclosure (EID) practices of listed Nigerian firms. Studies suggest a potential link between state ownership and lower levels of EID (Chi & Liu, 2016). This can be attributed to the notion that state-owned enterprises might face less pressure from external stakeholders, such as environmentally conscious investors, compared to their privately held counterparts. Additionally, state-owned firms could prioritize social and economic objectives over environmental concerns, potentially leading to less emphasis on robust EID practices (Ezejoh et al., 2017). However, the influence of ownership structure might be more nuanced. Some argue that state ownership, particularly by environmentally conscious governments, could incentivize stronger EID practices to promote national sustainability goals (Ioannou & Awaysheh, 2013; Ajape, Adeyemi & Omolehinwa, 2021).

*H<sub>03</sub>: there is no significant relationship between ownership structure and environmental information disclosure of listed firms in Nigeria*

#### **2.1.5 Directors' Independence and Environmental Information Disclosure**

While the influence of directors' independence on environmental information disclosure (EID) in Nigeria remains an under-explored area, research suggests potential benefits of independent boards. The presence of independent directors, free from conflicts of interest with management, could foster more objective oversight of environmental practices (Gallego-Álvarez et al., 2015). This, in turn, might translate into a greater emphasis on transparency and accountability, potentially leading to more comprehensive EID reports. Additionally, independent directors with expertise in environmental sustainability could bring valuable insights and guidance to the boardroom discussions, potentially influencing a firm's commitment to environmental stewardship and ultimately its EID practices (Ohidoa, Omokhudu & Oserogho, 2016). However, the effectiveness of independent directors might be

contingent on factors like the overall board composition and the strength of a company's environmental committees.

*H<sub>04</sub>: there is no significant relationship between directors' independence and environmental information disclosure of listed firms in Nigeria*

## **2.2 Theoretical Framework**

Stakeholder theory, as espoused by Freeman (1984), emphasizes the importance of managing relationships with a diverse range of stakeholders, not just shareholders. Stakeholders encompass those who influence or are influenced by a firm's decisions, including investors, employees, customers, communities, and environmental groups. In the context of EID, stakeholder theory suggests that firms are increasingly pressured to disclose environmental information to satisfy stakeholder demands for transparency and accountability regarding their environmental impact (Bebbington et al., 2018).

Voluntary disclosure theory, on the other hand, explores the motivations behind firms' decisions to disclose information beyond what is mandated by regulation (Chinedu & Ogochukwu, 2020). This theory suggests that firms strategically disclose information to achieve several objectives.

Firstly, EID can mitigate information asymmetry between a firm and its stakeholders. By disclosing environmental data, firms can alleviate stakeholder concerns about potential environmental risks and liabilities (Deegan & Unerman, 2011). This aligns with the findings of Chi and Liu (2016) who suggest that EID allows firms to manage stakeholder relationships proactively.

Secondly, firms with strong environmental practices can leverage EID to signal their commitment to sustainability, potentially attracting environmentally conscious investors and differentiating themselves from competitors (KPMG, 2023). This strategic use of EID aligns with voluntary disclosure theory and can be a significant factor influencing a firm's decision to disclose environmental information.

## 2.4 Empirical Review

Atang and Eyesi (2020) examined the determinants of environmental disclosure practices amongst listed manufacturing firms in Nigeria. Researchers employed an ex-post facto research design and analyzed data from a sample of 22 industrial sector companies using multiple regressions. Descriptive and inferential statistics were used to draw generalizable conclusions from the findings. The results indicate that a firm's profitability (cost of sales) has a positive influence on environmental disclosure, with a 1.8% increase in disclosure for every 1% increase in profitability. Additionally, the study reveals that board composition (13%) and auditor type (5.6%) also play a role in shaping a firm's environmental disclosure practices. In conclusion, the study suggests that profitability, board composition, auditor type, and firm size (not explicitly mentioned but implied by "jointly influences") are all determinants of environmental disclosure practices for listed manufacturing firms in Nigeria.

Alade and Odugbemi (2021) examined the factors influencing the quality of environmental disclosures by oil and gas firms listed on the Nigerian Stock Exchange between 2009 and 2018. Due to the limited number of firms (15) in this sector, a census sampling technique was employed, analysing the environmental reports, sustainability reports, and corporate social responsibility reports included in their annual reports. The study utilizes descriptive statistics, goodness-of-fit tests, and binary logistic regression to assess the impact of various determinants on disclosure quality. The findings reveal that three out of four determinants – return on assets, financial leverage, and firm size – have a statistically significant positive influence on the quality of environmental disclosure. However, share ownership distribution exhibited a negative effect. In conclusion, the study suggests that a company's profitability (return on assets), debt levels (financial leverage), and size are key drivers of the quality of environmental disclosures, while share ownership structure does not play a significant role.

Bello and Ogungbenle (2022) investigated the determinants of environmental disclosure practices amongst listed firms in Nigeria. Specifically, it examines how industry type (focusing on manufacturing and financial sectors), leverage (debt levels), and firm size impact a company's decision to disclose environmental

information. The research utilizes historical data from financial statements and accounts of companies listed on the Nigerian Stock Exchange. The study recommends that firms with operations that potentially affect the environment, particularly those associated with pollution and other environmental hazards, should be mandated to disclose their environmental commitments and financial investments related to environmental sustainability in their annual reports. To ensure a comprehensive analysis, the study employs panel data surveys from an adequate number of companies in both the manufacturing and non-manufacturing sectors.

Jerry, Teru and Musa (2022) explored the environmental accounting disclosure practices of Nigerian listed companies, particularly focusing on variations in disclosure practices due to the absence of mandatory guidelines. Researchers analysed a sample of eight quoted consumer goods companies listed on the Nigerian Stock Exchange using content analysis of their 2013 annual reports. The study employed a one-way analysis of variance to assess the influence of accounting standards on environmental disclosures. The findings revealed that a lack of standardized guidelines resulted in non-significant influence from accounting standards and significant variations in disclosure practices across companies.

### **3.1 Research Methodology**

The research design adopted in this study was *ex-post facto*, aiming to analyse the factors influencing determinants of environmental information disclosure of listed firms in Nigeria. A sample of 70 non-financial companies listed on the Nigerian Exchange Group from 2014 to 2023 was selected for this purpose. The study investigates the impact of several independent variables on environmental information disclosure (the dependent variable). These independent variables include firm size, profitability, directors' independence, and ownership structure. To analyse the data, the study utilizes descriptive statistics to provide a general overview, a correlation matrix to assess relationships between variables, and diagnostic tests to ensure data reliability. Finally, a random effect regression analysis is employed to determine the most suitable model and assess the influence of the independent variables on the environmental information disclosure of firms in Nigeria.

### 3.2 Model Specifications

$$EIDC = f(FSIZE, PROF, BOIND \& OWNST) \quad - \quad - \quad - \quad - \quad Eqn 1$$

$$EIDC_{it} = a_{0it} + a_1 FSIZE_{it} + a_2 PROF_{it} + a_3 BOIND_{it} + a_4 OWNST_{it} + U_t \quad - \quad Eqn 2$$

**Table 1:** Measurement of Variable

| <i>Variables</i>                            | <i>Symbols</i> | <i>Measurement</i>  |
|---|----------------|---|
| <i>Environmental Information Disclosure</i> | EIDC           | Measured using dummy variable of 1 representing the presence of environmental disclosure in the annual reports of each firm, otherwise (0). |
| <i>Firm Size</i>                            | FSIZE          | Measured using the log of Total Assets of firm <i>i</i> in year <i>t</i> .  |
| <i>Directors' Independence</i>              | BOIND          | Measured using the percentage of non-executive director in the board of firm <i>i</i> in year <i>t</i> .                                    |
| <i>Profitability</i>                        | PROF           | Measured by profit after tax of firm <i>i</i> in year <i>t</i> .  |
| <i>Ownership Structure</i>                  | OWNST          | Measured using percentage of institutional shareholding of firm <i>i</i> in year <i>t</i> .   |

Source: Author's Compilation

### 4.1 Data Presentation

| <i>Variable</i> | <i>Mean</i> | <i>Std. Dev.</i> | <i>Min</i> | <i>Max</i> | <i>Skewness</i> | <i>Kurtosis</i> |
|-----------------|-------------|------------------|------------|------------|-----------------|-----------------|
| <i>EIDC</i>     | 0.04683     | 0.14937          | 0          | 0.75       | 3.43213         | 13.84476        |
| <i>FSIZE</i>    | 7.10326     | 0.81346          | 5.2394     | 9.2409     | 0.23673         | 2.49076         |
| <i>PROF</i>     | -10.64114   | 449.1385         | -5376.709  | 6946.536   | 3.92553         | 163.8708        |
| <i>BOIND</i>    | 67.15459    | 14.6293          | 22.2222    | 94.4444    | -0.46635        | 2.83140         |
| <i>OWNST</i>    | 18.08214    | 23.60142         | 0          | 94.35      | 1.28917         | 3.61175         |

Source: Author's Compilation

The result summarizes the descriptive statistics for the determinants of environmental information disclosure (EIDC) among listed firms. The average EIDC score (0.0468) is relatively low, with a high standard deviation (0.1494) indicating significant variation in disclosure practices. Firm size (FSIZE) appears to be moderate on average (7.1033), while profitability (PROF) exhibits a wider range with a negative mean (-10.64), suggesting potential losses for some firms. Board independence (BOIND) is fairly high on average (67.15), and ownership structure (OWNST) is quite diverse (18.08 average with a large standard deviation).

#### 4.1.2 Correlation Matrix

| <i>Variable</i> | <i>EIDC</i> | <i>FSIZE</i> | <i>PROF</i> | <i>BOIND</i> | <i>OWNST</i> |
|-----------------|-------------|--------------|-------------|--------------|--------------|
| <i>EIDC</i>     | 1.0000      |              |             |              |              |
| <i>FSIZE</i>    | 0.3241      | 1.0000       |             |              |              |
| <i>PROF</i>     | 0.0110      | 0.0110       | 1.0000      |              |              |
| <i>BOIND</i>    | 0.085       | -0.0223      | -0.0183     | 1.0000       |              |
| <i>OWNSTR</i>   | -0.1032     | -0.1996      | 0.0394      | -0.1232      | 1.0000       |

Source: Author's Compilation

The table above displays the correlation coefficients between various the determinants of environmental information disclosure (EIDC) by listed firms. The strongest correlation appears to be between firm size (FSIZE) and EIDC (0.3241), suggesting larger firms tend to disclose more environmental information. Profitability (PROF) shows a weak positive correlation (0.0110) with EIDC, while board independence (BOIND) and ownership structure (OWNST) exhibit weak negative correlations (-0.085 and -0.1032, respectively) with EIDC. These correlations suggest that firm size might be a more prominent factor in environmental disclosure practices compared to profitability, board independence, or ownership structure.

#### 4.1.3 Variance Inflation Factor Test

| <i>Variable</i> | <i>OWNST</i> | <i>FSIZE</i> | <i>BOIND</i> | <i>PROF</i> | <i>Mean VIF</i> |
|-----------------|--------------|--------------|--------------|-------------|-----------------|
| <i>VIF</i>      | 1.06         | 1.04         | 1.02         | 1.00        | 1.03            |
| <i>1/VIF</i>    | 0.942297     | 0.957587     | 0.982362     | 0.997922    |                 |

Source: Author's Compilation

The Variance Inflation Factor (VIF) shows low values (all below 1.06) and high 1/VIF values (all above 0.94), indicating that multicollinearity, a problem where independent variables are highly correlated, is unlikely to be a major concern in this analysis.

#### 4.1.4 Breusch Pagan Test

|                                     |   |
|-------------------------------------|---|
| <i>Breusch Pagan Cooke/Weisberg</i> | <i>chi2(1) = 380.26; Prob&gt;chi2= 0.0000</i> |
| <i>Test for Heteroskedasticity</i>  |   |

**Source:** Author's Compilation

The Breusch Pagan Cooke/Weisberg test reveals a significant chi-squared value (380.26) with a very low probability (0.0000). This suggests the presence of heteroskedasticity, where the variance of the error terms is not constant across all observations.

#### 4.1.5 Hausman Test

|                                   |  |
|-----------------------------------|--|
| <i>Hausman Test</i>               | <i>Chi2 (4) = 4.17; Prob&gt;chi2= 0.3838</i> |
| <i>Test for omitted variables</i> |  |

**Source:** Author's Compilation

The Hausman test shows no significant chi-squared value (4.17) with a high probability (0.3838), suggesting no evidence of omitted variables biasing the model's estimates. Therefore, the study regression will be conducted using the Random Effect Model to test the stated hypotheses.

## 4.2 Random Effect Model Regression

| <i>Dependent Variable: Environmental Information Disclosure (EIDC)</i> |               |                    |                 |                     |             |
|--|---------------|--------------------|-----------------|---------------------|-------------|
| <i>Variables</i>   | <i>Symbol</i> | <i>Coefficient</i> | <i>Std. Err</i> | <i>t-Statistics</i> | <i>Sig.</i> |
| <i>Constant</i>  | _CONS         | -0.44914           | 0.05945         | -7.55               | 0.000       |
| <i>FIRM SIZE</i>   | FSIZE         | 0.06105            | 0.00772         | 7.91                | 0.000       |
| <i>PROFITABILITY</i>   | PROF          | -3.9506            | 7.1106          | -0.56               | 0.578       |

|                            |       |         |         |        |       |
|----------------------------|-------|---------|---------|--------|-------|
| <b>BOARD INDEPENDENCE</b>  | BOIND | 0.00075 | 0.00027 | 2.70   | 0.007 |
| <b>OWNERSHIP STRUCTURE</b> | OWNST | 0.00065 | 0.00020 | 3.15   | 0.002 |
| <b>Wald chi2 (4)</b>       |       |         |         | 75.99  |       |
| <b>Prob &gt; chi2</b>      |       |         |         | 0.0000 |       |

**Source:** Author's Compilation

This table presents the results of a regression analysis exploring determinants of environmental information disclosure (EIDC) by listed firms in Nigeria. The dependent variable is EIDC, and the independent variables are firm size (FSIZE), profitability (PROF), board independence (BOIND), and ownership structure (OWNST).

*H<sub>01</sub>: there is no significant effect of firm size on environmental information disclosure of listed firms in Nigeria*

The coefficient for firm size (0.06105) is positive and statistically significant (Sig. = 0.000). This indicates a positive relationship between firm size and EIDC. In other words, larger firms (higher FSIZE values) tend to disclose more environmental information compared to smaller firms. Therefore, the null hypothesis is rejected, as the findings reveals that firm size have significant effect on environmental information disclosure of listed firms in Nigeria.

*H<sub>02</sub>: profitability has no significant effect on environmental information disclosure of listed firms in Nigeria*

The coefficient for profitability (-3.9506) is negative but not statistically significant (Sig. = 0.578). This suggests a weak or potentially no relationship between profitability and EIDC. Contrary to expectations, profitability does not appear to be a major driver of environmental disclosure practices in this study. Therefore, we retain the null hypothesis, as the study reveals that profitability has no significant effect on environmental disclosure of listed companies in Nigeria.

*H<sub>03</sub>: there is no significant relationship between ownership structure and environmental information disclosure of listed firms in Nigeria*

The coefficient for ownership structure (0.00065) is positive and statistically significant (Sig. = 0.002). This suggests a positive relationship between ownership structure and EIDC. OWNST value represents greater concentration of ownership, the positive coefficient indicates that firms with concentrated ownership disclose more environmental information. Hence, the null hypothesis is rejected as the study reveals that ownership structure has significant relationship with environmental disclosure of listed firms in Nigeria.

*H<sub>04</sub>: there is no significant relationship between board independence and environmental information disclosure of listed firms in Nigeria*

The coefficient for board independence (0.00075) is positive and statistically significant (Sig. = 0.007). This suggests a positive relationship between board independence and EIDC. Firms with a higher proportion of independent board members (higher BOIND values) tend to disclose more environmental information. The findings reveals that board independence have significant relationship with environmental information disclosure of listed firms in Nigeria.

### **4.3 Discussion of Findings**

Consistent with expectations, firm size emerged as a significant positive determinant of EIDC. Larger firms tend to disclose more environmental information compared to their smaller counterparts. This could be attributed to factors like greater resource availability for environmental management and sustainability reporting, as well as facing higher stakeholder scrutiny due to their increased visibility. The finding agrees with those of Bello and Ogungbenle (2022), Alade and Odugbemi (2021) and Atang and Eyisi (2020) who reported that firm size is a significant determinant of environmental information disclosure.

Contrary to some prior research, profitability did not exhibit a statistically significant influence on EIDC in this model. This suggests that factors beyond a firm's financial performance play a more prominent role in shaping its environmental disclosure practices in the Nigerian context. The study agrees with those of Usiomon and Iyoha (2024), who reported that profitability have insignificant effect on environmental information disclosure of listed firms in Nigeria. The study contradicts the findings

of Alade and Odugbemi (2021) and Atang and Eyisi (2020) who reported significant relationship between profitability and environmental information disclosure.

The positive and significant coefficient for ownership structure requires further investigation to understand the underlying mechanism. Depending on how ownership structure is measured, the finding could suggest that either firms with concentrated ownership or those with a wider range of shareholders are more likely to engage in EID. Future research delving deeper into the specific ownership structure types could provide a clearer picture. The study contradicts the findings of Alade and Odugbemi (2022) who reported a negative relationship between ownership structure and environmental information disclosure of listed firms.

The positive and significant relationship between board independence and EIDC highlights the role of independent board members in promoting environmental transparency. Firms with a higher proportion of independent directors might be more likely to prioritize environmental considerations and hold management accountable for environmental performance, leading to more comprehensive EID reports. The result is in alignment with those of Bello and Ogungbenle (2022) and Atang and Eyisi (2020) who reported that board independence has significant effect on environmental information disclosure.

## **5.1 Conclusion and Recommendations**

This study investigated the determinants of environmental information disclosure (EIDC) amongst listed manufacturing firms in Nigeria. The analysis revealed that firm size and board independence are significant positive factors influencing EIDC, while profitability did not show a strong association. Ownership structure also exhibited a positive influence on environmental information disclosure.

Based on these findings, listed firms in Nigeria, particularly larger firms, should prioritize robust environmental information disclosure practices. Strengthening board independence through the appointment of qualified and environmentally conscious directors can further enhance transparency and accountability regarding environmental performance. While profitability may not be a direct driver, firms should recognize the growing importance of environmental stewardship and integrate

environmental considerations into their overall strategies to promote long-term sustainability.

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