

**How to Cite:**

EZE, C. U., & Ofoegbu, G. N. (2026). Environmental, Social and Governance (ESG) disclosures and financial performance of listed firms in Nigeria. *International Journal of Economic Perspectives*, 20(7), 740–756. Retrieved from <https://ijeponline.org/index.php/journal/article/view/1340>

## **Environmental, Social and Governance (ESG) disclosures and financial performance of listed firms in Nigeria**

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**Abstract**--This study, titled Environmental, Social and Governance (ESG) Disclosures and Financial Performance of Listed Firms in Nigeria, examined the impact of ESG disclosures on the financial performance of listed companies. Specifically, it evaluated the impact of ESG disclosures on Return on Equity (ROE), Fixed Asset Turnover (FAT), Earnings per Share (EPS), Tobin's Q (TQ), and Operating Ratio (OR). The study adopted an *ex-post facto* research design, using secondary data from annual reports, audited financial statements, and sustainability disclosures of 16 firms in the manufacturing/industrial and oil & gas sectors of the Nigerian Exchange Group (NGX), covering 2005 to 2024. Panel data analysis, including descriptive and correlation analysis, followed by multiple regression models were employed. The findings revealed that ESG disclosure had a positive and statistically significant impact on ROE ( $\beta = 2.1000$ ;  $p = 0.013$ ) and TQ ( $\beta = 2.6739$ ;  $p = 0.0392$ ), but had non-significant impact on FAT ( $\beta = 0.2015$ ;  $p = 0.3748$ ), EPS ( $\beta = -0.4712$ ;  $p = 0.2223$ ), and OR ( $\beta = 0.0983$ ;  $p = 0.2561$ ). The study concluded that ESG practices enhance long-term value creation, profitability, and investor confidence, while their impact on operational efficiency and short-term earnings remains limited. Recommendations include strengthening ESG reporting, integrating ESG with operational strategies, adopting cost-efficient compliance measures, improving disclosure quality, and managing operational costs to maximize ESG benefits.

**Keywords**---ESG Disclosure, Financial Performance, Return on Equity (ROE), Sustainability.

## **Introduction**

Over the past two decades, Environmental, Social and Governance (ESG) disclosures have evolved from an optional aspect of corporate social responsibility into a central element of corporate reporting and investment decision-making globally. ESG refers to a set of non-financial criteria used to evaluate how effectively firms manage their environmental impact, social relationships and governance structures (Martiny et al., 2024). This shift reflects the growing recognition that long-term business sustainability depends not only on financial outcomes but also on how organizations address environmental, social and governance challenges that influence resilience, reputation and value creation. The environmental dimension focuses on how firms manage natural resources through practices such as energy efficiency, waste management, emission reduction and climate risk mitigation (Khamisu & Paluri, 2024). The social dimension relates to how companies treat employees, customers and communities, emphasizing fair labour practices, diversity and respect for human rights (González-De-la-Rosa et al., 2023). The governance dimension concerns leadership structures, board composition, transparency, ethical conduct and accountability mechanisms that promote responsible decision-making and stakeholder trust (Mohd, 2023).

Globally, the development of ESG disclosure has been influenced by several institutional frameworks and initiatives. The United Nations Global Compact launched in 2000 encouraged firms to adopt principles relating to human rights, labour standards, environmental protection and anti-corruption. The Global Reporting Initiative introduced widely adopted sustainability reporting standards, while the Paris Agreement of 2015 reinforced the urgency of climate accountability and led to the creation of the Task Force on Climate-related Financial Disclosures in 2017. More recently, the International Sustainability Standards Board established in 2021 has provided a unified global framework for sustainability reporting, improving transparency and comparability across markets. Institutional investors have also accelerated ESG adoption. Major global investment firms increasingly incorporate ESG considerations into their investment decisions, while the Principles for Responsible Investment has attracted thousands of signatories managing trillions of dollars in assets (PRI, 2024). These developments reflect a fundamental shift in investment philosophy where sustainability performance is increasingly linked to financial outcomes.

Across regions, ESG disclosure practices have developed within different regulatory contexts. In the European Union, directives such as the Non-Financial Reporting Directive and the Corporate Sustainability Reporting Directive require large companies to report on environmental and social matters (Hummel & Jobst, 2024). Similar initiatives exist in the United Kingdom and the United States, where regulators increasingly require climate-related and governance disclosures (Lunawat et al., 2025). In Asia, countries such as Japan and Singapore have also introduced sustainability reporting requirements for listed companies

(Schumacher et al., 2022). In Africa, Nigeria has taken steps toward integrating ESG into corporate governance frameworks. The Nigerian Exchange Group introduced Sustainability Disclosure Guidelines in 2019 to encourage listed companies to incorporate sustainability principles into their operations and reporting practices. The Financial Reporting Council of Nigeria and the Securities and Exchange Commission have also developed a roadmap to align corporate reporting with international sustainability standards by 2027. However, despite these initiatives, ESG reporting in Nigeria remains inconsistent due to limited expertise, weak enforcement mechanisms and the absence of standardized reporting metrics (KPMG, 2022).

The relationship between ESG disclosure and financial performance has therefore attracted increasing scholarly attention. Financial performance refers to a firm's ability to effectively utilize its resources to generate profits and shareholder value (Sari & Ainun, 2024), commonly measured through indicators such as return on assets, return on equity, earnings per share and market-based measures like Tobin's Q (Valencia, 2025). Empirical findings remain mixed. Studies in developed economies often report a positive relationship between ESG disclosure and firm performance due to improved transparency, reputation and investor confidence (Aydoğmuş et al., 2022). However, evidence from developing economies remains less consistent because of differences in institutional quality and regulatory enforcement. In Nigeria, studies suggest that ESG practices can contribute to long-term value creation through improved risk management and stakeholder trust, although short-term financial benefits may vary across industries. Given the increasing emphasis on sustainability and evolving regulatory frameworks, this study therefore examines the impact of ESG disclosure on the financial performance of quoted firms in Nigeria.

### **Statement of Problem**

The growing prominence of Environmental, Social and Governance (ESG) disclosures reflects the increasing recognition that non-financial performance can significantly influence corporate value and investor decisions. While global evidence suggests that effective ESG practices may enhance firm performance by lowering risk, improving efficiency and strengthening stakeholder trust, the empirical outcomes remain inconsistent across contexts (Eccles et al., 2014; Khan et al., 2016). In Nigeria, despite regulatory efforts by the Nigerian Exchange Group and the Financial Reporting Council to institutionalize sustainability reporting, ESG disclosures among quoted firms remain fragmented and uneven, with significant variations in the quality, scope, and depth of information provided. While some companies present comprehensive sustainability reports, others offer only minimal or symbolic disclosures. This inconsistency undermines the comparability and credibility of ESG data, making it difficult to determine whether such reporting genuinely contributes to improved financial performance.

Most existing studies on ESG disclosure have predominantly focused on its implications for corporate reputation, sustainability reporting practices and stakeholder relations. However, this study integrated Market-based performance, profitability base performance and Efficiency based performance as well as asset utilization performance such as Tobin's Q, Return on Equity (ROE), Fixed Asset

Turnover, Earnings per Share (EPS), and Operating Ratio. While some studies highlight the potential of ESG practices to improve profitability and operational efficiency, others argue that compliance-driven or symbolic reporting yields minimal impact on shareholder value (Fernando et al., 2019). This ambiguity is particularly pronounced in emerging markets like Nigeria, where institutional enforcement is weak and market expectations of ESG practices are still evolving.

Consequently, a research gap exists in understanding whether ESG disclosures in Nigeria are merely symbolic or whether they genuinely translate into measurable improvements in financial performance. Addressing this is critical for investors, regulators and corporate managers in determining whether ESG reporting enhances firm valuation, strengthens profitability and improves operational efficiency.

### **Objective of the Study**

The main objective of this study is to examine the impact of Environmental, Social and Governance (ESG) disclosures on the financial performance of quoted firms in Nigeria. While the specific objectives are to:

- i. Evaluate the impact of ESG disclosures on the Return on Equity (ROE) of listed companies in Nigeria.
- ii. Determine the impact of ESG disclosures on Fixed Asset Turnover of listed companies in Nigeria.
- iii. Analyse the impact of ESG disclosures on Earnings per Share (EPS) of listed companies in Nigeria.
- iv. Examine the impact of (ESG) disclosures on Tobin's Q of listed companies in Nigeria.
- v. Assess the impact of ESG disclosures on the Operating Ratio (cost efficiency) of listed companies in Nigeria.

### **Literature Review**

#### **Environmental, Social and Governance and Return on Equity**

Oke, Ojogbo, and Bيرانee (2025) examined the influence of ESG practices on the performance of Nigerian manufacturing firms. The study focused on a population of all manufacturing firms listed on the Nigerian Exchange, from which a sample of 45 firms was selected. It covered a ten-year period from 2010 to 2020 and employed panel regression analysis to investigate the relationship between ESG factors and financial performance. The findings indicated that governance and social factors were strongly associated with higher return on equity (ROE), while environmental initiatives contributed positively, though their effects appeared more gradual. By employing panel regression, the study provided robust and credible results, reinforcing confidence in the link between ESG adoption and financial outcomes.

The findings resonate with the wider body of international literature. Alareni and Hamdan (2020), for instance, reported that ESG disclosure significantly improved financial performance among firms in Gulf Cooperation Council countries, particularly by strengthening investor trust and enhancing access to capital. Likewise, Buallay (2019) demonstrated that governance quality played a critical

role in boosting profitability across European firms, emphasizing the importance of transparency, accountability, and effective oversight mechanisms in driving corporate outcomes. Together, these studies suggest a consistent pattern across contexts: governance and social dimensions of ESG tend to deliver quicker and more visible financial returns compared to environmental initiatives. This tendency is particularly evident in developing economies, where institutional weaknesses, inconsistent regulatory enforcement, and limited resources often reduce the immediate benefits of environmental sustainability programs.

The implication for firms in Nigeria and similar economies is that strengthening governance structures and investing in socially responsible initiatives such as promoting board independence, ensuring employee welfare, and engaging meaningfully with local communities can yield relatively fast improvements in reputation, stakeholder relations, and financial performance. However, while these dimensions may provide short-term gains, neglecting environmental sustainability poses long-term risks. As global markets increasingly prioritize carbon reduction strategies, climate-related disclosures, and environmentally responsible supply chains, firms that fail to integrate environmental considerations may face reputational penalties, restricted market access, and reduced competitiveness. Thus, although governance and social practices may serve as an immediate driver of profitability, a balanced approach that integrates environmental initiatives is essential for long-term resilience and sustainable value creation.

### **Environmental, Social and Governance and Fixed Asset Turnover**

Widianingsih *et al.*, (2024) examined the impact of renewable energy consumption and ESG reporting on fixed asset turnover in the energy and basic materials sectors in Asia. Their analysis showed that ESG reporting, measured by ESG scores, significantly improves fixed asset turnover, indicating that firms with stronger ESG performance utilize their assets more efficiently. This suggests that ESG adoption provides operational benefits in addition to enhancing reputation and financial performance.

These findings are consistent with evidence from other studies linking ESG practices to firm outcomes. Oke, Ojogbo, and Biiranee (2025) found that governance and social factors positively influenced return on equity in Nigerian manufacturing firms, while environmental initiatives had more gradual effects. Similarly, Aydoğmuş (2022) highlighted that governance and social scores were more strongly associated with profitability than environmental scores, particularly in contexts where governance and social expectations are pressing. Widianingsih *et al.*'s study complements these results by showing that ESG practices can also enhance operational efficiency, suggesting multiple pathways through which ESG creates firm value.

Internationally, the study aligns with Chinprateep (2025), who reported a generally positive ESG–financial performance relationship across sectors, and with Friede, Busch, and Bassen (2015), who concluded that ESG performance is mostly value-enhancing but context-dependent. By linking ESG reporting to fixed asset turnover, Widianingsih *et al.* (2024) highlight that operational metrics can capture efficiency gains that may precede profitability improvements.

The implications are especially relevant for firms in emerging markets, where efficient resource use is critical for competitiveness. The study reinforces that ESG adoption should not be seen solely as a long-term sustainability investment but also as a strategy to improve immediate operational performance and efficiency, demonstrating that environmental, social, and governance initiatives can deliver both short-term and long-term value.

Also, Oyegunle-Esimaje (2024) investigated the impact of ESG scores on corporate financial performance, including fixed asset turnover, among non-financial firms listed on the Nigerian Stock Exchange. Using an ex post facto and cross-sectional design with data from 2012 to 2022, the study found a positive association between ESG performance and key financial metrics, indicating that firms with higher ESG scores are able to utilize their assets more efficiently. This finding highlights that ESG adoption not only enhances profitability and investor confidence but also supports operational efficiency, providing tangible benefits beyond reputational gains.

These results are consistent with evidence from Widianingsih et al. (2024), who reported that ESG reporting improved fixed asset turnover in the energy and basic materials sectors in Asia, suggesting that the efficiency-enhancing effects of ESG may extend across different geographies and industries. Similarly, Oke, Ojogbo, and Biiranee (2025) found that governance and social factors in Nigerian manufacturing firms were positively linked to return on equity, demonstrating that certain ESG components can generate quicker financial returns. The study also complements findings from Khan et al. (2019) in emerging Asian markets, who observed that ESG adoption generally improves firm performance, though outcomes vary by sector and regional context, and Aydoğmuş (2022), who highlighted the stronger impact of governance and social scores relative to environmental initiatives.

### **Environmental, Social and Governance and Earnings Per Share**

Oke, Ojogbo, and Biiranee (2025) examined the impact of Environmental, Social, and Governance (ESG) factors on the financial performance of Nigerian manufacturing firms, focusing on metrics such as earnings per share (EPS). Using panel data analysis with Fixed Effects and Random Effects models on data spanning 2014 to 2023, the study found that strong ESG performance positively affects EPS. This suggests that integrating ESG practices into corporate strategies can enhance financial outcomes, reinforcing the value of sustainable and responsible business practices in emerging markets.

The findings align with broader evidence on the benefits of ESG adoption. For instance, studies by Oyegunle-Esimaje (2024) and Widianingsih et al. (2024) demonstrated that ESG performance improves operational efficiency, including fixed asset turnover, highlighting multiple pathways through which ESG contributes to firm value. Similarly, Buallay (2019) and Velte (2017) documented positive links between governance quality and financial performance in European contexts, suggesting that ESG factors can enhance profitability across different geographic and institutional settings.

By showing that ESG adoption translates into tangible financial benefits such as higher EPS, Oke, Ojogbo, and Biiranee (2025) reinforce the argument that ESG integration is not only a compliance or reputational tool but also a strategic approach that strengthens shareholder value. The study underscores the importance of aligning ESG initiatives with firm-specific strategies and operational capabilities, particularly in emerging economies where firms face unique governance challenges and social expectations. Collectively, these findings suggest that ESG adoption can enhance both financial and operational performance, positioning firms to achieve long-term competitiveness while meeting the growing expectations of investors, regulators, and other stakeholders. Similarly, Izuagie (2025) investigated the impact of Environmental, Social, and Governance (ESG) practices on the financial performance of selected quoted manufacturing firms in Nigeria, with a particular focus on earnings per share (EPS). Using an ex-post facto research design and analyzing data from 2015 to 2023, the study found that governance and social sustainability practices have a statistically significant positive effect on EPS. This indicates that effective ESG practices can enhance financial outcomes, emphasizing the strategic value of integrating ESG initiatives into corporate operations.

These findings are consistent with other evidence from the Nigerian context and beyond. Oke, Ojogbo, and Biiranee (2025) reported that strong ESG performance positively influences EPS in Nigerian manufacturing firms, while Oyegunle-Esimaje (2024) and Widianingsih et al. (2024) showed that ESG adoption can improve operational efficiency, such as fixed asset turnover, thereby creating multiple pathways for firm value enhancement. Internationally, studies by Buallay (2019) and Velte (2017) found that governance quality and ESG performance are positively associated with financial performance in European firms, demonstrating the broader applicability of ESG as a value-enhancing strategy.

The study by Izuagie (2025) underscores the importance of focusing on governance and social dimensions of ESG, particularly in emerging markets where these factors may have a more immediate impact on profitability than environmental initiatives. By linking ESG practices to improved EPS, the research reinforces that sustainable corporate strategies are not merely compliance-oriented or reputational but can directly contribute to shareholder value. This highlights the need for firms to strategically integrate ESG into core business operations, ensuring alignment with financial and operational objectives to achieve long-term competitiveness and stakeholder trust.

### **Environmental, Social and Governance and Tobin's Q**

Yeye and Egbunike (2023) examined the impact of Environmental, Social, and Governance (ESG) disclosure on firm value, with a focus on the moderating role of profitability. Using panel data analysis of 12 industrial goods manufacturing firms listed on the Nigerian Stock Exchange from 2014 to 2020, the study found that ESG disclosure positively affects firm value, measured by Tobin's Q, and that profitability strengthens this relationship. This suggests that firms with higher profitability are better positioned to leverage ESG disclosure for enhancing market valuation, highlighting the synergistic effects of financial strength and sustainable practices.

The findings complement prior evidence on ESG adoption in Nigerian manufacturing firms. For instance, Oke, Ojogbo, and Biiranee (2025), Izuagie (2025), and Yahaya (2024) reported that ESG initiatives positively influence earnings per share (EPS), emphasizing the value-enhancing potential of sustainable practices. Similarly, studies by Oyegunle-Esimaje (2024) and Widianingsih et al. (2024) linked ESG adoption to improved operational efficiency, such as higher fixed asset turnover, suggesting that ESG contributes to both market valuation and operational performance.

By highlighting the moderating role of profitability, Yeye and Egbunike (2023) underscore that the benefits of ESG disclosure are not uniform across firms; financially stronger companies may gain greater value from transparent ESG practices. This aligns with international findings, including Buallay (2019) and Velte (2017), who documented that governance quality and ESG performance enhance financial outcomes, though the magnitude depends on firm-specific characteristics and context. The study reinforces the strategic importance of integrating ESG initiatives with financial management to maximize firm value, particularly in emerging markets where investor scrutiny and market expectations regarding sustainability are increasing.

In addition, Igbinovia and Agbadua (2023) investigated the influence of Environmental, Social, and Governance (ESG) reporting on firm value, with attention to the moderating role of firm advantage. Using regression analysis on data from 20 Nigerian manufacturing firms for the period 2017 to 2021, the study found that ESG reporting positively affects firm value, measured by Tobin's Q. Additionally, firms with competitive advantages experienced stronger benefits from ESG reporting, suggesting that strategic positioning and internal capabilities amplify the value-enhancing effects of ESG initiatives.

The findings complement earlier evidence on ESG adoption and firm performance in Nigeria. For example, Yeye and Egbunike (2023) highlighted that profitability moderates the positive effect of ESG disclosure on firm value, indicating that financially strong firms gain more from sustainability practices. Similarly, Oke, Ojogbo, and Biiranee (2025), Izuagie (2025), and Yahaya (2024) reported that ESG practices improve financial performance metrics such as earnings per share, while Oyegunle-Esimaje (2024) and Widianingsih et al. (2024) linked ESG adoption to operational efficiency, including fixed asset turnover.

#### **Environmental, Social and Governance and Operating Ratio (Cost Efficiency)**

Boluwade and Olaniyan (2025) examined the effect of sustainability cost disclosures on the operating performance of listed consumer goods companies in Nigeria. Using an ex-post facto research design and analyzing secondary data from ten Nigerian Exchange Group (NGX) listed firms' annual reports spanning 2015 to 2024, the study found a positive relationship between sustainability cost disclosures and operating performance. This indicates that transparent reporting of sustainability-related expenses can enhance cost efficiency, enabling firms to better manage operational resources while maintaining accountability to stakeholders.

The findings align with broader research on ESG and firm value, emphasizing that responsible corporate practices do not only impact profitability but also improve operational effectiveness. For instance, studies by Oyegunle-Esimaje (2024) and Widianingsih et al. (2024) highlighted that ESG adoption can enhance operational efficiency, including fixed asset turnover, while Oke, Ojogbo, and Biiranee (2025), Izuagie (2025), and Yahaya (2024) reported positive effects of ESG practices on earnings per share. Boluwade and Olaniyan's study contributes to this body of knowledge by demonstrating that detailed cost disclosures related to sustainability initiatives can provide tangible operational benefits in addition to reputational and financial gains.

The study also underscores the importance of sector-specific analysis. In consumer goods companies, where operational efficiency and cost management are critical, sustainability cost disclosures appear to offer measurable benefits, reinforcing the idea that transparency in ESG-related expenses can support both strategic decision-making and overall performance. This complements findings by Fiaeli and Adebayo (2025) and Adebayo, Akinloye, and Ibrahim (2025), which indicate that the effects of ESG reporting on financial performance may vary across sectors, highlighting the need for tailored approaches to ESG integration. Overall, Boluwade and Olaniyan (2025) demonstrate that sustainability cost disclosures are more than a compliance tool; they can directly contribute to enhanced operational performance and resource efficiency, providing Nigerian firms with a pathway to achieve both immediate and long-term value from sustainable practices.

## **Theoretical Review**

### **Stakeholder Theory**

Stakeholder Theory, developed by **Freeman (1984)**, argues that organizations have responsibilities not only to shareholders but also to other stakeholders such as employees, customers, suppliers, communities, and regulators. The theory emphasizes that firms achieve long-term success by balancing the interests of these groups. ESG disclosures support this theory by helping firms communicate their environmental, social, and governance practices, thereby building trust, improving reputation, and enhancing financial performance.

### **Legitimacy Theory**

Legitimacy Theory, proposed by **Suchman (1995)**, suggests that organizations must operate in ways that align with societal norms and expectations in order to gain approval and maintain legitimacy. Companies use disclosures, including ESG reporting, to demonstrate responsible behavior and maintain public trust. By showing accountability in environmental, social, and governance activities, firms can strengthen their reputation and secure stakeholder support, which may positively influence financial performance.

### **Agency Theory**

Agency Theory, introduced by **Jensen and Meckling (1976)**, explains the conflict of interest that can arise between shareholders (principals) and managers (agents). The theory argues that transparency, monitoring, and proper reporting help reduce these conflicts and align managerial actions with shareholder

interests. ESG disclosures improve transparency by providing information about governance structures, ethical practices, and sustainability efforts, thereby reducing information asymmetry and enhancing investor confidence.

### **Resource-Based View (RBV)**

The Resource-Based View, developed by **Barney (1991)**, states that firms gain sustainable competitive advantage through valuable, rare, inimitable, and non-substitutable resources. ESG practices can function as strategic resources that strengthen brand reputation, stakeholder loyalty, and investor confidence. When effectively implemented and disclosed, these capabilities enhance competitiveness, support long-term growth, and improve overall financial performance.

## **Methodology**

### **Research Design**

This study employs an *ex-post facto* research design, suitable for examining the impact of ESG disclosures on firm performance since the variables under investigation already exist and cannot be manipulated (Gil, 2025). The design relies on historical data drawn from annual reports and sustainability disclosures of listed manufacturing and oil and gas firms on the Nigerian Exchange Group (2005–2024). This approach allows the study to establish relationships between ESG disclosures and financial performance indicators such as Return on Equity (ROE), Earnings per Share (EPS), Tobin's Q, Fixed Asset Turnover, and Operating Ratio, providing insights into how sustainable practices influence firm outcomes over time.

### **Sources of Data**

This study uses secondary data covering the period 2005 to 2024. The data sources include annual reports and audited financial statements of the selected firms. Where available, sustainability and ESG disclosures are incorporated to examine how these practices relate to financial performance. ESG disclosure requirements to be used as a benchmark will be sourced from global reporting frameworks, including the Global Reporting Initiative (GRI) Standards, the Sustainability Accounting Standards Board (SASB), and the United Nations Principles for Responsible Investment (UN PRI). These standards provide internationally recognized guidelines for environmental, social, and governance reporting. The disclosures of Nigerian firms will be compared against these requirements to assess compliance, completeness, and quality. It is important to note that not all Nigerian firms are mandated to provide formal ESG or sustainability reports, and the extent and quality of disclosure vary across sectors and firms. Additional relevant data will be obtained from the Nigerian Exchange Group (NGX), regulatory bodies such as the Securities and Exchange Commission (SEC), and industry publications to ensure credibility and consistency. The use of secondary data is appropriate, as it provides verifiable, standardized, and longitudinal information necessary for examining the relationship between ESG disclosures and firm financial performance over time.

### **Population of the Study**

The population of this study consists of all the 150 companies listed on the Nigerian Exchange Group (NGX), with a particular focus on firms in the manufacturing/industrial and oil & gas sectors as at 2024 (nigeria234, 2025). These sectors were chosen due to their dominant role in Nigeria's economy, their sensitivity to environmental, social and governance (ESG) issues and the level of public and regulatory attention they attract. Firms in these sectors are not only among the largest contributors to Nigeria's GDP but are also highly exposed to sustainability challenges such as environmental impact, governance practices, and stakeholder accountability, making them suitable for assessing the effect of ESG disclosures on financial performance.

### **Sampling Method and Sample Size**

The study employed a purposive sampling method to select ten firms from the manufacturing/industrial and oil and gas sectors of the Nigerian Exchange Group (NGX) (Nyimbili and Nyimbili, 2024). Purposive sampling was appropriate because the research specifically focuses on sectors where ESG practices are most relevant and likely to impact financial performance. Firms in manufacturing and oil and gas are highly capital-intensive, face significant environmental and social scrutiny, and are subject to stricter governance expectations, making them suitable for investigating the relationship between ESG disclosure and financial outcomes. These companies, including Dangote Cement Plc, Lafarge Africa Plc, BUA Cement Plc, Nigerian Breweries Plc, Flour Mills of Nigeria Plc, Dangote Sugar Refinery Plc, Unilever Nigeria Plc, and Nestlé Nigeria Plc, and Seplat Energy Plc, TotalEnergies Marketing Nigeria Plc, Oando Plc, MRS Oil Nigeria Plc, Conoil Plc, Ardova Plc, Eterna Plc, and 11 Plc. were chosen because of their economic significance, consistent listing, and high exposure to ESG issues. Their scale and industry relevance make them suitable for assessing how ESG practices influence financial performance.

### **Method of Data Analysis**

The study employs panel data analysis, combining cross-sectional and time-series data of the selected firms from 2005 to 2024. Descriptive statistics are first used to summarize the data, while correlation analysis examines the association among variables. To test the hypotheses, multiple regression models are applied to evaluate the impact of ESG disclosures on ROE, EPS, Fixed Asset Turnover, Tobin's Q, and Operating Ratio.

Before the estimation of the model, several diagnostic tests are conducted to ensure the reliability, validity, and robustness of the results. First, descriptive statistics are employed to summarize the basic characteristics of the variables used in the study. This provides information on the mean, median, maximum, minimum, and standard deviation of the variables, thereby offering insight into their distribution and general behavior over the study period.

As part of the pre-estimation tests, a unit root test is performed to determine whether the variables are stationary. Stationarity ensures that the statistical properties of the variables, such as mean and variance, remain constant over time, thereby preventing spurious regression results. In this study, the Levin, Lin

and Chu (LLC) and Im, Pesaran and Shin (IPS) panel unit root tests are applied to examine the stationarity of the variables.

In addition, correlation analysis is conducted to examine the degree and direction of association among the variables included in the model. This helps to identify the presence of strong linear relationships between variables and provides preliminary evidence of how ESG disclosure relates to the selected measures of financial performance.

Furthermore, the Hausman specification test is applied to determine the most appropriate estimation technique between the fixed effects and random effects models. The fixed effects model accounts for firm-specific characteristics that remain constant over time, while the random effects model assumes that these individual effects are not correlated with the explanatory variables. The Hausman test therefore guides the selection of the most suitable model for the study.

After estimation, several post-estimation diagnostic tests are conducted to validate the robustness of the results. The Residual Cross-Section Dependence test, including the Breusch–Pagan LM test, Pesaran Scaled LM test, and Pesaran CD test, is performed to determine whether cross-sectional dependence exists among the panel units. These tests help to confirm whether the residuals across firms are independent.

Finally, the Breusch–Pagan–Godfrey heteroskedasticity test is carried out to examine whether the variance of the error terms is constant across observations. The absence of heteroskedasticity indicates that the model's estimates are efficient and reliable. Together, these diagnostic tests ensure the validity and robustness of the empirical results obtained in the study.

### Model Specification

The relationship between ESG disclosures and financial performance is expressed as a panel regression model:

$$FP_{it} = \alpha + \beta_1 ESG_{it} + \mu_{it}$$

Where:

- $FP_{it}$  = Financial performance measures of firm  $i$  at time  $t$
- $ESG_{it}$  = Environmental, Social, and Governance disclosures of firm  $i$  at time  $t$
- $\alpha$  = Intercept
- $\beta_1$  = Coefficient of ESG disclosures
- $\mu_{it}$  = Error term

Since financial performance is captured by multiple indicators, the model expands into five functional forms:

#### 1. ROE Model:

$$ROE_{it} = \alpha + \beta_1 ESG_{it} + \mu_{it}$$

#### 2. Fixed Asset Turnover Model:

$$FAT_{it} = \alpha + \beta_1 ESG_{it} + \mu_{it}$$

## 3. EPS Model:

$$EPS_{it} = \alpha + \beta_1 ESG_{it} + \mu_{it}$$

## 4. Operating Ratio Model:

$$OR_{it} = \alpha + \beta_1 ESG_{it} + \mu_{it}$$

## 5. Tobin's Q Model:

$$TQ_{it} = \alpha + \beta_1 ESG_{it} + \mu_{it}$$

The model applied in this study is adapted from existing ESG-performance frameworks widely discussed in prior literature. Earlier studies have commonly linked ESG to traditional financial measures such as Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q (Friede, Busch, & Bassen, 2015; Velte, 2017; Buallay, 2019).

Therefore, while the model retains traditional variables such as ROE and Tobin's Q for comparability with prior studies, it incorporates Fixed Asset Turnover and Operating Ratio to better capture operational efficiency. In addition, the study employs an ESG disclosure index constructed from firms' annual and sustainability reports, reflecting Nigeria's evolving regulatory environment. The index is developed by assigning a binary score to each indicator, where a value of 1 is given if the item is disclosed and 0 if it is not, based on information obtained from company annual reports, sustainability reports, and corporate websites. The total scores for each firm are then summed and divided by the total possible items to derive a percentage index, providing a standardized measure of ESG disclosure across firms. This adaptation ensures that the model remains grounded in established theory while also integrating new evidence and context specific developments.

## Results

The findings revealed that ESG disclosure had a positive and statistically significant impact on Return on Equity (ROE) of listed firms in Nigeria ( $\beta = 2.1000$ ;  $p = 0.013$ ), indicating that firms with higher ESG disclosure tend to achieve greater profitability for shareholders. The results also showed that ESG disclosure had a positive but statistically non-significant impact on Fixed Asset Turnover (FAT) ( $\beta = 0.2015$ ;  $p = 0.3748$ ), suggesting that asset efficiency is influenced more by internal operational strategies than by ESG disclosure alone. In contrast, ESG disclosure had a negative and statistically non-significant impact on Earnings Per Share (EPS) ( $\beta = -0.4712$ ;  $p = 0.2223$ ), implying that the costs associated with ESG adoption may temporarily reduce earnings without producing a strong immediate effect. Furthermore, ESG disclosure had a positive and statistically significant impact on Tobin's Q (TQ) ( $\beta = 2.6739$ ;  $p = 0.0392$ ), indicating that firms with stronger ESG disclosure tend to enjoy higher market valuations due to improved investor confidence. Finally, ESG disclosure showed a

positive but statistically non-significant impact on Operating Ratio (OR) ( $\beta = 0.0983$ ;  $p = 0.2561$ ), suggesting that operating cost efficiency is driven more by firm-level operational factors than by ESG activities.

### **Conclusion**

The study concludes that ESG disclosure has a mixed effect on the financial performance of listed firms in Nigeria. The findings show that ESG disclosure significantly improves Return on Equity and Tobin's Q, suggesting that sustainability practices enhance shareholder profitability and increase investor confidence, leading to higher market valuation. However, ESG disclosure has no significant effect on Fixed Asset Turnover, Earnings per Share, and Operating Ratio, indicating that its influence on operational efficiency and short-term earnings is limited. Overall, the results suggest that ESG practices contribute more to long-term value creation and improved market perception than to immediate operational performance.

### **Recommendation**

- i. Firms should strengthen their ESG disclosure practices by providing transparent and comprehensive sustainability reports, as improved ESG reporting has been shown to significantly enhance Return on Equity (ROE) and increase shareholder profitability.
- ii. Management of firms should integrate ESG initiatives with operational strategies and asset management policies to ensure that sustainability practices contribute more effectively to improved Fixed Asset Turnover (FAT) and better utilization of productive assets.
- iii. Companies should adopt cost-efficient ESG implementation strategies to minimize the short-term financial burden associated with sustainability compliance, thereby reducing potential negative effects on Earnings per Share (EPS).
- iv. Firms should continue to improve the quality of their ESG disclosures to strengthen investor confidence and market perception, since higher ESG transparency significantly increases firm value as reflected in Tobin's Q (TQ).
- v. Organizations should carefully manage the operational costs associated with ESG activities by incorporating sustainability initiatives into existing business processes, ensuring that such practices do not unnecessarily increase the Operating Ratio (OR).

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