
BOARDROOM DIVERSITY AND ESG PERFORMANCE: EXAMINING NIGERIAN FIRMS' COMMITMENT TO SUSTAINABILITY A CASE STUDY OF THE NIGERIAN BANKING SECTOR

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Abstrak

Pertimbangan Environmental, Social, and Governance (ESG) telah menjadi pusat perhatian dalam tata kelola perusahaan, keberlanjutan keuangan, dan kesuksesan bisnis jangka panjang. Seiring dengan meningkatnya penekanan investor global dan regulator terhadap praktik bisnis berkelanjutan, perusahaan semakin dituntut untuk mengintegrasikan prinsip ESG ke dalam strategi korporasi dan pengungkapan keuangan mereka. Penelitian ini menelaah pengaruh keberagaman dewan direksi terhadap kinerja ESG pada bank-bank di Nigeria, dengan fokus pada keberagaman gender, ukuran dewan, direktur independen, masa jabatan dewan, dan latar belakang pendidikan. Dengan menggunakan data sekunder dari laporan tahunan dan pengungkapan keberlanjutan lima bank komersial papan atas selama periode 2017 hingga 2023, penelitian ini mengevaluasi hubungan antara komposisi dewan dengan capaian ESG. Hasil penelitian menunjukkan bahwa meskipun keberagaman dewan merupakan mekanisme tata kelola yang penting, pengaruh langsungnya terhadap kinerja ESG secara statistik masih lemah. Keberagaman gender menunjukkan pengaruh positif namun tidak signifikan terhadap skor ESG, sedangkan ukuran dewan dan proporsi direktur independen menunjukkan hubungan negatif. Masa jabatan dewan, meskipun berasosiasi positif dengan kinerja ESG, tidak memiliki signifikansi statistik. Temuan ini mengindikasikan bahwa di luar keberagaman demografis, efektivitas dewan dalam mendorong integrasi ESG sangat bergantung pada penegakan regulasi, kebijakan perusahaan, serta keahlian dalam bidang keberlanjutan..

Kata Kunci: Keberagaman dewan direksi, kinerja ESG, tata kelola perusahaan, pelaporan keberlanjutan, sektor perbankan Nigeria.

Abstract

Environmental, Social, and Governance (ESG) considerations have become central to corporate governance, financial sustainability, and long-term business success. As global investors and regulators emphasize sustainable business practices, companies are increasingly required to integrate ESG principles into their corporate strategies and financial disclosures. This study examined the impact of boardroom diversity on ESG performance in Nigerian banks, focusing on gender diversity, board size, independent directors, board tenure, and educational background.

Using secondary data from annual reports and sustainability disclosures of five top-tier commercial banks between 2017 and 2023, this study evaluated the relationship between board composition and ESG outcomes. The findings indicated that while boardroom diversity is an essential governance mechanism, its direct effect on ESG performance is statistically weak. Gender diversity showed a positive but insignificant impact on ESG scores, while board size and the proportion of independent directors exhibited negative relationships. Board tenure, although positively associated with ESG performance, lacked statistical significance. These results suggested that beyond demographic diversity, board effectiveness in driving ESG integration depends on regulatory enforcement, corporate policies, and sustainability expertise.

Keywords: Boardroom diversity, ESG performance, corporate governance, sustainability reporting, Nigerian banking sector.

INTRODUCTION

The growing global focus on corporate sustainability has elevated the importance of Environmental, Social, and Governance (ESG) performance in contemporary business practice. Organizations are increasingly expected to embed ESG principles into their strategic objectives to strengthen accountability, enhance long-term profitability, and build stakeholder trust. Within this context, the financial sector—particularly the banking industry—plays a pivotal role in driving sustainable economic growth by channeling resources toward responsible investments and fostering ethical corporate behavior (Arayssi et al., 2016). However, the effectiveness of ESG implementation largely depends on corporate governance structures, with boardroom diversity emerging as a critical determinant of sustainability outcomes (Bear et al., 2010).

Boardroom diversity encompasses demographic, cognitive, and experiential variations among directors, such as gender, independence, expertise, nationality, and tenure. A diverse board is expected to enhance decision-making by incorporating multiple perspectives, reducing groupthink, and strengthening oversight (Adams & Ferreira, 2009). Empirical studies suggest that diversity can improve ESG performance by advancing corporate social responsibility (CSR), promoting environmental stewardship, and supporting ethical leadership. Nevertheless, evidence remains mixed, particularly in emerging economies like Nigeria, where institutional, regulatory, and cultural factors strongly shape governance practices (Birindelli et al., 2018)

Board Diversity and ESG in the Nigerian Banking Sector

The Nigerian banking sector is vital to economic stability and financial intermediation, making its commitment to ESG principles central to sustainable development. In line with global calls for responsible banking, regulatory bodies such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council of Nigeria (FRCN) have introduced corporate governance codes and sustainability reporting guidelines to strengthen ESG disclosures (CBN, 2021; FRCN, 2022). Despite these measures, compliance remains uneven, and concerns persist about whether corporate boards are truly effective in driving ESG integration. While some scholars argue that diverse boards

enhance governance quality and stakeholder engagement (Bhandari et al., 2022), others highlight structural inefficiencies, regulatory gaps, and socio-cultural constraints that may weaken the role of diversity in shaping ESG outcomes.

In Nigeria, board diversity is influenced by both regulatory mandates and voluntary governance practices. The CBN Code of Corporate Governance recommends the inclusion of independent directors, gender-balanced boards, and financial experts to strengthen oversight (CBN, 2021). Yet, women and independent directors remain underrepresented compared to global standards, raising questions about whether Nigerian banks fully leverage diversity to advance ESG performance. Moreover, a dynamic operating environment, shifting stakeholder expectations, and the rising importance of climate-related financial risks further underscore the need to reassess the role of board diversity in driving sustainability commitments (Ntim et al., 2017).

The growing global emphasis on ESG performance has prompted a shift in corporate governance practices, particularly in the banking sector. Financial institutions are increasingly expected to integrate ESG principles into their operations to strengthen sustainability, enhance accountability, and build stakeholder trust. However, many banks in emerging economies, including Nigeria, continue to face challenges in ESG compliance, largely due to weak governance structures, regulatory inefficiencies, and inconsistent sustainability reporting.

Boardroom diversity is widely recognized as an important governance mechanism that can shape ESG outcomes by improving decision-making, mitigating risk, and fostering ethical leadership (Arayssi et al., 2016; Bhandari et al., 2022). Yet, empirical evidence remains mixed. While some scholars argue that gender diversity, board independence, and financial expertise positively influence sustainable corporate practices (Bear et al., 2010) others contend that diversity alone is insufficient—particularly in contexts with weak institutional environments, underdeveloped regulatory frameworks, and limited enforcement mechanisms.

In Nigeria, corporate governance reforms such as the Central Bank of Nigeria (CBN) Code of Corporate Governance (2021) and the Financial Reporting Council of Nigeria (FRCN) Code (2022) have sought to strengthen board effectiveness and ESG disclosure. Despite these initiatives, compliance across banks remains uneven, raising questions about the effectiveness of board diversity initiatives in driving sustainability integration. Moreover, most existing studies on board diversity in Nigerian banks have concentrated on financial performance and risk management, with limited attention to ESG performance (Ntim et al., 2017). This lack of evidence creates a knowledge gap that warrants further investigation.

Given mounting pressure from investors, regulators, and international organizations for more robust ESG disclosure and sustainability practices, it has become imperative to examine how boardroom diversity influences ESG performance in Nigerian banks. This study addresses this gap by empirically analyzing the impact of diversity attributes—such as gender representation, board independence, and financial expertise—on ESG outcomes in publicly listed Nigerian banks between 2017 and 2023. The findings are expected to provide valuable insights into the role of governance structures in advancing sustainability and to contribute to the broader discourse on corporate governance and sustainable banking practices in emerging economies.

This study focuses on how boardroom diversity influences ESG performance in Nigerian banks. It also highlights which diversity attributes—such as gender, age, educational background, and the presence of foreign directors—have the most significant impact on ESG performance. Furthermore, the research examines the trends in ESG disclosures among Nigerian banks from

2017 to 2023.

Objectives

This study aimed to:

1. Examine the effect of boardroom diversity on ESG performance in Nigerian banks.
2. Analyze the influence of gender, age, educational background, and foreign directors on sustainability practices.
3. Assess trends in ESG disclosures and sustainability commitments within the Nigerian banking sector.

LITERATURE REVIEW

Theoretical Framework

The theory for this study is anchored on the Resource Dependence Theory (RDT) and supported by the Stakeholder Theory to explain the relationship between boardroom diversity and ESG performance in Nigerian banks.

Resource Dependence Theory (RDT)

The Resource Dependence Theory (RDT), developed by Pfeffer and Salancik (1978), posited that organizations relied on external resources to enhance their strategic positioning and long-term sustainability. One of the key mechanisms for accessing these resources is through the composition of the board of directors, which acted as a critical link between the firm and its external environment (Hillman et al., 2000).

In the context of this study, boardroom diversity—including gender, age, educational background, and the presence of foreign directors—were viewed as a strategic resource that could influence ESG performance. Recent research suggested that diverse boards contributed to better sustainability practices, improved corporate transparency, and enhanced decision-making, which positively affected ESG disclosure (Khan et al., 2022; Amorelli & García-Sánchez, 2021). Given that the Nigerian banking sector operated in a highly regulated and stakeholder-driven environment, the presence of diverse perspectives on boards could help navigate complex regulatory requirements, mitigate environmental risks, and strengthen social responsibility initiatives (Al-Shaer & Zaman, 2022).

Supporting Theory: Stakeholder Theory

The Stakeholder Theory, introduced by Freeman (1984), complemented RDT by emphasizing that corporate governance should not only prioritize shareholders but also consider the broader interests of multiple stakeholders, including regulators, employees, customers, and communities (Donaldson & Preston, 1995). In relation to ESG performance, diverse boards are more likely to incorporate stakeholder concerns into decision-making, leading to better environmental sustainability policies, stronger corporate social responsibility (CSR) initiatives, and improved governance practices (Birindelli et al., 2019).

By integrating RDT and Stakeholder Theory, this study provided a strong theoretical foundation for understanding the impact of boardroom diversity on ESG performance within the Nigerian banking sector. The combination of these theories suggested that banks with more diverse

boards are better equipped to address sustainability challenges, ensure compliance with ESG regulations, and enhance long-term value creation (Ararat et al., 2023).

Concept of Boardroom Diversity

Boardroom diversity refers to the heterogeneity of board members in terms of demographic, educational, and professional characteristics. It encompasses multiple dimensions, including gender, age, nationality, educational background, and industry experience, which collectively contribute to improved corporate governance, decision-making, and sustainability performance (Amorelli & García-Sánchez, 2021; Al-Shaer & Zaman, 2022).

The concept of boardroom diversity has gained significant attention in corporate governance literature, as diverse boards are often associated with enhanced strategic decision-making, stronger risk management, and increased corporate transparency (Birindelli et al., 2019). In the Nigerian banking sector, regulatory bodies such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council of Nigeria (FRCN) have emphasized the importance of boardroom diversity in promoting effective governance and sustainable business practices (CBN, 2020).

Key Dimensions of Boardroom Diversity

Gender Diversity – This refers to the representation of female board members in corporate governance structures. Studies have shown that gender-diverse boards improve corporate decision-making, stakeholder engagement, and sustainability performance. In Nigerian banks, gender diversity has been linked to improved ESG disclosures and stronger adherence to corporate social responsibility (CSR) initiatives.

Age Diversity – The age composition of board members reflects their generational perspectives and risk-taking behavior. Age-diverse boards bring together experienced directors with deep industry knowledge and younger directors with innovative, technology-driven insights (Ararat et al., 2023). In the Nigerian banking sector, a mix of senior executives and younger professionals can enhance adaptability to changing regulatory and ESG requirements.

Foreign Directors – The presence of non-Nigerian board members can enhance global best practices, cross-border investments, and international compliance with ESG frameworks such as the Global Reporting Initiative (GRI) and the United Nations Sustainable Development Goals (SDGs) (Amorelli & García-Sánchez, 2021). Nigerian banks with foreign directors have been found to exhibit stronger ESG commitment and improved sustainability disclosures (Khan et al., 2022).

Overall, boardroom diversity is a critical governance factor influencing the ability of firms to navigate ESG challenges, improve risk management, and enhance stakeholder trust. Its relevance in the Nigerian banking sector is increasingly recognized as financial institutions align their operations with sustainability principles and global governance standards (CBN, 2020).

Concept of ESG Performance

Environmental, Social, and Governance (ESG) performance is a multidimensional framework that evaluates a company's sustainability efforts and ethical business practices. It

reflects how organizations integrate environmental responsibility, social impact, and corporate governance principles into their operations (Eccles & Klimenko, 2019). ESG performance has become a critical factor in investment decisions, regulatory compliance, and corporate reputation, especially in the financial sector, where stakeholders demand greater transparency and accountability (Friede, et al., 2019).

The banking sector plays a pivotal role in driving ESG adoption due to its influence on financing sustainable projects and ensuring responsible investment practices (Giese et al., 2021). In Nigeria, regulatory bodies such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council of Nigeria (FRCN) have introduced guidelines encouraging banks to integrate ESG principles into their risk management, lending practices, and reporting structures (CBN, 2021).

Key Dimensions of ESG Performance

Environmental (E): Sustainability and Resource Efficiency

The environmental component of ESG evaluates a company's commitment to reducing its ecological footprint and implementing sustainable business practices (Grewal, et al. 2020). In the Nigerian banking sector, environmental performance includes:

- a. Carbon Emissions – Reducing greenhouse gas (GHG) emissions from banking operations.
- b. Waste Management – Implementing recycling policies and responsible disposal of electronic waste.
- c. Renewable Energy Usage – Adoption of solar energy and energy-efficient banking facilities.
- d. Green Financing – Providing financial support for environmentally sustainable projects (Giese et al., 2021).

Social (S): Employee Welfare and Stakeholder Engagement

The social aspect of ESG focuses on a company's impact on employees, communities, and broader society (Fatemi, et al., 2021). Nigerian banks' social performance is assessed through:

- a. Employee Welfare – Fair wages, workplace safety, and professional development opportunities.
- b. Corporate Social Responsibility (CSR) – Philanthropic initiatives, financial inclusion programs, and community development.
- c. Diversity and Inclusion Policies – Gender diversity in the workplace and equal employment opportunities.
- d. Customer Relations and Data Privacy – Ethical treatment of customers and cybersecurity measures to protect sensitive information (Eccles & Klimenko, 2019).

Governance (G): Ethical Leadership and Corporate Oversight

Governance performance evaluates how well a company adheres to corporate governance principles, ensuring accountability, ethical leadership, and compliance with regulations (Bhandari & Javakhadze, 2021). Key governance indicators in Nigerian banks include:

- a. Board Independence – Presence of independent directors to enhance decision-making and oversight.
- b. Risk Management – Adoption of risk control mechanisms and adherence to financial regulations.
- c. Ethical Leadership – Anti-corruption policies, whistleblower protections, and executive accountability.
- d. Transparency in ESG Reporting – Adherence to international sustainability reporting standards, such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) (Fatemi et al., 2021).

Relevance of ESG Performance in the Nigerian Banking Sector

As Nigerian banks align their operations with global sustainability frameworks, ESG performance has become a critical metric in evaluating long-term financial stability and corporate credibility. Investors, regulators, and stakeholders increasingly prioritize banks with strong ESG commitments, as these institutions are better positioned to mitigate risks, attract foreign investments, and enhance their corporate reputation (Friede et al., 2019). The integration of ESG principles in Nigerian banks has led to:

- a. Increased adoption of sustainable banking practices and green financing initiatives.
- b. Improved regulatory compliance with CBN and FRCN sustainability guidelines.
- c. Enhanced investor confidence in banks with strong governance and ethical standards.

Overall, ESG performance serves as a benchmark for corporate sustainability in the banking sector, ensuring that financial institutions operate responsibly while contributing to Nigeria's economic and environmental development (Grewal et al., 2020).

Empirical Review

The empirical review provides an overview of past studies on boardroom diversity and ESG performance, particularly within the banking sector.

Boardroom Diversity and ESG Performance

Several studies have examined the relationship between boardroom diversity and ESG performance, with mixed findings. Friede, et al., (2019) conducted a meta-analysis of over 2,000 empirical studies and found that companies with diverse boards tend to exhibit higher ESG scores, as they integrate broader perspectives into decision-making. Similarly, García-Sánchez, et al., (2020) provided evidence that gender-diverse boards enhance corporate environmental and social policies, leading to improved sustainability disclosures.

In the African context, Ntim (2021) analyzed board composition and sustainability practices in South African firms, showed that gender and nationality diversity positively influenced ESG reporting. Akinyomi & Olawale (2022) extended this study to Nigeria's financial sector, confirming that banks with higher board diversity tend to perform better in ESG-related disclosures.

Gender Diversity and ESG Performance

Gender diversity is one of the most extensively studied dimensions of board diversity in relation to ESG performance. Byron and Post (2019) found that female representation on corporate boards is positively correlated with sustainability initiatives, particularly in environmental and social governance. Similarly, Adams & Ferreira (2020) argued that women on boards contribute to stronger ethical governance and corporate social responsibility (CSR) programs.

For Nigerian banks, Adegbite, et al., (2021) highlighted that institutions with higher female board representation demonstrated more commitment to environmental sustainability, stakeholder engagement, and ethical banking practices.

Age Diversity and ESG Performance

Age diversity among board members can influence ESG decision-making, as younger and older directors bring different perspectives on sustainability. Liao, et al., (2019) examined this relationship and found that age-diverse boards tend to adopt more progressive ESG strategies, particularly in response to regulatory pressures.

Within the Nigerian banking sector found that age diversity on boards positively impacted the integration of green banking initiatives and ESG disclosures. The study suggested that a balance between experienced senior executives and younger directors fosters innovative sustainability solutions.

The educational background of board members influences corporate governance and sustainability decisions. Arora & Dharwadkar (2020) discovered that directors with finance, law, and sustainability-related educational backgrounds are more likely to advocate for ESG compliance. Chatterjee & Nag (2021) extended this view, showed that highly educated boards facilitate more transparent sustainability disclosures.

Empirical evidence from Nigerian banks indicated that board members with advanced degrees in business administration, economics, and environmental management significantly contributed to ESG reporting quality.

Foreign Directors and ESG Performance

The presence of foreign directors is associated with improved ESG practices due to their exposure to international best practices. Harjoto, et al., (2021) found that firms with a higher proportion of foreign directors demonstrated better environmental and corporate social responsibility performance.

In Nigeria, investigated the role of foreign board members in shaping ESG policies in banking institutions. Their study concluded that foreign directors enhanced governance mechanisms, compliance with global sustainability standards, and adoption of green banking policies.

Trends in ESG Disclosures in Nigerian Banks (2017-2023)

The Nigerian banking sector has witnessed significant improvements in ESG disclosures over recent years. CBN (2021) introduced regulatory frameworks to encourage banks to integrate sustainability reporting. Studies such as Adegbite et al. (2022) found an upward trend in ESG disclosures among Nigerian banks, with institutions aligning their reports with global sustainability standards like the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards

Board (SASB).

However, some studies noted challenges, including inconsistent ESG reporting frameworks, lack of enforcement, and green washing practices. Aliyu & Yakubu (2023) emphasized the need for more stringent regulatory oversight to ensure that Nigerian banks comply fully with ESG disclosure requirements

Hypotheses

Based on the research questions and expected findings, the following hypotheses were formulated:

1. H1a–H1e (ESG Relevance): Each board diversity dimension—gender, age, education, foreign directors, and tenure—significantly affects the *relevance* of ESG disclosures.
Rationale: According to Resource Dependence Theory (RDT) and Stakeholder Theory, diverse boards bring broader perspectives and external linkages that improve the usefulness of ESG information for decision-making.
2. H2a–H2e (Faithful Representation): Each board diversity dimension—gender, age, education, foreign directors, and tenure—significantly influences the *faithful representation* of ESG disclosures.
Rationale: Diverse boards enhance oversight and ethical orientation, improving the accuracy, completeness, and neutrality of ESG reporting.
3. H3 (ESG Trend): ESG disclosures among Nigerian banks increased significantly between 2017 and 2023.
Rationale: Regulatory reforms and stakeholder pressures are expected to drive measurable year-on-year improvements in ESG reporting.

RESEARCH METHODOLOGY

Research Design

This study adopted a quantitative research approach, utilizing secondary data extracted from publicly available financial reports, sustainability disclosures, and regulatory filings. A longitudinal research design was employed, covering a seven-year period from 2017 to 2023. This approach allowed for a comprehensive assessment of the relationship between boardroom diversity and ESG performance within the Nigerian banking sector. The study relied on an ex-post facto research design, as it examined pre-existing data without any form of manipulation. The rationale for this design was its ability to facilitate causal inferences and establish trends over time.

Data Collection Source

The data for this study were collected exclusively from secondary sources, ensuring objectivity and reliability. The key sources included:

1. Annual Reports of Selected Banks: These reports contained detailed corporate governance disclosures, board compositions, and financial statements, which were used to extract relevant variables.
2. Sustainability Reports (where applicable): Some Nigerian banks published stand-alone sustainability reports outlining their environmental, social, and governance (ESG) commitments and performance metrics. These reports provided insight into ESG

disclosures, which formed the basis for the dependent variable.

3. Nigerian Exchange Group (NGX) Filings: The NGX website hosted corporate disclosures, including financial and non-financial reports required for listed companies, which facilitated cross-verification of data.
4. Corporate Governance Disclosures from the Central Bank of Nigeria (CBN): As the primary regulatory authority for the banking sector, the CBN published corporate governance guidelines and periodic reports on compliance levels. These publications were reviewed to validate the governance-related indicators used in this study.

Population and Sample

The population for this study comprised all listed commercial banks in Nigeria as of 2023. However, due to data availability and the need for consistency in reporting, a sample of five (5) top-tier commercial banks was selected based on their market capitalization, corporate governance transparency, and the availability of ESG disclosures over the study period.

The inclusion criteria for the sample selection were as follows:

1. The bank must have been continuously listed on the NGX between 2017 and 2023.
2. The bank must have published annual reports for all years within the study period.
3. The bank must have disclosed ESG-related information in its financial or sustainability reports.

Variable Measurement and Model Specification

To examine the effect of boardroom diversity on ESG performance in Nigerian banks, this study defined key variables and specifies an econometric model.

Dependent Variable:

ESG Performance (ESG_SCORE): Measured using an aggregated ESG index based on environmental, social, and governance indicators derived from sustainability reports and corporate disclosures.

Independent Variables (Boardroom Diversity Measures):

1. Gender Diversity (GENDIV): Proportion of female directors on the board.
2. Board Size (BSIZE): Standard deviation of board Size
3. Independent Directors (IND_DIR): Proportion of Independent board members.
4. Board Tenure (BTEN): Years

Control Variables:

1. Firm Size (FSIZE): Logarithm of total assets.
2. Profitability (ROA): Return on Assets as a measure of financial performance.

3. Leverage (LEV): Debt-to-equity ratio, indicating financial risk.

Model Specification:

The study employs a panel regression model to examine the relationship between boardroom diversity and ESG performance:

$$ESG_{it} = \beta_0 + \beta_1 GENDIV_{it} + \beta_2 BSIZE_{it} + \beta_3 IND_DIR_{it} + \beta_4 BTEN + \beta_5 FSIZE_{it} + \beta_6 ROA_{it} + \beta_7 LEV_{it} + \epsilon_{it}$$

where:

1. i represents the bank,
2. t represents the year (2017–2023),
3. β_0 is the constant term,
4. $\beta_1 - \beta_7$ are the coefficients of the explanatory variables,
5. ϵ_{it} is the error term.

Estimation Technique

1. Descriptive Statistics: Mean, standard deviation, minimum, and maximum values of variables.
2. Correlation Analysis: To check multicollinearity between independent variables.
3. Panel Regression Analysis: Fixed effects (FE) and random effects (RE) models will be estimated, with the Hausman test used to determine the preferred model.
4. Robustness Checks: Variance Inflation Factor (VIF) to assess multicollinearity and heteroskedasticity tests to check model validity.

RESULTS AND DISCUSSION

Descriptive Statistics

Tabel 1
Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
ESG Score (%)	65.33	14.5	41.27	87.15
Gender Diversity (%)	22.64	7.87	10.02	39.21
Board Size	11.69	2.51	8	15
Independent Directors (%)	47.88	11.47	31.38	69.48
Board Tenure (Years)	6.86	1.9	3.81	9.84

ESG Performance: The average ESG score was 65.33%, indicating a moderate commitment to sustainability, but with significant variations (41.27% – 87.15%) among banks. **Gender Diversity:** Female board representation was low (22.64% average), with some banks having as little as 10.02%, highlighting a need for greater inclusivity.

Board Size: The average board size was 11.69 members, ranging from 8 to 15, reflecting different governance structures across banks. **Independent Directors:** On average, 47.88% of board members were independent, ensuring transparency, but some banks had as low as 31.38%, raising governance concerns. **Board Tenure:** The average board tenure was 6.86 years, with a range of 3.81 to 9.84 years, balancing stability and renewal in governance.

Correlation Matrix

Tabel 2
Correlation Matrix

Variable	ESG Score (%)	Gender Diversity (%)	Board Size	Independent Directors (%)	Board Tenure (Years)
ESG Score (%)	1	0.208	-0.18	-0.305	0.11
Gender Diversity (%)	0.208	1	0.019	-0.354	-0.046
Board Size	-0.18	0.019	1	0.035	0.146
Independent Directors (%)	-0.305	-0.354	0.035	1	0.128
Board Tenure (Years)	0.11	-0.046	0.146	0.128	1

The correlation matrix provides insights into the relationships between boardroom diversity variables and ESG performance in Nigerian banks. Key observations include: **ESG Score and Gender Diversity (0.208):** A weak positive correlation suggests that banks with higher female representation on the board tend to have slightly better ESG performance. However, the relationship is not strong enough to indicate a significant impact. **ESG Score and Board Size (-0.18):** A weak negative correlation implies that larger boards are slightly associated with lower ESG scores. This may indicate inefficiencies in decision-making within larger boards regarding sustainability initiatives.

ESG Score and Independent Directors (-0.305): A moderate negative correlation suggests that banks with a higher proportion of independent directors tend to have lower ESG scores. This could imply that independent directors focus more on financial oversight than sustainability concerns. **ESG Score and Board Tenure (0.11):** A very weak positive correlation indicates that longer board tenure has a minimal impact on ESG performance. This suggests that the stability provided by longer-serving board members does not necessarily translate into stronger sustainability commitments.

Gender Diversity and Independent Directors (-0.354): A moderate negative correlation indicates that banks with higher female board representation tend to have fewer independent directors. This could reflect board composition trade-offs or regulatory constraints. Gender Diversity and Board Tenure (-0.046): A negligible negative correlation suggests no meaningful relationship between board tenure and gender diversity, implying that tenure stability does not necessarily affect female representation on boards.

Board Size and Independent Directors (0.035): A negligible positive correlation suggests that board size does not significantly influence the proportion of independent directors. Board Size and Board Tenure (0.146): A weak positive correlation indicates that larger boards tend to have slightly longer average tenure, but the impact is minimal. Independent Directors and Board Tenure (0.128): A weak positive correlation suggests that longer-serving boards may have a slightly higher proportion of independent directors, possibly due to board renewal policies.

The correlations suggest that boardroom diversity factors have limited direct influence on ESG performance, with gender diversity showing the most positive association. However, negative correlations between ESG scores and board size/independent directors highlight potential governance trade-offs. Further statistical tests, such as regression analysis, are necessary to determine causality and the extent of these relationships.

Multicollinearity Test

Tabel 3
Multicollinearity Test

Variable	VIF
Gender Diversity (%)	1.14
Board Size	1.02
Independent Directors (%)	1.16
Board Tenure (Years)	1.04

The Variance Inflation Factor (VIF) results indicate no multicollinearity concerns among the independent variables. All VIF values are well below the threshold of 10, suggesting that gender diversity (1.14), board size (1.02), independent directors (1.16), and board tenure (1.04) are not highly correlated. This confirms the reliability of the variables for regression analysis, ensuring accurate and unbiased estimates.

Regression

Tabel 4
Regression

Variable	Dependent Variable	Coefficient	Std. Error (Robust)	t-value	P-Value	95% Confidence Interval Lower	95% Confidence Interval Upper
Constant	ESG Score (%)	81.02	20.92	3.87	0	39.93	122.11
Gender Diversity (%)	ESG Score (%)	0.22	0.36	0.63	0.529	-0.49	0.93
Board Size	ESG Score (%)	-1.15	1.19	-0.97	0.334	-3.48	1.18
Independent Directors (%)	ESG Score (%)	-0.35	0.22	-1.57	0.117	-0.79	0.09
Board Tenure (Years)	ESG Score (%)	1.38	1.4	0.99	0.323	-1.35	4.11

The regression analysis examined the effect of boardroom diversity variables on ESG performance (dependent variable) in Nigerian banks. Key findings include:

1. Constant (81.02, $p = 0.000$) The intercept is significant, indicating that when all independent variables are zero, the predicted ESG score is 81.02.
2. Gender Diversity (0.22, $p = 0.529$) Gender diversity has a positive but insignificant effect on ESG performance, suggesting that increasing female representation on the board does not significantly enhance ESG scores.
3. Board Size (-1.15, $p = 0.334$) Board size shows a negative but insignificant impact, implying that larger boards may slightly reduce ESG performance, though not in a statistically meaningful way.
4. Independent Directors (-0.35, $p = 0.117$) The presence of independent directors has a negative effect, but it is not statistically significant. This suggests that board independence alone may not drive ESG improvements.
5. Board Tenure (1.38, $p = 0.323$) Board tenure has a positive but insignificant relationship with ESG scores, indicating that longer-serving board members may contribute to ESG performance, though the impact is not strong.

None of the board diversity variables significantly influence ESG performance at a 5% significance level, suggesting that other factors beyond boardroom diversity might drive sustainability efforts in Nigerian banks.

Robustness Test

Tabel 5
Robustness Test

Robustness Check	Test Value	Decision
Heteroscedasticity (Breusch-Pagan)	p = 0.112	No heteroscedasticity detected
Autocorrelation (Durbin-Watson)	1.59	No severe autocorrelation
Normality of Residuals (Jarque-Bera)	p = 0.241	Residuals are normally distributed
Model Specification (Ramsey RESET)	p = 0.298	No specification error in model

1. No heteroscedasticity (Breusch-Pagan, $p = 0.112$) – Residual variance is constant.
2. No severe autocorrelation (Durbin-Watson = 1.59) – Residuals are largely uncorrelated.
3. Residuals are normally distributed (Jarque-Bera, $p = 0.241$) – Valid statistical inference.
4. No model specification errors (Ramsey RESET, $p = 0.298$) – Model is correctly specified.

The diagnostic tests confirm that the regression model is statistically sound, with no issues of heteroscedasticity, autocorrelation, non-normal residuals, or model specification errors. This ensures that the estimated coefficients are reliable for interpretation and decision-making.

Test of Hypothesis

1. H1 (Board Diversity and ESG Relevance): Regression results show that Gender Diversity ($p = 0.529$), Board Size ($p = 0.334$), Independent Directors ($p = 0.117$), and Board Tenure ($p = 0.323$) all have p-values above 0.05. This indicates that none of the diversity attributes had a statistically significant impact on ESG performance. H1 is not supported.
2. H2 (Board Diversity and Faithful Representation): Coefficient values suggest different directions of influence: Gender Diversity ($\beta = 0.22$), Board Size ($\beta = -1.15$), Independent Directors ($\beta = -0.35$), and Board Tenure ($\beta = 1.38$). While these show varying degrees of influence, none are statistically significant. H2 is partially supported—board attributes vary in influence, but effects are weak and insignificant.
3. H3 (ESG Disclosure Trends 2017–2023): Although the regression did not directly test trends, previous studies and regulatory developments point to an upward shift in ESG disclosures over the period. H3 is conceptually supported by regulatory reforms and reporting practices, but requires direct testing through trend analysis or year fixed effects.

Discussion of Findings

This study examined the impact of boardroom diversity on Environmental, Social, and Governance (ESG) performance in Nigerian banks, focusing on variables such as gender diversity, board size, independent directors, board tenure, and educational background. The findings provided insights into how these governance attributes influence ESG outcomes.

Gender Diversity and ESG Performance

Gender diversity exhibited a positive but statistically insignificant effect on ESG performance ($\beta = 0.22$, $p = 0.529$). This suggests that while increasing female representation on boards may enhance discussions on sustainability, it does not necessarily lead to significant improvements in ESG scores. This finding aligns with prior studies that argue gender diversity alone may not be sufficient to drive substantial ESG improvements, as other governance factors also play critical roles (Adams & Ferreira, 2009; García-Sánchez et al., 2019).

Board Size and ESG Performance

The analysis revealed a negative but insignificant relationship between board size and ESG performance ($\beta = -1.15$, $p = 0.334$). This implies that larger boards do not necessarily contribute to stronger ESG outcomes. Larger boards may face coordination challenges, leading to inefficiencies in decision-making processes related to sustainability initiatives. Prior research suggests that beyond an optimal size, larger boards may hinder effective governance and slow down ESG-related decision-making (Jizi et al., 2014; Cheng, 2008).

Independent Directors and ESG Performance

Independent directors showed a negative but statistically insignificant effect on ESG performance ($\beta = -0.35$, $p = 0.117$). This suggests that the mere presence of independent directors may not be sufficient to enhance ESG performance. The effectiveness of independent directors in promoting ESG initiatives depends on their expertise and active engagement in sustainability matters. Recent discussions emphasize the need for directors with specific sustainability expertise to effectively address environmental challenges (Reyes, 2024).

Board Tenure and ESG Performance

Board tenure demonstrated a positive but statistically insignificant relationship with ESG performance ($\beta = 1.38$, $p = 0.323$). While longer-serving board members may develop a deeper understanding of the organization's operations, their extended tenure alone does not necessarily lead to better sustainability outcomes. Continuous learning and adaptation to evolving ESG standards are crucial for board members to effectively contribute to sustainability initiatives (Lu & Wang, 2021).

Although specific data on educational background was not included in the initial model, it is recognized as a critical factor in boardroom diversity. Directors with diverse educational backgrounds bring varied perspectives and problem-solving approaches, which can positively influence ESG performance. Business schools, particularly in Europe, are increasingly integrating sustainability into their curricula, preparing future leaders to prioritize ESG considerations. This trend highlights the importance of educational diversity in enhancing board effectiveness in sustainability matters (Financial Times, 2023).

Overall Implications

The findings suggest that while boardroom diversity is an important aspect of corporate governance, its direct impact on ESG performance in Nigerian banks is limited. This underscores the need for complementary measures, such as targeted training for board members on

sustainability issues, recruitment of directors with specific ESG expertise, and robust corporate policies that support sustainability initiatives. Enhancing the educational background of board members, particularly in fields related to sustainability, can further strengthen the board's capacity to drive ESG performance. By addressing these areas, Nigerian banks can better align their governance structures with sustainability goals, leading to improved ESG outcomes.

CONCLUSION

5.1 Summary of Findings

This study investigated the impact of boardroom diversity on ESG performance in Nigerian banks, considering factors such as gender diversity, board size, independent directors, board tenure, and educational background. The key findings are as follows:

1. **Gender Diversity:** A positive but statistically insignificant relationship with ESG performance ($\beta = 0.22$, $p = 0.529$), suggesting that increased female representation on boards alone does not significantly enhance ESG outcomes.
2. **Board Size:** A negative but insignificant relationship with ESG performance ($\beta = -1.15$, $p = 0.334$), indicating that larger boards may face coordination challenges, leading to inefficiencies in sustainability decision-making.
3. **Independent Directors:** A negative but insignificant effect on ESG performance ($\beta = -0.35$, $p = 0.117$), highlighting that the presence of independent directors alone does not guarantee improved ESG performance.
4. **Board Tenure:** A positive but statistically insignificant effect on ESG performance ($\beta = 1.38$, $p = 0.323$), implying that longer-serving directors may have experience but need continuous exposure to evolving ESG standards.

Introduction these findings suggest that while boardroom diversity is important, its direct impact on ESG performance remains limited in the Nigerian banking sector. Additional mechanisms, such as targeted ESG training and policy enforcement, are necessary to enhance corporate sustainability practices.

5.2 Policy Recommendations

Based on the findings, the following policy recommendations are proposed to strengthen ESG governance in Nigerian banks:

1. **Enhancing ESG Expertise on Boards**

Banks should prioritize appointing board members with expertise in sustainability, environmental management, or ESG reporting. Continuous training programs should be introduced to equip board members with knowledge of evolving ESG trends and best practices.

2. **Optimal Board Size for Effective Decision-Making**

Policymakers should encourage an optimal board size to balance diverse expertise with efficiency in decision-making. Banks should adopt flexible board structures to ensure effective oversight of ESG initiatives.

3. **Strengthening the Role of Independent Directors**

Independent directors should be selected based on their expertise in corporate sustainability rather than just regulatory compliance. Regulators should develop guidelines to ensure that independent directors actively contribute to ESG oversight and implementation.

4. **Encouraging Gender and Educational Diversity**

Banks should establish policies to promote gender diversity, including mentorship programs for women in leadership roles. Recruitment policies should emphasize educational diversity to incorporate board members with backgrounds in sustainability, finance, and social governance.

5. Improving ESG Reporting and Accountability

Regulators, such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council (FRC), should mandate standardized ESG disclosure frameworks. Banks should integrate ESG performance into executive performance evaluations and incentive structures.

6. Regulatory Support for ESG Integration

The Nigerian government should introduce incentives for banks that demonstrate strong ESG performance, such as tax benefits or reduced regulatory burdens. ESG policies should be incorporated into corporate governance codes to ensure compliance and enforcement.

While boardroom diversity plays a role in shaping ESG performance, its impact in Nigerian banks remains statistically weak. Therefore, beyond increasing diversity, organizations must implement targeted ESG strategies, training programs, and policy reforms to drive meaningful improvements in sustainability practices. Strengthening board expertise, optimizing governance structures, and enforcing regulatory compliance will be crucial in advancing ESG integration in Nigeria's financial sector.

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