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AN EMPIRICAL REVIEW OF THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND SUSTAINABILITY REPORTING IN EMERGING MARKETS: EVIDENCE FROM NIGERIA

ABSTRACT

This paper presents an empirical review of the relationship between capital structure and sustainability reporting in emerging markets, with a particular focus on Nigeria. Drawing from global, regional, and local studies, the review highlights the complex and context-dependent nature of this relationship, influenced by firm-specific factors such as ownership structure, industry type, profitability, and governance mechanisms. It also considers broader environmental and institutional conditions, including regulatory frameworks, market volatility, and disclosure standards. While evidence from developed markets often shows a positive correlation between financial leverage and sustainability disclosures largely driven by investor expectations and transparency obligations findings from Nigeria are more fragmented due to inconsistent ESG practices, methodological limitations, and a focus on specific sectors like manufacturing. Nigerian firms tend to adopt sustainability reporting reactively, often tied to profitability, rather than as part of a long-term strategic framework. The study identifies key limitations in the existing literature, including over-reliance on crosssectional data, lack of causal analysis, and inconsistent measurement approaches. Based on these insights, the paper recommends a multistakeholder strategy involving policymakers, corporate managers, and researchers to strengthen ESG reporting, align capital structure with sustainable development goals, and foster more robust, transparent corporate practices across diverse sectors. This review contributes to the growing discourse on sustainable finance in emerging economies and provides actionable guidance for improving the quality and relevance of sustainability disclosures in Nigeria's corporate landscape.

Keywords: Capital structure, sustainability reporting, ESG, emerging markets, Nigeria

1. Introduction

Across the globe, the integration of sustainability reporting into corporate financial strategy has become increasingly vital as stakeholders demand greater transparency regarding environmental, social, and governance (ESG) practices. Regulatory bodies, investors, and consumers are placing pressure on companies to disclose their sustainability efforts, particularly in light of global commitments such as the United Nations Sustainable Development Goals and the Paris Climate Agreement (KPMG, 2022; UNCTAD, 2021).

In response, many developed and emerging economies are embedding sustainability into financial reporting frameworks. Regionally, African economies are gradually aligning with these trends. Institutions such as the African Development Bank and regional stock exchanges are encouraging ESG disclosures to attract sustainable investment and improve corporate accountability (World Bank, 2023). However, despite this momentum, the extent to which sustainability reporting is effectively integrated into corporate structures especially in terms of how capital structure influences such reporting remains under-researched across many parts of Sub-Saharan Africa.

In Nigeria, sustainability reporting has gained prominence with regulatory reforms, including the planned adoption of the IFRS Sustainability Disclosure Standards by 2027. Empirical evidence shows that about 75% of listed firms in Nigeria have started aligning with sustainability guidelines, with positive correlations observed between ESG disclosures and financial performance indicators such as net profit margin and return on capital employed (Olayinka & Oluwamayowa, 2022). However, the role of capital structure particularly the impact of debt-to-equity and debt-to-asset ratios on sustainability reporting remains ambiguous. Some studies argue that higher leverage can enhance transparency through creditor monitoring, while others suggest that financial constraints from debt may discourage comprehensive reporting (Uwuigbe et al., 2021). Moreover, corporate governance elements such as ownership structure and board gender diversity have been shown to influence sustainability practices in Nigerian firms (Ogunleye et al., 2023). Therefore, this study aims to assess the effect of capital structure measured through debt-to-equity and debt-to-asset ratios on the comprehensiveness of sustainability reporting.

2. Literature Review/Theoretical Framework

Conceptual Clarification

Capital Structure

Capital structure refers to the specific mix of debt and equity a firm uses to finance its operations and growth. It reflects the firm's financial strategy, risk tolerance, and cost of capital, all of which influence corporate behavior, including decisions about transparency and long-term investment in sustainability initiatives. In emerging markets like Nigeria, firms often face financial constraints and higher capital costs, which make capital structure decisions even more critical (Modigliani & Miller, 1958; Saeedi & Mahmoodi, 2011). Studies have shown that firms with higher leverage might be pressured to disclose more ESG information to reduce agency costs and meet the informational needs of creditors (Jensen & Meckling, 1976; Uwuigbe et al., 2021).

Conversely, excessive debt could limit resources available for sustainability initiatives and reduce transparency due to financial strain (Myers, 2001).

Sustainability Reporting

Sustainability reporting is the practice of disclosing information about a firm's environmental, social, and governance (ESG) performance, aimed at informing stakeholders about its non-financial impacts. It encompasses disclosures on carbon emissions, energy usage, labor practices, and ethical governance, among others. In Nigeria and other emerging markets, sustainability reporting is gaining traction as part of corporate responsibility and strategic positioning (Olayinka & Oluwamayowa, 2022; Uwuigbe et al., 2018). Effective sustainability reporting enhances stakeholder trust and long-term performance but is often influenced by regulatory pressure, investor expectations, and internal corporate governance structures (Ioannou & Serafeim, 2017; Clarkson et al., 2008).

Corporate Governance

Corporate governance refers to the structures, processes, and relations used to direct and manage an organization. Key governance mechanisms such as board composition, ownership structure, and gender diversity play a pivotal role in shaping a firm's disclosure behavior and capital structure decisions. Strong governance practices are associated with improved transparency and increased likelihood of sustainability reporting (Shleifer & Vishny, 1997; Mallin, 2019). In the Nigerian context, studies have found that firms with more independent directors, female board members, and diverse ownership are more likely to disclose ESG information and maintain optimal capital structures that support responsible business practices (Ogunleye et al., 2023; Uwuigbe et al., 2021).

Theoretical Framework

This study anchored on Agency Theory, as developed by Jensen and Meckling (1976), explores the relationship between principals (e.g., shareholders) and agents (e.g., managers), emphasizing the potential conflicts of interest that arise when managers do not act in the best interests of shareholders. In the context of capital structure, the theory posits that debt can serve as a disciplinary mechanism to curb managerial opportunism, as increased financial scrutiny from creditors compels managers to adopt more transparent and responsible behavior (Jensen, 1986). This same mechanism is relevant to sustainability reporting, where firms may use voluntary ESG disclosures to reduce information asymmetry, gain stakeholder trust, and demonstrate

accountability, particularly in markets with weak institutional oversight like Nigeria (Cormier & Magnan, 2015). Thus, Agency Theory provides a comprehensive lens through which the relationship between capital structure and sustainability reporting can be understood, especially in emerging markets where corporate governance challenges are more pronounced.

Empirical Literature Review

Overview of Global Empirical Studies on Capital Structure and Sustainability Reporting

Globally, a growing body of empirical research has investigated the relationship between capital structure and sustainability reporting, particularly in the context of corporate financial decision-making and stakeholder engagement. Studies from developed markets such as the United States, United Kingdom, and parts of Western Europe suggest that firms with high leverage levels often adopt more transparent sustainability disclosure practices to mitigate agency costs and enhance their legitimacy among investors (Jensen & Meckling, 1976; Hussain, Rigoni, & Orij, 2018). The rationale is that firms burdened with debt are under greater scrutiny from creditors and capital markets, making sustainability reporting a strategic tool to signal responsible governance and long-term stability.

In addition to the role of leverage, empirical studies also highlight how sustainability reporting may affect a firm's access to finance. For instance, research conducted by Dhaliwal et al. (2011) revealed that companies with higher quality sustainability disclosures enjoy lower costs of equity capital. This is attributed to the trustbuilding effect of transparent non-financial reporting, which reduces information asymmetry between management and investors. Similarly, studies in Germany and the Nordic countries have shown that integrated reporting which combines financial and sustainability information improves firms' valuation and facilitates access to both equity and debt capital (Frias-Aceituno, Rodriguez-Ariza, & Garcia-Sanchez, 2013). These findings suggest a bi-directional relationship where not only does capital structure influence sustainability disclosure decisions, but strong sustainability performance may also enable more favorable capital structure choices.

Moreover, multinational corporations (MNCs) operating in regulated markets often adopt voluntary sustainability reporting standards such as the Global Reporting Initiative (GRI) or SASB to align with stakeholder expectations and international benchmarks. Empirical studies show that these firms tend to maintain conservative capital structures to support long-term ESG commitments and reduce risk exposure

(Eccles, Ioannou, & Serafeim, 2014). The empirical consensus in developed economies indicates that sustainability reporting and capital structure are interconnected, with both financial leverage and non-financial performance indicators shaping corporate transparency, accountability, and risk management strategies. However, these patterns may vary significantly in emerging economies due to weaker institutional frameworks, limited enforcement, and different stakeholder dynamics.

Empirical Evidence from Emerging Markets

Emerging markets present a unique setting for studying the relationship between capital structure and sustainability reporting due to their developing financial systems, evolving regulatory frameworks, and varying levels of institutional strength. Empirical research in these regions often reveals inconsistent or context-specific results compared to developed economies. For instance, a study by De Villiers and Marques (2016) in South Africa found that firms with high financial leverage were less likely to disclose sustainability information, primarily due to the cost pressures and risk aversion associated with debt obligations. Conversely, in Brazil and India, larger and more profitable firms with greater access to capital markets showed a higher tendency to publish detailed environmental, social, and governance (ESG) reports, especially when listed on international exchanges or under pressure from foreign investors (Prado-Lorenzo & Garcia-Sanchez, 2010).

A significant body of work from Asia highlights how governance structures and cultural factors impact the capital structure sustainability nexus. For example, empirical studies in Malaysia and Indonesia demonstrate that firms with robust corporate governance mechanisms such as independent boards and audit committees are more likely to engage in sustainability reporting, even when they operate with high debt levels (Haniffa & Cooke, 2005). These findings suggest that good governance can mediate the negative influence of leverage on transparency by reinforcing accountability. Similarly, research from China by Zhang, Zhu, and Ding (2013) indicates that firms with moderate debt tend to improve CSR disclosure to mitigate lender concerns and signal financial health, a behavior driven by the dual demands of economic performance and political legitimacy in state-influenced markets.

Despite growing interest in ESG in these markets, many firms still face institutional and economic barriers that constrain both their capital structure decisions and sustainability efforts. Studies in Eastern Europe and parts of Latin America have found that weak regulatory enforcement, high-interest rates, and limited investor activism often reduce incentives for sustainability disclosures, particularly in highly leveraged firms (Ioannou

& Serafeim, 2012). Moreover, the adoption of global standards like the GRI or IFRS for sustainability reporting remains uneven, creating gaps in data quality and comparability. These limitations suggest that while there is an increasing awareness of the importance of ESG and capital structure integration in emerging markets, substantial policy and institutional reforms are still needed to enhance the consistency and reliability of corporate disclosures.

Empirical Findings from Nigeria

Environmental Reporting and ROCE

Focused research on environmental disclosures in Nigerian manufacturing firms presents mixed but insightful findings. Soetan et al. (2024) examined 39 listed manufacturing firms between 2010 and 2019 and discovered that while general non-financial environmental disclosure had no significant impact on ROCE growth, financial and performance-based environmental reporting had a positive influence. Their study emphasized that integrated environmental reporting combining operational impact, cost, and performance metrics enhanced returns on capital employed, highlighting the importance of detailed and strategic reporting. In contrast, Iliemena, Okonkwo, and Ike (2022), analyzing 23 manufacturing firms over 2012–2021, found that social responsibility disclosures improved gross profit margin, but environmental reporting alone had no statistically significant effect on ROCE. These contrasting results suggest that environmental reporting's contribution to firm value in Nigeria may be more indirect, influencing brand equity or compliance credibility before reflecting in capital productivity.

Manufacturing Sector ESG Reporting

Empirical studies focusing on Nigeria's manufacturing sector reveal sector-specific dynamics between ESG reporting and financial performance. Oke, Ojogbo, and Biiranee (2025) conducted a comprehensive study on consumer goods manufacturers (2014–2023) and found that environmental practices positively influenced ROA and EPS, while social dimensions significantly enhanced ROA and ROE. Governance elements showed mixed outcomes, implying variations in board effectiveness and regulatory compliance. Igbekoyi and colleagues (n.d.) further observed that profitability measured through profit after tax was the most influential factor behind firms' commitment to environmental disclosure, whereas earnings per share and liquidity had lesser effects. These findings suggest that while ESG practices are gaining attention, Nigerian manufacturers often adopt them reactively, especially when profitability allows.

Ownership Structure and Sustainability Reporting

Ownership composition has emerged as a vital factor influencing sustainability reporting practices in Nigerian firms. Adejumo et al. (2025), studying 10 listed multinationals from 2018 to 2022 using DOLS and FMOLS methods, found that institutional, managerial, foreign, and family ownership types all enhanced sustainability disclosure levels, while government ownership had a suppressive effect. Supporting this, Nuubia et al. (2024) evaluated 30 listed manufacturing firms and found institutional ownership strongly encouraged comprehensive CSR reporting, particularly among firms seeking external investor credibility. Additionally, Baba and Baba (2021) used a GRI-based index on 80 Nigerian firms (2012–2017) and noted that block, foreign, and dispersed ownership had positive effects on environmental and social disclosures, whereas managerial ownership showed no statistical significance. These studies consistently point to the conclusion that concentrated, external, and private ownership encourages stronger ESG engagement in Nigeria's corporate landscape.

Sustainability Reporting and Profitability

Several empirical studies in Nigeria affirm a positive link between sustainability reporting and financial profitability. Lawrence (2022), in a study involving 57 listed Nigerian companies, showed that sustainability compliance significantly influences both net profit margin and ROCE, reinforcing the notion that sustainable practices align with financial growth. Similarly, Iheduru and Okoro (n.d.), covering 20 quoted companies over a 10-year period (2008–2017), demonstrated that economic and social disclosures had a direct and positive impact on return on equity (ROE) and return on investment (ROI), though environmental and governance elements did not consistently show significant financial benefits. Sectoral evidence further supports this pattern. For instance, Okutu and Adegbie (2024) reported modest but positive effects of sustainability disclosure on ROE in oil and gas companies, while Aniagboso and Orjinta (2023) found that social and employee welfare disclosures improved profitability in pharmaceutical firms, but environmental and governance disclosures did not. These findings underscore the economic relevance of sustainability initiatives, especially those addressing social and stakeholder concerns.

Summary of Key Variables and Measurement Techniques

Capital Structure

Capital structure refers to the composition of a firm's long-term financing, primarily the balance between debt and equity. It is a critical determinant of a firm's financial risk, cost of capital, and overall financial health. Common measures include leverage ratios such as total debt to equity, which assess how much debt is used to finance the company relative to equity holders' investment. Debt-to-assets ratios indicate the proportion of assets funded by debt, offering insights into solvency. Additionally, short-term versus long-term debt ratios reveal the maturity profile of a firm's obligations, affecting liquidity and refinancing risk (Myers, 2001; Harris & Raviv, 1991). Understanding capital structure is crucial because it influences firms' ability to invest in sustainability initiatives and their disclosures.

Sustainability Reporting

Sustainability reporting captures how companies communicate their environmental, social, and governance (ESG) practices to stakeholders. ESG disclosure scores aggregate a company's performance across various sustainability dimensions and are often measured using frameworks such as the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), or tailored local checklists. These frameworks standardize reporting, enabling comparability and ensuring transparency in areas like carbon emissions, labor practices, community engagement, and board diversity (KPMG, 2020; Eccles & Krzus, 2018). Accurate sustainability reporting can influence investor decisions, regulatory compliance, and firm reputation.

Firm Performance

Firm performance is the outcome variable most commonly used to assess the effectiveness of capital structure decisions and sustainability practices. Typical financial metrics include Return on Capital Employed (ROCE), which measures the efficiency of capital use; Return on Equity (ROE), indicating profitability relative to shareholder equity; and gross profit margin, reflecting operational efficiency. Earnings per share (EPS) provides shareholder value insights, while broader firm value metrics like Tobin's Q capture market perceptions of firm worth (Damodaran, 2012; Ross, Westerfield & Jaffe, 2013). Linking sustainability reporting with performance metrics helps determine the economic impact of ESG efforts.

Control Variables

Empirical studies control for factors that might confound the relationship between capital structure, sustainability reporting, and performance. Common controls include ownership type (institutional, foreign, family, government), which influences governance and reporting quality; firm size, often proxied by total assets or revenue; profitability metrics like net income; growth indicators such as asset or sales growth; asset tangibility, reflecting the proportion of fixed assets; and board characteristics including independence and diversity (Jensen & Meckling, 1976; Fama & Jensen, 1983). Properly accounting for these variables ensures robustness and validity in empirical models.

Summary Table of Variable Types and Measures

Variable Type	Examples	Measures	Source
Capital	Leverage	Total Debt/Equity, Debt-to-Assets,	Myers (2001); Harris &
Structure	ratios	Short-term Debt/Long-term Debt	Raviv (1991)
Sustainability	ESG	GRI Index Scores, SASB Scores,	KPMG (2020); Eccles &
Reporting	disclosure	Environmental, Social, and	Krzus (2018)
	scores	Governance (ESG) Reporting Indices	
Firm	Profitability	Return on Capital Employed (ROCE),	Damodaran (2012);
Performance	and Efficiency	Return on Equity (ROE), Gross Profit	Ross, Westerfield &
		Margin, Earnings Per Share	Jaffe (2013)
Control	Ownership,	Ownership Type (Institutional, Family,	Jensen & Meckling
Variables	size,	Foreign, Government), Firm Size,	(1976); Fama & Jensen
	governance	Profitability, Asset Tangibility, Board	(1983)
		Characteristics	

Source: Author Computation (2025)

Discussion of Gaps in the Literature

Despite growing research on capital structure and sustainability reporting in Nigeria, key gaps remain. Findings on the impact of environmental reporting on financial performance are inconsistent, indicating a need for deeper exploration of contextual factors (Soetan et al., 2024; Iliemena, Okonkwo, & Ike, 2022). Most studies focus on listed manufacturing firms, neglecting SMEs and other sectors, which limits the broader applicability of results (Oke, Ojogbo, & Biiranee, 2025). Ownership structure influences sustainability disclosures, but the interaction between ownership, leverage, and ESG practices is underexplored (Adejumo et al., 2025; Baba & Baba, 2021). Additionally, the distinct contributions of environmental and governance reporting to profitability are unclear, partly due to predominantly cross-sectional study designs that restrict causal inferences (Iheduru & Okoro, n.d.; Okutu & Adegbie, 2024). Finally, there is limited investigation into how capital structure directly affects sustainability reporting decisions, a linkage well-documented in global contexts but underexamined in Nigeria, highlighting an important area for future research (De Villiers & Marques, 2016; Eccles, Ioannou, & Serafeim, 2014).

Methodological Review

Research Designs Commonly Used in Reviewed Studies

Most empirical studies investigating the relationship between capital structure and sustainability reporting in Nigeria and other emerging markets adopt quantitative research designs. These studies typically employ descriptive and explanatory designs to evaluate the causal or associative nature of financial leverage and ESG disclosure. Cross-sectional research designs are widely used due to their simplicity and availability of annual firm-level data. However, a growing number of studies are shifting towards longitudinal or panel designs to capture changes over time and to control for unobserved heterogeneity. For instance, studies like Soetan et al. (2024) and Oke et al. (2025) use panel designs covering a span of 8 to 10 years, allowing them to analyze trends and relationships more robustly. Experimental and mixed methods are rare in this context, likely due to the complexity of corporate behavior and the reliance on secondary data.

Data Sources and Analytical Methods

The primary data source in most of the reviewed studies is secondary data obtained from corporate annual reports, financial statements, and databases such as the Nigerian Stock Exchange (NSE), Bloomberg, and Thompson Reuters. Many researchers also rely on ESG indices and reporting standards like the Global Reporting Initiative (GRI) to evaluate sustainability practices. Analytical techniques commonly include multivariate regression models particularly fixed effects and random effects models for panel data to explore the relationship between sustainability disclosures and firm-level variables such as return on equity (ROE), return on capital employed (ROCE), and leverage ratios. Studies like Adejumo et al. (2025) and Lawrence (2022) apply more advanced econometric tools such as Fully Modified Ordinary Least Squares (FMOLS), Dynamic Ordinary Least Squares (DOLS), and Generalized Method of Moments (GMM) to address issues of endogeneity and serial correlation. However, few studies go beyond correlation to establish causality using instrumental variables or natural experiments.

Summary of Sample Characteristics from Reviewed Papers

Reviewed studies typically draw their samples from listed firms on the Nigerian Stock Exchange, especially those in manufacturing, oil and gas, banking, and telecommunications sectors. Sample sizes vary considerably, ranging from as few as 10 companies (in ownership structure studies) to over 80 firms in broader analyses. The study periods also differ, with most spanning 5 to 10 years, covering financial data from 2010 to 2023. The preference for listed firms reflects data availability, but it excludes a large portion of unlisted and SME firms that may have different capital and reporting behaviors. There is also a bias towards profitable or multinational firms that are more likely to engage in sustainability reporting. Few studies account for regional diversity within Nigeria or disaggregate firms based on their ESG maturity levels. This creates a gap in understanding the full spectrum of corporate behavior regarding capital structure and sustainability.

Discussion of Key Findings

Relationship between Capital Structure and Sustainability Reporting

Empirical findings suggest a complex and bidirectional relationship between capital structure and sustainability reporting. Firms with higher leverage often engage in more comprehensive sustainability disclosures as a strategic tool to reduce information asymmetry and mitigate the risks associated with debt financing (Dhaliwal et al., 2011; Eccles, Ioannou, & Serafeim, 2014). This behavior is aligned with signaling theory, which posits that companies use voluntary disclosures to convey reliability and long-term viability to stakeholders. However, studies from emerging markets, including Nigeria, indicate mixed results. While some evidence shows that firms with strong ESG practices tend to have more stable and conservative capital structures (Oke, Ojogbo, & Biiranee, 2025), others find little or no direct relationship, possibly due to institutional weaknesses and inconsistent regulatory enforcement (Soetan et al., 2024).

How Firm Size, Industry Type, and Governance Influence the Relationship

Firm size is a significant moderator in the capital structure sustainability reporting relationship. Larger firms are more visible to the public and are therefore more likely to adopt comprehensive sustainability practices and maintain more structured capital arrangements (Baba & Baba, 2021). Industry type also plays a crucial role manufacturing, oil and gas, and consumer goods sectors are more engaged in sustainability disclosures due to their environmental impact and public scrutiny (Lawrence, 2022; Okutu & Adegbie, 2024). On governance, firms with strong board independence, presence of audit committees, and institutional ownership tend to report more extensively on sustainability, even in the presence of high leverage (Adejumo et al., 2025). Good governance practices help align management's interests with those of shareholders and creditors, fostering transparency and financial prudence.

Contextual Factors Unique to Nigeria

Nigeria presents a distinctive environment for examining the capital structure—sustainability nexus due to its regulatory, economic, and institutional characteristics. Weak enforcement of corporate disclosure standards, political interference, and endemic corruption reduce firms' incentives to adopt sustainability reporting as a risk management tool (Iheduru & Okoro, n.d.). Moreover, market volatility driven by exchange rate fluctuations, inflation, and oil price shocks often compels firms to prioritize short-term financial survival over long-term ESG goals (Iliemena, Okonkwo, & Ike, 2022). Additionally, access to capital is limited, especially for SMEs, due to high interest rates and underdeveloped financial markets, making it difficult for firms to balance sustainability objectives with financial obligations. These challenges often result in inconsistent or symbolic sustainability disclosures that lack measurable impact.

Comparison between Nigerian Firms and Other Emerging Markets

Compared to their counterparts in other emerging markets such as India, Brazil, and South Africa, Nigerian firms are generally less consistent in integrating ESG practices with capital structure decisions. While firms in countries like South Africa have shown a higher degree of institutional commitment to sustainability often supported by robust stock exchange regulations and investor activism Nigerian firms lag due to fragmented policy implementation and limited stakeholder pressure (De Villiers & Marques, 2016). In Brazil and India, foreign investment and international listing requirements have driven companies to adopt international standards like GRI, which also influence their capital allocation strategies (Prado-Lorenzo & Garcia-Sanchez, 2010). In contrast, Nigerian firms primarily view sustainability reporting as a compliance obligation rather than a strategic decision linked to financial structuring, thereby limiting its impact on long-term financial planning and investor confidence.

Conclusion and Recommendations

This review has revealed that the relationship between capital structure and sustainability reporting is complex and context-dependent, influenced by firm-specific characteristics such as ownership structure, industry type,

profitability, and governance, as well as broader environmental factors like regulatory strength and market maturity. While global studies suggest that firms often use sustainability disclosures to signal transparency and reduce financing costs, evidence from Nigeria and other emerging markets remains mixed due to inconsistent reporting standards, data limitations, and sectoral focus. Nigerian firms in the manufacturing sector, for example, demonstrate a growing commitment to ESG reporting, yet this is often reactive and tied to profitability rather than proactive strategic planning. Additionally, methodological shortcomings in existing empirical studies such as reliance on cross-sectional designs and lack of standardized sustainability metrics limit the generalizability of findings. Therefore, although progress has been made, significant work remains to fully understand and optimize the interplay between financial structure and sustainability practices in Nigeria's evolving corporate landscape. Based on the conclusion the following recommendation were made; to enhance the relationship between capital structure and sustainability reporting, a multi-stakeholder approach is essential. Policymakers should establish and enforce standardized ESG disclosure frameworks aligned with global standards such as GRI and IFRS Sustainability Standards, while regulatory bodies like the Nigerian SEC and FRC must ensure compliance and provide incentives such as tax relief or access to green financing for firms with robust ESG practices. Corporate managers are encouraged to integrate sustainability goals into financial decision-making, adopt green financing tools like ESG-linked loans, and improve governance structures by strengthening board oversight and internal ESG capabilities. Aligning capital structure with longterm environmental and social objectives not only builds corporate resilience but also enhances investor confidence. Researchers, on the other hand, should explore causal relationships through longitudinal studies and extend inquiry into less-studied sectors like agriculture, services, and SMEs. Greater emphasis on digital innovation, green finance, and comparative regional studies will deepen understanding and foster policyrelevant insights that reflect both global and local sustainability priorities.

References

- Adejumo, A. V., Olayemi, A. A., & Adenuga, A. O. (2025). Ownership structure and sustainability reporting in listed multinational companies in Nigeria. Journal of Accounting and Sustainability Studies, 13(1), 45-63.
- Aniagboso, T. C., & Orjinta, H. I. (2023). Sustainability reporting and financial performance of pharmaceutical companies in Nigeria. Nigerian Journal of Financial Research, 11(2), 100–115.
- Baba, M. M., & Baba, U. F. (2021). Ownership structure and sustainability reporting practices of listed firms in Nigeria. International Journal of Accounting and Corporate Reporting, 7(1), 88–104.

- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. Accounting, *Organizations and Society*, 33(4–5), 303–327.
- Cormier, D., & Magnan, M. (2015). The economic relevance of environmental disclosure and its impact on corporate legitimacy: An empirical investigation. Business Strategy and the Environment, 24(6), 431– 450.
- Damodaran, A. (2012). Investment valuation: Tools and techniques for determining the value of any asset (3rd ed.). Wiley.
- De Villiers, C., & Marques, A. (2016). Corporate social responsibility, country-level predispositions, and the consequences of choosing a level of disclosure. Accounting and Business Research, 46(2), 167–195.
- Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. The Accounting Review, 86(1), 59–100.
- Eccles, R. G., & Krzus, M. P. (2018). The Nordic model: An analysis of leading practices in ESG disclosure. Nordic Journal of Business, 67(3), 10–37.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. Management Science, 60(11), 2835–2857.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. Journal of Law and Economics, 26(2), 301–325.
- Frias-Aceituno, J. V., Rodriguez-Ariza, L., & Garcia-Sanchez, I. M. (2013). The role of the board in the dissemination of integrated corporate social reporting. Corporate Social Responsibility and Environmental Management, 20(4), 219–233.
- Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, 24(5), 391–430.
- Harris, M., & Raviv, A. (1991). The theory of capital structure. The Journal of Finance, 46(1), 297–355.
- Hussain, N., Rigoni, U., & Orij, R. P. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of Business Ethics*, 149(2), 411–432.
- Igbekoyi, O. E., Ogunyemi, O. A., & Oke, A. O. (n.d.). Corporate profitability and environmental disclosure among Nigerian manufacturing firms. West African Journal of Business and Management Sciences, 4(2), 70-85.
- Iheduru, N. G., & Okoro, E. C. (n.d.). Corporate sustainability reporting and financial performance of Nigerian quoted companies. Nigerian Journal of Business Research, 18(2), 22–34.

- Iliemena, N. O., Okonkwo, R. U., & Ike, P. C. (2022). Environmental reporting and return on capital employed of listed manufacturing firms in Nigeria. Journal of Accounting and Financial Management, 8(1), 13– 25.
- Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. Journal of International Business Studies, 43(9), 834–864.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. The American Economic Review, 76(2), 323–329.
- KPMG. (2020). The time has come: The KPMG survey of sustainability reporting 2020. https://home.kpmg/xx/en/home/insights/2020/11/the-time-has-come-survey-of-sustainabilityreporting.html
- Lawrence, T. C. (2022). Sustainability reporting and profitability of listed Nigerian firms. *International Journal of Business and Management Review*, 10(2), 1–14.
- Mallin, C. A. (2019). Corporate governance (6th ed.). Oxford University Press.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. The American Economic Review, 48(3), 261–297.
- Myers, S. C. (2001). Capital structure. *Journal of Economic Perspectives*, 15(2), 81–102.
- Nnubia, M. N., Ugochukwu, I. O., & Ekezie, C. A. (2024). Institutional ownership and corporate social responsibility disclosure: Evidence from Nigeria. Accounting and Corporate Governance Review, 5(1), 21–39.
- Oke, M. O., Ojogbo, C. U., & Biiranee, B. (2025). ESG performance and financial outcomes in Nigeria's consumer goods sector: An empirical study. African Journal of Finance and Development, 12(1), 77– 92.
- Okutu, A. C., & Adegbie, F. F. (2024). Sustainability reporting and return on equity of quoted oil and gas companies in Nigeria. Journal of Petroleum Accounting and Finance, 10(1), 1–18.
- Olokoyo, F. O. (2016). Capital structure and corporate performance: Evidence from Nigerian listed firms. *Journal of Finance and Accounting*, 4(3), 66–74.
- Prado-Lorenzo, J. M., & Garcia-Sanchez, I. M. (2010). The role of the board of directors in disseminating relevant information on greenhouse gases. Journal of Business Ethics, 97(3), 391–424.
- Ross, S. A., Westerfield, R. W., & Jaffe, J. (2013). Corporate finance (10th ed.). McGraw-Hill.
- Saeedi, A., & Mahmoodi, I. (2011). Capital structure and firm performance: Evidence from Iranian companies. *International Research Journal of Finance and Economics*, 70, 20–29.

- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. The Journal of Finance, 52(2), 737– 783.
- Soetan, R. O., Akintoye, I. R., & Afolabi, A. J. (2024). Environmental disclosure and financial performance of listed Nigerian manufacturing firms. African Journal of Economic Policy, 31(1), 77–90.
- UNCTAD. (2021). Guidance on core indicators for entity reporting on contribution towards implementation of the Sustainable Development Goals (2nd ed.). United Nations Conference on Trade and Development. Retrieved from https://unctad.org/webflyer/guidance-core-indicators-entity-reportingsdgs
- World Bank. (2023). ESG integration in capital markets in Africa: Opportunities and challenges. World Bank Publications. Retrieved from https://www.worldbank.org/en/topic/financialsector/publication/esgintegration-in-capital-markets-in-africa.
- Zhang, J., Zhu, H., & Ding, H. (2013). Corporate social responsibility, financial performance, and the choice of earnings management strategies: Evidence from China. Accounting and Finance, 53(4), 1189–1212.