

Environmental Accounting and Sustainability Reporting in Nigeria

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ABSTRACT

This research investigates the methodologies of associating environmental accounting with sustainability reporting within the Nigerian context, emphasizing on the challenges, levels of adoption, and implications pertinent to sustainable development. It was grounded in an analysis of extant literature regarding environmental accounting and sustainable reporting. This desktop research utilizes theoretical framework covering stakeholder theory, legitimacy theory, and the Triple Bottom Line (TBL) to examine the incorporation of environmental accountability into corporate practices. An extensive review of both empirical and conceptual literature was conducted to assess the efficacy of sustainability reporting in mitigating environmental challenges and promoting transparency among enterprises in Nigeria. The results indicate notable deficiencies in regulatory enforcement: a lack of corporate commitment and the absence of standardized reporting framework. Moreover, economic and operational impediments such as elevated implementation costs and inadequate access to green financing obstruct the widespread acceptance of these practices. This research advocates for a series of actions that encompass the fortification of regulatory framework, the provision of financial incentives, and the utilization of technology for real-time environmental monitoring and the enhancement of stakeholder awareness. It further underscores the necessity of embedding sustainability within corporate strategies and aligning them with the United Nations' Sustainable Development Goals (SDGs).

Keywords: Environmental Accounting, Sustainability reporting, Stakeholder theory, Legitimacy theory, Triple Bottom Line

INTRODUCTION

Sustainability reporting, frequently characterized as environmental reporting, social accounting, or corporate social responsibility, constitutes an essential component of corporate governance. Given the relentless and often self-serving pursuit of enhanced wealth and expansion by corporate entities, the necessity for sustainable development has become paramount. While the current generation endeavors to exploit the earth's finite resources, it must remain cognizant of the potential risks associated with undermining the capacity of future generations to fulfill their own needs.

The tenets of sustainable development exert a significant influence on the domains of accounting and financial reporting, as well as the principles governing harmonization and standardization within the accounting profession. In addition to evaluating economic dimensions, it is imperative to thoroughly assess the repercussions of business operations on the environment and society at large. Consequently, numerous standard-setting organizations, including the International Integrated Reporting Council (IIRC) and the Global Reporting Initiative (GRI), have developed frameworks designed to encompass environmental and social dimensions. The sustainability of environmental reporting serves as a critical mechanism for the disclosure and transparency of organizations' policies and both short- and long-term strategies related to their environmental activities, thereby providing stakeholders with evidence of their accountability for operational practices and their consequent impact on the environment (Akinleye, & Owoniya, 2024).

Environmental accounting and sustainability reporting have gained prominence as businesses increasingly recognize the need to balance profitability with environmental and social responsibilities. In Nigeria, the oil and gas industry, manufacturing, and banking sectors are at the forefront of environmental disclosure due to regulatory pressures and stakeholder demands. Environmental sustainability has become a global priority, driven by climate change, resource depletion, and environmental degradation. Nigeria, Africa's largest economy, faces critical environmental challenges, including deforestation, oil spills, desertification, and waste management issues. Despite these challenges, environmental accounting and sustainability reporting in Nigeria remain underdeveloped (Desi & Adegbe, 2023).

Environmental degradation and unsustainable business practices are critical challenges in Nigeria, driven largely by industrial activities in high-impact sectors such as oil, gas, and manufacturing. Despite growing awareness of the need for sustainable development, the adoption of environmental accounting and sustainability reporting among Nigerian firms remains limited and inconsistent. Several barriers, including weak regulatory frameworks, lack of capacity, and poor stakeholder awareness, contribute to these challenges (Fadipe & Adegbe, 2023). The weak adoption of environmental accounting in Nigeria has significant consequences, including:

- **Environmental Impact:** Continuous environmental degradation threatens biodiversity and public health particularly in regions like the Niger Delta.
- **Global Competitiveness:** Nigerian firms risk falling behind international peers who are increasingly prioritizing sustainability in their operations.
- **Economic Risks:** Without proper environmental accountability, companies face reputational risks, regulatory penalties, and potential exclusion from global supply chains.

This study aims to address gaps in environmental accounting and sustainability reporting in Nigeria by exploring its current state, identifying barriers to adoption, and proposing strategies for improving practices and outcomes. The primary focus is on the role of environmental accounting and sustainability reporting in advancing sustainable development within the country. Specific objectives include examining the practices' alignment with national regulations and global standards, analyzing the financial, social, and environmental impacts of sustainability disclosures on corporate performance, and assessing the influence of these practices on Nigeria's progress toward sustainable development goals (SDGs). This study will identify barriers to adoption, propose actionable recommendations, and develop a framework to improve sustainability reporting in Nigerian organizations. Ultimately, it aims to provide evidence-based policy recommendations to strengthen regulatory and institutional support, contributing to both the academic literature on environmental sustainability and offering practical insights for policymakers and businesses in Nigeria.

Environmental Accounting Framework

The framework for this study integrates the theoretical underpinnings of Stakeholder Theory, Legitimacy Theory, and Triple Bottom Line (TBL) Framework to explain the dynamics of environmental accounting within the Nigerian context.

Environmental accounting is defined as the identification, collection, estimation and analysis of environmental cost information for superior decision-making within the firm. It can be defined as the generation, analysis, and use of financial and non-financial information in order to optimize corporate, environmental and economic performance, achieving a sustainable business the ultimate objective of environmental accounting is to clearly indicate the environmental cost of each process, separating the non-environmental costs from the environment costs. Environmental accounting integrates environmental costs into financial and managerial accounting systems, emphasizing transparency in reporting. Sustainability reporting, typically guided by frameworks like the Global Reporting Initiative (GRI), extends beyond financial metrics to include environmental, social, and governance (ESG) disclosures (Abdulkadir et al, 2022).

Key Concepts and Practices

Environmental Cost Accounting: This is classified into internal cost and external cost. Internal Cost refer to the explicit expenditures incurred by an organization in relation to environmental protection initiatives, encompassing pollution control apparatus, waste management, and enhancements in energy efficiency while External Costs refers to the implicit expenditures that society bears, such as the repercussions of pollution, depletion of resources, and adverse health effects. Although the precise quantification of such costs presents challenges, their consideration is indispensable for a comprehensive evaluation of environmental ramifications.

Environmental Management Accounting: This discipline emphasizes the provision of information pertinent to internal decision-making processes. It facilitates the identification of domains where enhancements in environmental practices can yield financial savings or generate revenue. Furthermore, it underpins the formulation of environmental strategies and operational frameworks.

Physical Accounting: This field quantifies tangible inputs and outputs, including water, energy, and raw materials. It aids in monitoring resource utilization and discerning opportunities for increased efficiency.

Monetary Accounting: This aspect involves attributing monetary values to environmental consequences, thereby enabling their incorporation into financial statements. Such endeavors can be fraught with difficulties, as numerous environmental costs and advantages resist straightforward monetary quantification.

Benefits of Environmental Accounting

Enhanced Decision-Making: By integrating environmental considerations into decision-making frameworks, organizations are positioned to make more sustainable and informed choices. **Improved Risk Management:** The identification and alleviation of environmental risks serve to safeguard a company's reputation and overall financial viability.

Increased Stakeholder Value: Transparent disclosures regarding environmental performance can draw the attention of environmentally conscious investors and consumers.

Regulatory Compliance: Environmental accounting aids organizations in adhering to environmental regulations, thereby averting potential penalties.

Innovation and Efficiency: By quantifying environmental impacts, organizations can uncover avenues for innovation and operational refinement.

Challenges and Limitations

Data Availability and Quality: Acquiring reliable and consistent environmental data presents considerable challenges.

Valuation of Environmental Impacts: The process of assigning monetary values to environmental costs and benefits often entails subjectivity and complexity.

Integration with Traditional Accounting: The amalgamation of environmental data into conventional financial accounting systems can prove to be problematic.

Lack of Standardized Reporting Frameworks: The absence of standardized reporting frameworks may impede comparability across different organizations.

Future of Environmental Accounting

Given the escalating significance of environmental issues, the relevance of environmental accounting poised to increase. Future advancements in this domain may encompass:

Advanced Data Analytics and AI: The employment of these technologies to scrutinize extensive datasets pertaining to environmental factors.

Integration with Sustainability Reporting: The amalgamation of environmental, social, and governance (ESG) metrics into cohesive sustainability reports.

Development of Standardized Metrics: The establishment of standardized metrics aimed at measuring and comparing environmental performance.

Increased Investor Demand: The rising interest among investors in sustainable investment opportunities will catalyze the demand for dependable environmental data.

By embracing environmental accounting methodologies, organizations have the potential to foster a more sustainable future while simultaneously enhancing their long-term financial outcomes.

Sustainability Reporting Framework

Sustainability reporting is the process of disclosing an organization's economic, environmental, and social performance. It aligns with global standards like the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB). Sustainability reporting can be defined as a report that addresses the economic, social and environmental needs of the present stakeholders without compromising its ability to meet the needs of the future stakeholders. The stakeholders include both direct and stakeholders, such as shareholders, employees, clients, pressure groups, regulatory bodies, creditors, government and local communities. In Nigeria, sustainability reporting is increasingly relevant as companies aim to comply with global standards and address local environmental challenges, such as pollution and resource depletion. Key benefits of environmental accounting include improved regulatory compliance, enhanced stakeholder trust, and better strategic positioning for long-term profitability (Okafor & Amahalu, 2023).

Importance of Sustainability Reporting

Transparency and Accountability: Sustainability reporting facilitates organizational transparency regarding operational activities and promotes self-accountability for their decisions.

Risk Management: By recognizing and addressing environmental and social risks, organizations can effectively reduce potential threats to their operational integrity.

Enhanced Reputation: An exemplary sustainability report can significantly bolster a corporation's public image and brand perception.

Improved Financial Performance: The implementation of sustainable practices often results in cost efficiencies, heightened operational effectiveness, and diminished risk exposure.

Investor and Stakeholder Relations: This practice assists organizations in cultivating more robust relationships with investors and various stakeholders by furnishing them with essential information.

Regulatory Compliance: Engaging in sustainability reporting aids organizations in adhering to diverse environmental and social regulatory frameworks.

Key Elements of Sustainability Reporting

Typically, sustainability reports encompass the following domains:

Environmental Performance: Greenhouse gas emissions, water consumption, waste production, energy utilization, biodiversity preservation and pollution mitigation

Social Performance: Labor relations, Human rights advocacy, community involvement, occupational health and safety standards, diversity and inclusion initiatives

Economic Performance: Financial outcomes, supply chain oversight, customer satisfaction metrics, innovation, research and development activities

Governance: Board diversity and composition, Executive remuneration, risk management and strategies anti-corruption policies

Frameworks and Standards

A variety of frameworks and standards direct sustainability reporting, including:

Global Reporting Initiative (GRI): This framework serves as a prevalent resource for sustainability reporting, offering comprehensive guidelines for addressing a spectrum of environmental, social, and economic matters. Three series of Standards support the reporting process: the GRI Universal Standards, which apply to all organizations; the GRI Sector Standards, applicable to specific sectors; and the GRI Topic Standards, each listing disclosures relevant to a particular topic. Using these Standards to determine what topics are material (relevant) helps organizations to achieve sustainable development (Fadipe & Adegbeie, 2023).

International Sustainability Standards Board (ISSB): was formed by consolidating the climate disclosure standards board (CDSB) and the value reporting foundation (VRF), which included the sustainability accounting standards board (SASB). The aims were to enhance transparency and accountability in how companies report their sustainability-related risks and opportunities, enabling better decision-making by investors, regulators, and other stakeholders. It develops and approves IFRS sustainability disclosure standards (IFRS S), which issued IFRS S1 (general sustainability disclosure) and IFRS S2 (climate-related disclosures) (Okafor & Amahalu, 2023).

Task Force on Climate-related Financial Disclosures (TCFD): Formed by the Financial Stability Board, this task force aims to develop recommendations for climate-related financial disclosures.

Empirical Evidence

Empirical studies in Nigeria highlight the relationship between environmental accounting practices and corporate performance:

(i) Performance Metrics: Studies show mixed results regarding the financial impact of sustainability disclosures. For example, Omaliko et al. (2020) found a significant positive effect of social and environmental disclosures on the financial performance of non-financial firms. However, Ordu and Amah (2021) found no significant relationship between environmental accounting and return on assets in the oil and gas sector. Moreover, Desi and Adegbeie (2023) found that environmental accounting practices had a significant positive effect on the sustainable performance of listed manufacturing firms in Nigeria.

Similarly, Udekwasili (2022) found that environmental sustainability reporting has significant and positive relationship with financial performance of consumer goods firms in Nigeria. Similarly, Okon et al. (2023) provided further evidence by demonstrating that sustainability reporting significantly influences the return on capital employed in the oil and gas sector.

(ii). Sector-Specific Findings: Research by Omaliko, et al. (2018) on oil and gas firms showed compliance with GRI standards positively correlated with improved environmental and social governance practices. Similarly, economic sustainability reporting was found to significantly enhance return on equity among Nigerian companies. Moreover, study by Fadife and Adegbeie (2023) on Environmental Accounting and Environmental Capacity for Sustainable Economy in Nigeria showed a significant relationship between the variables. Similarly, study by Ogbonna, et al. (2020) on Environmental Accounting and Sustainability Development in Nigeria revealed that environmental accounting has not fully influenced sustainability

development in Nigeria. Moreover, research by Efut (2020) on Enhancing Sustainable Development through Environmental Accounting: A Case of Nigeria. Findings shows environmental accounting reporting has direct influence on sustainable development measurement indices. Also, Onyewo et.al (2022) conducted a research on Drivers of Environmental and Social Sustainability Accounting Practices in Nigeria: A Corporate Governance Perspective, result shows that corporate governance mechanism have no influence on sustainability accounting.

Challenges of limited adoption of sustainability frameworks and inconsistent reporting practices hinder the effectiveness of environmental accounting. Many Nigerian firms, especially SMEs, struggle with the cost of implementing such systems.

Theoretical Perspectives

The theoretical underpinnings of environmental accounting in Nigeria are primarily based on stakeholder theory, legitimacy theory and Triple bottom line framework:

- (a) **Stakeholder Theory:** This theory emphasizes that companies must address the needs and expectations of various stakeholders, including shareholders, government, communities, and environmental activists.
 - Application in Nigeria: Stakeholders such as the Nigerian government, through agencies like NESREA, demand compliance with environmental regulations, while local communities (e.g., those in the Niger Delta) press for accountability due to environmental degradation caused by oil exploration.
 - Implication: Companies that adopt robust environmental accounting practices can build trust, mitigate conflicts, and ensure long-term business sustainability.
- (b) **Legitimacy Theory:** Firms seek to maintain societal legitimacy by adhering to norms, values, and expectations of their operating environments.
 - Relevance in Nigeria: Companies operating in sectors with significant environmental impact, such as oil and gas, use sustainability reporting to align with societal expectations and reduce reputational risks.
 - Implication: Reporting on environmental and social performance helps these firms demonstrate compliance with global standards and local regulations.
- (c) **Triple Bottom Line (TBL):** Framework Proposed by Elkington (1997), the TBL framework expands the traditional financial accounting focus to include environmental and social dimensions:
 - People: Examining the social impact of corporate activities on employees, communities, and consumers.
 - Planet: Accounting for environmental impact, including resource use, emissions, and waste.
 - Profit: Assessing economic performance.
 - Application in Nigeria: The TBL is critical in addressing the country's socio-economic challenges, where companies must balance profitability with minimizing environmental degradation and fostering community development

CONCLUSION

Environmental accounting and sustainability reporting are essential to achieve sustainable development in Nigeria. Despite the significant challenges, the integration of these practices can drive transparency, accountability, and environmental stewardship. Collaborative efforts between the government, private sector,

and civil society are necessary to foster an enabling environment for these practices to thrive. Environmental accounting and sustainability reporting are critical for promoting corporate transparency and addressing Nigeria's pressing environmental concerns. Despite the challenges in adoption and implementation, empirical evidence supports a positive relationship between sustainability practices and corporate performance. Theoretical frameworks such as stakeholder and legitimacy theories further highlight the strategic importance of these practices. Moving forward, strengthening regulatory frameworks and fostering awareness among Nigerian firms will be vital for achieving development goals.

The challenges and potential of environmental accounting and sustainability reporting in Nigeria necessitate targeted recommendations to improve its adoption, implementation, and effectiveness.

1. Strengthen Regulatory Frameworks and Enforcement:

- **Enhance Existing Laws:** Update environmental laws like the NESREA Act to include clear guidelines and penalties for non-compliance with sustainability reporting requirements.
- **Mandatory Sustainability Reporting:** Introduce policies mandating sustainability disclosures for high-impact industries such as oil, gas, and manufacturing, ensuring alignment with global frameworks like the GRI or SASB standards.
- **Strengthen Enforcement Mechanisms:** Equip regulatory bodies with adequate resources, technology, and skilled personnel to monitor compliance effectively

2. Build Capacity and Awareness:

- **Training Programs:** Develop capacity-building initiatives for accountants, auditors, and corporate managers on environmental accounting and sustainability practices. Partnerships with academic institutions and international organizations can support this goal.
- **Public Awareness Campaigns:** Educate stakeholders, including the public and investors, about the importance of sustainability disclosures in fostering accountability and reducing environmental degradation.

3. Foster Stakeholder Collaboration:

- **Community Engagement:** Involve local communities in sustainability initiatives to build trust and address specific environmental concerns, such as oil spills in the Niger Delta.
- **Corporate-NGO Partnerships:** Encourage collaborations between companies and environmental NGOs to develop sustainability strategies and implement corporate social responsibility (CSR) projects

4. Research and Development:

- **Support for R&D:** Encourage investments in research to develop innovative solutions for sustainability challenges in Nigeria, such as renewable energy technologies and waste management systems.
- **Data Transparency:** Promote open access to environmental data to facilitate research, monitoring, and the development of evidence-based policies.

5. Benchmark against Global Standards:

- **Global Best Practices:** Encourage Nigerian firms to adopt internationally recognized sustainability standards such as GRI, ISO 14001, and CDP frameworks.
- **International Partnerships:** Collaborate with global organizations and institutions to benchmark progress and learn from successful case studies in other developing economies

6. Long-Term Vision and Policy Integration:

- Align with SDGs: Integrate sustainability reporting goals with Nigeria's commitment to the United Nations Sustainable Development Goals (SDGs), particularly SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action).
- Periodic Review: Establish mechanisms for periodic review and updates of sustainability policies and reporting frameworks to ensure relevance and effectiveness.

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