

Environmental Disclosure and The Quality of Financial Reports of Listed Nigerian Manufacturing Firms

Dr. Emmanuel O. Emenyi

Department of Accounting, Akwa Ibom State University

Agnes Stephen Okpokpo

Department of Accounting, Akwa Ibom State University

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ABSTRACT: *This study examined the relationship between environmental disclosure and the quality of financial reports in Nigerian manufacturing sector. The specific objectives were to examine the relationship between environmental donations and sponsorship disclosure on the quality of financial reports among manufacturing firms in Nigeria; examine the relationship between environmental restoration disclosure on the quality of financial reports among manufacturing firms in Nigeria, examine the relationship between environmental waste management disclosure on the quality of financial reports among manufacturing firms in Nigeria and ascertain the relationship between environmental donations and sponsorship disclosure, restoration and waste management disclosure and the quality of financial reports among manufacturing firms in Nigeria. Ex-post facto research design was adopted and a final sample size of 10 manufacturing firms was purposively selected for a period of 10 years. The data were collected through content analysis method. Descriptive and inferential statistics were used to analyze collated data. Findings revealed that two out of the three components of the environmental accounting information, namely, Environmental Restoration (ER), and Environmental Donations and Sponsorship (EDS) have no significant influence on the quality of financial reports among the manufacturing firms. Thus, the null hypothesis were accepted. The study concluded that the influence of the disclosure of accounting information about environmental restoration, and environmental donations and sponsorship on the quality of financial reports of manufacturing firms in Nigeria were insignificant. It was recommended that Standard setters and policy makers should work with the Ministry of Environment to consider introducing mandatory disclosures which are consistent.*

KEY WORDS: environmental accounting, quality, financial reports

INTRODUCTION

The consciousness of environmental degradation by various stakeholders has recently mounted pressure on Nigerian manufacturing firms of the need to be environmentally friendly and

responsible. These pressures require corporations to respond to public issues such as the need for effective waste management, effective restoration, the need to avoid earth, water, and air pollution, and the general need for a safe and clean environment. In the words of Daferighe and Aje (2005), creating an environmental accounting information system within an organization could enhance the awareness amongst firms.

Environmental accounting disclosure provides a correct evaluation of costs -benefits preservation measures of the environment by manufacturing firms. It assists to provide structure for companies to discover and account for the past, present and future environmental accounting information to aid decision-making and control of management (KPMG and UNEP, 2006). The severity of environmental impacts has its adverse effect on the quality of our life. Actions are being taken both at the international and national level to reduce, prevent and diminish its impact on social, economic and political spheres.

The pattern of environmental accounting information disclosure in Nigeria is voluntary in nature. The implication is that Nigerian firms, especially those in the manufacturing sectors may likely abuse the weaknesses inherent in voluntary environmental accounting reporting, which may not report the components of environmental accounting information disclosure that would enable stakeholders to make accurate decisions. Past evidence shows that the quality of financial reports of listed Nigerian firms have been deficient over time (Ofoegbu, 2016). Corporate environmental reporting in Nigeria is also at its developing stage (Ngwakwe, 2008). However, financial reporting has provided a platform for a growing number of manufacturing firms in combining their environmental efforts with their economic efforts in demonstrating their accountability for environmental stewardship.

Engaging in environmental and social activities and disclosing same in the annual financial or sustainability report by business entities has been controversial for over three decades among stakeholders (Okafor, et al (2020). Ensuring the transparency of the activities of economic entities in the process of modernizing the country's economy and integrating into the world community is considered one of the most significant issues, in this process, the actual problems are considered to be the correct formulation of accounting in business entities, the preparation of financial statements based on international standards. Timely and systematic setting of these processes contributes to the improvement of the quality of accounting information, ensuring the improvement of the quality of accounting will serve to make the right and optimal management decisions for external and internal users (Avlokulov 2021). Environmental accounting disclosure is crucial to the provision of information to the general public about organizations efforts at keeping the environment safe through minimization of environmental liability. Environmental disclosure provides platform for management to give account of stewardship and assist management in taking informed decisions. Environmental costs are costs expended on the protection of environment, damage reduction and prevention of environmental hazards (Ezeagba et al 2017).

Statement of the problem

Financial reports of some manufacturing firms in Nigeria have been found to be deficient over the years. This is because the reports lack the vital components of environmental accounting information that would enable stakeholders to make informed decisions. Also, voluntary reporting has been abused by some manufacturing firms in Nigeria just because of the weakness involved in this pattern. They demonstrate an insufficient commitment to report environmental accounting disclosure components. The importance of the environmental performance, resource usage and environmental remediation have been relegated to the background. The financial reports usually convey information on depreciation of assets without considering the degradation effect of organizations' interactions with the environment.

Environmental stewardship is yet to be taken seriously in Nigeria. It is not surprising that water, land and air pollution are increasing in Nigeria. Commercial cost accounting systems are not fully showing the financial impacts and environmental costs in the costs of products and transactions. Most firms do not know the degree of their environmental accounting information, so are likely to miscalculate them. This means that if they are not assessing such information they are not monitoring and reporting them. Some manufacturing firms are therefore not doing enough in capturing the accurate cost of the impact of their activities on the environment neither do they consider the reliability of information contents and accuracy of information. It is against this background that the study attempt to investigate the influence of environmental accounting disclosure on the quality of financial reports among manufacturing firms in Nigeria.

Objectives of the study

The main objective of this study was to examine environmental accounting disclosure and its influence on the quality of financial reports in Nigerian manufacturing firms. The specific objectives are to;

1. determine the relationship between environmental donations and sponsorship and the quality of financial reports among manufacturing firms in Nigeria
2. examine the relationship between environmental restoration and the quality of financial reports among manufacturing firms in Nigeria
3. access the relationship between environmental waste management and the quality of financial reports among manufacturing firms in Nigeria.
4. ascertain the relationship between environmental donations and sponsorship, restoration, and waste management and the quality of financial reports among manufacturing firms in Nigeria.

Research questions

The following research questions are developed to guide the study:

1. What is the relationship between environmental donations and sponsorship and the quality of financial reports among manufacturing firms in Nigeria?
2. To what extent does environmental restoration affect the quality of financial reports in manufacturing firms in Nigeria?

3. What is the environmental donations and sponsorship, restoration, and waste management relationship between environmental waste management and the quality of financial reports among manufacturing firms in Nigeria?

4. To what extent does environmental donations and sponsorship, restoration, and waste management affect the quality of financial reports in manufacturing firms in Nigeria?

Hypotheses of the study

In pursuit of the above-stated research objectives, the following hypotheses are developed:

H₀₁: Environmental donations and sponsorship have no significant influence on the quality of financial reports of manufacturing firms in Nigeria

H₀₂: There is no significant influence of environmental restoration on the financial reports of manufacturing firms in Nigeria

H₀₃: Environmental waste management have no significant influence on the quality of financial reports among the manufacturing firms in Nigeria.

H₀₄: Environmental donations and sponsorship, restoration, and waste management have no significant effect on the quality of financial reports among the manufacturing firms in Nigeria.

Significance of the study

This research would be of assistance to the various stakeholders such as manufacturing firms, the regulatory authorities, policy makers, the investors, lenders, government, researchers, scholars, students, standards setters and academics in the following ways: At present, no law requires firms in Nigeria to prepare and publish environmental reports. This study will assist in increasing the perception of regulatory authorities in putting in place a set of law that will encourage environmental accounting information disclosure in the financial reports. Currently, there are no local standards for firms that prepare and publish environmental accounting information reports. This study will resuscitate the need for the Financial Reporting Council of Nigeria to put machineries in place for environmental accounting information reporting standards.

Conceptual review

Environmental accounting information

Environmental accounting is sustainability strategies initiative that has been defined by Steele and Powell (2002), as that part of traditional accounting which deals with the system of identifying and analyzing of material flow and their related money flows by using environmental accounting techniques to provide insight into environmental emissions (impact). The National income accounting, financial accounting, and business managerial accounting get their support from the use of an accounting system. Environmental accounting also covers information measuring the environmental performance which includes regulatory bodies and manufacturers in economic terms. Cost-benefit principles here relate to the financial evaluation of environmental costs and the economic benefits of good environmental administration. Environmental accounting is observed by Peskin (1989), as a device that can be utilized to decide on substantial and external costs for projects and activities (such as human health). It must, therefore, be planned so that it provides information allowing users access to the environmental behaviour of a firm and its economic consequence. The information of the

environmental accounting system is made from two perspectives: in monetary units or financial information and in physical units or non-financial information. Therefore, it is essential to ensure that the different information needs of different interested parties are protected. The manner of reflecting the business process should be separated according to the users of the accounting information and decision-making tasks (Kolk, 1999). Adding environmental accounting information in the financial reports of companies is a technique of inculcating sustainability reporting in everyday business decisions. A key function of the environmental initiative is to transport costs linking environmental impacts to the management of the company, therefore, encouraging them to find out means to lessen and evade economic costs and also reduce the company's environmental emission (impact) Daferighe & Aje (2005).

In 2000, the Global Reporting Initiative (GRI) published the first version of its guidelines, which was the first international framework for comprehensive corporate sustainability reporting with a particular focus on environmental matters (GRI, 2022a). Thereafter, GRI G1 Guidelines (2000), GRI G2 Guidelines (2002), GRI G3 Guidelines (2006), GRI G3.1 (2011), and GRI G4 (2013) were developed to embrace economic, social, and ethical issues. In 2016, the GRI's Global Sustainability Standards Board issued the first global standards, including all the main concepts of the previous guidelines, improved with a more flexible structure, clearer requirements and a more straightforward language. These standards configure a set of modular reporting guidelines to support organisations in communicating the impacts of their activities on economic growth, society, and the environment (GRI, 2022b). According to the GRI (2022a), its standards aimed to: "create a common language for organisations and stakeholders, with which the economic, environmental, and social impacts of organisations can be communicated and understood. The Standards are designed to enhance the global comparability and quality of information on these impacts, thereby enabling greater transparency and accountability of organisations".

These standards continue to be updated and added to, including new Topic Standards on Tax (2019) and Waste (2020). The GRI provides a list of corporate reporting features to be included in non-financial statements and sustainability reports. The new structure consists of 36 Standards into Universal Standards and Topic-Specific Standards. The Universal Standards enclose "100 series", containing three of 36 Standards, i.e. GRI 101 on Foundation, GRI 102 on General Disclosure, and GRI 103 on Management Approach. The Topic-Specific Standards embrace "200 series" on economic issues, "300 series" on environmental issues, and "400 series" on social issues. These series detail the disclosures related to the organisation's impacts on economic, environmental, and social issues, and the use of qualitative and quantitative indicators to measure such impacts (Molinari and Carungu, 2019). Furthermore, the GRI standards acknowledge the importance of the stakeholder engagement process to identify the stakeholders and their needs, and the material social and environmental topics to be reported in the non-financial reports.

Accordingly, IFRS Foundation catches on to this opportunity coming from the double materiality perspective and may emphasise the risk of financial capture for sustainability reporting practice. In the IFRS Foundation's consultation paper, it reads (IFRS Foundation,

2020, p. 14): “For the SSB to commence with a double-materiality approach would substantially increase the complexity of the task and could potentially impact or delay the adoption of the standards. Therefore, a gradualist approach is recommended. If established, the SSB would initially focus its efforts on the sustainability information most relevant to investors and other market participants. Such information would more closely connect with the current focus of the IASB.” “if more jurisdictions embrace the double-materiality concept to minimise the risks of global and jurisdictional fragmentation of standards.”

Thus, IFRS Foundation’s ISSB will work primarily to produce sustainability standards for reporting information about the social and environmental effects on the reporting entity, their financial performance and the enterprise value (IFRS Foundation, 2020, p. 13; IFRS Foundation 2022b). This will privilege investors and other capital market participants, as the primary audience of financial reporting (IFRS Foundation, 2020, p. 13). The ISSB was finally constituted with the formal purpose of “developing a set of sustainability disclosure standards” to produce “sustainability disclosure that is useful to investors and other participants in the world’s capital markets in making economic decisions” (IFRS Foundation, 2021). Thereby, the ISSB sustainability standards aim to be only about reporting financial-related sustainability information, as confirmed in the first exposure draft IFRS/S1 (IFRS Foundation, 2022b).

The GRI and the ISSB currently occupy two different positions in the sustainability reporting standard-setting arena. As stated, the ISSB aims to provide standards for investors-oriented sustainability disclosure that can have financial implications for the entities. The recent collaboration agreement between the IFRS Foundation and the GRI aims to pursue the following purpose. “ensuring compatibility and interconnectedness of investor-focused baseline sustainability information that meets the needs of the capital markets, with information intended to serve the needs of a broader range of stakeholders. Aligning where possible their respective work programmes, terminology and guidance, helping to reduce the reporting burden for companies and to further harmonise the sustainability reporting landscape at an international level.”

It recognises that:“the IFRS Foundation and GRI provide two ‘pillars’ of international sustainability reporting—a first pillar representing investor-focused capital market standards of IFRS Sustainability Disclosure Standards developed by the ISSB, and a second pillar of GRI sustainability reporting requirements set by the GSSB, compatible with the first, designed to meet multi-stakeholder needs.”

Thus, we can expect that the GRI standards will keep maintaining a distinguished global position as the primary standards for multi-stakeholder sustainability reporting. Yet, the open question is about whether the influence of the IFRS Foundation’s sustainability-related disclosure standards will prevail over the GRI multi-stakeholder approach in companies’ sustainability reporting practices.

While ISSB adjusted its position to differentiate it from the GRI, the second factor than can explain the ISSB’s and the GRI’s future success and their different jurisdictions in the

sustainability reporting standard-setting arena is about their different source of legitimacy. As argued above, the IFRS Foundation's consultation paper was to get legitimacy from its main stakeholders to operate as a sustainability disclosure standard-setter. The IFRS Foundation's consultation paper highlights that a requirement for success is: "achieving a sufficient level of global support from public authorities, global regulators and market stakeholders, including investors and preparers, in key markets" (IFRS Foundation, 2020).

Thus, while the GRI has already a strong legitimacy coming from its widespread adoption and the GRI adopters over the decades, the ISSB still have to get its legitimacy by demonstrating that its action is desirable, proper and appropriate (Suchman, 1995). Nevertheless, it is worth noting that, despite the global diffusion, the GRI was not able to establish a mandatory adoption of its standards over its decades of work. This may likely be explained by a different regulatory context characterizing the past two decades and the level of institutionalisation of sustainability reporting practices. Instead, the IFRS Foundation's ISSB entered the scene in a favourable context by leveraging the regulatory push and global need for an international standards setter for sustainability reporting. In its Proposal, the European Commission (2021) highlights that: "Many stakeholders stressed that if the EU develops sustainability reporting standards, it should build on and be consistent with international standard-setting initiatives." (p. 17)

Thus, IFRS Foundation can benefit from this regulatory need and its global structure in financial reporting standard-setting as much that, in its consultation paper, attempt to convince the public of the need for ISSB by arguing: "Stakeholders could also benefit if a single organisation developed requirements in financial reporting and sustainability reporting." (IFRS Foundation, 2020, p. 9)

Yet, *ceteris paribus*, the GRI can also meet this demand for operating as a global sustainability standard-setter, so receiving the regulatory endorsement. The difference from the IFRS Foundation lies in the different legitimacy they can use. In its attempt to enter the sustainability reporting field, the IFRS Foundation seems to get its legitimacy by relying on its structural legitimacy. Structural legitimacy allows "audiences [to] see the organisation as valuable and worthy of support because its structural characteristics locate it within a morally favoured taxonomic category" (Suchman, 1995, p. 581). Structures are indicators of the organisation's socially constructed capacity to perform specific work and convey the message that is acting on collectively valued purposes properly (Suchman, 1995). Structures can be, for example, the procedures that become the valued proxy for judging the organisation's operation (Suchman, 1995).

Similarly, the IFRS Foundation seeks to persuade its audience that it is the right global standard-setter for sustainability reporting: "The IFRS Foundation's three-tier governance structure could be effectively used for the creation of an SSB. This structure consists of an independent standard-setting board of experts governed and overseen by a global set of Trustees who, in turn, are accountable to a monitoring board of public authorities, the IFRS Foundation Monitoring Board. The Monitoring Board provides a formal link between the Trustees and public authorities to enhance the public accountability of the IFRS Foundation."

Accordingly, by showing its structure, procedural setting and ties with regulators and authorities, the IFRS Foundation seeks to demonstrate that it is the right organisation to govern the global sustainability standard-setting procedures. As Suchman (1995, p. 581) argues, a “structurally legitimate organisation becomes a repository of public confidence because it is ‘the right organisation for the job’”. Thus, the IFRS Foundation leverage its structural legitimacy by benefiting from its structural power and institutional endorsement in global accounting standard-setting. However, this “sense of rightness” has more to do with the organisation’s identity and less with demonstrating its competence (Suchman, 1995).

Environmental accounting information disclosure for quality

Financial Reports

Dragomir and Anghel-ilcu (2011) point out the basic components of environmental accounting disclosure. However, there is no sole best method of good environmental disclosures that can be adopted by all companies. Firms should design and implement strategies in the light of regulatory framework that will produce a resourceful, qualitative and result-oriented result, for quality financial reporting in the interest of stakeholders. Efficient and effective environmental information disclosure should be designed in line with the condition surrounding each entity and continuously reviewed according to the changing situation of the time. But, for organizations which intend to compete internationally, the following are recommended as essential environmental accounting information components (Dragomir and Anghel-ilcu, 2011): Environmental restoration, environmental donations and sponsorship, and environmental waste management.

Environmental restoration (ER)

Environmental Restoration cost is when the company undertakes restoration, rehabilitation and environmental work, especially, when environmental disturbance is caused by the development or on-going production at the company’s site. These overheads are predicted at the beginning of the assets useful life and in line with IAS 37. The expenses at the restoration site may also be derived as a consequence of the continuous use of an asset whose environmental impact is not insignificant. Nevertheless, PricewaterhouseCoopers(2004) considers that, when environmental pollution is outside the industrial parameters for the use of a certain asset, the supplementary expenses should be incurred immediately. Provisions for clean-up costs are persistent elements, that is, they are known at one point in time and may be found unchanged for quite a lot of financial years in the statement of financial position (balance sheet).

The following are collections of environmental restoration cost:

- (a) Cost as a result of the restoration and rehabilitation of environmental work on the disturbed environmental plant at Anglo America;
- (b) Rio Tinto, restoration expenditures incurred at the end of the relevant operations;
- (c) GDF Suez, rehabilitating land on which former plants were located.

Environmental donations and sponsorship (EDS)

Environmental donations and sponsorship involve companies showing voluntary commitments towards the community, associations and the natural environment. However, taxes paid for

environmental purposes should be disclosed separately in the financial reports in a manner that demonstrates extreme attention for the company's public image. These costs are compulsory for improving the companies' public image (Dragomir and Anghel-ilcu, 2011).

The following are some collection of environmental donations and sponsorship:

- (a) Eco-packing tax and eco- contribution on promotional brochures by Casino Guichard;
- (b) Expenditures incurred by Cadbury in respect to charitable purposes, education and enterprise, environment, health and welfare. Nigerian Stock Exchange (2013)

Environmental waste management

Environmental waste management entails a reduction in what is there, sorting, separating, transforming, returning to service what can be used and properly disposing what is left (Rose, 2002). According to Ghush, (2009), waste is unavoidable human activities. They arise as a by-product of a production process and they arise when the materials are disposed after they have been used. Discarding of waste in a system has a massive environmental impact and can cause a serious environmental hazard. Novick (2009), specifies that waste management in any place is associated with cost reduction in the speed of sanitation-related diseases, reduction on the occurrence of non- communicable diseases and reduction on environmental emissions. All manufacturing firms in Nigeria are expected to make a report on the related cost incurred in the management of waste. This will enable the stakeholders to make informed decisions in evaluating the organization's response to environmental matters and the activities the organization must have engaged in to avoid environmental degradation. Environmental waste management costs incurred as an expense should be fully disclosed in the company's financial reports. This has an inverse relationship with organizational performance by reducing the profit and return on assets of the company Emenyi, et al (2016).

Financial reports

Financial reporting is a process of providing information concerning organizations financially and non-financially for useful decision making (Beest, Braam and Boelen, 2009). Financial reports provide organizations financial and non-financial information on reducing harmful activities (pollutions) on the environment. This information is normally in the form of a financial statement (IASB, 2010). These reports are subjected to scrutiny by external auditors to make it reliable and confident in the mind of the users. Therefore, audited financial reports is a useful guide for decision making by the various stakeholders (such as creditors suppliers, government agencies and regulators(IASB, 2010).

A financial report of an organization is an important instrument for communication between the firm and the stakeholders. For that reason, financial reporting serves as a vital tool within the corporate governance framework. Audited financial reports of a firm bring about the comparison of organization within the time periods (Hodge, 2001) and so help the various stakeholders to make informed decisions (Razman and Iskandar, 2003).The financial reports should be of a good quality and reliable for financial reporting processes and the duties of the stakeholders involved in providing assurances to financial reporting. According to Wolnizer (1995), a good quality and reliable financial reports depend on the monitoring system of the company.

Local and international accounting standard-setting bodies have emphasized, the importance of high-quality financial reports. United Kingdom's International Accounting Standard Board and the USA Financial Accounting Standard Board, in their separate mechanism, have emphasized the need for financial reporting. Every company in Nigeria registered under the Companies and Allied Matters Acts CAMA, 1990 and 2004 is required to produce financial reports for every financial year. The Companies and Allied Matters Acts CAMA, 1990 and 2004 also require that this financial reports should be subjected to check by the external independent auditor. By this examination function, the stakeholders who are the users of the financial information are given good assurance that the financial statements are not misleading, capable of picturing the financial reports untrustworthy (Messier and Boh, 2002).

Additionally, the Nigerian Stock Exchange (NSE) requires that listed companies in the exchange should produce annual audited accounts not later than four (4) months after the end of their financial year and their annual reports not later than six (6) months after financial year end. The purpose of these requirements is to ensure that stakeholders are well informed and provided with information needed to guide their decision making. Beestet *al.*, (2009) said that, in giving good quality and reliable reports, financial reporting processes will positively influence capital providers and stakeholders in making investment, and credit decisions and thus enhance the overall market effectiveness.

The idea of quality financial reports has significantly brought considerable research attention around the world. Besides, researchers have not been able to clearly define what constitutes the quality of financial reporting in an organization. However, the Companies and Allied Matters Acts CAMA, 1990 and 2004 did not define what constitutes quality in financial reporting. Past literature had focused on financial restatement and fraud, as factors which tend to inhibit the attainment of high-quality financial reports. They used these factors of financial reporting as evidence of a breakdown. Compliance of financial reporting with accounting and auditing standards has been used by previous research as a proxy for quality financial reporting (Beasley, 1996; Song and Windram, 2004).

The challenge however, is that if there is a deficiency in the harmonization of what constitutes quality in financial reporting, then it would be hard to assess the role of environmental accounting information disclosure with regards to financial reporting oversight. Jonas and Blanchets (2000) put forward that a structure that analyzes the quality of financial reporting into a number of ways includes; relevance, reliability, comparability, consistency and clarity. The structures were supported by the International Accounting Standards Board (IASB), in their outline for financial reporting, for which they express as the qualitative characteristics of financial reporting (IASB, 2010). This study adopted these features in measuring quality financial reports.

Previous studies on financial reporting quality, using qualitative characteristics, indicated that these characteristics can be operationalises (Jonas and Blanchect, 2000; McDaniel *et al.*, 2002; Beestet *al.*, 2009). These systems mention the qualitative characteristics of financial reports to include: relevance, faithful representation, understandability, comparability, and timeless. Beestet *al.*, (2009) categorized these into two, namely: fundamental and enhancing qualitative

characteristics. Relevance and faithful representation, according to Beestet *al.*, (2009) mentions that the fundamental qualitative characteristic is most vital and determines the content of financial reporting information. The enhancing qualitative characteristic can improve decision usefulness when the fundamental qualitative characteristics are established. However, they cannot determine financial reporting quality on their own (IASB, 2008). The test in the use of qualitative characteristics is how to operationalise the qualitative characteristic.

IFRS is accounting standards propagated by the International Accounting Standard Board (IASB) for presenting financial reporting information believed to be accepted globally. Gee (2002) IFRS is an organized development that encourages reliability, understandability, relevance and comparability which is a remedy for decision making in organized economic entities. Internationalization of trade between countries of the world has called for globalization, in regulatory changes in the financial reporting system of Nigeria in 2012. Nigeria unfurled its roadmaps “to adopt the International Financial Reporting Standards (IFRS) with effect from January 1, 2012” (Ekanem, 2013).

The coming out of International Financial Reporting Standards (IFRS) is seen by many as a way of adding reliability to financial reporting and increasing its information usefulness with comparability (Duc-Phan and Barut, 2013). Therefore, international trade between countries of the world has brought about globalization, in regulatory changes in the financial reporting system and creditability.

Operationalization of the qualitative characteristics

Financial reporting quality is defined in terms of the fundamental and enhancing qualitative characteristics, (IASB, 2008). But, previous studies have operationalized the qualitative characteristics in line with this classification. Fundamental qualitative characteristic of financial reporting is relevance and faithful representation. The understandability, comparability and timeliness are classified under enhancing qualitative characteristics. The enhancing qualitative characteristics improve decision usefulness of the financial report.

Relevance

Relevance as defined by IASB (2008) is the capital provider’s means of making a difference in the decisions made by users. Predictive and confirmatory values are the operationalised terms of relevance. Both financial and non-financial information should be able to give insight into business prospect, risk as well as the possible future situation for the organizations.

Faithful Representation

According to the IASB (2008) framework, to faithfully represent economic phenomena that information purports to represent, annual reports must be complete, neutral, and free from material error. Economic experience, according to IASB (2008), refers to the economic resources and requirement as well as the transactions. Faithful representation is often measured in terms of neutrality, completeness, freedom from material error, and verifiability (Maines and Wahlen, 2006). The proxies commonly used in prior studies (example, Beestet *al.*, 2009, Tasios and Bekiaris, 2012) to measure faithful representation include a). Freedom from bias; b). Neutrality; c). Unqualified audit reports; and d). Health, safety and environment statement.

Understandability

The IASB (2008) groups understandability among the enhancing qualitative characteristics of financial reporting. Understandability is usually measured using five items that emphasize the transparency and clearness of the information presented in annual reports. These include. How well-organized the information in the annual reports is presented; Disclosure of information in tables and graphs; Devoid of technical jargon and the unfamiliar glossary of terminologies.

Comparability

Comparability refers to the identification of the similarities and differences between two sets of economic phenomena that will assist users in the quality of information. It is often measured in terms of consistency in the use of similar accounting policies from certain period to period as well as the comparability in a certain period across the industry. The proxies used in previous researches are; (a) Explanations of the implication of change and notes to changes in accounting policies. (b) Judgments explanations of the implications of the revisions and notes to revisions in accounting estimates. (c) The company's adjustment of previous accounting periodic figures for the effects of the implementations of a change in accounting policy. (d) The company provides a comparison of the results of the current accounting period with previous accounting periods. (e) The information in the financial report is comparable to information provided by other organizations within the industry and (f) Presence of company ratios in the financial reports and financial index numbers, (IASB, 2010).

Timeliness

The IASB's (2010) conceptual framework defines timeliness as having information available to decision makers before it loses its power to influence environmental accounting decisions (IASB, 2010). Timeliness is also seen as a point in time it takes to disclose the data or information and the general quality of the decision. The quality of data or information in financial reports is determined when timeliness is measured in terms of the number of days for the auditor to sign the account after the book-year end (IASB, 2010).

Theoretical review

Stakeholder theory

Stakeholder theory is relatively associated with the core value of environmental reporting and the proponent is Freeman (1984). The success of the firm according to stakeholder's theory depends strongly on the good relationship between the firm and its stakeholders. The theory holds that a company's survival requires the support of the stakeholders in reporting on the components of environmental accounting information for quality of financial reports (Chan, 1996). The Greater the influence of the stakeholders, the more the company will report on environmental matters. Stakeholders have the capacity to influence either directly or indirectly the control of resources required by the organizations. The level of control of the stakeholder's power is determined by the resources. Stakeholders in the theory are individuals or groups whose rights are violated or respected by the organization actions.

The theory of stakeholder is considered as the principal theory in this thesis because stakeholders are believed to have some degrees of influence over the organization's resources control. In the view of Freeman (1984), stakeholder involves an individual that can be affected or not affected by business activities of an organization. This means that the environmental pollution or emission by firms may have a negative or positive effect on the stakeholder's decision-making process. Freeman (1984), further states that the organization's relationship between the stakeholders is subject to a defined sort of contracts. He also declines the opinion that shareholders are the only ones with a legitimate interest in company's activities. Customers, employees and suppliers also have a legitimate interest in the company's business activities.

Nevertheless, a simple summary is that stakeholder theory lies on a company's obligation to put in place a good relationship with the stakeholder and equally the right of different groups to take part in company's decision making. The theory proposed that companies should, and in reality take into account the interests of stakeholders above the shareholders' interest. All the aspects of environmental accounting information components should be disclosed in the financial reports of manufacturing firms so that stakeholders will make informed decisions.

Review of empirical studies

Ofoegbu (2016) investigated the corporation's environmental accounting information disclosure in the manufacturing firms in Nigeria. The researcher used ex-post facto and content analysis research design for 10 quoted selected manufacturing firms from 2008-2014. The annual reports were used in the study and findings showed that the company's financial performance has a significant impact on the quality of environmental accounting information disclosure of companies. However, the size of the firm had no impact on the quality of environmental accounting information disclosure.

Onyali *et al.*, (2014) in their study on consideration of the practice of environmental information disclosure of selected manufacturing firm in Nigeria. They adopted content analysis in analyzing the financial reports of the studied firms with respect to their environmental disclosure practices. Furthermore, a survey statistics were carried out to find out whether the practice of environmental disclosure in Nigerian companies has improved. In the findings, it was discovered that the practice of environmental disclosure in Nigerian companies is still in the elementary stage and contains little or no monetary data.

Anyanwu (2015), in an empirical study titled "Environmental Management Accounting Techniques and Quality Financial Reporting" undertook to assess and explain the level to which environmental reporting disclosures quality take place in listed firms in Nigeria. The study as well identified and discussed the likely basis for the quality of reporting level. The study adopted a descriptive statistical research method. It revealed that firms in Nigeria are stepping up in environmental disclosures compared to what it was five (5) years ago. In addition, the study disclosed that greater parts of the firms are reporting on environmental accounting information voluntarily. The study concluded that many firms in Nigeria do not efficiently disclose environmental matters. The companies that disclosed on few environmental accounting information are inconsistent. The study recommended that Nigerian firms have to

do more to show their seriousness in improving environmental pollution by means of better quality disclosures in the financial reports of companies to build healthier value for all stakeholders.

Daferighe and Morrey (2015), carried out a study on the practices of environmental accounting by corporations in Nigeria. The study was aimed at assessing the effect of legislations of government on the practice of environmental accounting. It compared current practices across companies in various sectors of the economy. The study used chi-square on 25 quoted firms in the Stock Exchange of Nigeria, covering different sectors of the economy.

Emenyi, Beredungo, and Akpan (2016), undertook a study on environmental cost accounting and the cost of environmental damage on stakeholder's well-being in Nigeria's south-south geo-political zone. The study was to examine whether oil and gas companies pay close attention to the environment as a form of companies social responsibility. This was hinged on the inadequate measurements and disclosure of the cost effectiveness of environmental damage on the well-being of the inhabitants of the affected area of oil spills. A survey research design was adopted while information was elicited from 362 respondents with ANOVA used to test the null hypothesis. The study discovered that it is relevant to measure and disclose the cost of environmental damage on stakeholder's well-being in the environmental reporting of petroleum exploiting firm. The study recommended that oil and gas companies account for the cost of environmental damages on the well-being of the inhabitants of the affected areas in their environmental cost accounting and disclosure.

Uwuigbe and Olayinka (2011), studied at the level of social environmental disclosure among listed companies in the Nigerian Stock Exchange (special references to the brewery and building material industry in Nigeria). The company's financial reports for the period 2004-2008 were used as the main source of secondary data. Content analysis technique was used to get data from the financial reports and the t-test statistics was used in analyses. The study as part of its findings revealed that the level of corporate social environmental disclosures among the selected firms has a significant difference. They concluded that an environmental disclosure among the selected listed firms is very low and remains in its embryonic stage.

Noodoezh and Moghimi (2015), carried out a study on environmental costs information disclosure in the company's accounting systems. The study was aimed at examining the extent to which companies evaluate and report the negative environmental waste. The study adopted a descriptive statistical research method. The study revealed that the greater part of firms is not keen on reporting the information related to environmental accounting information components in their financial reports. This is because they consider that its disclosure would impose financial commitments on them. The study recommended that firm managers should disclose environmental accounting information as a means of lifting a company's prestige and environmental reputation and legitimating their activities for effective and efficient decision making.

Cnaet *al.*, (2013), carried out research on "the impact of environmental cost on corporate performance: A study of oil firms in Nigeria". The study's main objective was to investigate

environmental cost impacts on the corporate performance of oil firms in the Niger Delta States. The methodology adopted was a field survey involving a sample of 12 oil firms. Findings revealed that the practice of sustainability in business and company's performance is significantly related. In its recommendations, the study opines that a well-articulated environmental costing system should be developed by the management of oil firms in the Niger Delta States in order to assure a crisis-free working atmosphere by managers and this will lead to staff maximum productivity as well as improve company's performance.

Firoz and Ansari (2010), in an empirical study titled "environmental accounting and international financial reporting standards" undertook to critically appraise on the literature of environmental accounting and to examine whether international financial reporting standards are applied in the monitoring and protection of the environment. The study informed that organizations are required to improve the scope of financial reporting in regards to the environment. The study recommended that a prescribed form of known reporting principles and standardized reporting framework must be developed to surmount any view that social and environmental information reporting lacks reliability.

Esiraet *al.*, (2014) conducted a research on management of environmental cost and profitability of the Nigerian oil sector between 2004 to 2013. They observed that there are inadequate standards directing on environmental cost management in Nigerian oil and gas firms. The study adopted an exploratory research design to introduce the processes involved in carrying out the study. The study concluded that the environmental accounting in the oil sector is at its elementary stage. The work recommended that there should be policy consistency on the improvement of external reporting in environmental accounting information disclosure.

Rakos and Antohe (2014), aimed at establishing the significance of the financial activities on the environment, and of its assimilation in the decisional structure of an organization's financial system. The study also examined environmental accounting as an approach for providing vital information for the activities specific to environmental management. The study revealed that environmental accounting is a system of setting out strategies and managing the environmental performance which should reveal the managerial technique and obligation of the financial entity management to the environment. The study concludes that environmental accounting is a fundamental instrument in providing pertinent information for making correct environmental decisions in the financial reports of companies.

Armed et al. (2016) investigated environmental accounting and firm profitability in Nigeria using ordinary least square regression (OLS). With a sample of 50 listed companies and a cross-sectional research design, data were obtained from annual reports and accounts of the sampled the sampled firms. The research evidence showed that a significant relationship exist between environmental accounting and firms profitability, however, the study revealed a negative relationship when moderated by firm seize.

Adewale, Alawiye and Akomolafe (2017). The study examined the inadequacies of corporate environmental disclosures both in quantity and quality amongst manufacturing firms in

Nigeria. The companies were selected based on judgment or purposive sampling, the study revealed that corporate environmental disclosure is still at its lowest ebb amongst manufacturing firms in Nigeria and there will be a need for sensitization, regulatory compulsion or government intervention for companies to participate in corporate environmental disclosure.

Onyali and Okafor (2018) examined firm attributes and corporate environmental performance of listed industrial goods firms on Nigerian stock exchange. The study rested on stakeholder's theory Dependent variable Environmental performance was measured as waste management cost. The independent variables consist of firm size, profitability and firm age. Leverage and board size served as control variables. The result revealed that firm size profitability and firm age have statistical significance on corporate environmental performance.

Solomon (2020) conducted empirical review of literature on environmental disclosure and financial performance of listed oil and Gas Company in Nigeria. The study was supported by legitimacy and stakeholders theories respectively. The result of empirical findings were mixed. Some studies reported positive outcome while others displayed negative correlation.

Omalikoet al(2020) empirically examined the impact of social and environmental disclosure on performance of non-financial firms in Nigeria, the study adopted *Ex post* factor design and made use of data obtained from the NSE and published annual financial reports of the entire 112 non-financial firms quoted on the Nigerian stock exchange with data spanning from 2011-2018. The study found that social and environmental disclosures have significant positive impact on net-asset per share (firm's performance) over the years. The study opined that firms should have positive disposition towards social and environmental friendly practices.

Okafor (2018) carried out a survey on environmental cost accounting and reporting on firm financial performance of quoted oil and gas companies in Nigeria. The stakeholder's theory provided the theoretical support for the study. Environmental cost account comprised of cost remediation and pollution control, cost of environmental law, compliance and penalty and donations and charitable contributions. The findings revealed a significant positive relationship between financial performances (ROA) on environmental cost accounting (ECA) disclosure.

Kokwaleski (2014) examined effect of non-financial information on stakeholder's investment decision making explored the statistical test tool of (OLS), using the variable of return on asset (ROA) and environmental disclosures as index for non-financial information and found that the level of firms environmental disclosures influences its performance and suggested corporate bodies should increase the volume of disclosures in their reports for investors consumptions.

Gelb (2017) discovered a significant positive relationship between the level of environmental disclosures of firms and performance measured by (ROA) in his study on environmental disclosure and corporate performance.

Menike (2020) investigated how environmental disclosure impacted the return on asset using secondary data obtained from annual reports of twenty six(26) food, tobacco and beverages

producing firms quoted on the Colombo stock exchange. The result of the regression analysis conducted revealed that return on asset was positive and significantly impacted by environmental accounting disclosure and firm size; but insignificantly influenced by liquidity.

Gap in the Literature

Most past studies were made with emphasis on survey method of the influence of environmental accounting on the financial reports quality. Little or no attention was given to the measuring viewpoint especially the consideration of financial reports quality of manufacturing firms in Nigeria, using accounting practice that is generally accepted (GAAP) and the current International Financial Reporting Standards (IFRS) eras. Also, most of the empirical evidence came from developed economies. Apparently, it appears that there are some precincts in the previous research which need to be examined. Firstly, most scholars in literature only expressed environmental accounting and the financial reporting but no or little emphasis on the evaluation of the financial reports quality of manufacturing companies in Nigeria. Secondly, environmental accounting information that influences the financial reports quality of manufacturing firms in Nigeria has not been thoroughly investigated and assessed with the available data.

These are the major precincts in the knowledge of environmental accounting and the financial reports quality of manufacturing firms in Nigeria. Being short of empirical evidence on the degree of financial reports, quality of manufacturing companies in Nigeria makes it hard to assess the transparency and integrity of the reports issued by the manufacturing firms. As a result of these precincts, the study of financial reports quality in regards to environmental accounting disclosure of manufacturing companies in Nigeria is justified. Nigerian manufacturing firms are considered appropriate to provide the needed information which is recognized as causing pollution on the environment. It is expected that this research would assist to enlarge previous studies and add to the growing literature on accounting for environmental disclosure and the financial reports quality of manufacturing firms in Nigeria using descriptive evidence from the developing economy.

Research design

The study adopted the *Ex-post facto* design. The reason for this design would be based on the fact that it is not easy to directly or indirectly influence or control any of the independent variables. The design was also adopted to allow a complete evaluation of the quality of financial reports and the influence of environmental accounting of selected manufacturing firms in Nigeria. The population of this research consists of 55 listed manufacturing firms on the Nigerian Exchange Group between 2011 and 2020 (NSE, 2011). They were listed firms operating in the consumer goods, industrial, conglomerates and healthcare sectors.

Sample size

From the population of 55 manufacturing firms listed on the Nigerian Exchange Group between 2011 and 2020. The sample size was selected, using Taro, Yamene (1967) formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = the sample size

n= the population

e = error term

Thus,

$$n = \frac{55}{1 + 55(0.05)^2}$$

$$n = 48$$

Table 3.1 Sample size and selection procedure

Description	2011 – 2020
Sample size determined, using Yamene (1967) formula	48
Manufacturing firms with insufficient Data	(38)
Final sample	10

Source: Compiled by the Researcher, (2023).

The figures in Table 3.1 include only manufacturing firms that disclose environmental information. This selection was to ensure unbiased estimation. Therefore, those with insufficient data were also excluded from the study, because the information disclosed was insufficient.

Sampling technique

Purposive sampling technique was used for the research. The procedure helps in the selection of manufacturing firms that disclosed environmental related information. The sample firms are: Dangote Cement Plc, Dangote Sugar Plc, Nestle Foods Nigeria Plc, Dangote Flour Mill Plc, Cadbury Nigeria Plc, Guinness Nigeria Plc, Berger Paints Plc, Chellarams Plc, Fidson healthcare and Unilever Nigeria Plc. This collection is based on the type of pollutions (emissions) indulged the firms on the environment, and type of raw materials used as well as their disposal of wastes and most importantly availability of the financial reports on the web over the period of the study. Secondary data will be the main source of data for the study. The data were obtained from financial reports of selected firms for the study. Particularly, data from director's reports, sustainability reports, statement of financial positions, statement of profit or loss and other comprehensive income, notes to the financial statement. The data was collected from ten (10) manufacturing firms listed in the Nigerian Exchange Group. From 2011 to 2020 using content analysis method. The financial reports and accounts was extracted, examined, coded, questioned and computed for the needed data.

Theoretical specification of model

In this section, the set of theoretical proposition will be reviewed on Environmental Donations and Sponsorship (EDS), Environmental Restoration (ER), Environmental Waste Management (EWM), and Quality of Financial Reports (QFR).

Dependent variable

The quality of financial reports is the dependent variable in the study. This will be measured using the IFRS qualitative characteristics model. The Qualitative Characteristics Model tends to overcome the limitation of other models. So, the quality of financial reports (QFR), which is the dependent variable in this research, is measured using the qualitative characteristics model. The model is stated as follows:

$$QFR_{kt} = \Sigma(REL_{kt}, FRE_{kt}, UND_{kt}, COM_{kt}, TIM_{kt}) \quad \text{Model (1)}$$

Where

QFR_{kt} = The qualitative characteristics of financial reports for Manufacturing firm k in year t

REL_{kt} = Relevance characteristics scores for manufacturing firm k in year t

FRE_{kt} = Faithful representation characteristics scores for manufacturing firm k in year t

UND_{kt} = Understandability characteristics scores for manufacturing firm k in year t

COM_{kt} = Comparability characteristics scores for manufacturing firm k in year t

TIM_{kt} = Timeliness characteristics scores for manufacturing firm k in year t.

Independent variable

Environmental accounting information is the independent variable in this study, which will be measured using its components: Environmental Donations and Sponsorship (EDS), Environmental Restoration (ER), and Environmental Waste Management (EWM). The equation is stated as follows:

$$QFR_{kt} = f(EDS_{kt}, ER_{kt}, EWM_{kt}, e_t) \quad \text{Model (2)}$$

QFR_{kt} = The qualitative characteristics of financial reports for Manufacturing firm k in year t

EDS_{kt} = Environmental Donations and Sponsorship for manufacturing firm k in year t

ER_{kt} = Environmental Restoration for manufacturing firm k in year t

EWM_{kt} = Environmental Waste Management for manufacturing firm k in year t

e_t = Error term in year t.

Measurement of variables (variable description)

The Variable description that will be used is research-constructed measurement check-list. These are explained below:

Measurement check-list

The measurement check-list constructed will be used to extract information from the financial reports of the studied manufacturing firms in Nigeria. The check-list as presented in Appendix I consists of issues relating to the environmental accounting information.

(i) Components of environmental accounting information

Disclosure of environmental accounting information was measured using three major components which are: Environmental Restoration (ER), Environmental Donations and Sponsorship (EDS), and Environmental Waste Management (EWM). These were measured using 0 as non-disclosure of environmental item, 1 as Partial disclosure and 2 as full disclosure of environmental item from the audited reports of the studied manufacturing firms in Nigeria.

(ii) The Quality of financial reports

The quality of financial reports will be considered as the dependent variable in this study. The components that will be used in establishing the financial reports quality and the level of usefulness in decision making are expressed in the Qualitative Characteristics Model (QCM). The Quality of Financial Reports was measured based on five major components of indicators of QCM, which are Relevance (REL), Faithful Representation (FRE), Understandability (UND), Comparability (COM) and Timeliness (TIM). Each major component of QCM were measured using 0 as non-disclosure of environmental item, 1 as Partial disclosure and 2 as full disclosure of environmental item from the companies audited reports of the studied manufacturing firms in Nigeria.

Table 3.2: Theoretical framework of the components of environmental accounting information and the quality of financial reports

S/N	Variables	Definition	Types	Measurement	<i>Apriori</i> Expectation
1	QFR	Quality of financial reports	Dependent	IFRS Qualitative Characteristics Model related information	
2	EDS	Environmental Donations and Sponsorship	Independent	Reports on environmental donations and sponsorship related information	Positive
3	ER	Environmental Restoration	Independent	Reports on environmental restoration related information	Positive
4	EWM	Environmental Waste Management	Independent	Reports on environmental waste management related information	Positive

Source: Researcher's Computation, (2023).

Empirical specification of model

Multiple linear regressions

The linearmodels for multiple-regression are expressed as follows:

$$QFR_{kt} = \beta_0 + \beta_1 EDS_{kt} + \beta_2 ER_{kt} + \beta_3 EWM_{kt} + e_t$$

Where:

$\beta_1, \beta_2, \beta_3$ = coefficient.

β_0 = Constant

QFR_{kt} = Quality of financial reports for manufacturing firm k in year t

EDS_{kt} = Environmental Donations and Sponsorship for manufacturing firm k in year t

ER_{kt} = Environmental Restoration for manufacturing firm k in year t

EWM_{kt} = Environmental Waste Management for manufacturing firm k in year t

e_t = Error term in year t.

Method of data analysis

Descriptive and inferential statistical system was used to analyse the information in the study. The descriptive statistics was used in summarizing the information as well as their perceptions on the status of environmental accounting information disclosure. Correlation and Multiple regressions techniques was adopted as inferential statistics system, to determine whether a relationship exists between the quality of the financial report and the environmental accounting information. The data for the dependent and independent variables were extracted from the financial reports using contents analysis method and collated with the aid of Microsoft Excel software. In order to determine the level of environmental accounting information engaged by the listed manufacturing firms in Nigeria, a disclosure index techniques (Checklist) of 28 items was developed. The data was captured using a disclosure checklist with the scale 0-2, where 0 = none disclosure, 1 = partial disclosure and 2 = Full disclosure.

Data Presentation

Descriptive Statistics

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Environmental Donations & Sponsorship	100	0	6	1.67	1.498	.584	.241	-.069	.478
Environmental Restoration	100	0	2	.14	.513	3.422	.241	9.909	.478
Environmental Waste Management	100	0	2	.38	.789	1.605	.241	.586	.478
Quality of Financial Report	100	.35	.54	.41	.023	.680	.241	7.538	.478
Valid N (listwise)	100								

Source: Researcher's computation (2023)

The descriptive statistics for the variables of the study, which are Environmental Donations & Sponsorship (EDS), Environmental Restoration (ER), Environmental Waste Management (EWM) and Quality of Financial Reports (QFR) are presented in Table 4.1. The minimum values of 0, 0,0,0,0 were obtained for EDS, ER, EWM respectively while the minimum QFR computed was 35%. The maximum values of 6,2 and 2 were obtained for EDS, ER and EWM respectively while the maximum QFR was computed to be 54%. The mean of 1.67, 0.14 and

0.38 were obtained for EDS, ER and EWM respectively while the average QFR computed was 41%.

Test of Hypotheses

The test of hypotheses was tested regression analysis.

Table 4.2 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.577 ^a	.333	.312	1.242	.778

a. Predictors: (Constant), ENVIRONMENTAL DONATIONS & SPONSORSHIP, ENVIRONMENTAL RESTORATION, ENVIRONMENTAL WASTE MANAGEMENT

b. Dependent Variable: QUALITY OF FINANCIAL REPORT

Source: Researcher's computation (2023)

Table 4.3 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	74.008	3	24.669	15.991	.000 ^b
	Residual	148.102	96	1.543		
	Total	222.110	99			

a. Dependent Variable: QUALITY OF FINANCIAL REPORT

b. Predictors: (Constant), ENVIRONMENTAL DONATIONS & SPONSORSHIP, ENVIRONMENTAL RESTORATION, ENVIRONMENTAL WASTE MANAGEMENT

Source: Researcher's computation (2023)

Table 4.4 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.580	2.264		1.140	.257		
	Environmental Restoration	1.071	.247	.367	4.333	.000	.969	1.032
	Environmental Waste Management	.730	.161	.384	4.532	.000	.965	1.036
	Environmental Donations & Sponsorship	-3.189	5.380	-.050	-.593	.555	.991	1.009

a. Dependent Variable: QUALITY OF FINANCIAL REPORT

Source: Researcher's computation (2023)

Hypotheses One

The null hypothesis one states that environmental donations and sponsorship have no significant influence on the quality of financial reports of manufacturing firms in Nigeria. Based on the decision rule of the study, the null hypothesis one of the study is accepted and the

alternate rejected because the p-value of 0.555 shown in Table 4.4 is greater than 0.05. The null hypothesis is further accepted because the t-cal value of -0.593 is less than the critical value of t which was 1.984. Therefore, environmental donations and sponsorship have no significant influence on the quality of financial reports of manufacturing firms in Nigeria.

Hypothesis Two

The null hypothesis two states that there is no significant influence of environmental restoration on the financial reports of manufacturing firms in Nigeria. Based on the decision rule of the study, the null hypothesis two of the study is rejected and the alternate accepted because the p-value of 0.000 shown in Table 4.4 is greater than 0.05. The null hypothesis is further rejected because the t-cal value of 4.333 is greater than the critical value of t which was 1.984. Therefore, there is significant influence of environmental restoration on the financial reports of manufacturing firms in Nigeria.

Hypothesis Three

The null hypothesis three states that environmental waste management have no significant influence on the quality of financial reports among the manufacturing firms in Nigeria. Based on the decision rule of the study, the null hypothesis three of the study is rejected and the alternate accepted because the p-value of 0.000 shown in Table 4.4 is greater than 0.05. The null hypothesis is further rejected because the t-cal value of 4.532 is greater than the critical value of t which was 1.984. Therefore, environmental waste management have significant influence on the quality of financial reports among the manufacturing firms in Nigeria.

Hypothesis Four

Table 4.5 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.568 ^a	.322	.315	1.239	.703

a. Predictors: (Constant), EDS, ER, EWM

b. Dependent Variable: QUALITY OF FINANCIAL REPORT

Source: Researcher's computation (2023)

Table 4.6 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	71.550	1	71.550	46.572	.000 ^b
	Residual	150.560	98	1.536		
	Total	222.110	99			

a. Dependent Variable: QUALITY OF FINANCIAL REPORT

b. Predictors: (Constant), EDS, ER, EWM

Source: Researcher's computation (2023)

Table 4.7 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.879	.170		5.177	.000	
	EDS, ER, EWM	.842	.123	.568	6.824	.000	1.000

a. Dependent Variable: QUALITY OF FINANCIAL REPORT

Source: Researcher's computation (2023)

The null hypothesis four states that Environmental donations and sponsorship, restoration, and waste management have no significant effect on the quality of financial reports among the manufacturing firms in Nigeria. Based on the decision rule of the study, the null hypothesis four of the study is rejected and the alternate accepted because the p-value of 0.000 shown in Table 4.7 is greater than 0.05. The null hypothesis is further rejected because the t-cal value of 6.824 is greater than the critical value of t which was 1.984. Therefore, Environmental donations and sponsorship, restoration, and waste management has significant effect on the quality of financial reports among the manufacturing firms in Nigeria.

DISCUSSION OF FINDINGS

The result of the analysis in Table 4.4 showed a regression coefficient of -0.050 for environmental donations and sponsorship. This implies that -5% of the variation in quality of financial report of the selected manufacturing companies is accounted for by environmental donations and sponsorship of the companies. The implication of the result means that an increase in the environmental donations and sponsorship of manufacturing firms in Nigeria will decrease the quality of financial report of the selected companies by only -5%. The result of the analysis shows that there is a negative relationship between environmental donations and sponsorship and quality of financial report of the selected companies as shown in regression analysis. This finding is in line with findings of Noodoezh and Moghimi (2015), carried out a study on environmental costs information disclosure in the company's accounting systems.

The result of the analysis in Table 4.4 showed a regression coefficient of 0.367 for environmental restoration. This implies that 36.7% of the variation in quality of financial report of the selected manufacturing companies is accounted for by environmental restoration of the companies. The implication of the result means that an increase in the environmental restoration of manufacturing firms in Nigeria will increase the quality of financial report of the selected companies by 36.7%. The result of the analysis shows that there is a positive relationship between environmental restoration and quality of financial report of the selected companies as shown in regression analysis. This finding is in line with findings of Anyanwu (2015), in an empirical study titled "Environmental Management Accounting Techniques and Quality Financial Reporting" undertook to assess and explain the level to which environmental reporting disclosures quality take place in listed firms in Nigeria.

The result of the analysis in Table 4.4 showed a regression coefficient of 0.384 for environmental waste management. This implies that 38.4% of the variation in quality of financial report of the selected manufacturing companies is accounted for by environmental

waste management of the companies. The implication of the result means that an increase in the environmental waste management of manufacturing firms in Nigeria will increase the quality of financial report of the selected companies by 38.4%. The result of the analysis shows that there is a positive relationship between environmental waste management and quality of financial report of the selected companies as shown in regression analysis. This finding is in line with findings of Uwuijbe and Olayinka (2011), studied at the level of social environmental disclosure among listed companies in the Nigerian Stock Exchange (special references to the brewery and building material industry in Nigeria).

The result of the analysis in Table 4.7 showed a regression coefficient of 0.568 for environmental donations and sponsorship, restoration, and waste management. This implies that 56.8% of the variation in quality of financial report of the selected manufacturing companies is accounted for by environmental donations and sponsorship, restoration, and waste management of the companies. The implication of the result means that an increase in the environmental donations and sponsorship, restoration, and waste management of manufacturing firms in Nigeria will increase the quality of financial report of the selected companies by 56.8%. The result of the analysis shows that there is a positive relationship between environmental donations and sponsorship, restoration, and waste management and quality of financial report of the selected companies as shown in regression analysis. This finding is in line with findings of Solomon (2020) conducted empirical review of literature on environmental disclosure and financial performance of listed oil and Gas Company in Nigeria.

CONCLUSION

The study also concludes that effects of the disclosure of accounting information about environmental restoration, environmental donations and sponsorship on the quality of financial reports of manufacturing firms in Nigeria were significant. In the relationship between the components of environmental accounting information disclosure and the quality of financial reports of manufacturing firms in Nigeria, the results show that some of the components such as: Environmental Donations & Sponsorship and environmental waste management, have significant positive relationship with the quality of financial reports.

Recommendations

In line with the findings and conclusions of this study, as discussed in the previous sections, as well as the suggestions made, the following recommendations are proffered towards enhancing the influence of environmental accounting information disclosure and improving the quality of financial reports in Nigerian Manufacturing firms:

- i. Manufacturing firms in Nigeria should be sensitive to their activities and strive as much as possible to desist from those environmental activities that would consequently result in environmental degradation.
- ii. Companies should also maintain a good legal compliance record in order to avoid risking criminal actions thereby resulting in financial costs; and waste should be treated and well-handled, and should not be left to pollute the environment thereby incurring disposal cost.

- iii. There should be a balance of qualitative and quantitative disclosures which clearly link to the financial information contained in the report so that it is useful for evaluating the economic consequences resulting from the organizations environmental practices.
- iv. Standard setters and policy makers should work with the Ministry of Environment to consider introducing mandatory disclosures which are consistent and standardised.
- v. Environmental accounting information components should be tracked and charged separately from other expenditures by manufacturing firms. This will provide more accountability and transparency on the organizations reporting its impact on the environment.

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APPENDIX I

Measures used to operationalize the Proxies of Environmental Accounting Information (including the Measurement Scales)

1.	Environmental donations & sponsorship	
Question No.	Question	Operationalization
EDS ₁	Are the Costs relating to donation, Sponsorship disclosed in the report?	0=No 1=Partially 2=Fully disclosed
EDS ₂	Do the company sponsor workshop or training on safety & environment for the contractors?	0=No 1=Partially 2=Yes
EDS ₃	Do the company sponsor workshop or training programme on safety & environment for employee's?	0=Not all 1=Partially 2=Yes on annual basis
EDS ₄	Do your organization donate to the regulatory environmental bodies in Nigeria?	0=No 1= Partially 2=Yes
EDS ₅	Do the company sponsor environmental programme within the host communities?	0=No 1= Partially 2=Yes
EDS ₆	Do you implement, the sponsored total group's health, safety, environment & quality charter in your organization?	0=No 1= Partially 2=Yes
2.	Environmental Restoration	
Question No	Question	Operationalization
ER ₁	Are there provisions instituted by the company to restore environment?	0=No 1= Partially 2=Yes
ER ₂	Do the environments disturb Rehabilitated cost reported during the financial year?	0=No 1= Partially 2=Yes
ER ₃	Is restoration cost reported at the end of the financial year?	0=Not reported 1= Partially 2=Fully reported
ER ₄	Do you report on environmental assessments or clean-ups liability in the annual report?	0=No provision made 1= Partial provision 2= full provision made
ER ₅	Are there any provisions shown for rehabilitation restoration of l& used for operation?	0=No 1= Partially 2=Yes
3.	Environmental Waste Management	
Question No	Question	Operationalization
EWM ₁	Do the company's maintain an environmental management system (EMS)?	0=No,1= Partially 2=Yes
EWM ₂	Do the company's raise awareness of the sustainable operations that is associated Waste management across all the factories & departments?	0=No 1= Partially 2=Yes
EWM ₃	Do the companies explored monitoring techniques for Waste reduction?	0=No 1= Partially 2=Yes

EWM ₄	Do the company rapid industrialization resulted in the generation of huge quantity of hazardous waste?	0=No,1= Partially 2=Yes
EWM ₅	Do the company's explore the use of environmental friendly technologies to avoid disposal of CO2 emissions as waste?	0=No 1= Partially 2=Yes

Source: Author's Compilation, 2022.

APPENDIX II

Measures used to Operationalize the Fundamental & Enhancing Quality Characteristics(including the Measurement Scales)

Relevance		
Question no.	Question	Operationalization
R1	To what extent do financial reports disclosed forward-looking information?	0= No disclosure 1= Partially disclosed 2= Adequately disclosed
R2	To what extent do the financial reports disclosed information in terms of business opportunities?	0= No disclosure 1= Partially disclosed 2= Adequately disclosed
R3	To what extent does the company disclose environmental accounting information?	0= Not disclosed 1=Partially disclosed 2= Fully disclosed
R4	To what extent do financial reports provide information as to how business report environmental, safety & health liability?	0= No provision 1= Partial provision 2= Full provision
R5	To what extent do financial reports contain management & analysis section which provide a feedback on evaluating financial Statement?	0= Does not contain 1= Partially contained 2= Adequately contained
Faithful representation		
Question No.	Question	Operationalization
F1	To what extent do financial reports explain the assumptions & estimates made in the preparation of financial statement?	0= Not explained 1= Partially explained 2= Fully explained
F2	To what extent does the company explain its choice for certain accounting principles	0= Not explained 1= Partially explained 2= Fully explained

	used in the preparation of financial statements?	
F3	To what extent do financial reports explain the environmental impacts in the annual report?	0= Not explained 1= Partially explained 2= Fully explained
F4	To what extent do financial reports highlight the positive as well as the negative event in a balance way?	0= Highlights only positive event 1= Partial highlight 2= Fully highlight positive & Negative Events
F5	To what extent does the company provide information on spillage?	0= Not disclosed 1= Partially disclosed 2= Fully disclosed
Underst&ability		
Question no.	Question	Operationalization
U1	To what extent is the annual report presented in a well-organized manner?	0= Not organized 1= Not well organized 2= Very well organized
U2	To what extent are the notes on the statement of financial position & the statement of comprehensive income clear?	0= No explanation given to the notes 1= Partial explanation 2= Adequate explanation given
U3	To what extent does the presence of graphs & tables clarify the presented information?	0= No graph & table 1= Partial graph 2= Adequate graphs & tables
U4	To what extent is the use of language & technical jargon in the annual report easy to follow?	0= Jargon & technical terms, not explained 1= Partially explained 2= No jargon or technical terminology
U5	What is the size of the glossary?	0= No glossary 1= One page of glossary 2= Two pages of glossary
Comparability		
Question No.	Question	Operationalization
C1	To what extent do the notes to changes in accounting policies explain the implications of the change?	0= Change not explained 1= Change Partially 2= Change fully explained

C2	To what extent do financial reports explained in the notes indicate the implication of the revisions in accounting estimates & judgments?	0= Revisions without explanation 1= Partial explanation 2= Adequate explanation
C3	To what extent did the company adjust previous accounting period's figures, for the effect of the implementation of a change in accounting policy or revisions in accounting estimates?	0= No adjustment made 1= Partial adjustment 2= Adequate adjustment
C4	To what extent does the company provide a comparison of the results of current accounting period with previous accounting periods?	0= Only one year comparative figures 1= Two year comparative figures 2= Three-five years comparative figures
C5	To what extent is the information in the annual report comparable to information provided by other organization?	0= No comparison 1= Partial 2= Comparison with detailed explanation
C6	To what extent does the company present financial index number & ratios in the annual report?	0= One ratio 1= Two ratio 2= Three to five ratios
Timeliness		
Question no.	Question	Operationalization
T1	How many days does it take the financial report after book-year end to be signed?	0= More than four weeks 1= Three week 2= One to two weeks
T2	How many months does it take annual accounts to be published?	0= One months 1= Two to Three months 2= Four months & above
T3	What method(s) was the preparation accounts based?	0=No 1= Partially IFRS 2=IFRS

Source: Author's Compilation, 2022