

Environmental Accounting Disclosures and Financial Performance: A Literature Review

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ABSTRACT

The global disclosure initiative (GDI) Standards explains that environmental accounting information disclosure is the practice of being accountable to both internal and external Stakeholders of Organizations by measuring and disclosing firms' performance in relation to the goal of the organization. This study offered the conceptual, empirical and theoretical review on environmental accounting disclosure and financial performance. Based on the literature reviewed the current study identified that there is disagreement in the literature on environmental accounting disclosure and financial performance. Some studies found positive impact, some negative and other studies found mixed results. The common empirical methodology used in the literature are fixed effect, random effect, pool OLS and multiple regression methods. Multiple proxies of environmental accounting disclosure and financial performance were used in the literature which partly explains the conflicting result among existing studies. The review paper concludes by identifying some directions for future research.

Keyword: Environmental Accounting Disclosure, Financial performance

1. INTRODUCTION

Environmental accounting is seen by corporate managers and environmental advocates alike as a necessary complement to improved environmental decision-making in organizations (Muhammad, 2018). Environmental Disclosure is environmental information owned by a company by disclosing the environmental conditions in the company's annual financial report which results in the presence or absence of annual report disclosures that depend on company policy. Companies that make environmental disclosures are government parties that can know and also anticipate environmental damage by reading the disclosure of a company's environment and have the benefit of facilitating the community in having environmental awareness in choosing a product from a company that cares for the environment (Shonhadji, 2018).

The *Global* Disclosure Initiative (GDI) Standards explains that environmental accounting information disclosure is the practice of being accountable to both internal and external Stakeholders of Organizations by measuring and disclosing firms' performance in relation to the goal of the organization (Mohammad, Fakhrol and Rezaur, 2016). It is the reason why corporate organizations disseminate the environmental effects of their operational activities to their Stakeholders and to the Society (Ezeiofor, John-Akamelu and Chigbo, 2016).

In the developing countries and Nigeria in particular, research previously conducted has shown that environmental accounting disclosure is voluntary as a result of non-availability of either local or international standards to guide disclosure. Companies tend to disclose this information to conform to industry practices, pressures from environmental activist and advocates, relationship with the parent company (Multinational corporations), the ownership structure of the company, size and level of profitability etc.(Oyedokun, Elvis & Abiola, 2019). In the oil and gas producing states of Nigeria for example, due to crude oil extraction for petroleum products, the environs have experience high pollutions [such as oil spillage, gas flaring, black soot, clay soot, among others; Ojo, 2016] of which today the whole world is clamouring on climatic change agreement. Also, agitators (militants, oil communities and so on) from time to time react for their communities being marginalised and neglected without adequately compensated in spite of the fact that their environment is highly degraded and polluted. Consequently, the operating companies in the Region suffer from sabotages by agitators as well as the government of Nigeria complaining of a drop in oil and gas revenue due to wastage and sabotage of the environmental resources (Udo, 2018).

Financial performance is a critical consideration for profit-making firms. It is the bottom line for assessing the goals of firm. It refers to the act of performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives are being met. It is the process of measuring the results of a firm's policies and operations in financial terms (Yahaya & Lamidi, 2015). It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare different industries or sectors (Yahaya, Kutigi & Ahmed, 2014). While a number of factors influence financial performance of a firm, the environment in which the firm operates seems to have greater influence. According to Solomon (2020), financial performance in broader sense refers to the degree in which financial objectives have been accomplished. It measures how well a company has fared in monetary terms and its overall financial health for a particular period (Olowookere, Taiwo & Onifade, 2021). Financial performance is a subjective measure of how well a firm utilizes its assets from its business operation to generate profit (Okafor, 2018). Financial performance can be measured in different ways

such these include the Return on Capital Employed, Return on Asset, Return on Equity, Net Profit Margin, Audit Firm Type, Leverage, dividend per share, Earnings per share among other indicators.

The inconclusive prior empirical findings of the relationship between environmental accounting disclosure performance and financial performance have led to conflicting results. Similarly, several studies have examined the effect of environmental accounting disclosures on the financial performance of firms in different countries and sectors over the last few years with mixed, inconsistent and inconclusive results ranging from positive, negative, no relationship, statistically significant to insignificant influence. These outcomes were definitely due to the usage of diverse research methodologies, the different periods covered, nature of variables considered, availability and nature of data used, diverse jurisdiction and sector of study, different sample composition and diverse measures of environmental accounting disclosures employed. The varied and conflicting views by prior scholars informed this study. It is against this background; the current study is on the environmental Accounting disclosure on financial performance: A survey of Nigerian oil and gas companies listed in the Nigerian Stock Exchange (NSE).

2. CONCEPTUAL REVIEW

2.1 ENVIRONMENTAL ACCOUNTING DISCLOSURE

Environmental accounting disclosure is a framework for organizations to publish environmental costs/liabilities and benefits/assets to support management in decision-making, control and for public disclosure it relate to the provision of sufficient, adequate, necessary and timely organisation's environmental impacts information to permit informed judgement to users of such information, it also seen as the guidelines/framework/models and activities in line with accounting rules/principles to recognise, measure, present and disclose environmental issues by an entity for the preparation of environmental financial statements (UNEP, 2011; Nguyen, 2020).

The Association of Chartered and Certified Accountants (ACCA), described environmental disclosures as a mixture of narratives, including objectives, explanations and numerical data, such as the amount of pollution, resources consumed for a specific accounting period on the environmental effect of a company. Environmental Disclosure is a formal statement that defines the environmental burden and efforts of an organization, including the objectives of the company, environmental policies and impacts regularly reported and released to the public, this can be Mandatory and Voluntary Disclosures (Ong, Tho, Goh, Thai, & Theh, 2016; Olowookere, Taiwo & Onifade, 2021). Thus, Environmental Disclosure can either be mandatory or voluntary. In literature most of the studies confirmed that disclosure by businesses are voluntary particularly in developing countries' researches.

Environmental Disclosure is a form of corporate responsibility to stakeholders that relates to environmental disclosure activities carried out by the company in the past, present and future that are produced by the company's environmental management decisions. Environmental disclosure of a company is not yet required for each company, but the manager in an agency or in the management of the company will always try to disclose information about the company's environmental management that will be disclosed by the company. So that with the occurrence of environmental disclosure of a company, it will add a value to the company in the future (Chiu et al, 2020). Environmental Disclosure is environmental information

owned by a company by disclosing the environmental conditions in the company's annual financial report which results in the presence or absence of annual report disclosures that depend on company policy. Companies that make environmental disclosures are government parties that can know and also anticipate environmental damage by reading the disclosure of a company's environment and have the benefit of facilitating the community in having environmental awareness in choosing a product from a company that cares for the environment (Shonhadji, 2018).

According to (Crowther 2016), the primary purpose of environmental disclosure is to examine and incorporate in the firm annual reports issues that bother on environmental hazard that are not taken cognizance of in traditional or conventional accounting function that stakeholders can use for decision making. Disclosure of corporate environmental activities stressed the necessity for a close monitoring of natural resources and the corporation's harmful effect on the society it operate. Environmental effects caused by activities of firms especially those in the manufacturing, oil and gas and banking include pollutions like noise, waste, hazardous emission, spillages, degradation (Parmigiani, Klassen & Russo 2015). In recent years, then, a belief has arisen in businesses and in society that reporting has a wider role than that expressed in the traditional 'stockholder/shareholder' perspective. Importantly, one need not hold to the 'deep green' end of the argument to hold these views: there are strategic reasons why a wider view of accountability may be held and, accordingly, why initiatives such as environmental reporting may be supported; environmental consequences of an organisation's inputs and outputs. Inputs include the measurement of key environmental resources such as energy, water, inventories (especially if any of these are scarce or threatened), land use, etc. Outputs include the efficiency of internal processes (possibly including a 'mass balance' or 'yield' calculation) and the impact of outputs. These might include the proportion of product recyclability, tonnes of carbon or other gases produced by company activities, any waste or pollution (Lint, 2009). These measures can apply directly (narrowly) or indirectly (more broadly). A direct environmental accounting measures those within the reporting entity whereas an indirect measure will also report on the forward and backward supply chains which the company has incurred in bringing the products from their origins to the market. For example, a company can directly report on the environmental impact of its own company: its branches and main office. But to produce a full environmental report, a company would also need to include the environmental consequences of those activities it facilitates through its business loans. Where a company claims to report on its environmental impacts, it rarely includes these indirect measures because it is hard to measure environmental impacts outside the reporting company and there is a dispute about whether such measures should be included in the company's report (the company may say it is for the other company to report on its own impacts)

2.2 CONCEPT OF FINANCIAL PERFORMANCE

Firms' Financial Performance is multi-faceted, and the appropriate measure selected to assess corporate performance depends on the type of organization evaluated, and the objectives to be achieved through that evaluation (Kaguri, 2013). Firm performance encompasses three specific areas: financial performance (profits, ROA, ROI, EPS, etc.); product market performance (sales, market share, etc.); and shareholder return (total shareholder return, economic value added) (Richard, Devinney, Yip & Johnson, 2009). Financial performance refers to a firm's ability to achieve planned financial results as measured against its intended outputs (Mutende, Mwangi, Njihia and Ochieng, 2017). Financial performance is usually

measured using financial ratios, such as ROE, ROA, return on capital, return on sales (ROS) and operating margin (Gilchris, 2013).

According to Solomon (2020), financial performance in broader sense refers to the degree in which financial objectives have been accomplished. It measures how well a company has fared in monetary terms and its overall financial health for a particular period (Olowookere, Taiwo & Onifade, 2021). Financial performance is a subjective measure of how well a firm utilizes its assets from its business operation to generate profit (Okafor, 2018). It is also used to predict the financial well-being of a company, over a period of time. Company performance is very essential to management as it is an outcome which has been achieved by an individual or a group of individuals in an organization related to its authority and responsibility in achieving the goal legally, and conforming to the morale and ethics. Company's performance is evaluated in three dimensions. The first dimension is company's productivity, or processing inputs into outputs efficiently. The second is profitability dimension, or the level of which company's earnings are bigger than its costs. The third dimension is market premium, or the level of which company's market value is exceeding its book value (Wang, 2002; Chiu et al, 2020). Financial performance is commonly used as an indicator of a firm's financial health over a given period of time. The financial performance of a firm can be defined or measured in various different ways including profitability, gauge return, market share growth, return on investment, return on equity and liquidity (environmental disclosure). Performance indicators include Return on capital employed, Return on asset, Net profit, Net profit margin, Return on equity and dividend per share, Audit firm type, Earnings per share, have been used by previous works to measure firm performance particular in oil and gas.

2.4 Theoretical Review

2.4.1 Stakeholders' theory

Stakeholders' theory was developed by Edward Freeman (1984) in his work on strategic management. It states that an organization's disclosure of social and environmental information is due to pressure from stakeholders and that an organization will respond to the concerns and expectations of powerful stakeholders and some of the responses will be in the form of strategic disclosures. In the context of a firm, stakeholders are the (society, shareholders, creditors, employees, customers, and suppliers, who may be interested in the firm's social and environmental activities). The basic premise of this theory is that company's performance is determined by successful management of all the relationships that a company has with its stakeholders. It is also believed that environmental performance and social responsibilities are ways to project a positive image to stakeholders in order to increase long term profitability by retaining and attracting new customers. By and large, the theory is anchored on organization management and business ethics with the focus on values and morals that must influence organizational performance. It centers on the need for management to satisfy all interested parties connected to the organization. In view of the fact that there is interdependence between corporate firms and the environment, corporate social responsibility has gained much importance in business performance, sustainability and stability. The theory takes cognizance of how the organization manages the stakeholders to achieve their objective. The organization must disclose adequate information to the benefits of the stakeholders for future benefits and decision making. Related parties include any person or group of people who are interested in the company, as they may influence or be influenced by the company. Freeman divides stakeholders with related interests and

obligations into two groups: inside and outside the business. Managers and employees are stakeholders inside the business; stakeholders outside the business are shareholders, suppliers, and government agencies. The stakeholder theory has many applications; one application in the field of accounting that believes a company's success depends on the cooperation of its stakeholders, because they provide tangible or intangible resources to ensure the survival of the firm. These resources can be financial resources (shareholders), operating environment and public services (government agencies), and labor (employees).

2.4.2 Legitimacy theory

Legitimacy theory propounded by Max Weber (1947) and developed by Lindblom (1994) and Suchman Mark (1995). The theory assumes that organizations seek to ensure that they operate within the bounds and norms of society. Legitimacy theory explains how environmental disclosures can be useful in narrowing the gap between company actions and social expectations. It offers a powerful mechanism for understanding voluntary social and environmental disclosures made by corporations, and that this understanding would provide a vehicle for engaging in critical public debate. According to Deegan (2002), legitimacy helps to explain how an entity desiring to sustain its operations must comply with the expectations of the community in which it operates. Lindblom (1994) stated that "legitimacy is a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part". The theory further states that, for a company to continue to operate successfully, it must act within the boundaries and norms that society defines as socially-responsible behavior (O'Donovan, 2002).

2.4.3 Quality of life theory

This theory was developed by Abraham Maslow in 1962. It assumes that the higher the society's need for satisfaction, the greater is the quality of life for that society. Institutions are established to provide the needs of the society. The theory asserts that continues industrial activities in the environment have economic benefits and hazards. This brought hatred to industrial development in some areas. Firms are therefore regarded as wicked for their activities in destroying and bringing degradation to the environment. The theory believes that government should formulate policy that will ensure quality of life to the people and society (Okafor, 2018).

2.4.4 Environmental economic theory

Environmental economic theory assumes that as the industrialization process continues to accelerate, the environment is threatened and destroyed as never before. This has led to an increase awareness of environmental protection. The idea of environmental economics theory helps companies to find a balance between corporate development and environmental protection. That is, to minimize the environmental impact of economic activities and also ensure sustainable development. This theory emphasizes the economy as a subsystem of the ecosystem with its focus upon preserving natural capital (Fondevila et al. 2019).

2.4.5 Theory of sustainable development

Sustainable development means meeting the present's needs without prejudice to the ability of future generations to meet their own needs (Giangrande et al. 2019). That is, the protection of natural resources and the development of environmental sustainability (Ghai and Vivian

2014). This idea can be traced back to the Silent Spring, published in 1962 (Sikdar 2003). Sustainable development is a scientific and economic growth model that requires development to be closely related to the environment (Giangrande et al. 2019). To ensure the synchronization of environmental development and economic development,

2.4.6 Institutional theory

This theory can be traced to the Sociologist, Selznick (1949). Institutional theory is concerned with examining and explaining how institutionalized norms and pressures affect social changes among organizations. This theory is slowly but steadily emerging as a useful theoretical framework in relation to the environmental implications of an organization's operations and behaviors. The institutional framework emphasized the importance of regulatory, normative, and cognitive factors that affect firms' decisions to adopt a specific organization practice. This theory has been the most regulatory pillar on environment management practices. This theory is based on social and economic theoretical perspectives (DiMaggio & Powell, 1983). It explores how organizational structures and actions are shaped by institutional forces, such as Government, professional agencies and society around the institutions. There are three possible pressures: coercive pressure, imitation pressure, and normative pressure.

2.4.7 Accountability theory

Accountability theory was developed by Tetlock (1983). According to Tetlock and Lerner (1999), accountability is seen as mechanism and as a process in which a person has a potential obligation to explain his or her actions to another party who has the right to pass judgment on the actions as well as to subject the person to potential consequences for his or her actions. According to Gray, Javad, Power and Sinclair (2001), "accountability theory is concerned with the relationship between groups, individuals, organizations and the rights to information that such relationships bring about. Accountability is an act of being responsible or answerable for one's own decisions or actions with the expectation of explaining and justifying them when asked to do so. Simply stated, accountability is the duty to provide an account of the actions for which one is held responsible. The nature of the relationships and the attendant rights to information are contextually determined by the society in which the relationship occurs. It is absolutely true that some sort of relationship will exist between an organization and each of its stakeholders.

2.4.8 The polluter – pays – principle

The polluter – pays – principle advocated by United Nations Environmental Program. In Rio Declaration (1992), "it is the commonly accepted practice that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment. For instance, a factory that produces a potentially poisonous substance as a by-product of its activities is usually held responsible for its safe disposal. This principle underpins most of the regulation of pollution affecting land, water and air.

2.4.9 Slack Resources Theory

The Slack Resources Theory The slack resources theory contends that high performance firms would have a large pool of resources available for investment in socially responsible programmes. Implicit in this theory is that availability of slack resources for allocation to

social programmes is contingent on good financial performance; hence a positive relationship should exist. Although Barnard (2011) had discussed the role of slack in his early work, the specific label of 'slack' had not been coined until March and Simon published their seminal book. Cyert and March (1963) defined slack as "the difference between total resources and total necessary payments". It was added that "slack is that cushion of actual or potential resources which allows an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with respect to the external environment".

2.4.10 Voluntary disclosure theory

The voluntary disclosure theory states that the purpose of voluntary disclosure is for environmental practices information to be passed on to shareholders (Bewley & Li, 2000). Companies effectively use the target environment as a way to convey information, hoping that the contents of the environmental performance announcement can be positively related to the environmental performance, and hopefully through disclosure of environmental information will transfer a company's environmental strategy to shareholders (Clarkson et al., 2008)

2.4.11 Corporate Social Responsible theory

Corporate social responsibility was published by Bowen and Johnson in their 1953 book *Social Responsibilities of the Businessmen*. They call to propagate and urge property managers not to harm the rights and interests of others, to appeal to charity to compensate for damages caused by businesses harming society.

3. EMPIRICAL LITERATURE

In this section, this study attempts to review some of the empirical studies on the effect of environmental disclosure on financial performance. Awa, Larry, Udu and Chigozie (2022) assessed the effect of Environmental Accounting Information Disclosures on Financial Performance of Cement Manufacturing Companies in Nigeria. Ex-post facto research design was adopted in carrying out the study. Panel Data were gathered from the annual reports of the company and estimated using the multiple regression techniques. The findings of the study revealed that corporate social responsibility disclosure, such as health and safety disclosure and remediation/pollution control disclosures have positive and significant effects on return on assets while environmental fines and penalties disclosure have negative and statistical insignificant effect on return on assets of the listed companies in Nigeria. The study recommends that companies should ensure sustainability reporting in their annual reports. It also recommends that government should liaise with both national and international accounting standard setting bodies to ensure that environmental disclosures are mandatory.

Fabian and Kenechukwu (2022) examine the impact of green accounting disclosures on sustainability of manufacturing firms in Nigeria for the period 2016-2020. Data were collected from the annual reports and accounts of industrial goods firms of the country, the study adopted Ex Post Facto Design and employed OLS technique for the data analysis. The findings of the study indicate that waste management disclosure, pollution control & environmental remediation disclosure have significant and positive impact on firms' sustainability. It recommended that companies should design products which generate less waste, pollutants, toxic or emission during their life cycle. This can be carried out through

life-cycle analysis and should also be incorporated in the financial reporting of the firm for financial statements users' consumption. By doing this, the sustainability of such firm is ensured. Esther & Innocent (2021) examined the effect of environmental cost on corporate performance of sixteen selected listed manufacturing firms on Nigerian Stock Exchange. Data for the firms were extracted from their annual reports from 2012 to 2019 and were analyzed using descriptive statistics, Hausman test and the Panel Least Squares Regression statistical techniques. The study used Return on Investment as proxy of firm performance, the dependent variable. From the result, the study revealed that cost relating to the prevention of environmental degradation, management and education have negative effect on financial performance while cost on environmental damage was found to be positive and significant in determining performance. The study recommends that companies should take more preventive measures that are embedded in business strategy and save the firm's financial resources such as reducing waste-prone operations and using environmentally friendly materials for manufacturing.

Abdullahi and Auwal (2021) assess the implication of compliance and enforcement of the NESREA Act, profitability, and Growth on environmental disclosure of cement companies in Nigeria. Secondary data comprising financial and non-financial information were source from annual accounts and reports of the sample companies, spanning a period of five years (2015 – 2019). The study employed Panel regression models and finds that compliance with NESREA Act increases environmental disclosure by 2.9%. ROA also exerts a significant impact on environmental disclosure. Firm Size is also positive and exerts significant impact. It recommends that measuring, treatment, disclosure, and reporting of environmental activities need to be standardized and mandated to give a true and fair view of environmental management practices. These will not only protect the environment but will also enhance the firm's competitiveness and subsequently lead to high corporate performance. Olowookere, Taiwo and Onifade (2021) examined the impact of environmental accounting disclosure on financial performance of listed cement companies in Nigeria from 2011 to 2019. Methodology employed for the study is expo facto research design. The study employed descriptive statistics and estimated panel regression methods. The results of the study revealed that environmental accounting disclosure has positive and significant impact on firm financial performance of the listed cement companies in Nigeria. The study therefore recommends that relevant stakeholders including government agencies and regulatory agencies such as financial reporting council among others should put in place workable monitoring mechanism to ensure that firms in Nigerian cement industry engage in better environmental accounting disclosure since it plays key role on their performance and long run survival by extension.

Tiamiyu, Oyedokun, adeyemo (2021) investigated how financial performance influence environmental accounting disclosure of manufacturing firms in Nigeria, the study used panel regression model for data analysis. From the result, it reveals that there is a positive and significant relationship between financial performance and environmental disclosure. Based on the result the study recommends that the management should increase their responsibility to the environment by complying with the environmental regulations, investment in assets should also be expanded to enhance profitability and a uniform acceptable reporting framework should be adopted. Adegbe, Ogidan, Siyanbola, Adebayo (2020) investigated the impact of environmental accounting on the share value of 28 quoted food and beverages companies in Nigeria. Descriptive and inferential statistics were used for the analysis of the data. The result showed that environmental accounting practices have positive and significant effect on the share value of the companies. The study concluded that environmental

accounting influences the share value of companies in the food and beverages sector and recommends that management of the companies should incorporate corporate accounting and the disclosures in their financial statements so as to enhance investors' decision and have positive impact in the share values in the capital market.

Kalash (2020) investigates the determinants of public disclosure of environmental information by firms and its effect on their financial performance in turkey. The study used sample of 66 firms listed on Istanbul Stock Exchange for the period of 2014-2018. From the result, it indicated that highly leveraged and larger firms, and firms with higher equity agency costs are more likely to disclose environmental information. It also showed that profitability, industry type, information asymmetry, investment opportunities and business risk do not have effect on the probability that the firm will disclose environmental information. The overall result showed a weak effect of environmental disclosure on financial performance of Turkish firms. Nguyen (2020) evaluate the factors that affect the degree of environmental accounting information disclosure of 87 industry companies listed on the Vietnamese stock market from 2009 to 2019. Data was analyzed using pooled OLS, the fixed effects model, and the random effects model. The results showed that the extent of environmental accounting information disclosure is influenced by factors: firm size, uptime and independent audit. These factors positively affect the level of environmental accounting information disclosure; independent audit has the greatest influence. The study recommends that there is need to improve disclosure of environmental accounting information for industrial enterprises under study and also increasing the competitiveness of the public company in terms of global integration.

Ezeagba, Rachael and Chiamaka (2019) examined the relationship between environmental accounting disclosures and return on equity and return on capital of food and beverage companies in Nigeria. Data for the study were collected through secondary sources and analyzed using Pearson's correlation statistical technique and multiple regression. The study revealed that there is a significant relationship between environmental accounting disclosures and return on equity of selected companies. It also revealed a negative relationship between environmental accounting disclosures and return on capital employed and net profit margin of selected companies. Based on these findings, the researcher recommends that firms should adopt uniform reporting and disclosure standards of environmental practices. This will enhance control and measurement of performance. The study also suggests that firms should be encouraged to disclose their environmental practices in their annual reports in order to enhance their competitiveness which would subsequently, lead to higher corporate perform

Nguyen and Tran (2019) assessed the relationship between disclosure levels of environmental accounting information and financial performance. Data were collected from the firms listed in Vietnam Stock Exchange from 2013 to 2017, including the firms disclosed and the ones did not disclose the environmental accounting information. The study used two regression models to investigate the relationship between environmental accounting information and return on assets. The results indicated that there was a close relationship between disclosure level of environmental accounting information and financial performance. In addition, there was a difference in terms of financial performance between the firms that had not disclosed environmental accounting information and the ones that disclosed the environmental accounting information. Conclusively, based on the quantitative and qualitative research methodology, the team assessed the impact of the level of disclosure of environmental accounting information on the financial performance of the business. The results indicate that the level of disclosure of environmental accounting information affects the financial performance of businesses both now and in the future. At the same time, the study also found

the relative difference in financial performance between two groups of enterprises disclosing environmental accounting information and not disclosing environmental accounting information. However, it was recommended that the Environmental Regulatory of Vietnam needs to raise awareness of corporate environmental responsibility and the benefits of disclosing detailed environmental accounting information to the financial performance of the business.

Oyedokun, Elvis, Abiola (2019) examined the effect of environmental accounting disclosure on firm value of listed industrial goods companies in Nigeria from 2007 to 2016. The ex-facto research design was adopted, data were gathered through the individual sample company annual financial statement and analyzed using multiple regression technique. Environmental accounting disclosure was measured by non-financial indicators, financial indicators and performance indicators while the firm value is measured by Tobin's Q. Based on the result, it showed that non-financial indicators have a positive significant effect on firm value while performance indicators have a negative significant effect on firm value of industrial goods companies in Nigeria. Therefore, there is need for a corporate entity to improve their environmental responsibility practices and disclosure comprehensively their environmental risks, liabilities and impact on environment. The study also suggests that sanctions be put in place to encourage disclosure must especially non-financial indicators because it has a direct influence on the firm value of the industrial goods companies in Nigeria. Udo (2019) empirically examined the effect of environmental accounting disclosure practices (EADP) in annual reports of ten (10) listed oil and gas companies in Nigeria from 2009 – 2018 using Ex-post facto research design. Secondary sources were the main sources of data for the study. An environmental disclosure index with 40 items in line with Global Reporting Initiative (GRI) (2006/2008/2011/2013) was developed and environmental data from the annual reports of the listed companies under study were captured using content analysis. The data were analyzed using descriptive and inferential statistics. Based on the findings, the study revealed that the sampled oil and gas companies were disclosing very inadequate financial and nonfinancial environmental information in their annual reports at a minimum disclosure practice of 0.0283 and maximum of 0.2727; and that on average the disclosure level of the sampled companies' representing the oil and gas industry EADP stood at about 11.67%. It also showed that profitability has significant negative influence on EADP; leverage and liquidity have significant positive influences on EADP while long-term financing contribution has insignificant positive influence on EADP. The study recommended that there is serious need for standardized EADP of the industry in Nigeria through mandatory disclosures and efforts should be tailored by the companies in Nigeria towards preparing environmental financial statements. Yahaja (2019) studied the impact of environmental disclosure practices on the financial results of listed environmental affected companies in Nigeria. The study proxied return on assets for the financial performance, it also used green reporting index to measure environmental reporting. From the findings, it showed that environmental management activities and financial performance have positive relationship. Dike and Micah (2018) studied environmental accounting practices and sustainable development of 34 companies in Nigeria. The study used descriptive statistics and finds that environmental accounting practices have negative effect on sustainable development. It finally, recommends that firms should establish efficient production of products with reasonable rates without harmful effect on sustainable development, will result into the reduction of environmental effect and have positive effect to increasing profitability.

Kamal and Alia (2016) investigated the existences of the environmental disclosure and financial performance among top 100 company of market capitalization in Malaysia for the

period 2011 using Content analysis. The study found mixed results between the existence of the environmental disclosure practices and financial performance in the country. Based on the findings the study suggested that need for environmental disclosure if the companies want to legitimize their position among the society to enhance the expectation in measuring the environmental. Akeem, Membra and Willy (2016) investigated the relationship between the degree of environmental information disclosure and firm performance in Vietnam's listed companies. The study revealed that there is a positive relationship between the degree of disclosure and financial performance of the firms. Habbash (2015) using regression and content analysis examine a sample of 267 annual reports for the period 2007-2011 on Environmental Disclosure practices in Saudi Arabia and the potential relationship with Corporate Governance, ownership and company structure, following the application of the Saudi 2006 CG code in 2007. The study found that the average Environmental Disclosure has improved following the application of the Saudi 2006 CG code to 30%. It also finds that audit committee effectiveness, role duality, state and institutional ownerships, firm profitability, and industry sensitivity positively affect Environmental Disclosure. The board independence, family ownership, and firm size are found not to be significant determinants of Environmental Disclosure, while a negative significant correlation was found with firm leverage. The results concluded that Corporate Governance regulators and stakeholders should acknowledge the importance of active audit committees comprising relevant experts and independent directors, in addition to the role of state and institutional ownership in enhancing Environmental Disclosure.

3.1 GAPS IDENTIFIED FROM LITERATURE

Based on the above literature reviewed the current study identified that there is disagreement in the literature on the effect of environmental disclosure on financial performance. Some studies found positive impact, some negative and other studies found mixed result. Example, Tiamiyu, Oyedokun, adeyemo (2021) found positive effect. Kalash (2020) found negative effect. Kamal and Alia (2016); Awa, Larry, Udu and Chigozie (2022) found mixed results. Hence, these disagreements on the effect of environmental disclosure on financial performance motivate this current work. Most of the past studies have not extended their reviewed period to 2021. This study extended its period up to 2021

5. CONCLUSION AND RECOMMENDATIONS

This study offered the conceptual, empirical and theoretical review on environmental accounting disclosure and financial performance. Based on the literature reviewed the current study identified that there is disagreement in the literature on environmental accounting disclosure and financial performance. Some studies found positive impact, some negative and other studies found mixed results. The study recommends that The regulators can promote disclosure practice by offering incentives to the firms that engage more in environmental accounting so as to encourage the practice, industry should prioritize the disclosure of environmental information in their annual report as one of the strategies to improve their financial performance in the industry, Policymakers and regulators agencies should contribute to social and economic development by introducing policies, principles and regulations that enhance firms' environmental disclosures and compel the industries to disclose detailed information about their environmental performance. The methodological variations have an important bearing on future research into the linkages between environmental accounting disclosure and financial performance. Researchers should give careful thought to the structure and scope of their data, the choice of estimation technique, the

selection of control variables and the extent to which their results are sensitive to alternative assumptions and techniques.

REFERENCES

- Abdullahi, A., & Auwal, B. M. (2021), The Implication of NESREA Act and Financial Performance on Environmental Disclosure in Nigeria. *Asian Journal of Economics, Business and Accounting* 21(10): 106-121.
- Adegbie, F. F., Ogidan, A. A., Siyanbola, T. & Adebayo S. A. (2020), Environmental Accounting Practices and Share Value of Food and Beverages Manufacturing Companies Quoted in Nigeria. *Journal of Critical Reviews* ISSN- 2394-5125 VOL 7, ISSUE 13, 2020.
- Akeem, L. B., Memba, F., & Willy, M. (2016), The effect of Identification of Environmental Cost on Quality of Disclosure: A Critical Analysis of Shipping Lines in Nigeria. *European Journal of Business, Economics and Accountancy*, 4(2), 37-50.
- Akor, O. P. & Okey, A. C. (2021) Sustainability Accounting And Financial Performance Of Oil And Gas Companies In Nigeria. *Int. J. Innovative Finance and Economics Res.* 9(1):182-197, 2021.
- Awa, F. N., 2 Larry E. U. & Udu, G. C. (2022), Effect of Environmental Accounting Information Disclosure on Financial Performance of Manufacturing Companies in Nigeria (Study of Selected Cement Companies in Nigeria). *International Journal of Humanities* DOI: 10.5281/zenodo.1405443.
- Beredugo, S. B. & Mefor, I. P. (2012), The impact of environmental accounting and reporting on sustainability development in Nigeria. *Research Journal of Finance and Accounting*, 3 (7), 55-63.
- Braam, G. & L. Uit de Weerd & M. Hauck & M. Huijbregts (2016), “Determinants of Corporate Environmental Reporting: the importance of environmental performance and assurance”, *Journal of Cleaner Production*, 129, 724-734.
- Chidinma, O. S. (2022), Impact of Accounting Information System on the Performance of the Petroleum Industry in Nigeria Ogbodedagu, Sylvia Bingham University *Journal of Accounting and Business (BUJAB)*.
- Chiu, C. L., Zhang, J., Li, M., Wei, S., Xu, S., & Xiaotong, C. (2020), study of environmental disclosures practices in Chinese energy industry Chiu et al. *Asian Journal of Sustainability and Social Responsibility* 5:9 <https://doi.org/10.1186/s41180-020-00036-1>.
- De Wet, J.H.v.H., & Du Toit, E. (2007), Return on equity: A popular, but flawed measure of corporate financial performance. *South African Journal of Business Management*, 38(1), 1-12.

- Dike, W., & Micah, C. (2018), Environmental Accounting Practices and Sustainable Development in Nigeria. *Scholars Journal of Economics, Business and Management (SJEEM)*, 5(6), 505-512.
- Ezeagba. C. E., Rachael, J. C., & Chiamaka, U. (2017), Environmental Accounting Disclosures and Financial Performance: A Study of selected Food and Beverage Companies in Nigeria (2006-2015)
- Fabian, O., & Kenekukwu, N. (2022), Impact of Green Accounting Disclosures on Sustainability of Manufacturing Firms in Nigeria Obiora. PhD, *International Journal of Trend in Scientific Research and Development (IJTSRD)* Volume 6 Issue 2, Page 82.
- Foerster, S. R., Sapp, S.G., & Shi, Y. (2014). The effect of voluntary disclosure on firm risk and firm value: Evidence from Management Earnings Forecasts. *Advances in quantitative Analysis of Finance and Accounting*, 179-213.
- Fondevila, M. M., Moneva, J. M., & Scarpellini, S. (2019), Environmental disclosure and Eco-innovation interrelation. The case of Spanish firms. *Revista de Contabilidad-Spanish Accounting Review*, 22(1), 73-87.
- Ghai, D., & Vivian, J. M. (2014), Grassroots environmental action: people's participation in sustainable development (Vol. 4): Routledge. Giangrande, N., White, R. M., East, M., Jackson,
- Gilchris, M. (2013), Influence of bank specific and macroeconomic factors on the profitability of 25 commercial banks in Pakistan during the time period 2007-2011, *American Journal of Business and Finance*, 3(2), 1-10.
- Gray, R. & M. Javad & D.M. Power & C.D. Sinclair (2001), "Social and Environmental Disclosure and Corporate Characteristics: A Research Note and Extension", *Journal of Business Finance & Accounting*, 28(3-4), 327-356.
- Habbash, M. (2015), Corporate Governance, Ownership, Company Structure and Environmental Disclosure: Evidence from Saudi Arabia. *Journal of Governance and Regulation* /Volume 4, Issue 4.
- Hassan, S., & Hakan, O. (2012), The importance of environmental accounting in the context of <http://eprints.ibu.edu.ba/1282/>.
- Islam, S. M., Miah, M. S., & Fakir, A. A. (2015), Environmental Accounting and Reporting- An Analysis of Bangladeshi Corporate Sector. *Journal of Finance and Accounting*, 4(2), 1-14.
- Kaguri, W.A. (2013), Relationship between firm characteristics and financial performance of life insurance companies in Kenya (Unpublished master's thesis). University of Nairobi, Kenya.

- Kalash, I. (2020), Environmental Disclosure: Determinants and Effects on Financial Performance? Empirical Evidence from Turkey. *Sosyoekonomi* Vol. 28(46), 95-115. DOI: 0.17233/sosyoekonomi.2020.04.05.
- Kamar, K. (2017), Analysis of the Effect of Return on Equity (Roe) and Debt to Equity Ratio (Der) On Stock Price on Cement Industry Listed in Indonesia Stock Exchange (Idx) In the Year of 2011-2015. *IOSR Journal of Business and Management*, 19(5), 66-76.
- Lu, Y. & I. Abeysekera (2014), "Stakeholders' Power, Corporate Characteristics, and Social and Environmental Disclosure: Evidence from China", *Journal of Cleaner Production*, 64, 426-436.
- Michelon, G. & A. Parbonetti (2012), "The Effects of Corporate Governance on Sustainability Disclosure", *Journal of Management and Governance*, 16(3), 477-509.
- Mohammad, R., Fakhrul, I. and Rezaur, R. (2016), Environmental Accounting Reporting Disclosure and Company Profitability. A case study on listed Manufacturing Companies of Bangladesh. *International Journal of Ethics in Social Sciences*, 4(2): 19-34.
- Musa, S. J., Teru, P., & Musa, B. (2015), Environmental Accounting Disclosure Practice of Nigerian Quoted Firms: A Case Study of Some Selected Quoted Consumer Goods Companies. *Research Journal of Finance and Accounting*, 6(22), 31-37.
- Mutende, E.A., Mwangi, M., Njihia, J.M., & Ochieng, D.E. (2017), The moderating role of firm characteristics on the relationship between free cash flows and financial performance of firms listed at the Nairobi securities exchange. *Journal of Finance and Investment Analysis*, 6 (4), 1-3.
- Niresh, W.H & Silva, N.J (2017), The extent of social responsibility disclosure practices: *Journal of Accounting Review*, (54), 112-134.
- Obida, S. S., Owolabi, S. A., Enyi, P. E., & Akintoye, I. R. (2019). Environmental disclosure practices and stock market return volatility in the Nigerian Stock Exchange. *International Journal of Scientific and Research publications* 9(7), 95-108.
- Olowookere, J. K., Kolawole, J. & Taiwo, A. A. (2021), Environmental Accounting Disclosure Practices And Financial Performance Of Listed Cement Companies In Nigeria. *Gusau Journal of Accounting and Finance*, Vol. 2, Issue 2.
- Ong, T., S., Tho, H., S., Goh, H., H., Thai, S., B., & Teh, B., H. (2016), The relationship between environmental disclosure and financial performance of public listed companies in Malaysia. *International Business Management*, 10(4); 461-467.
- Oyedokun, G. E., Elvis, E., & Abiola, T. (2019), Environmental Accounting Disclosure and Firm Value of Industrial Goods Companies in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)* Volume 10, Issue 1, PP 07-27 .DOI: 10.9790/5933-1001030727

- Pandey, I.M. (2004). Financial Management. (7th ed.) New Delhi: VIKAS Publishing House, PVT Ltd. performance as moderation. International journal of research science & management. 5(8):
- R., Clarke, T., SaloffCoste, M., et al. (2019), A competency framework to assess and activate education for sustainable development: Addressing the UN sustainable development goals 4.7 challenge. Sustainability, 11(10), 2832.
- Richard, P.J., Devinney, T.M., Yip, G.S., & Johnson, G., (2009), Measuring organizational performance: towards methodological best practice. Journal of Management, 35(3), 718-804.
- Shonhadji , N. (2018), Financial performance to environmental disclosure with environmental Solomon, P., J. (2020), Environmental disclosure and financial performance of listed oil and Gas companies in Nigeria. Accounting and accountability Journal (8), 47-79.
- Tiamiyu, M.A., Oyedokun, G.E., & Adeyemo, A. (2021), Firm Characteristics and Sustainability Reporting of Listed Manufacturing Companies in Nigeria. AFAR Multidisciplinary Journal of Management Sciences, 3(1), 1-18.
- Umoren, A.O., Isiafwe-Ogbari, M.E & Atolagbe, T.M. (2016), Corporate social responsibility and firm performance: A study of listed firms in Nigeria. Proceeding of the ICAN 2nd Annual International Conference on Accounting and Finance, Ikeja, Lagos.
- United Nations Environment Programme, UNEP (2011), Environmental Assessment of Ogoniland. United Nations Environment Programme Press, Kenyan. www.unep.org, 1 - 257.
- Velez, I. (2010), Financial and Ratio Analysis, Lecture, Universidad, Technological de Bolivar. Available from: <http://www.ssrn.com/abstract=163827>.
- Wang A (2006), the role of law in environmental protection in China: recent developments. Vt J Environ Law 8:195–224 [Wwww.oilandgasforum.com.ng/oil-gas](http://www.oilandgasforum.com.ng/oil-gas)