

Environmental Accounting and Profitability of Selected Quoted Oil and Gas Companies in Nigeria (2012-2017)

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Abstract

The study investigated the relationship between environmental accounting and Profitability of selected quoted oil and gas companies in Nigeria in recent years 2012-2017. Specifically it examined the relationship between environmental expenditure and Net profit of quoted oil and gas companies in Nigeria. Explanatory, historical and correlational design was adopted for the study while secondary data was utilized for the study. Data were gathered from annual reports and accounts of the companies available on their websites and from Nigerian Stock Exchange (various years). The data collected was from the period 2012 – 2017. The Annual reports includes, annual financial statements; annual sustainability reports as well as Annual Reports of global tax payment to nations by the quoted oil firms, annual returns submitted at Nigerian Stock Exchange for the years under study. Regression was used for data analysis and testing of the hypothesis. The result of the study shows that there is no significant relationship between environmental expenditure and net profit of the oil and gas companies in Nigeria under study. The study therefore recommends that amongst others that the management of the oil and gas companies should channel efforts towards engaging in adequate environmental spending and its disclosure as way of increasing stakeholders trust and showing more transparency in their operations. This could in turn lead to achieving better financial performance seen in terms of its profitability.

Keywords: Environmental Accounting, Environmental Expenditure, Financial Performance, Nigeria, Net Profit, Oil and Gas companies.

INTRODUCTION

Generally the oil and gas operation is characterized by huge capital investment while at the same time expected to reap huge profits from operations due to the demand for oil and gas products. However, regardless of the capital intensive nature of it (which invariably attracts various stakeholders including investors) profits are generally high when compared to other operations in any nation where oil is present (Effiong, 2010). Effiong succinctly points out the generic situation in Nigerian Niger delta stating that in spite of the large profits made by oil companies operating in the Niger Delta, the people of the region live in squalor without basic amenities. This has resulted in an upsurge of violent activities orchestrated by community-based organizations wishing to draw international attention to the plight of the people in the area. However, in the past, both national and international nongovernmental organizations have launched campaigns to address the issues, but little have been achieved because the oil companies are reluctant to be responsible corporate neighbors and the Nigerian government seem unwilling to devise solutions to address the problem (Effiong, 2010).

Furthermore, in a recent report published by Fasua (2018) of Proshare Research Institute, it quoted the Nigerian Minister of petroleum as saying that Nigerian oil and gas sector is no longer as profitable as it used to be. The minister continued that “Nigeria’s petroleum

industry is NOT as profitable as we make out, for several reasons. Certainly nowhere near as profitable as to be able to afford the tastes we have now developed and the way those who run that industry award themselves with crazy salaries and allowances, foreign trips, five star medicals and everything in between. Nigeria has therefore been building castles in the air thinking it has a profitable and robust industry upon which we could build magnificent castles and establish greatness (Fasua, 2018). In other words, there are situations of poor profitability caused by unstable oil prices as well as unstable productions and sales as well as fluctuating exchange rates amongst others yet operators continue to live as if all is well.

The causes of this fall in profitability as they claimed include insecurity, disruptions in productions and militancy that has persistently affected the operations of the oil and gas companies. In other to curb this situation and increase performance, corporate social responsibility has been suggested as some of the solutions that could at least mitigate the situation, at least on the short term (Adewoye, Olaoye & Ogundipe, 2018).

Corporate Social Responsibility (CSR) is about the contribution a company makes to society through its core business activities, its social investment and philanthropy programmes (Ango, 2012). The European Commission defines it as *a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment*. (European Commission, 2001). It is related to complex issues such as environmental protection, human resources management, health and safety at work, relations with local communities, relations with suppliers and consumers (Ango, 2012). With corporate social responsibility as argued by several scholars, organizations could help in reducing the economic, environmental as well as social problems that affects their host communities and nations (Bhattacharya, Korschun & Sen, 2009; Frynas, 2005; Imran, Kashif, Syed, Jamal & Mario 2010; Asaolu et al 2011; Merchant, 2014; Odutayo, Ademin & Sajuyigbe, 2014; Ordu & Anaele, 2015; Karhumba & Mukaria, 2016; Madiche et al, 2018). Highlighting the benefits, Bhattacharya, Korschun & Sen (2009) stated that CSR makes business organizations to consider the interest of society by taking responsibility for the impact of their activities on stakeholders (customers, suppliers, employees, shareholders, communities) as well as the environment. The result of which strengthens the relationship of business concerns with different stakeholders, ensure minimum conflicts and maximum loyalty from all stakeholders of the corporation (Imran, Kashif, Syed, Jamil & Maria, 2010). This is where environmental accounting comes to play, to at least make companies accounting for the environmental impact caused by their activities so that adequate responsibility in terms of taxation and other penalties can be taken by them.

Environmental Accounting (EA) is defined as the ability of oil and gas companies to account for and truthfully report on their operational activities towards damages on environmental issues such as Energy, Water, Greenhouse gases, Emissions, Hazardous and non hazardous waste as well as Recycling and Packaging. There is a great deal of potential to cause several and avoidable environmental harm by unchecked oil and gas exploration activities, in addition to severe health hazards that is usually associated with oil and gas exploration activities resulting from pollution and the likes. Similarly, the culture, and economic and social structure of local and indigenous communities are also usually affected. To compound the problems, it is believed that environmental laws in emerging economies such as Nigeria and others are often ineffective because they are substantively inadequate and/or because they are inadequately enforced. According to KPMG (2007 Report), this has led to calls by academics, practicing lawyers and human rights and environmental activists for transnational oil companies to voluntarily improve their Profitability in countries with inadequate environmental laws. This is now required to be done in their accounting reporting (KPMG, 2007). This will give rise to sustainability reporting. The studies of Osho (2014) that focused on oil firms revealed that there is a significant relationship exists between the effectiveness of accounting procedure and performance, accuracy and reliability of accounting records in the

industry while at the same time the effectiveness of the accounting system does not reduce the incidence of tax avoidance by the firms and this is to the advantage in terms of their performance, thus the need for adequate accounting disclosures including environmental, social and economic impact disclosures.

Study Objective

- To ascertain the relationship between environmental expenditure and net profit of oil companies in Nigeria.

Research Question

- To what extent does environmental expenditure of the oil and gas companies in Nigeria relate with their Profitability in terms of Net profit?

Research Hypothesis

Ho₁: There is no significant relationship between environmental expenditure and net profit of oil and gas companies in Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Framework

Understanding Environmental Accounting:

According to the lawdictionary.com, Environmental Reporting (ER) is an objective evidence of environmental conditions as a public disclosure. Its focus is on a firm's environmental Profitability information, and it is very much like public statements of financial Profitability information. Furthermore, it involves both non financial and financial reporting. Non-financial Reporting on its own as defined by API (2005) is a form of reporting on the range of environmental, health and safety, social, and economic issues and impacts that relate to oil and gas company operations and products, and is synonymous with Sustainability Reporting. In addition, companies may choose to use a variety of other terms to refer to this concept, such as corporate responsibility, corporate citizenship, or contributions to sustainable development. The term 'non-financial' is used by some companies to distinguish these reports from more traditional company financial reports, even though both reports include economic indicators (API, 2005). In the same vein, there are terminologies that are used interchangeably for reporting in oil and gas industry for global reporting and congruency in accounting. These are according to Campbell & Slack, (2006) as follows:

- (i) Sustainability or sustainable development reporting,
- (ii) Non-financial indicator reporting,
- (iii) Corporate responsibility,
- (iv) Corporate social responsibility or social responsibility reporting, and
- (v) Citizenship reporting.

All these can be used interchangeably as generic terms to describe voluntary disclosure on performance in these areas. Therefore, depending on the term a company adopts, environmental and sustainability reporting is necessary as this will at least give a snapshot of the companies' obligations to its host communities as well as environment. This will in turn enhance its acceptability rating.

Objectives of Environmental Accounting

- (i) Environmental accounting aims at challenging conventional accounting practices, in particular financial accounting, for giving a narrow image of the interaction between the

natural environment and organizations, thereby artificially constraining the subject of accounting.

(ii) Environmental accounting seeks to broaden the scope of accounting in the sense that it should:

- Concern itself with more than only economic events
- Not be exclusively expressed in financial terms.
- Be accountable to a broader group of stakeholders.
- Broaden its purpose beyond reporting financial success.

(iii) Environmental accounting points to the fact that companies influence their external environment both positively and negatively through their activities and should therefore, account for these effects as part of their standard accounting practices.

(iv) Environmental accounting offers an alternative account of significant economic entities, and thus, has the “potential to expose the tension between pursuing economic profit and the pursuit of environmental objective” (Boyd, 2000).

Benefits of Adopting Environmental Accounting

According to Ibanichuka & Ihendinihu (2008), the following are examples of ways companies will benefit from implementing environmental accounting practices:

- Increased information for decision-making
- More accurate product or service costing.
- Enhanced image management and public relations.
- Identification of social responsibilities
- Identification of market development opportunities.
- Identification of ways and operational areas of cost savings or cost reduction.
- Maintaining legitimacy

Basic Environmental Accounting Elements

Ibanichuka & Ihendinihu (2008) maintained that basic environmental accounting elements are the key items forming the basis of environmental accounting. To engage in environmental accounting, a company must first clarify the objectives of environmental accounting. The objectives must conform to policies or environmental considerations made in the business activities of such companies. It must conform to the company’s environmental targets and action plans.

Concept of Profitability

Profitability is Profitability measurement by which organisational as well as management ability and efficiency can be measured. According to Iswaita (2007), there are two kinds of performance, financial Profitability and non-financial performance; and financial Profitability emphasizes on variables related directly to financial report. Dwivedi, (2002) also established that financial Profitability is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm’s overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggression (Stewart, 2009). Company Profitability 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 Profitability 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).

Researchers in the strategic management field have offered a variety of models for analyzing financial performance. However, little consensus has emerged on what constitutes a valid set of Profitability criteria. For instance, researchers have suggested that studies on financial Profitability should include multiple criteria analysis. This multidimensional view of Profitability implies that different models or patterns of relationship between corporate Profitability and its determinants will emerge to demonstrate the various sets of relationships between dependent and independent variables in the estimated models (Corrode, 2017). However, profitability measures have been mostly used and thus can give a quick assessment of the way the organization has fared financially.

Profitability indicators such as Return on capital employed (ROCE), ROA, Net profit, Net profit margin, ROE and dividend per share, Earnings per share, have been used by previous studies (Dwivedi, 2002; Uwigbe & Egbide; 2012, Zayol, Agaregh & Enerji, 2017; Adewoye et al, 2018) to measures Profitability of firms, especially in the oil and gas operations hence this study adopts ROCE and Net profit for performance. Similarly, the dimensions of CSR activities have been highlighted to include to the host communities, employees and government as a stakeholders (Bhattacharya, Korschun & Sen, 2009; Imran, Kashif, Syed, Jamal & Mario 2010) why costs such as environmental expenditure, human development costs, social expenditure and infrastructure contribution to government, environmental impact assessment costs amongst others have been reported in sustainability reports of oil companies and used for research purposes (Uwiaghbe & Egbide, 2012; Ironkwe & Success, 2017; Ordu & Ironwe, 2016; Adewoye et al, 2018) hence this study adopts environmental spending for environmental accounting and return on assets for financial Profitability of companies its conceptual framework of analysis.

Net Profit (NETP)

According to Farris et al (2010), **net profit** or **net income** is "a measure of the profitability of a venture after accounting for all costs". They went further to illustrate the importance of Net Income by showing that in a survey of nearly 200 senior marketing managers, 91 percent responded that they found the "net profit" metric very useful. In accounting, net profit is equal to the gross profit minus overheads minus interest payable for a given time period (usually: accounting period) (Farris, Neil, Pfeifer; & Reibstein, 2010). Furthermore, a common synonym for "net profit" when discussing financial statements (which include a balance sheet and an income statement) is *the bottom line*. This term results from the traditional appearance of an income statement which shows all allocated revenues and expenses over a specified time period with the resulting summation on the bottom line of the report. In simplistic terms, net profit is the money left over after paying all the expenses of an endeavor.

Environmental accounting and Profitability of oil and gas companies:

Ifurueze, Etale & Binglar (2013) examined the impact of environmental cost on corporate Profitability in oil companies in the Niger Delta States of Nigeria. Primary data was used for the study. A survey of twelve oil companies was used for data gathering and multiple regression used for data analysis. Three selected indicators of sustainable business practices: Community Development Cost (CDC), Waste Management Cost (WMC) and Employee Health and Safety Cost (EHSC) were used for the study. The results of the study indicated that sustainable business practices and corporate Profitability is significantly related. The study concluded by recommending that the management of oil companies in the Niger Delta States of Nigeria develop a well articulated environmental costing system in order to

guarantee a conflict free corporate atmosphere needed by managers and workers for maximum productivity and eventually improves corporate performance.

In a similar vein, Che-Ahmad, Osazuwa & Mgbame (2015), examined the effect of environmental accounting on the financial Profitability of firms in Nigeria. The study utilizes a cross-sectional research design and content analysis to obtain environmental disclosure information from the audited annual reports. Regression was used for data analysis. The study revealed that there is a significant relationship between environmental accounting disclosure and firm's financial Profitability when environmental accounting is moderated by firm-specific variables such as firm size, industry type and auditor firm type.

Sadly, Nigeria has no mandatory environmental or social reporting requirement for public companies, and there are no significant initiatives which encourage such disclosure (Aondoaka, 2015). To buttress this point, British American Tobacco Nigeria (2010) in its assessment of Nigerian situation, observes that the practice of social reporting is not widespread in Nigeria and corporate social responsibility is often considered synonymous with philanthropy. Equally worthy of note is that the Companies and Allied Matters Act (CAMA) does not make any mention of environmental or social reports requirements among the financial statements required to be published by public companies. With this loophole in terms of mandatory disclosure, most companies will optimize this loophole and would not be able to take all round responsibility and liability for their actions in the communities. Should this mandatory disclosure in place and enforced, adequate cost would be awarded to their actions. Further, fines and more taxation would also serve as a deterrent to these social, environmental and economic damages that are done to the community.

Although efforts have been made especially towards creating a framework for regulation especially in the environment in order to forestall environmental damages, however, these efforts have not been effective. For example, the Federal Environmental Protection Agency 1988 (FEPA) was created and charged with the administration and enforcement of the environmental law, as well as the enactment of the Harmful Waste (Special Criminal Provisions) Act, 1988, (supposedly to deal specifically with illegal dumping of harmful waste (Ogbodo, 2010; Fasua, 2011). However, as noted by Environmental Law Research Institute (2009), the role of legislation in inducing responsible attitudes and behaviours towards the environment cannot be overlooked. Hence, legislation serves as an effective instrument for environmental protection, planning, pollution prevention and control. Yet implementation has become an issue.

Others are the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act 2007; Environmental Impact Assessment (EIA) Act 2004 and Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN) 2002, published by the Department of Petroleum Resources (DPR). Even with these, regulatory agencies with oversight created, standardize environmental and social accounting practices and norms in preparation of statutory financial statements for public companies are not given attention in these laws. Similarly there is no pronouncement from the accounting standard body in Nigeria on the issue of Sustainability Reporting, just as the professional accountancy bodies in the country are yet to give Sustainability Reporting the attention it deserves. In the area of awards, the Nigeria Social Enterprise Report and Awards (The SERAs), promotes growth, sustainable development and livelihoods in Nigeria by recognizing and rewarding corporate organisations as well as individuals who have contributed to social development and transformation of Nigeria.

Interestingly, the SERAs are endorsed by the Federal Inland Revenue Service (FIRS) and Standard Organisation of Nigeria (SON). In line with its vision, SERAs recognize and promote the role of corporate organizations in Corporate Sustainability and Responsibility in Nigeria (The SERAs, 2011). As laudable as this acts are, without a solid regulatory

pronouncement and enforcement, sustainability accounting and reporting will not be embraced and taken seriously in Nigeria especially by MNCs amongst others, as it is in other nations. Thus, with these loosed regulatory and enforcement framework, government revenue coming from these players in the industries will continue to be undermined.

Theoretical Framework

Environmental Theory

According to O'Riodian (1997) as cited in Ironkwe & Success (2017), the need for environmentally friendly products, services and clean technology was emphasized in Technocentric theory. According to this view, a balanced report will include the impact of business activities on the environment. Consequently, how a corporation manages its immediate and remote environment is of essence. Therefore, as environmental theorists posit, organizational activities regardless should be in a way that not just its assets are safeguarded, but its environments as well. In line with this view, MNCs have to act based on their operations in such a manner that their activities will not engender the environment. Where this happens, its activities become counterproductive to its stakeholders.

Stakeholder Theory

In an organization, there are basically two types of stakeholders (Internal and external). Most internal stakeholder includes management, employee and board while external stakeholder include shareholders, communities, creditors, debtors/customers, government agencies, and environment (Johnson-Rokosu & Olanrewaju, 2016). Basically, stakeholder theory is based on proposition that a firm's success or otherwise depends on a successful management of all the relationships that a firm has with its stakeholders (Uwuigbe & Jimoh, 2012). It is argued that stakeholder theory is one of the theories that seeks to explain the practice of presenting social information, focused on the role it can play in relations between organizations, governments, individuals, associations and societies in general (Magnaghi & Aprile, 2014). Gray et al (2002), reported that from an organizational point of view, stakeholder theory is based on a model of accountability for all actors, be it normative, descriptive or the explanatory power they hold in the context of CSR; and includes the responsibilities of the company and the transparent nature of its activities. A crucial element that the company can use to manage stakeholder relationships is precisely the information (financial, sustainability, or both) managed to gain the support and approval of corporate strategy from the stakeholders, without raising an objection. Voluntary disclosure is amply justified by the stakeholder theory and consequently the theory of legitimacy that is considered an appropriate means to maintain and develop relations between the various interest-bearing groups and the company.

Furthermore, stakeholder provides another theoretical framework for explaining the relationship between various stakeholders and management; and potentially useful in examining or influencing corporate social disclosures or sustainability reporting by organization in the annual corporate reports.

Hence, the theoretical framework adopted in this study is the Legitimate Theory of CRS.

In line with this, one of the genuine acknowledgments by industry of a duty to the environment is one reason for the growth of voluntary environmental guidelines and policies. Second, these codes are a response to shareholder, customer, interest group and community pressure on companies to be transparent and accountable in environmental management, allowing industry to demonstrate environmental responsibility and enhancing public relations. Third, companies have adopted these co-operative and flexible approaches to environmental regulation in order to avoid prescriptive and costly command and control mechanisms.

In their separate studies (Watts & Zimmerman, 1978; Pfeffer & Salancik, 1978) asserts that the need to rely on stakeholders to provide resources support and pressure from these stakeholders contribute to certain action, inaction and corporate social disclosure pattern by the organization. Similarly, as noted by other scholars, ethical managers do not wait to be informed to do this disclosure, however they just engage in it on their own thereby winning the trust and confidence of their stakeholders (Ordu & Okorafor, 2014). For example, the restless nature of militancy in Niger Delta; frequent attacks on oil installations and kidnapping of foreign nationals to draw attention to environmental pollution and degradation, forces major oil companies to have a rethink, become socially responsible and discloses information on environment, social and governance in their corporate reports. This example collaborated the submission of Uwuigbe & Jimoh, (2012) that the more powerful the stakeholders, the more the company must adapt. (Johnson – Rokosu & Olanranwanju, 2016).

Review of Empirical Literature

Several earlier studies have highlighted the impacts of MNCs operating in the Niger Delta Region of Nigeria and the need for the disclosure of their activities on the environment via environmental accounting (Ukoli, 2005; Tuwamasi & Meren, 2006; Uyigüe & Agho, 2007; Onuoha, 2008; Anifowose, 2008; Kamalu & Nwokocha, 2011; UNEP, 2011; Mmadu, 2013; Amnesty International, 2015; Uzoma & Mgbemena, 2015). They have one thing in common: the negative impact of multinationals activities has outweighed their positive impacts on the area. It is argued that in terms of environmental changes occurring within the region, large areas of mangrove forest have been destroyed which is a major source of wood to the indigenous people. Oil spills, affects terrestrial and marine resources; whilst some past spills have necessitated the complete relocation of some communities, loss of ancestral homes, pollution of fresh water, loss of forest and agricultural land, destruction of fishing grounds and reduction of fish population, which is the major source of income for the Niger Delta people. Which all constitute massive unquantifiable losses to farmers, fishermen and hunters (Ukoli, 2005). The pollution exposes people also to new risk of diseases.

Uzoma and Mgbemena (2015) in their study evaluated some oil companies in the Niger delta region of Nigeria: looking at the environmental impact their activities have on the area. The study used data from past and present studies, government and non-government bodies and existing literature such as those of Twumasi & Merem, 2006; Uyigüe & Agbo, 2007; Uyigüe & Ogbeibu, 2007). The secondary data used were obtained from the Nigerian National Petroleum Co-operation, World Bank Report, National Bureau of Statistics, United Nations Environmental Protection Programme, Amnesty International, International Monetary Fund, Published and unpublished materials, Books, Newspapers, Conferences and Seminar papers, Journals and the Internet. The data obtained was analyzed using descriptive method of analysis to obtain logical deductions and sequential presentation of facts from the data obtained to give a clear picture of the problem. The study revealed that that activities associated with petroleum exploration, development and production operations have local detrimental and significant impacts on the atmosphere, soils and sediments, surface and groundwater, marine environment and terrestrial ecosystems in the Niger delta. In addition, the Niger Delta consists of diverse ecosystems of mangrove swamps, fresh water swamps, rainforest and is the largest wetland in Africa and among the ten most important wetland and marine ecosystems in the world, but due to oil pollution caused by exploration, the area is now characterized by contaminated streams and rivers, forest destruction and biodiversity loss, in general the area is ecological wasteland. Discharges of petroleum hydrocarbon and petroleum – derived waste streams have caused environmental pollution, adverse human health effects, socioeconomic problems and degradation of host communities in the oil producing states in the Niger Delta region. Furthermore, the study acknowledged that, the oil

industry located within the region has contributed immensely to the growth and development of the country, which is a fact that cannot be disputed but unsustainable oil exploration activities has rendered the Niger Delta region one of the five most severely petroleum damaged ecosystems in the world (Uzoma & Mgbeme 2015). With these damages, it could be argued that regardless of the amount of tax paid currently by this MNCs, more cost needs to be awarded. Perhaps this could be a way of compensating for their damaging activities on the environment as well as be able to raise the needed revenue that could be used for developmental purposes. The challenge has always been how to get them to be accountable in terms of assessing their taxable income and activities. Perhaps more and mandatory rather than voluntary sustainability accounting and reporting could achieve that.

Alhashi, Nobanee and Khare (2018), examined the Impact of Sustainability Practices on Corporate Financial Performance: Literature Trends and Future Research Potential. The study has it that the relationship between corporate sustainable practices and financial Profitability has received growing attention in research, yet a consensus remains elusive. This paper identifies developing trends and the issues that hinder conclusive consensus on that relationship. We used content analysis to examine the literature and establish the current state of research. A total of 132 papers from top-tier journals are shortlisted. We find that 78% of publications report a positive relationship between corporate sustainability and financial performance. Variations in research methodology and measurement of variables lead to the divergent views on the relationship. Furthermore, literature is slowly replacing total sustainability with narrower corporate social responsibility (CSR), which is dominated by the social dimension of sustainability, while encompassing little to nothing of environmental and economic dimensions. Studies from developing countries remain scarce. More research is needed to facilitate convergence in the understanding of the relationship between corporate sustainable practices and financial performance. Keywords: corporate sustainability; financial performance.

Nwaiwu and Oluka (2018) examined environmental cost disclosure and financial Profitability of oil and gas in Nigeria. This study empirically examines the effect of environmental cost disclosure and financial Profitability measures of quoted oil and gas companies in Nigeria. Time series data were collected from annual financial reporting and economic review of Central Bank of Nigeria; Pearson product moment coefficient of correlation and multiple linear regression analysis with the aid of special package for social sciences (SPSS) version 22. The econometric results reviewed adequate disclosure on environmental cost, compliance to corporate environmental regulations have positive significant effect on financial Profitability measures. Thus the study recommended regulatory enforcement for adequate environmental cost disclosure and proper reporting. Management of oil and gas companies in Nigeria should develop a well articulated environmental costing system in order to guarantee a conflict free corporate atmosphere for improved corporate performance.

Utile, Tarbo and Ikya (2017), examined corporate environmental reporting and the financial Profitability of listed manufacturing firms in Nigeria. The study investigates the effect of environmental reporting on the financial Profitability of listed manufacturing companies in Nigeria. The study aims at determining the effect of erosion control reporting (ECI), waste management reporting (WMI) and air pollution reporting (API) on the financial Profitability of listed manufacturing firms in Nigeria. The study adopted an ex-post facto research design using the random effect regression analysis as the major technique for data analyses. The sample of the study was drawn from ten manufacturing firms listed on the Nigerian Stock Exchange. It was found that both erosion control reporting and air pollution reporting has significant effect (0.002) and (0.026) respectively with firm financial Profitability while waste management reporting has negative but significant effect (0.000) on firm financial Profitability of companies under investigation. The major conclusion reached by this study is

that environmental reporting has significant effect on firm financial performance. The study recommends that the Environmental Regulation Agency should collaborate with the Financial Regulation Council of Nigeria to make environmental reporting a necessity in annual reports of listed firms in Nigeria.

Nnamani, Onyekwelu and Ugwo (2017), evaluated the effect of sustainability accounting on the financial Profitability of listed manufacturing firms in Nigeria. Firms used for the study were chosen from the Nigerian brewery sector. Data were sourced from the financial statements of three sampled firms. Data were analysed using the ordinary linear regression. The study reveals that sustainability reporting has positive and significant effect on financial Profitability of firms studied. Following the findings, the study recommends that firms in Nigeria should invest reasonable amount of their earnings on sustainability activities while specific accounting templates be articulated by professional accounting regulating bodies to guide firms' reportage on sustainability activities. The Financial Reporting Council of Nigeria (FRC) and others alike should make sustainability reporting compulsory while adequate sanctions are spelt out and enforced on defaulting organizations to serve as a deterrent.

Ironkwe and Ordu (2016), examined environmental reporting in the oil and gas industry in Nigeria. Via a theoretical review and discuss analysis, the study looked at the need for adequate Environmental Reporting – both financial and non-financial reporting and its importance in the industry in reaching out to stake holders. It is anchored on the legitimacy theory of corporate social responsibility reporting whilst critically assessing the reporting requirements as well as what is usually reported in the financial statements of Oil and Gas companies vis a viz standard disclosure requirements. It was found that that reporting format needs to be consistent and followed in order to ensure transparency in reporting of company operation. Looking at environmental Profitability indicator as well as reporting formats and Normalization factors, it is found out that the greatest challenges faced by the industry regarding sustainability Profitability reporting are determining how to measure, define and select appropriate indicators.

Malarvizhi and Ranjanni (2016) conducted a research to examine whether there is any significant relationship between Corporate Environmental Disclosure (CED) and firm Profitability of selected companies listed in Bombay Stock Exchange (BSE), India. They use content analysis methodology by developing an environmental disclosure index (EDI) and formulating hypotheses to test the association between firm Profitability and level of environmental disclosure. Primary data was collected using questionnaire instrument. A regression model with EDI as dependent variable and return on capital employed (ROCE), return on assets (ROA), net profit margin (NPM) and earnings per share (EPS) as independent variable is used to analyze data for this research. Results show there is no significant relationship between the level of environmental disclosure and firm performance. They recommended that corporate organizations should be educated on the benefits of better environmental Profitability and encouraged to comply with the requirements for long-term survival. As part of environmental governance government should include education on ethical environmental disclosure at societal level, school level.

Raymond, John, Racheal and Ben (2016) in their work, assessed the effect of sustainability accounting measure on the Profitability of corporate organizations in Nigeria. Ex post facto research design and time series data were adopted. Data for study was collected from annual reports and accounts of the company in Nigeria. Formulated hypotheses were tested using Regression Analysis with aid of SPSS Version 20.0. Based on the analysis, the study found that environmental cost does not impact positively on revenue of corporate organizations in Nigeria, also that environmental cost impact positively on profit generation of corporate organizations in Nigeria. Based on this the researcher recommends that Indigenous and multi-

national firms should ensure that strict policies as regards environmental accounting are adhered to, in order to enable stable organizational performance.

Norhasimah, Norhabibi, Nor, Sheh, Qamarul and Inaliah, (2015) investigated the effect of environmental disclosure on financial Profitability in Malaysia using the Malaysian Public Limited Companies. Non probabilistic sampling (purposive sampling) was used to arrive at a sample of 100 companies of market capitalization for the year 2011. Norhasimah et al selected these companies because they were relatively large and believed to have more activities that impacted on the society as reflected in their financial statements. Data was collected from financial reports of these companies for the year 2011. An environmental index was developed, 10% of the total sample was selected to conduct a pilot test of ten (10) companies. ROA, EPS and ROE were used to measure performance. To analyze the data, spearman's correlation and multiple regressions were used. Findings revealed that there is a significant relationship between total environmental disclosure and financial performance.

Beredugo, (2012) evaluated the relationship between environmental accounting and reporting and sustainable development in Nigeria with the aim of determining the effect of sustainability disclosure on firm's performance. The researcher used the survey research design. Data was collected from a sample of 400 respondents out of a population of three million (3000,000) people. Pearson's correlation coefficient, student t-test and the ordinary least square methods were used for the analysis of data. Findings revealed that environmental accounting and reporting is positively related to sustainable development and firm financial Profitability and that they are consequences to non-compliance. He also discovered that stakeholders increasingly require companies to manufacture goods efficiently and at competitive prices without harming the environment. This study used primary method of data collection which is inseparable from bias in addition; information on sustainability reports gotten from respondents cannot be reliable as findings are only based on the awareness of the respondents. Therefore, a further study that is devoid of a biased method of data collection is required to further confirm the effect of these independent variables on the dependent variable.

From the review of empirical studies it can be deduced that Environmental management practices alone are negatively related to market and financial performance. However, improved environmental Profitability substantially reduces the negative impact of environmental management practices on market and financial performance. The paper provides empirical evidences with large sample size that environmental management practices become an important mediating variable to resolve the conflicts between lean manufacturing and environmental performance. Additional contextual analyses suggest that differences exist in terms of the strengths and statistical significance of some of the proposed relationships. Thus, for effective implementation of environmental management, firms need to measure environmental Profitability through which the impact of environmental management on other business Profitability outcomes is examined.

METHODOLOGY

Research Design

The research design of this study is explanatory, historical and correlational in nature. The focus of an explanatory research design is how to effectively explain the characteristics of a population or a social phenomenon (Saunders, Lewis & Thornhill, 2007). This is usually effective where a quantitative framework is adopted for the study, where it is possible to establish the relationship or influence on one variable on the other. Historical in nature in the sense that historical data – Expenditure on the environment (Environmental spending) by the oil and gas companies and net profit of about 6 year period are used. Furthermore, the correlational method adopted, involves the use of regression analysis, and helps to measure

the relationship between two variables. It helps to ascertain whether or not a variable has an influence on the other. Unlike in experimentation, the relationship is observed in a more natural environment, thus suitable for this study

Population and sample of the Study

Sustainability accounting/reporting mandatory compliance by MNCs (especially in their originating countries) commenced within the early 2000s when the guidelines for its reporting was released at the World Summit on Sustainable Development in 2002 (Gray, 2005), however mandatory compliance in some developed nations began mid 2000s. However, in developing nations such as Nigeria, there has not been mandatory adoption as such much of data for this purpose were not available. Data available from Nigeria stock exchange for some of the indigenous companies were from 2009 upwards and were not composite until 2012 upwards. Therefore, 6 year period (2012- 2017) for which composite sustainability accounting data were available were chosen for the study, because it will give relatively acceptable time period of study for the research. The data for financial performance (Net Profit) for same period (2012- 2017) were also utilized

Sample and Sample Size Technique:

The sampling technique used is the convenience sampling technique. As the name implies, it is a sample “chosen purely on the basis of convenience” (Baridam, 2005, p 104). The variables in this sample are chosen simply because they are accessible or easy to measure. Hence, purposively, data of the last six year period for both Environmental accounting and financial Performance dimensions were chosen for this study. The periods are from 2012-2017.

Method of Data Collection

Secondary sources of data were used as the main data collection sources. The relevant data for this study were collected from the annual reports and accounts of the companies available on their websites and from Nigerian Stock Exchange (various years). The data collected was from the period 2012 – 2017. The Annual reports includes: Annual financial statements; annual sustainability reports as well as Annual Reports of global tax payment to nations by the quoted oil firms, annual returns submitted at Nigerian Stock Exchange for the years under study.

Method of Analysis

The data analysis techniques involve the mathematical and statistical formula used in analyzing the outcome of the research hypothesis and question. Regression was used in this study for analysis and testing of the hypothesis. This is because, NETP values are dependent on environmental accounting activities carried out in the companies. Using these variables, the following hypothesis is tested

Operational variables

There are two variables in this study; Environmental accounting and Profitability. Environmental accounting is the independent variable, while Profitability is the dependent variable. The dimensions for the independent variables and the measures of dependent variable are as follows:

Dependent Variable (Y): NET Profit as the dependent variables in the study as proxy to Profitability (FP) of the oil and gas companies

Independent Variables (X): The independent variables employed in the study Environmental Accounting (EA) proxied with Environmental expenditure (ENVSPND)

The functional relationship between the dependent and independent variables in this study could be stated as:

$$FP = F (EA) \text{-----} (1)$$

$$(NETP) = F (ENVSPND) \text{-----} (2)$$

RESULTS AND ANALYSIS

Testing of Hypotheses

Ho₁: There is no significant relationship between environmental expenditure and Net Profit of oil and gas companies in Nigeria.

The table 4.1 and 4.2 respectively showed that calculated F value of 0.003 was not significant at .965 level which is higher than 0.05 chosen level of probability, hence the null hypothesis is accepted which means there is no significant relationship between environmental expenditure and Net Profit of oil and gas companies in Nigeria within the period of the study.

Table 4.1: Summary of Regression Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.055 ^a	.003	-.994	17264029.61273	.003	.003	1	1	.965	2.917

a. Predictors: (Constant), ENVSPND

b. Dependent Variable: NETPROFIT

Table 4.2: Summary of ANOVA Result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	914869528010.443	1	914869528010.443	.003	.965 ^b
	Residual	298046718469125.100	1	298046718469125.100		
	Total	298961587997135.600	2			

a. Dependent Variable: NETPROFIT

b. Predictors: (Constant), ENVSPND Source: SPSS Version 21.0 Output.

Summary and discussion of findings

This study was carried out to assess the impact of environmental accounting on the Profitability of quoted oil and gas companies in Nigeria. It emphasized that environmental management practices alone are negatively related to market and financial performance. However, improved environmental Profitability substantially reduces the negative impact of environmental management practices on market and financial performance. Thus, for effective implementation of environmental management, firms need to measure environmental Profitability through which the impact of environmental management on other business performance outcomes is examined. It further discussed the objectives of environmental accounting which includes among others challenging conventional accounting practices, in particular financial accounting, for giving a narrow image of the interaction

between the natural environment and organizations, thereby artificially constraining the subject of accounting as well as seeks to broaden the scope of accounting in the sense that it should: Concern itself with more than only economic events, Not be exclusively expressed in financial terms. While the benefits of environmental accounting was also discussed to include bringing about increased information for decision making and more accurate product or service costing.

From the results above, as summarized on the table, it is observed that there is no significant relationship on the variables tested. It implies that the environmental spending are not related to the Profitability of the companies however environmental disclosure are essential to enable government and other authorities see how transparent the firms are in terms of their activities. Furthermore, it also implies that there have not been enough environmental spending engaged by the oil and gas firms, given the situation where there is always profits recorded yearly in their annual statements. From this result, it shows that better Profitability in terms of financial indicators used here such as Net Profit and others do not depend on environmental accounting disclosures. It implies that good financial Profitability of firms could be as a result of many factors such as efficient management of people and material, the asset turnovers and the capital injections into the firms amongst others. The result is in line with the works of Malarvizhi & Ranjanni (2016) and Raymond et al, (2016) whose works showed that there is no significant relationship between the level of environmental disclosure, environmental cost and firm Profitability in the oil and gas industry.

CONCLUSION AND RECOMMENDATION

As earlier mentioned, this study investigated the relationship between environmental accounting and Profitability of oil and gas companies in Nigeria given the antecedence of the oil and gas firms. Financial Profitability of firms does not depend on the expenditures made towards the environment in which they operate. However, when sufficient spending is made towards protecting the environment, trust and transparency would be seen to have taken place by the stakeholders, conducive operating environment could be created and hence better Profitability could be attained by the companies.

In view of the finding of the study, it is concluded as follows: Environmental expenditure as a dimension of environmental accounting does not have any significant relationship with Profitability of oil and gas companies in terms of their Net Profit. In line with the findings the following recommendation is put forward for consideration by the appropriate authorities:

In view of the insignificant relationship that exists between environmental accounting and financial Profitability of the companies, the management of the companies should channel effort on engaging in adequate environmental spending and its disclosure as way of increasing stakeholders trust and showing more transparency in their operations. This could in turn lead to achieving better financial performance. Furthermore, functional and interactable environmental accounting units should be created by each oil company to ensure that the companies maintain their guidelines in reporting environmental issues in their annual reports and accounts, this way stakeholders would access this information and even vouch for them as socially responsible and this could bring about more investors to the companies.

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