

Effect of Environmental Accounting on Financial Performance of Quoted Oil and Gas Companies in Nigeria

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Abstract

Globalization has helped connect societies and their environmental fates more closely than ever before. Individuals are now stressing the importance of the natural environment. Environmentally responsible activities from operating companies to the host communities reduce hostility and disruption of operations. Therefore, this study examines the relationship between environmental accounting and financial performance of selected oil and gas companies listed on Nigerian Stock Exchange. Using simple random sampling technique, secondary data were collected from annual reports and accounts of eight (8) selected oil and gas companies spanning 2009 to 2018. Multiple regression technique was adapted to analyse data collected. The findings reveals that environmental accounting does not have significant impact on the financial performance of the listed oil and gas firms in Nigeria for the period covered as indicated by Wald X^2 (4.33) and (7.60) with P-value 0.3629 and 0.1075 respectively for ROE and ROA. These means that the fund committed to environmental cost by these selected firms does not reflect on their profitability for the period under reviewed. Based on this, it was recommended that Management of oil and gas firms should increase their participation in Community Development Cost (CDC) to their host communities and increase their employee health and safety cost (EHSC) in order to guarantee a conflict free operation atmosphere needed by managers, customers, employees and interested parties for maximum productivity. The government should make law that

will mandate oil and gas firms in Nigeria to deploy certain percentage of their income back to the host community to enhance more participation in environmental accounting and improve organization performance.

Keywords: Environmental Accounting, Community Development Cost, Return on Assets.

Introduction

Public concern for the natural environment has been one of the most important developments in recent decades. Globalization has helped connect societies and their environmental fates more closely than ever before. Individuals are now stressing the importance of the natural environment, with a recent U.S. survey indicating, by a ratio of six to one, strong willingness to pay more for products that save the environment (Shil & Iqbal, 2005). The development of more effective environmental laws and legal systems throughout the world has thus become critical to directing economic development and growth onto a path of environmental sustainability.

Stakeholders are much more concern and agitating for friendly environment thereby leading to recommending that the top priorities for corporate expenditures be cleaning up the environment and safer products, (Howes 2002). Many international companies are now with no option than to publish separate annual environmental performance reports. These converging forces suggest a need for rigorous research into the linkage between environmental

accounting and firm financial performance.

According to Bassey, Effiok & Okon (2013), awareness of the environment and man's ability to cause damage started from the fifties of the 19th century. During the fifties and sixties of the 19th century people all over the world become more concerned about the quality of their environment. The damage that environmental pollution has caused to our environment posed serious challenges to the health of the planet which has reached an alarming level. The effect of mankind activities on the world ecology and the state of the world's environment have led to increased public concern for the natural environment and scrutiny of the company's operations and performance (Bartolomeo, 2000).

Well known environmental tragedies, like the cause of mercury poisoning in mania mate (Japan), severe smoke pollution episode in London and massive oil spill caused by Terry Canyon accident reinforced in people's mind the sense that the quality of air, water and a wide range of natural resources were being seriously degraded (Bassey, Effiok & Okon,

2013). Industrial emissions and effluence constitute great threat to the atmosphere, the native farmers are no less a threat to the effect of the ozone layer, the seas, oceans and land. Local farmers also systematically destroy the biodiversity through continued crude method of farming, felling of trees and bush burning as well as non-sustaining fishing methods without replacement of the natural resources.

In Nigeria, Oil Pollution from spills, oil well blow-outs, oil ballast discharges and improper disposal of drilling mud from petroleum prospecting and other production wastes have resulted in environmental degradation problems such as loss of the aesthetic values of natural beaches due to unsightly oil slicks; damage to marine wildlife, modification of the ecosystem through species elimination and the delay in biota (fauna and flora) succession, and decrease in fishery resources (Dorweiler & Yakhou, 2003). It is against this background that a number of companies and other organizations are solidifying their environmental approaches and developing business activities that take the environment into consideration as environmental conservation efforts continues to increase in line with the Sustainable Development Goals vision.

The haste to develop in Nigeria does not always incorporate pollution control and waste management into environmental management plan even

though the environmental laws regarding pollution and waste management seem to be inadequate or where they exist, remain to a large extent not enforceable (Hassan, 2011). Environmental accounting (EA) is an inclusive field of accounting. It provides reports for both internal use, generating environmental information to help make management decisions on pricing, controlling overhead and capital budgeting, and external use, disclosing environmental information of interest to the public and to the financial community (Bartolomeo, 2000).

The need for EA has become the concern and focus of nations and responsible corporate managements. It became one of the foremost issues on the agenda of nations and businesses earlier in the 1990s and the reasons for this were varied emanating from both within and outside of the firm and particularly at the global level (Okoye and Ngwakwe, 2004).

According to Elkington (2007), Environmentalists agree that it could be more cost efficient and beneficial for companies to acquire pollution prevention or clean technology than those of pollution clean-up. It is also observed that in environmental regulations, there is a shift from the 'command and control' approach to market-driven forms in which pollution prevention alternatives are replacing pollution cleaning approach.

In the light of the awakening to environmental protection, various laws and regulations such as the Environmental Impact Assessment Act, 1992 and the Department of Petroleum Resources (DPR), Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN: 2002) were enacted (Osemene, 2007). These require corporate managements to consider the environmental implications of all internal decisions of their managements.

This study is motivated by the fact that as the global business world is getting more competitive by the day due to globalization and environmental change, only the effective businesses will continue to maintain the top position and gain competitive advantage. The need for corporate organizations to develop environmental cost responsiveness and to disclose in annual financial reports environmental information has become of great importance, corporate neglect and avoidance of environmental costing leave gap in financial information reporting. In developed nations, Canada, Norway, Netherlands, United Kingdom and the United States of America have led in the pursuit of degradation and pollution prevention, control and the need for environmental safety (Skillius, and Wennberg, 1998, IFAC: 2005). Developing nations like Zimbabwe, Namibia, Philippines and Indonesia have led in championing policies to address need for accounting

and accountability for environmental costs.

There is lack of completeness and correctness of fair view to users of financial information, such as shareholders, environmental regulatory agencies, environmentalists and potential financial investors in Nigeria. For example, degradation or other negative impacts on the environment could affect corporate financial statement by creating actual or contingent liabilities and may have adverse impacts on asset values (Dorweiler and Yakhou, 2003).

Managers within organization are coming under increased pressure to not only reduce costs, but also to minimize the environmental impacts on their operations. Unfortunately, a substantial impact on the environment has left Nigeria with enormous economic, social, and environmental legacy. This pressure is coming from a broad group of stakeholders, including regulatory bodies, employees, customers, investors, non-government organization and finance providers (Osemene, 2007).

Various stakeholders, including business customers, investors, local communities and government put pressure on organizations to improve and report environmental performance (Hassan, 2011). Secondly, as a result of the stakeholders' pressure, environmental costs are not matching with its earning and benefits, this is

part of the organizational decision making (Daniel & Ambrose, 2013). There is an increasing recognition that conventional management accounting practices often do not provide sufficient and accurate information for environmental management and environmental-related cost management (Gale, 2006).

Therefore, the negative impact on the environment could affect corporate financial statements such as creation of actual or contingent liabilities and may have adverse impact on asset values. It is in view of the aforementioned problems that necessitated the need for this study. Thus, the central point of this study is to investigate the effect of environmental accounting on the performance of some selected oil and gas industry in Nigeria.

Efforts have been made on the by the researchers across the globe on environmental accountability and firm's financial performance in the last few decades. Such as the studies conducted by Chauhan & Kalola (2014), Daniel & Ambrose (2013), Bewley & Li (2000), Mitchell, Perey & Mekinlay (2006), Al-Tuwaijri, Chrstense & Hughes (2004) and Enahoro (2009) to mention a few. However, none of these studies focus on on oil and gas companies in Nigeria by take into cognizance years except the study conducted by Enahoro (2009) of which his scope was 1998 – 2007 which is consider not recent enough to make decision currently.

The scope of this research ranges from 2009 – 2018 with trend to trace the effect of environmental accounting on the financial performance of quoted oil and gas companies in Nigeria. This research therefore is a modest effort to fill that gap. The study will assure commitment of the oil and gas industry in Nigeria to international agreements on environmental regulations which will in turn assure sustainable development and save environment in Nigeria.

Thus, it is necessary for Oil and Gas companies in Nigeria to consider issues involving environmental issue activities and growth if they are ever to play dominant role in creating value over time. Based on this and many more, the following specific objectives become pertinent:

- i. Assess the extent to which community development cost influence the financial performance of quoted oil and gas companies in Nigeria;
- ii. Ascertain how employee health and safety cost influence the financial performance of quoted oil and gas companies in Nigeria, and
- iii. Examine the effect of cost of environmental law compliance on financial performance of quoted oil and gas companies in Nigeria.

Literature Review

Environmental accounting covers information relating to all aspects of the environment. It includes environment-related expenditures,

environmental benefits of products and details regarding sustainable operations (Irish times, 2000). According to Bassey, Effiok and Okon (2013), environmental accounting involves the identification, measurement and allocation of environmental cost, and the integration of these costs into businesses. It also encompasses the means of communicating such information to companies' stakeholders. Environmental accounting is used in assessing the increasing cost of exportation with the aim of improving environmental efficiency and manages the negative effects.

Howes (2002) pointed out that environmental accounting entails the generation, analysis and use of monetized environmentally related information to improve corporate environmental and economic performance. Dorweiler and Yakhou (2003) specified that Environmental accounting is an inclusive field of accounting. It provides reports for both internal use, generating environmental information to help make management decisions on pricing, controlling overhead and capital budgeting, and external use, disclosing environmental information of interest to the public and to the financial community.

Environmental Accounting enables organizations to track their environmental data and other greenhouse gas (GHG) emissions against reduction targets, and

facilitates environmental reporting to provide sustainability related data that is comprehensive, auditable, and timely to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development - economic development, social development and environmental protection in Nigeria, (UNCTAD, 2003).

Environmental accounting helps the firm to record all environmental costs incurred by the business thereby finding a way of reducing the cost (environmental expenses) so that the business can increase profit. Also environmental accounting helps to disclose to the outside world their ability to be environmental friendly. According to Pramanik, Shil and Das (2007), some of the specific issues (problems) regarding the environmental accounting and reporting include: Identification of environmental cost and expenses, Capitalization of cost, Identification of environmental liabilities, and Measurement of liabilities.

Environmental Regulation in Nigeria

Environmental regulation in Nigeria exists as window dressing before 1988. However, this changed as a result of an attempt in 1997 by a foreign company, acting through an agent, to dump toxic waste in the Niger Delta region. This event shocked the Federal Government of Nigeria and highlighted the porous nature of

environmental regulation in the country. This gave rise to the promulgation of Decree No.42 of 1988 by the former Federal Military Government of Nigeria. This decree made it a criminal offence for anyone to carry or dump any harmful waste within the entire land mass and waters of the Federal Republic of Nigeria. The episode gave rise to the need for an agency to oversee environmental protection; hence Decree 58 of 1988 gave birth to the Federal Environmental Protection Agency (FEPA).

The Decree was later amended in 1992 by Decree No 59 of 1992, granting FEPA the responsibility for protection of the environment, biological diversity, conservation and environmental technology and research. It was this decree that created the first standards of environmental regulation in Nigeria. The standards include: water quality, effluent limitation, air quality, atmospheric protection, ozone layer protection, noise levels and the control of hazardous substances. These represent the efforts made by successive administrations to ameliorate the environmental problems of the country. However, on May 29, 1992 the civilian government under President Olusegun Obasanjo, added an impetus to the struggle against environmental menaces by according the environment a greater priority.

To this effect, it created, for the first time in the history of Nigeria, the Ministry of Environment in June 1999. The former regulatory agency, the FEPA, was absorbed by the Ministry of Environment which took over all its functions.

Environmental Reporting Laws in Nigeria

Environmental related Acts and Decree have been enacted in Nigeria before independence under different context by her colonial master- Great Britain. These laws were scattered and uncoordinated as there was no fully organised institution to coordinate and discharge environmental related duties. In 1950s, the Criminal Code Act and Noxious Act were enacted to control odour and noise pollutions against neighbours. Later, the Public Health Acts were enacted aimed at vitiating the indiscriminate disposal of waste into the surrounding environment- especially water bodies, and its specific health goal was to reduce the spread of contagious diseases (Chokor, 1993).

At late 1960s and early 1970s, some Acts such as Water Courses Act of 1969, and Refining Act of 1974 were enacted to control oil pollution of land and navigable waters, and the fishing methods. The first legal document that made mention of environmental impacts and mitigation was the Fourth National Development Plan (1981-1985). This document urged the public

and private industries to produce the environmental impact assessment (EIA) of their projects, and to acquire facilities for environmental assessments. Also, it called for researches and studies into Nigerian environmental features, and the reason for environmental quality standards and public environmental education.

In 1979, the then Nigerian constitution stipulated the need for environmental hygiene, cleanliness, and refuge management of which the local government councils were delegated to supervise the activities. This law was made towards planning and beautification of the surrounding environment. There are some other laws directed towards environmental conservation and protection that were made by different sectors or ministries in Nigeria before the creation of environmental institution.

These laws are mainly found in the oil industries for oil exploration and exploitation related activities, and the ministry of works and housing (before the creation of ministry of environment) was given the responsibility to handle all environmental related activities. Such laws enacted in these ministries (ministry of petroleum and ministry of works and housing) for ecological conservations were: oil pipeline ordinance of 1965; oil in navigable water regulation of 1968; petroleum drilling and production regulation of 1969. These laws were enacted and

enforced by the department of Petroleum Resources (DPR) of Nigerian National Petroleum Corporation (NNPC) through which Nigerian government participates and regulates oil activities and operations in the country.

Theoretical Framework

In an attempt to provide a sound theoretical background for this study, this study is anchored on the legitimacy theory. Legitimacy theory suggests that a firm may be in one of four phases with regard to its legitimacy. Establishing legitimacy which represents the early stages of a firm's development and tends to revolve around issues of competence, particularly financial, but the organization must be aware of socially constructed standards of quality and desirability as well as perform in accordance with accepted standards of professionalism (Hearit, 1995). Maintaining legitimacy is the phase that most firms would generally expect to be operating in, where their activities include: ongoing role performance and symbolic assurance, that all is well, and attempts to anticipate and prevent or forest all potential changes to legitimacy (Chen, & Roberts, 2010).

Extending legitimacy is point where an organization enters new markets or changes the way it relates to its current market. This can give rise to a need to extend legitimacy which is apt to be intense and proactive as management

attempts to win the confidence and support of wary potential constituents (Chen, & Roberts, 2010).

Defending legitimacy occurs when legitimacy is threatened by an incident (internal or external) and therefore requires defense.

Enahoro (2009) investigate the design and bases of environmental Accounting in Oil and Gas and Manufacturing sector in Nigeria. The study used both primary and secondary data available from oil and gas company's annual report and questionnaire spanning from 1998 to 2007 for five (5) companies. Pearson product moment correlation was used to investigate the impact of environmental. They found that Environmental accounting practice does not have significant impact on company performance in Nigeria.

Chauhan and Kalola (2014) wrote on the analysis of environmental accounting and firm profitability of reliance industry limited, Gujarat, india. Using secondary data generated from annual reports & accounts of selected company quoted on the reliance industry limited from 2007 to 2012, ordinary least square and multiple regression analysis was used to see the association between net operating profitability and all independent variables. T-Test was used for testing statistical significant level. The study revealed that since the disclosures of environmental information are voluntary, there is a

diversity of reporting practice. Large companies tend to report more environment information in their annual reports than the medium- scale businesses.

Ihendinihu and Onyinyechi (2016) examined the impact of environmental and corporate social responsibility (CSR) accounting on organization financial performance. Secondary data was used for the study; multiple linear regression and T-test were used for analyzing the impact of environmental and corporate social responsibility accounting on organization financial performance. It can be deduced that firm's expenditure to environmental and social issues are not proportionate to their financial performance as represented by Profit after tax. Therefore, CSR and environmental maintenance should be a matter of concern to both the government; NGO's and Firms at large.

Mitchell, Percy and Mckinlay (2006) examined the environmental disclosures of twenty Australian firms subject to a successful EPA prosecution between 1994 and 1998 using content analysis. They found the disclosures made by sampled firms to be predominantly posit disclosures made by their sample firms to be predominantly positive in nature. The content analysis revealed that even where a firm has a specific corporate environmental policy, they place a low priority on reporting environmental performance data to external parties.

The study concluded that Australian firms prefer to disclose their activities and specific programs, rather than their research and development, capital expenditure, policies or performance. Bewley and Li (2000) appealed to voluntary disclosure theory to examine the environmental disclosures of Canadian manufacturing firms. They used the Wiseman index to measure the 1993 annual report disclosures of 188 firms and industry membership to proxy for pollution propensity. They found that firms with a higher pollution propensity and greater media coverage of their environmental performance are more likely to disclose general environmental information, a result that also consistent with the socio-political theories.

Methodology

The model specified for this study is specified as follows:

$PRF = f(\text{ENVAC})$, PRF = Financial Performance, ENVAC = Environmental Accounting, $\text{ENVAC} = f(\text{ROE}, \text{and ROA})$

Enahoro (2009) model was adopted and re-modified for this study as follows:

$$\text{ROE}_{it} = \alpha + \beta_1 \text{CDC}_{it} + \beta_2 \text{EHSC}_{it} + \beta_3 \text{CELC}_{it} + \mu_{it} \dots \dots \dots (1)$$

$$\text{ROA}_{it} = \alpha + \beta_1 \text{CDC}_{it} + \beta_2 \text{EHSC}_{it} + \beta_3 \text{CELC}_{it} + \mu_{it} \dots \dots \dots (2)$$

The econometric form of the model is as follows:

$$\text{ENVAC} = \alpha + \beta_1 \text{ROE}_{it} + \beta_2 \text{ROA}_{it} + \mu_{it}$$

Where:

ENVAC = CDC = Community Development Cost, EHSC = Employee Health and Safety Cost and CELC = Cost of Environmental Law Compliance. While financial performance was measure using ROE and ROA . μ_{it} = Total error term, β_1 , β_2 , represent intercept. *A priori* expectation is that $\beta_1 - \beta_2 > 0$.

Decision rule; null hypothesis is rejected if the prob (p-value) is < 5% significance level, otherwise it is accepted.

In this study, researchers adopt the panel research design because the study is carried out on a group of quoted oil and gas companies (cross sectional units) and for more than a year (time series). The study employs co-relational research for the purpose of addressing the problem of the research. Correlation research approach is used where the variables to be investigated, are amenable to empirical measurement and verification. The study used data mainly from secondary sources because the estimation of the model employed in the study requires the use of data in the form of financial and market information.

In this regard, the sources of data for the study are the Nigerian Stock Exchange Fact Books and the annual reports and accounts of the companies for the year 2009 to 2018 covered by the study. The sample focuses exclusively on eight (8) selected oil

and gas firms within the downstream oil sector as classified by the Nigerian Stock Exchange and the Corporate Affairs Commission using random sampling techniques out of the eighteen (17) listed oil and gas companies. The empirical study is therefore of eight (8) selected oil and gas companies in Nigeria which are African Oil Petroleum, Chevron Oil Nigeria Plc., Mrs Oil Plc., Shell Plc.,

Oando Oil Plc., Mobil Oil Nig. Plc., Conoil Plc.

This study employs the multivariate technique for the purpose of data analysis. The model uses dependent variables: Return on Equity, Return on Asset ROA, and explanatory variables, Community Development Cost (CDC), Employee Health and Safety Cost (EHSC), and Cost of Environmental Law Compliance (CELC).

Results and Discussion

Table 1: Correlation Matrix

	ROE	ROA	EHSC	CDC	CELC
ROE	1.0000				
ROA	0.7478	1.0000			
EHSC	0.3145	0.3081	1.0000		
CDC	0.0630	0.0031	0.0317	1.0000	
CELC	-0.1929	-0.0429	-0.0243	0.0170	1.0000

Source: Author's Computations, (2019).

In this table above correlation matrix reflects the relative strength of the linear relationship between these variables. According to Gujarati (2004), multi-collinearity could only be a problem if the pair-wise correlation coefficient among regressors is above 0.80. However, it is obvious that the variables in Table 1 are orthogonal (statistically independent) and do not pose correlation concern for the study.

Table 2: Variance Inflation Factor

Variable	VIF	1/VIF
CDC	1.07	0.9371
CELC	1.06	0.9443
EHSC	1.00	0.9972
Mean VIF	1.06	

Source: Author's Computations, (2019).

It is an implicit assumption when using panel least square estimation method that the exogenous variables are not perfectly correlated or near perfect correlation with one another. If there is no relationship between the explanatory variables, they would be said to be orthogonal to one another.

Hence, table 4.3 displays the relationship between the independent variables of this study with the aid of variance inflation factor (VIF). The result indicated absence of multi-

collinearity among these variables as indicated by VIF of each variable falling below 10, and the average VIF is also less than 10.

Table 3: Effect of Environmental Accounting on Financial Performance of Quoted Oil and Gas Companies in Nigeria.

Variable	Random Effect Model (ROE)	Random Effect Model (ROA)
Constant	8.6546 (0.005)*	6.6123 (0.053)**
CDC	-0.0001 (0.582)	-0.0002 (0.085)**
EHSC	0.0000 (0.443)	0.0001 (0.043)*
CELC	-0.0001 (0.130)	4.9900 (0.883)
Wald X ²	4.33 (0.3629)	7.60 (0.1075)
Hausman Test		0.26 (0.9924)
Breusch and Pagan	52.55	138.41
Lagrangian Multiplier Test	(0.0000)*	(0.0000)*

* and ** denotes 5% and 10% level of significance.

() denotes Prob., while the value denotes coefficients of the variables.

Source: Author's Computations, (2019).

Table 3 above shows the result of the random-effects model for effect of environmental accounting disclosure on financial performance (ROE and ROA) of quoted oil and gas companies in Nigeria. Overall R² value of 0.0846 (9%) and 0.0543 (5%) for ROE and ROA respectively reflect the observed fitness in the sample regression line.

More so, these percentages (9%, and 5%) revealed the extent of how

financial performance of quoted oil and gas firms in Nigeria is explained by the independent variables (EHSC, CDC, and CELC) jointly. The description of each explanatory variable in relation with the explained variable (ROE and ROA) is as follows:

In terms of the sign and size of the coefficients that signify the effect of community development cost (CDC) on financial performance of quoted oil

and gas firms in Nigeria, it is apparent that CDC had negative but minute effect on ROE and ROA and was statistically insignificant at 5% and 10% level of significance, with the exception of ROA as supported with statistical figure (0.582 and 0.085 for ROE and ROA). This implies that there is negative relationship between community development cost (CDC) and financial performance of quoted oil and gas firms in Nigeria. Therefore, the stated null hypothesis that community development cost does not have significant effect on financial performance of oil and gas firms in Nigeria cannot be refuted.

The sign and magnitude of the coefficients that signify the effect of employee health and safety cost (EHSC) on financial performance of quoted oil and gas firms in Nigeria revealed positive but minute effect on ROE and ROA, and was found to be statistically significant at 5% level of significance on ROA, but insignificant on ROE as denotes with the statistical value (0.443 and 0.043). This implies that there is positive relationship between employee health and safety cost (EHSC) and financial performance of quoted oil and gas companies in Nigeria with respect to their return on assets but not on return on equity. Therefore, the stated null hypothesis that employee health and safety cost does not have significant influence on financial performance of oil and gas firms in Nigeria cannot be accepted.

More so, the sign and magnitude of the coefficients signifying the effect of cost of environmental law compliance (CELC) on financial performance of quoted oil and gas companies in Nigeria apparently revealed that CELC had negative effect on ROE, but positive and major influence on ROA and was statistically insignificant at 5% and 10% level of significance as supported statistically by (0.13 and 0.88). Therefore, the stated null hypothesis that cost of environmental law compliance does not have significant influence on financial performance of oil and gas firms in Nigeria cannot be refuted.

Furthermore, the Wald X^2 (4.33), (7.60), and (7.10) with P-value 0.3629, 0.1075 and 0.1308 respectively for ROE and ROA indicates that environmental accounting disclosure has no statistical significance on financial performance of quoted oil and gas companies in Nigeria even at 10% level of significance.

Conclusion and Recommendations

Based on the findings of this study, it was concluded that environmental accounting cost does not have significant effects on financial performance of the chosen oil sector for the period under review. Little funds were committed to CDC by the Nigerian oil sector for the period under study. Substantial fund was committed to EHSC which in turn increase Nigerian oil sector profitability under the period review.

A reasonable degree of changes occur in term of ROA, ROE and NPM when compared with environmental accounting cost due to significant fund committed to EHSC.

Based on the conclusion of this study, the following recommendations were made:

- i. Management of oil and gas firms should increase their participation in CDC to their host communities in order to guarantee a conflict free operation atmosphere needed by managers, customers, employees and interested parties for maximum productivity/profitability. This will silence the militant agitation in the host community.
- ii. Management of oil and gas firms should formulate and implement consistent environmental friendly policies like immediate removal of pollution or contaminants from the environment, community safety e.t.c, to enhance their competitiveness.
- iii. Government should make laws that will mandate oil and gas firms in Nigeria to deploy certain percentage of their income back to the host community. This will enhance compliance with environmental law and regulation and have the practice of environmental accounting.

References

Al-Tuwaijri, S., Christensen, T. & Hughes, K. (2004). The

Relations among Environmental Disclosure, Environmental Performance, and Economic Performance: A simultaneous equations approach. *Accounting, Organizations and Society*, 29(5):101-135.

Bartolomeo, M. (2000). Environmental Management Accounting In Europe: Current Practice and Future Potential. *The European Accounting Review*, 9(1):31–52.

Bassey, E. B., Effiok, S.O., Okon, E. E. (2013). The Impact of Environmental Accounting and Reporting on Organizational Performance of Selected Oil and Gas Companies in Niger Delta Region of Nigeria, *Journal of Finance and Accounting*, 4(3):57-73.

Bewley, K. & Li, Y. (2000). Disclosure of Environmental Information by Canadian Manufacturing Companies: A Voluntary Disclosure Perspective. *Advances in Environmental Accounting and Management*, 1(1):26-45.

Chauhan, L. R., & Kalola, R.A. (2014).An Analysis of Environmental Accounting and Firm Profitability of Reliance Industries Limited. *Journal of*

- Commerce and Management*, 3(1):1-25.
- Chen, J.C. & Roberts, R.W. (2010). Towards a more coherent understanding of the organisaton-society Relationship: A Theoretical Consideration for Social and Environmental Accounting Research. *Journal of business ethics*, 97(4): 651-665.
- Chokor, B.A. (1993). The Identification, Promotion and Preservation of Natural and Cultural Landscape for Tourism. Benin-City: Environment and Behaviour.
- Daniel, M. M. & Ambrose, J. (2013). Environmental Accounting and Firm Profitability: An Empirical Analysis of Selected Firms Listed in Bombay Stock Exchange, India, *International Journal of Humanities and Social Science*, 3(18):248-256.
- Dorweiler, V. P. & Yakhou, M. (2003). Dimensionality of Environmental Accounting. *Journal of Accounting and Finance Research*, 9(4): 47-64.
- Elkington, J. (2007). *Cannibals with Forks: The triple bottom line of 21st Century Business*, Oxford: Capstone Publishing, Oxford, UK.
- Enahoro, J.A. (2009). Design and Bases of Environmental Accounting in Oil & Gas and Manufacturing Sectors in Nigeria. An Unpublished Ph.D. Thesis submitted to the Department of Accounting, Covenant University Ota, Nigeria.
- Gale .R. (2006). Environmental management accounting as a reflexive modernization strategy in cleaner Production. *Journal of clean production*. 14(1): 1228-1236.
- Gujarati, D. N. & Sangetha, D. N. (2007). *Basic econometrics*, (4th edition), New Delhi, Tata McGraw Hill Education Pvt Ltd
- Hassan, S.U. (2011). Environmental Cost and Firm Performance: Evidence from Quoted Oil Companies in Nigeria. *International Journal of Marketing and Technology*, 1(6): 6-21.
- Hearit, O. (1995). Environmental accounting where we are now, where we are heading.
- Howes, R. (2002). Environmental Cost Accounting: An Introduction and Practical Guide, London, the Chartered Institute of Management Accountants.

- IFAC, (2005). Financial and Management Accountants Committee Report, Environmental Management in Organisations. The Role of Management Accounting, Issued by the International Federation of Accountants.
- Irish, T. (2000). *Environmental Accounting and Social Responsibility and Its Impact on Annual Reporting*. Business 2000, seventh edition.
- Mitchell, J., Percy, M., & McKinlay, B. (2006). Voluntary environmental reporting practices: A further study of poor environmental performers. *Australian Journal of Corporate Law*, 19 (2):64-81.
- Nigerian Stock Exchange (2018). *Fact book various issues*, Lagos: NSE. Lagos, Pathway Communications Limited.
- Okoye, A. E. & Ngwakwe, C. C. (2004). Environmental Accounting: A convergence of antecedent divergence. Accountancy; Management Companion.
- Osemene, O.F. (2007). An assessment of environmental and financial accounting issues in the operations of oil and gas industries in Nigeria“, An unpublished seminar paper, Department of Accounting and Finance, University of Ilorin, Ilorin.
- Pramanik, A.K., Shil, O.H. & Das, A.B. (2007). *Emironmental Accounting and Reporting*, New Delhi, Deep Publication P.V.T ltd. Rocky
- Shil, N. C. & Iqbal, M. (2005). “Environmental disclosure a Bangladesh perspective”, the cost and management of Journal 33(4), 26-228.
- Skillius, A. & Wennberg, U. (1998). Continuity, Credibility and Comparability; Key challenges for corporate environmental performance measurement and communication, a report commissioned by the European Environmental Agency; Sweden, The International Institute for Industrial Environmental Economics at Lund University.
- UNCTAD, (2003). Integrating Environmental and Financial Performance at the Enterprise Level: *A Methodology for Standardizing Co-efficiency Indicators*.