

Green Accounting and Corporate Viability of Selected Oil Industry Firms in Nigeria

Bralayefa Tantua, Ebimotimi G. Agbalaiko and Lyndon M. Etale

Department of Accounting, Faculty of Management Sciences, Niger Delta University,
Wilberforce Island, Bayelsa State, Nigeria

doi: <https://doi.org/10.37745/ejaaf.2013/vol11n71629>

Published June 24 2023

Citation: Tantua B., Agbalaiko E.G., and Etale L.M. (2023) Green Accounting and Corporate Viability of Selected Oil Industry Firms in Nigeria, *European Journal of Accounting, Auditing and Finance Research*, Vol.11, No. 7, pp.16-30

ABSTRACT: *The study was carried out to examine the relationship between green accounting practices and corporate viability of selected oil industry firms in Nigeria. Components of green accounting practices used include restoration cost, redemption cost and compensation cost, while return on investment was used to represent corporate viability. The study adopted the ex-post facto research design using secondary data collected from published annual reports of sampled firms (Oando, Shell, Agip, Conoil, and Alcon Oil) from 2010 to 2022. Data gathered was analyzed using the Ordinary Least Square (OLS) methods with the aid of E-views version 9 computer software. The results of the empirical analysis showed that restoration cost, redemption cost and compensation cost all had positive but not statistically significant association with return on investment (the measure of corporate viability) of selected oil industry firms in Nigeria. The study concluded that green accounting has positive influence on corporate viability of the selected oil industry firms in Nigeria. It was recommended that publicly quoted firms should adopt uniform green accounting reporting and disclosure standards for the purpose of control and measurement of viability.*

KEYWORDS: compensation cost, corporate viability, green accounting, redemption cost, restoration cost

INTRODUCTION

The environmental destruction that we witness today can be attributed to the industrial revolution of the 18th century, when machines and technology started to take the place of manual labour. Companies mainly focus on their economic viability and do not take into account the environmental effects caused by their financial activities, which is why the concept of green accounting has emerged. Green accounting is a system of accounting that aims to integrate environmental costs into the financial operations of public companies, revealing their capability to generate profit while benefiting people and the environment. Corporate viability is an evaluation of how well a company is meeting its business objectives, and involves measuring financial viability, customer satisfaction, employee productivity, and operational efficiency, among other metrics.

The purpose of corporate viability management is to pinpoint areas that can be improved, devise strategies to tackle them, and evaluate progress to guarantee that the organization is reaching its objectives. As David (2015) pointed out, corporate viability is monitored to assess whether the targets and aims set out in the planning stage have been met in the implementation stage. This is seen as an effective feedback control system that enables administrators to utilize the data from viability measurement systems to devise further actions and guarantee the ongoing advancement of the company.

In a study conducted by Eze (2021), it was noted that green accounting is an important system for businesses to assess and report on their environmental viability. This type of accounting system takes into account environmental costs and benefits of business operations and strategies and is also referred to as environmental or ecological accounting. Ogoun and Ekpulu (2020) further commented that by utilizing green accounting, businesses can gain insight into the costs associated with unsustainable practices and make more informed decisions about their operations.

Green accounting is viewed from the perspective of full or all-inclusive costing, which involves providing accurate information in organization's annual reports and accounts regarding the potential social costs associated with the impacts of their activities on the environment. Through green accounting, businesses can identify opportunities to reduce their environmental costs and generate additional income.

Green accounting has become increasingly popular in recent years, as organizations have realized the importance of reducing their environmental footprint. By implementing green accounting systems, organizations can track their environmental viability and make more informed decisions about their operations (Menike, 2020). Thus, green accounting can help organizations identify opportunities for sustainability, and gain insight into the financial benefits of doing so. This includes taking into account restoration costs, redemption costs, and compensation costs to ensure that organizations are meeting their environmental objectives.

Statement of the Problem

Green accounting is a method used to evaluate the corporate viability of a business organization in terms of its effect on the environment. It allows businesses to measure the economic costs and benefits of their environmental strategies, which are increasingly becoming mandatory in Nigeria. Although voluntary disclosures have been made to demonstrate the positive relationship between green accounting and corporate viability, studies have found that firms that make green accounting disclosures tend to be more profitable (Ogoun & Ekpulu, 2020; Menike, 2020). Despite this, green accounting is yet to become a mandatory requirement for companies listed on the Nigerian stock market. Nagle (2016) found that green accounting is a prevalent subject in the international community, but is not yet a priority in Nigeria. This study aimed at investigating the nexus between green accounting and corporate viability among selected oil industry firms in Nigeria using restoration, redemption and compensation costs as proxy for green accounting and return on investment as element of corporate viability. The

research questions and hypotheses were selected on the basis of the aforementioned aim of this study.

LITERATURE REVIEW

Conceptual Framework

Green Accounting

Green accounting is a term that encompasses a range of activities related to the identification and reporting of costs and benefits associated with efforts to reduce environmental impacts. This includes costs related to liability, waste disposal, and other green-specific costs. It also encompasses any costs and benefits that arise from changes to a firm's products or processes that involve a change in environmental impacts. All types of information collected and analyzed by firms can count as green accounting data, including input prices, technical and scientific studies, legal, marketing, and financial analyses. Green accounting information need not be the product of accountants, and can be used by product designers, financial analysts, and facility managers.

Galari, Gravas and Stavropoulos (2011) define green accounting as the process of communicating the social and green effects of organizations' economic actions to various interest groups within society and to the wider public. Crowther (2010) further explains green accounting as an approach to reporting a firm's activities which stresses the need to identify socially relevant behaviour, determine those to whom the company is accountable for its social viability, and develop appropriate measures and reporting techniques.

The importance of green accounting has been acknowledged for its role in providing information, management planning and control. According to Chibuzo (2013), it supports green protection by enabling organizations to comply with green regulations and policies in a cost-effective manner. Examples include investing in pollution control projects and looking for cost-efficient alternatives to toxic materials. It also involves reporting green wastes and emissions to regulatory agencies. In terms of eco-efficiency, green accounting helps to reduce costs and green impacts by encouraging more efficient use of water and materials. For strategic planning, it helps organizations to evaluate and implement cost-effective and environmentally-friendly initiatives to maintain their long-term competitiveness. This includes collaborating with suppliers to design green products and services, estimating the cost of future regulations, and reporting to stakeholders such as customers, investors and local communities.

Many accountants have a misconception of the fundamental nature of green accounting, meaning there is still no accepted form of green accounting. While it is true that accounting reports such as asset values, liabilities, dividends, cost estimates and financial analysis can be done in one procedure, the rules for the economic, social, and green consequences are all different. Furthermore, accounting income does not accurately reflect the economic profit. This has led to the belief that accounting practice does not take into account the social context, and that financial statements only reflect the capitalist nature of organizations.

Corporate Viability

Successful firms are seen as a crucial factor in the development of nations. Economists often refer to them as an engine, helping to drive economic, social, and political progress. To remain competitive, businesses must strive for viability excellence. In recent years, the concept of firm viability has become a major focus in strategic management research, and is commonly used as a dependent variable. Despite its frequent mention in the literature, there is no universal definition or accepted method of measurement for firm viability. This has led to diverse interpretations of the concept, as people's perceptions of what constitutes good viability may differ (Laudon & Laudon, 2006).

The success of a company's viability is typically measured by its profitability and return on investment. However, these conventional viability indicators have some fundamental flaws, such as the mismatch between revenue and costs. Revenue is generated from the management of natural resources, while only the costs incurred to acquire, transport, and process raw materials are taken into account. Companies are not accounting for the potential long-term losses due to environmental damage from resource extraction. This means that companies are only recognizing expenses related to the immediate viability or activities to generate revenue in the present period, ignoring any potential future costs.

Senior managers strive to constantly improve the viability of their organisations to meet the expectations of all stakeholders. This usually follows a circle of three stages, namely corporate planning, strategy implementation and viability measurement. Corporate planning involves setting goals and objectives that align with the organisation's vision and mission statements. Managers then assess the organisation's strengths and weaknesses, as well as its external opportunities and threats, to inform the formulation of goals and strategies. Viability measurement is then used to evaluate whether the goals and objectives set in the planning phase have been achieved in the implementation phase. A feedback control system is used to provide managers with the necessary information to plan further actions for continuous improvement (James, 2014).

Theoretical Framework

This study relied on the Stakeholder theory for providing the theoretical foundation for it, as reported in the following section.

Stakeholder Theory

The Stakeholder Theory was propounded by R. Edward Freeman which is widely credited as the originator of the Stakeholder Theory, which he first proposed in his landmark 1984 book, *Strategic Management: A Stakeholder Approach*. Stakeholder theory is a philosophical concept that states that people or organizations have moral and ethical responsibilities to any group or individual that can affect or be affected by their decisions. Stakeholder theory emphasizes that companies should not only consider shareholders' interests but also those of all stakeholders, including employees, customers, suppliers, and the environment. This theory suggests that companies should be ethical and responsible in their decisions and actions, and should strive to create a balance between the interests of different stakeholders. Stakeholder theory is related

to incorporate social responsibility, which is the notion that businesses should consider their responsibilities to the wider society.

In his study, Bassey (2013) highlighted that stakeholders are entities which are impacted by the operations of a company or that can have an effect on the corporation. He emphasized that for an organization to survive in the long run, it requires the support and agreement of its stakeholders. The more influential the stakeholders are, the more an organization must adjust to their desires and requirements. According to Freeman (2015), the fundamental principle of the stakeholder's theory is that a company's success is contingent on the effective management of all the relationships it has with its stakeholders, first coined by the Stanford Research Institute (SRI).

Myers (2009) recognizes that the pursuit of development has caused immense damage to the environment and natural resources, which could be a hindrance to sustainable development. Omotosho (2006) insists that for Nigeria to be competitive in the global market, a suitable macroeconomic green accounting should be employed. Owolabi (2006) claims that oil spillage is a major concern for the oil industry and the resulting environmental pollution. Ogbeifun (2002) further explains that spills can be caused by the deterioration of pipes due to age or sabotage.

Naturally, owners are also interested in the green behaviour of the company, taking into account its economic consequences and their effect on return on investment. Other interested parties, such as customers, suppliers, competing businesses, the public, government agencies, the media, and green protection initiatives, are likewise keeping a close eye on the company's approach to the environment. Jaroslara and Miroslau (2016) highlighted that the role of green accounting is to meet the information needs of all relevant stakeholders. Some of these stakeholders are primarily focused on the impact of the company's activities, products, and services on the environment.

Empirical Review

The purpose of Arshad's (2018) study was to investigate the impact of social and environmental accounting (SEA) on the profits of companies in Erbil, Kurdistan Region. To this end, the researcher administered a questionnaire to 50 local and international firms in the region, which was answered by the Chief Financial Officers (CFOs) or accountants of the firms. The study aimed to determine the extent to which these companies cared about the environment and society, as well as the governmental regulations and policies that needed to be followed, and the effect these policies had on profits in 2017. Previous empirical studies (Bowman and Haire, 1975; Vance, 1975; and Abbot and Monsen, 1979) conducted in the 1970s had already revealed the influence of environmental accounting on corporate viability, particularly in the context of limited accounting disclosure and weak state control in developing economies. Thus, Arshad's (2018) study sought to assess how the SEA of these companies in Erbil could affect their profit.

Bewley and Li (2000) investigated the environmental disclosures of Canadian manufacturing firms in 1993 with reference to the voluntary disclosure theory. To gauge these disclosures,

they applied the Wiseman index and used industry membership as a benchmark for pollution propensity. Their results revealed that firms with a higher pollution propensity and greater media coverage of their environmental viability are more likely to disclose general environmental information, which is consistent with socio political theories. Subsequently, Hughes et al. (2001) conducted a similar study with U.S. manufacturing firms in 1992 and 1993, using the modified Wiseman index to measure disclosures in the president's letter, MD&A, and notes sections of the annual report, as well as the CEP rankings as a proxy for environmental viability. They discovered that firms with lower CEP rankings generally make the most disclosures.

Likewise, Muhammed, Wasif, Shabbir, and Ume (2018) carried out a study on the relationship between environmental accounting and non-financial firms' viability: an empirical analysis of selected firms listed in the Pakistan stock exchange, Pakistan. Environment awareness has made people concerned over the world in green accounting to observe the ecological viability of their surroundings. The purpose of this study is to investigate the relationship between environmental accounting and non-financial firms' viability listed on the Pakistan stock exchange, Pakistan. The present study used the regression analysis technique (REM), using companies' annual data from 2006-2016. The empirical analysis showed a significant positive relationship between environmental accounting and a firm's size. While earning per share and return on capital employed statistically turned out to be insignificant. Therefore, those companies, which have huge sizes, spend more resources on social welfare in terms of environmental pollution protection. On the contrary, the limitation of this research is the small sample size of listed companies in the Pakistan stock exchange. Hence, outcomes cannot be generalized for the entire population. Based on the results, it is suggested that government must give some tax relief to those firms, which work for environmental protection and environmental reporting should be compulsory in Pakistan to have a clean homeland. This study has contributed to the literature by adding data from Pakistan. To the researcher's best knowledge, the data on Pakistan is currently limited and this study contributes to a better understanding of environmental reporting practices.

Nwaiwu and Oluka (2018) investigated the relationship between environmental cost disclosure, corporate environmental regulations and the financial viability of oil and gas companies in Nigeria. Through time series data collected from annual financial reporting and economic review of Central Bank of Nigeria, the authors employed Pearson product moment coefficient of correlation and multiple linear regression analysis with the aid of special package for social sciences (SPSS) version 22. The results of the study showed that adequate disclosure of environmental cost and compliance to environmental regulations have a positive and significant effect on financial viability. Consequently, the authors suggested that management in oil and gas companies should develop environmental cost systems to ensure improved corporate viability. Additionally, it was recommended that regulatory enforcement should be implemented for proper environmental cost disclosure and reporting.

The results of Ofunya's (2015) research suggest that the implementation of green accounting practices has a positive effect on the viability of Kenyan tea factories. Utilizing a descriptive

survey research design, a self-designed questionnaire was administered to environmental management representatives of 63 tea factories operating under the East Africa Tea Traders Association. The data was analyzed with the Statistical Package for Social Sciences and factor analysis was used to explore the underlying variance structure of a set of correlation coefficients. The findings of this study provide the tea sector with valuable insights into how to ensure environmental sustainability.

Tochukwu (2018) investigated the influence of environmental costs accounting and reporting on the financial viability of quoted Nigerian oil companies through a survey of their financial reports from 2006-2015. Applying regression analysis with the help of Statistical Package for Social Sciences (SPSS), the study concluded that improved environmental viability leads to an increase in the business value of an organization. Additionally, environmental accounting offers organizations the possibility of reducing environmental and social costs and optimizing their viability.

In addition, Azhar (2019) examined the impact of environmental accounting information system alignment on firm viability and environmental viability in the case of small- and medium-sized enterprises. The research was based on a survey of 300 SMEs in Saudi Arabia and the results showed that environmental accounting information system alignment had a positive effect on both firm viability and environmental viability. Furthermore, Bilal, Zainon and Tareq (2016) investigated the effect of green accounting on sales volume of green cars. Through a descriptive survey research design, the study population consisted of 332 car dealers over the 2010-2014 period, and the results showed that green marketing strategies had both positive (e.g. green product, green promotion and green process) and negative (e.g. green price, green physical evidence, green people, green distribution) effects on sales growth. The study concluded that the adoption of green marketing strategies could potentially increase the sales volume of green cars, while the adoption of these strategies could lead to a decrease in sales volume of non-green cars.

Likewise, Hayford, Joseph and Afra (2013) studied the green marketing orientation and viability of SMEs in Ghana. Methodologically, the study adopts the descriptive survey research design, with a sample population of one hundred and twenty eight (128) respondents. The self-designed structured questionnaire was adopted to collect information from the selected population. After distribution and retrieval of the questionnaire, the questionnaires were analyzed using the Pearson Product Moment Correlation methods to analyze the stipulated research hypotheses. The study indicates that there exists a strong relationship between green orientation employee satisfaction, green orientation customer satisfaction, green orientation employee retention and green orientation image. All the dimensions of the GMO scale have positive and significant impacts on viability of the firms. In addition, there exists stronger impact of green marketing dimensions on the customer business to business (B2B) satisfaction and employee retention.

Furthermore, Raschael, Francis, Munyoki and Kinoti (2017) investigated the relationship between green accounting practices and customer satisfaction in the soft drink industry in

Nairobi Kenya. This study was anchored on consumer behavior theory and was guided by positivistic philosophy. The study adopted a descriptive cross-sectional research design to determine how green marketing practices affect customer satisfaction in soft drink companies in Nairobi County, Kenya. The study targeted a sample of 180 trade customers and 162 soft drink firms but, the researcher managed to successfully collect data from 130 of the trade customers and 102 soft drink firms. Since Cronbach's Alpha is the most commonly used measure of co-efficient of internal consistency, the study adopted the same. Descriptive statistics (mean scores and measures of dispersion) and inferential statistics (correlation, analysis of variance and regression analysis) was conducted to determine the expected relationships between green marketing practices and customer satisfaction. The study results revealed a statistically significant positive linear relationship between green marketing practices and customer satisfaction ($\beta = .389$, $p\text{-value} = 0.002$). The relationship was statistically significant because the p value is less than the set value of 0.05 ($p\text{-value} = 0.002$). The regression results also showed that green marketing practices had explanatory power on customer satisfaction in the soft drink industry in Nairobi Kenya in that it accounted for 22.3 percent of its variability ($R\text{ square} = 0.223$). Based on the overall study results obtained from the tests of the study hypotheses, it is concluded that there was a relationship between green marketing practices and customer satisfaction in the soft drink industry in Nairobi Kenya.

Bassey, Sunday and Okon (2013) conducted a study to investigate the impact of environmental accounting and reporting on the viability of selected oil and gas companies located in the Niger Delta region of Nigeria. The research utilized random and stratified sampling techniques to select the sample elements, and collected data both from primary and secondary sources. The data was analyzed using Pearson's product moment correlational analysis and the results showed that there is a positive relationship between environmental cost and firm profitability. It was concluded that companies should consistently report and disclose environmental-related information in their financial statements and reports, and that accounting standards should be regularly updated to ensure they remain dynamic and applicable to changing environmental and situational needs.

Mohammed, Sutrisno, and Prihat (2013) employed Partial Least Square (PLS) analysis in order to examine the impact of environmental accounting implementation on company value, as well as the mediating role of environmental viability and environmental information disclosure. The results of their research suggest that environmental accounting implementation has a direct effect on company value, as well as an indirect effect through environmental information disclosure. Additionally, environmental viability has a direct effect on company value, and an indirect effect on company value through environmental information disclosure. However, environmental accounting implementation and environmental viability did not have an effect on company value through environmental information disclosure.

Agbiogwu, Ibendimihu and Okafor (2016) investigate the influence of environmental and social costs on the viability of Nigerian manufacturing firms using secondary data from 10 randomly selected companies' annual report and financial summary from 2014. The t-test of SPSS version 20 was used to analyze the collected data which revealed that environmental and

social costs significantly affect net profit margin, earnings per share, and return on capital employed for the sample firms. The researchers recommend that the government should ensure that manufacturing companies in Nigeria strictly follow environmental laws.

Green Accounting and Corporate Viability

Lekhanya (2014) found that economic viability can have an impact on a firm's decision to engage in green accounting and disclose its outcomes. Roberts (2015) highlighted that when a company is not doing well, economic demands take priority over social and environmental responsibility costs. Additionally, Meek (2014) noted that when a firm has a weaker financial standing, it is unable to provide more information to satisfy its stakeholders. Based on the stakeholder theory, there is a positive correlation between economic viability and a company's decision to carry out environmental audits.

According to Okoye and Ngwakwe (2014), corporate-level environmental accounting involves the identification, measurement, recognition, and disclosure of environmental costs, liabilities, and contingencies in a company's financial records for the benefit of all stakeholders. Macve and Carey (2014) have suggested the development of 'natural resource accounts' which would account for the depletion of natural and environmental resources and provide an environmentally-adjusted 'value added statement' or 'sustainable development profit and loss statement' based on sustainable development accounting principles.

In this study, financial viability is assessed primarily by measuring the return on total assets (ROA) of an organization. ROA is calculated by dividing earnings before interest and taxes (EBIT) by total assets. This ratio gives an indication of how efficiently the firm is using its resources to generate profits. It is a key indicator of the financial wellbeing of an organization, providing insight into its profitability, solvency, liquidity, gearing, and growth prospects.

METHODOLOGY

The ex-post-facto research design was utilized in this study. This type of design involves using variables that cannot be altered or manipulated by the researcher during the experiment, and instead requires the collection of data after the events have already occurred.

For this study, a sample of five public quoted firms in Nigeria was selected using the simple random sampling technique. The firms chosen were Oando, Shell, Agip, Coin Oil and Alcon Oil. Data was collected from these companies' management between 2010 and 2022, which included Restoration cost (RSC), Redemption cost (RDC) and Compensation cost (CPC); regressed against Return on investment the employed measure of corporate viability. The data was obtained from secondary sources, that is, the published annual reports of the selected companies.

The data series for the variables in the model were evaluated using the Ordinary Least Squares (OLS) method of regression of the green accounting variables (Restoration cost, Redemption

cost, and Compensation cost) against Return on investment (proxy for Corporate viability) of selected oil industry firms in Nigeria aided by the E-views software.

Model Specification

This research builds upon the Khan-Knight (1991) and Dada-Oyeranti (2012) macroeconomic models by incorporating open economy indicators. It examines the dynamic relationship between the activities of insurance companies and equity capital in Nigeria. The functional and parametric model used for this purpose is as follows:

The study adopted the Ordinary Least Square (OLS) method to develop a model on the
 $ROI = f(RSC, RDC, CPC)$ - - - - - (1)

This is transform to the econometric form or equation as follows:

$$ROI = \beta_0 + \beta_1 RSC + \beta_2 RDC + \beta_3 CPC \quad - \quad - \quad - \quad - \quad (2)$$

Where,

ROI = Return on investment (proxy for corporate viability)

RSC = Restoration cost

RDC = Redemption cost

CPC = Compensation cost

β = intercept

$\beta_1 - \beta_3$ = Coefficient of the independent variables

Note: All variables are in their natural logarithm form.

RESULTS AND DISCUSSION

Table 1: Summarised Data on ROI, RSC, RDC and CPC by Company.

Company	ROI (₦Millions)	RSC (₦Millions)	RDC (₦Millions)	CPC (₦Millions)
Oando	20,657.32	83,924.08	5,940.2	520.9
Shell	24,296.33	14,629.26	6,757.9	585.6
Agip	24,794.24	29,327.67	7,981.4	612.3
ConOil	54,204.80	36,833.33	9,186.3	643.1
Alcon Oil	63,258.58	43,039.08	9415.2	694.8

Sources: Researcher's Computation from Annual Reports of Selected Companies 2023.

This Table 1 shows the data on the viability of five different companies (Oando, Shell, Agip, ConOil and Alcon Oil) in terms of their ROI, RSC, RDC and CPC, covering the period 2010 to 2022. The figures are in millions of Nigerian currency. Table 1 reveals that Oando has the lowest ROI of 20,657.32, while Alcon Oil has the highest ROI of 63,258.58. The highest RSC is 83,924.08 for Oando, while the lowest is 14,629.26 for Shell. The highest RDC is 9,415.20 for Alcon Oil, while the lowest is 5,940.20 for Oando. Lastly, the highest CPC is 694.8 for Alcon Oil, while the lowest is 520.90 for Oando.

Table 2: Regression Results

Dependent Variable: ROI

Variable	Coefficient	Std. Error	t-statistic	Prob
C	-45.792	16.4916	3.532	0.0039
RCP	0.4153	0.212	5.117	0.0618
RCP	0.619	0.813	3.133	0.7811
CCP	0.513	0.411	5.367	0.0891
R-squared	0.921	Mean dependent var		20.6544
Adjusted R-squared	0.901	S.D. dependent var		30.53357
S.E. of regression	0.253769	Akaike info criterion		0.318390
Sum squared resid	0.708383	Schwarz criterion		0.507203
Log likelihood	1.612076	F-statistic		62.07764
Durbin-Watson stat	0.741	Prob (F-statistic)		0.000000

Source: Author's Computation Using E-view 9

Table 2 shows the results of a regression analysis of the effect of green accounting and corporate viability of selected oil industry firms in Nigeria. The dependent variable is Return on investment (ROI). The independent variables are Restoration cost (RSC), Redemption cost (RDC) and Compensation cost (CPC). The overall coefficient of determination of the regression model (R-squared), the coefficients of the independent variables, standard errors, t-statistics, and probability values of the variables are also provided. The results show that all the explanatory variables have positive but not significant association with the response variable (return on investment) given the value of the p-values.

The R² Square value is 0.921 implies that 92 per cent of the change in corporate viability represented by ROI is explained by the combined changes in the explanatory variables (Restoration cost, Redemption cost and Compensation cost), Also, the Adjusted R² value of 0.901 implies that at 90 per cent confidence level the model used in the estimation is a proper and good fit, and to that extent can be relied on for interpretation and for making valued judgment.

DISCUSSIONS

Restoration cost and Return on investment:

H₀₁: There is no significant relationship between restoration cost return on investment of selected oil industry firms in Nigeria

From Table 2, the regression result shows that there is no significant relationship between restoration cost and return on investment. It implies that a unit increase in restoration cost will lead to 0.4153 increases in return on investment. Restoration cost has no statistically significant association with ROI with a (p-value of 0.0618) at five per cent level of significance as 0.0618 is greater than 0.05. Thus, the null hypothesis is accepted.

The findings of this study are supported by the research results Arhar (2019) and Arshad (2018). However, this study results are not consistent with those of Mohammed et al (2018) and Nwaiwu & Oluka (2018).

Redemption cost and Return on investment:

H₀2: There is no significant association between redemption cost and return on investment of selected oil industry firms in Nigeria

From Table 2, the regression results show that a unit increase in redemption cost will lead to 0.619 increase in return on investment (corporate viability) as indicated by the coefficient. Given the p-value of 0.7811 which also greater than 0.05, Redemption cost also, has no statistically significant link with ROI at five per cent level of significance. Therefore the null hypothesis is also accepted.

The findings of this study while in line with research results of Arhar (2019) and Arshad (2018); are not supported by the findings of Mohammed et al (2018) and Nwaiwu & Oluka (2018).

Compensation cost and Return on investment:

H₀3: There is no significant relationship between compensation cost and return on investment of selected oil industry firms in Nigeria

From Table 2, the regression results show that there is no significant relationship between Compensation cost and ROI of selected oil industry firms in Nigeria as the p-value of compensation cost (0.0891) is greater than 0.05. Given the coefficient of CPC of 0.513, a unit increase in CPC will lead to a 0.513 increase in ROI. Here again the null hypothesis was accepted.

The findings of this study while in consonance with research results of Arhar (2019) and Arshad (2018) but are not in agreement with the findings of Mohammed et al (2018) and Nwaiwu & Oluka (2018).

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study was carried out to examine the relationship between green accounting practices and corporate viability of selected oil industry firms in Nigeria. Components of green accounting practices used include restoration cost, redemption cost and compensation cost, while return on investment was used to represent corporate viability. The study adopted the ex-post facto research design using secondary data collected from published annual reports of sampled firms (Oando, Shell, Agip, Conoil, and Alcon Oil) from 2010 to 2022. Data gathered was analyzed using the Ordinary Least Square (OLS) methods with the aid of E-views version 9 computer software. The results of the empirical analysis showed that restoration cost, redemption cost and compensation cost all had positive but not statistically significant association with return on investment (the measure of corporate viability) of selected oil industry firms in Nigeria. The study concluded that green accounting has positive influence on corporate viability of the selected oil industry firms in Nigeria.

Recommendations

From the findings of the study, the following recommendations were made:

1. This study revealed that selected companies have put in much effort towards environmental protection. However, the current accounting system does not reflect such efforts for its stakeholders. So, there should be an accounting standard for measuring, treatment and

disclosure of firms' green accounting practices. This will enhance proper environmental reporting

2. Publicly quoted firms should adopt uniform reporting and disclosure standards of green accounting and environmental disclosure practices for the purpose of control and measurement of viability

3. The firms should be encouraged to disclose their environmental practices in their annual reports to enhance their competitiveness which would subsequently lead to improvement in corporate viability.

REFERENCES

- Adams, R. (1997). Linking financial and environmental viability. *Environmental Accounting and Auditing Reporter*, 2(10), 331-335.
- Adediran, S. A. & Atu, O. K. (2010). Corporate environmental responsibility as a means of alleviating Niger Delta crises. *Academic Scholarship Journal*, 2(1), 34-44.
- Aina, E. O. A. (1991). The making of Nigerian environmental policy FEPA monograph/Federal Environmental Protection Agency.
- Albertini, E. (2014). A descriptive analysis of environmental disclosure: A longitudinal study of French companies. *Journal of Business Ethics*, 12 (2), 233-254.
- Anifowose, B., Lawler, D. M., Van Der Horst, D. & Chapman, L. (2016). A systematic quality assessment of environmental impact statements in the oil and gas industry. *Science of the Total Environment*, 572, 570-585.
- Awan, H. M. & Shahzad, B. K. (2011). Customer's criteria for selecting an Islamic bank: evidence from Pakistan. *Journal of Islamic Marketing*, 2(1), 14-27.
- Babalola, Y. A. (2012). The impact of corporate social responsibility on firms' profitability in Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, 45(1), 39-50.
- Bagur-Femenias, L., Perramon, J. & Amat, O. (2015). Impact of quality and environmental investment on business competitiveness and profitability in small service business: The case of travel agencies. *Total Quality Management & Business Excellence*, 26(7-8), 840-853.
- Bassey, E. B., Sunday, O. E. & Okon, E. E. (2013). The impact of environmental accounting and reporting on organizational viability of selected oil and gas companies in the Niger Delta Region of Nigeria. *Research Journal of Finance and Accounting*, 4(3), 57-73.
- Bennett, M., & James, P. (Eds.). (2017). *The Green bottom line: Environmental accounting for management*. Lagos: Routledge.
- Brammer, S. & Pavelin, S. (2008). Factors influencing the quality of corporate environmental disclosure. *Business Strategy and the Environment*, 17(2), 120-136.
- Brinkmann, T., Scholles, C., Wind, J., Wolff, T., Dengel, A. & Clemens, W. (2008). Processing of coal mine gas with low methane concentrations for use in high-temperature fuel cells. *Desalination*, (1-3), 7-11.
- Burrirt, R. L., Hahn, T. & Schaltegger, S. (2002). Towards a comprehensive framework for environmental management accounting-Links between business actors and

environmental management accounting tools. *Australian Accounting Review*, 12(27), 39-50.

- Chen, X., Cui, Z., Fan, M., Vitousek, P., Zhao, M., Ma, W. & Deng, X. (2014). Producing more grain with lower environmental costs. *Nature*, 2(3), 486-489.
- Crowther, D. (2002). *A social critique of corporate reporting: A semiotic analysis of corporate financial and environmental reporting*. Port Harcourt: Ashgate Publishing.
- D'Amico, E., Coluccia, D., Fontana, S. & Solimene, S. (2016). Factors influencing corporate environmental disclosure. *Business Strategy and the Environment*, 25(3), 178-192.
- Dechezlepretre, A. & Sato, M. (2014). The impacts of environmental regulations on competitiveness. *Policy brief, Grantham Research Institute on Climate Change and the Environment & Global Green Growth Institute*, November 201
- Drabo, A. (2010). Environment quality and economic convergence: Extending environmental Kuznets curve hypothesis. *Economics Bulletin*, 30(2), 1617-1632.
- Egan, T. M., Yang, B. & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human resource development quarterly*, 15(3), 279-301.
- Escrig-Olmedo, E., Munoz-Torres, M. J., Fernandez-Izquierdo, M. A. & Rivera-Lirio, J. M. (2017). Measuring corporate environmental viability: A methodology for sustainable development. *Business Strategy and the Environment*, 26(2), 142-162.
- Frances Cairncross. (1995). *Green: A guide to business and the environment*. Lagos: Island Press.
- Galani, D., Gravas, E. & Stavropoulos, A. (2011). The relation between firm size and environmental disclosure. In *International Conference on Applied Economics-ICOAE*, 2(5), 179-186.
- Hutchinson, F. (2000). Environmental accounting: Issues reporting and disclosure. *Journal of Applied Businesses research*, 16 (4), 12-33.
- Igben, R. O. (2004). *Financial accounting made simple*. Lagos: ROI Publishers.
- Medley A.A. (1997). Environmental accounting—what does it mean to professional accountants. *Accounting Auditing and Accountability Journal*, 10(4), 89-113.
- Odocha, J.N.K. (2002). *The danger of oil spillage and excerpts*. National Annual General Conference of the Association of Resident Doctor NPDC monitor, second quarter
- Omnamasivaya, B. & Prasad, M. S. V. (2016). The influence of financial viability on environmental accounting disclosure practices in India: Empirical evidence from BSE. *IUP Journal of Accounting Research & Audit Practices*, 15(3), 16.