

Comparative Analysis of Environmental Accounting and Corporate Performance in Nigeria

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Abstract

The study analyzed the performance of Nigerian publicly traded corporations in terms of environmental accounting (green accounting). The investigation covers the years 2012 through 2020 using secondary data and an ex-post-facto approach. This methodology was chosen since the data had already been documented by reputable organizations like the Central Bank of Nigeria and other financial institutions. Five publicly traded firms were chosen at random from among the research's overall population: Oando, Shell, Agip, Coin Oil, and ALCON Oil. The study comprised all publicly traded Nigerian enterprises. Using Ordinary Least Square (OLS) methodology. The findings of the study exposed that restoration, redemption, and compensation expenses positively affect the companies' performance, on performance. That is, green accounting has aided in the improvement of organizational performance in the majority of Nigeria's publicly traded companies. It also demonstrates that the majority of the firms mentioned are active in restoration, redemption, and compensation testing. The article recommends that, a standard should be created for analyzing, treating, and reporting a company's environmental actions. For the purposes of performance control and assessment, publicly traded companies should establish common environmental reporting and disclosure standards. Companies' competitiveness and overall performance can be enhanced by making their environmental practices public in their annual reports.

Keywords: Restoration, Redemption, Compensation, Performance

1.1 Introduction to the Study

The business environment has grown very competitive in the twenty-first century as a result of developments in technology, infrastructure, and global access to information. Due to the increased demand for consumers, businesses must boost their resources, focusing more on obtaining and keeping customers. Because of the ever-increasing competition in the worldwide market, businesses must be adamant about meeting client demands and desires more efficiently and effectively than their competitors. As a result, most organizations have implemented several

accounting activities by accountants that have aided in improving company performance (Kotler, 2008).

Accountants can make a significant contribution to the discussion of social responsibility in the workplace. The capacity of accountants to create a system for holding corporations accountable for their actions is a fundamental component of their contribution (Lehman, 2007). Social responsibility accounting is a broad word that incorporates a wide variety of issues concerning firms' dealings with the general public. Ethics, governance, charity, community participation, product safety, equal opportunity, human rights, and environmental efforts are just a few of the topics covered. The current cases of corporate scandals are a reason enough to create a concern for how companies comply with codes of good corporate governance. Environmental and human rights groups in industrialized nations were the first to push for the development of what is now known as "social responsibility accounting," also called "social and environmental accounting," "company social reporting," and "corporate social responsibility reporting."

Early social responsibility accounting (Drucker, 2015) emerged in the 2000s, coinciding with the environmental movement (Gray & Guthrie, 2007). According to Waddock (2014), social responsibility accounting is a branch of accounting that tries to define an institution's or organization's results and financial status from a social standpoint because businesses are important and have an impact on society a whole. From the accounting profession's perspective, such consideration is intrinsically tied to social and environmental reporting or accounting when addressing social responsibility accounting. A company's social and environmental impacts are communicated to specialized interest groups and the general public through this procedure (Gray, Owen & Maunders, 2010).

Companies around the world have devised a variety of strategies to address the intersection of societal needs, the natural environment, and corresponding business imperatives, depending on how deeply and effectively they incorporate social responsibility approaches into strategy and day-to-day operations. It's impossible to overlook environmental issues when running a business. When adopting social responsibility accounting, companies must consider the interests of their customers, workers, shareholders, communities, and the environment in all parts of their business. Innovation can be aided by adding social, environmental, or sustainability considerations into new product and service development, according to Little (2016). A less risky investment, according to Shane and Spicer, is one in which the corporate social responsibility (CSR) risk is actively considered (2011).

When it comes to calculating the environmental and economic impact, green accounting is an excellent tool. Economic well-being and pollution and resource degradation are reflected in environmental accounts (Festus, 2015). Various natural resources are used by businesses to keep things functioning properly. Investing a portion of a company's profits on environmental preservation and ecological balance is essential. As a result, enterprises must account for the use of substances that have the potential to harm the environment. In India, environmental accounting is still in its early stages. Environmental accounting and reporting face a number of issues, including environmental accounting technique, social values in applicable assumptions, economic value, and a lack of trustworthy industrial data. In this context, the current research is being carried out to establish a theoretical model of green accounting and reporting methods for Indian corporations (Little, 2016).

Environmental circumstances have a considerable influence on accounting items such as capital, assets, liabilities, expenditures, and income. The many accounting items relating to the environment can be categorized into four basic dimensions of green accounting such as,

restoration cost, redemption cost and compensation cost. Despite all the detailed literatures reviewed in this study, there are some lapses and unanswered questions regarding to the green accounting and efficiency of quoted firms in Nigeria, therefore, this study will use to solve the challenges of accounting and also add incredibly to knowledge of existing literatures. The purpose of this research is to look into green accounting and company performance in Nigeria using a comparative analysis of publicly traded companies.

Research Questions

The following research questions were answered in course of carrying out this study;

1. To what extent does restoration cost have influence on the performance of public quoted organizations?
2. To what extent does redemption cost have effect on the performance of quoted organizations?
3. To what extent does compensation cost have impact on quoted organizations?

Research Hypotheses

For the study, the following research hypotheses were developed:

HO1: In Nigeria, there is no substantial association between the cost of restoration and the performance of publicly traded companies.

HO2: In Nigeria, the redemption cost has a major impact on the performance of publicly traded companies.

HO3: In Nigeria, there is no significant link between compensation tests and the success of publicly traded companies.

2. Relevant Literature Review

2.1 Conceptual Review

Green or Environmental Accounting

Many people use the term "green accounting" in a variety of ways, and it has a wide range of meanings. The term "green accounting" is often used to describe the process of identifying and disclosing environmental expenditures, such as environmental liabilities and waste disposal expenses. To be considered green, a firm must account for all costs and benefits connected with product and operation improvements and shifts in the company's green effect (James, 2014). He went on to say that green accounting data does not have to be created by accountants or used by accountants.

While financial data refers to any information with a financial connotation, whether it is explicitly or implicitly employed in a company's decision-making process, the term "financial data" is more appropriate. Green accounting data will be used by product designers, financial analysts, and facility managers in equal measure. He clarified that nearly any type of data collected and processed by businesses qualifies. An example of this would be the pricing of raw materials, as well as the results of scientific and technological studies that link production processes to physical outputs. According to Seetharaman (2013), green accounting is a method for calculating the total environmental costs of a business's actions and/or goods. To track an organization's environmental performance in a more quantifiable method, they also mentioned green accounting. Aggregated air emissions, water effluent discharge, soil pollution, and boundary

noise levels are the most important regions to monitor. When an organization's financial decisions have ramifications for its social and environmental well-being as well as its bottom line, it's called "green accounting," according to Gray, Owen, and Maunders (2014). "Green accounting" (Crowther, 2010) defines it as a strategy to report on a company's operations that stresses socially relevant conduct, deciding who is responsible for a company's societal performance and developing appropriate metrics and reporting techniques.

Nagle's (2016) study on green accounting demonstrates that green accounting is a top priority for company executives. Green accounting is not yet a priority in Nigeria, despite the fact that it is a hot topic in the international community. Field and Field (2011) talk about how pollution of the air, water, and land contributes to environmental degradation and its associated costs. There is a tremendous volume of solid trash that must be disposed of either on land or incinerated if domestic garbage is discharged into rivers and coastal waterways without being treated or recycled. Polluting stack-gas scrubbing results in a highly concentrated sludge from airborne SO₂ emissions from power plants. Nighttime dumping, illegal dumping on the roadside, and rural dumping are all examples of degradation. Enhanced green accounting is seen as a vital complement to better environmental decision-making in the private sector by companies and environmental organisations alike. Environmental accounting professionals are widely believed to be able to assist businesses in devising and implementing environmentally friendly strategies that are also profitable. As a result, environmental regulation is changing toward policies that rely more heavily on the collection and reporting of environmental data by the public sector.

Corporate Performance

For underdeveloped countries, a successful firm establishment is an essential component. Economists often compare countries to an engine when it comes to determining their economic, social, and political growth. In order to thrive in today's highly competitive business environment, every organization must function on a performance-based model (David, 2015). Over the last few years, strategic management research has increasingly used firm performance as a dependent variable. According to scholars, there is no consensus on how to describe or quantify it. Different people's tastes will lead to alternate interpretations because most experts cannot agree on a common operational definition of corporate performance (Laudon & Laudon, 2006).

Performance as a measure of a company's success, in the form of profit and return on investment, is based on traditional performance measures that have inherent problems. One of them has to do with the matching notion, which isn't proportionate to income and expense. Its income is derived from its resource management activities (natural). However, only the costs of acquiring, transporting, and processing resources are recorded (raw materials). The company was unable to account for losses incurred as a result of resource exploitation and its consequences. It demonstrates that firms only identify expenses connected to performance or measure implementation efforts in order to create income in that period, although future costs are a result of long-term environmental damage. It should be connected with notions of how items are entrenched in the environment in terms of how raw materials are procured, how raw materials are mass produced, and how their use impacts the environment, as well as where the community benefits.

To address the needs of a variety of stakeholders, senior executives are continually searching for methods to enhance their firms' performance. Organizational improvement approaches are often divided into three categories: corporate planning, strategy execution (execution), and performance assessment or evaluation (David, 2005). The corporate planning process includes setting goals and objectives that are aligned with the organization's corporate vision, mission, and value statements. Organizational strengths and weaknesses as well as external

opportunities and dangers are taken into consideration while setting goals. Finally, corporate performance is assessed to see if the aims and objectives set forth during the planning phase were met during the implementation phase. With the support of a competent feedback control system, managers can use the information provided by performance measurement systems to plan future activities to assure the organization's continued success (James, 2014).

Environmental Accounting in Nigeria

A company's financial line is directly impacted by environmental expenditures, yet these costs are not the company's responsibility. Traditional and hidden expenses are included in private costs that encompass a person's reputation and the worth of their personal connections. To enhance environmental management systems, such as planning, control and monitoring of material or energy flows might employ this categorization (Lethmate & Doost, 2000).

It's possible to correctly measure environmental preservation-related costs and benefits using environmental accounting (in monetary or physical terms). Only a few of the words used to describe the issue include social and environmental accounting, social and environmental reporting, and social and environmental accounting. Environmental accounting can provide a more accurate picture of the real costs associated with the procurement and processing of raw materials; production; distribution; usage; maintenance; and disposal; (Seetharaman, 2013). Due to production activity, natural resources have been exhausted and the environment has been harmed. As a result of these activities, the ozone layer has been depleted, creating an environmental system imbalance (Dike, 2011). Environmental deterioration, resource depletion, and the long-term viability of economic activity have sparked renewed interest in environmental accounting and reporting. Environmental accounting, a relatively new idea in Nigeria, seeks to take into account the effect of the physical environment on production and consumption (Adediran, 2010).

Organizations need to account for these consequences of production and consumption in their financial accounts. Several statutes govern the reporting of financial information by companies that are traded on the Nigerian Stock Exchange (NSE) in Nigeria. The following are a few of the monuments:

1. Companies and Allied Matters Act 1990 as amended to date (Oyewole, 2001)
 2. Nigeria Accounting Standard Board (NASB), now Financial Reporting Council of Nigeria (FRCN) (Oyewole, 2001)
 3. Investment and Security Act 1999
 4. Bank and other Financial Institutions Act 1991
 5. The Insurance Act 1997
 6. Security and Exchange Commission Law Elkington (2017).
- i. **Conventional Costs:** Cost accounting and capital budgeting often handle the expenses of using raw materials, utilities, capital assets, and supply. The environmental elements of these expenditures, on the other hand, are rarely termed environmental costs. Whatever the case, it's vital to take these costs into account while making business decisions.
 - ii. **Potentially Hidden Costs:** This is an example of an environmental expense which may be hidden from management due to its rarity or the fact that it is collected in corporate overhead accounts (EPA 742-R-95-003, 1995). Regulatory and voluntary environmental costs, up-front environmental costs, and back-end environmental costs are just a few instances of expenses that management is completely unaware of.
 - iii. **Contingent Costs:** Costs that could be incurred in the future are included in this section. Remediation and compensation costs can be incurred as a result of unintentional discharges into the environment (such as oil spills) as well as fines and penalties for future

- regulatory infractions. Internal management accounting procedures and forward-looking judgements have not been required to far to document these costs.
- iv. **Image and Relationship Costs:** The company's management, customers, workers, communities, and regulators all have subjective (though measurable) judgments on the company's operations. These charges are also referred to as "image and connection costs" for the company. Environmental reports and community relations initiatives, fees paid voluntarily for environmental activities (such as tree planting), and charges for recognition programs are all included in this area of expenditures. However, the immediate rewards of relationship or business image investments are usually intangible.
- v. **Societal Costs or External Costs:** A company is not legally liable for any of the costs associated with environmental or societal issues. As a result of the legal system, they result in environmental degradation and uncompensated injury to persons and property. It's difficult to evaluate societal costs at the moment; yet, any environmentally conscious firm must examine external ramifications and value societal costs in order to incorporate them into their planning and decision-making.

2.1.5 Impact of Green Accounting and Corporate Performance

Lekhanya (2014) claims that the financial performance of a company affects management's decision to utilize green accounting and to report the results. A company's bottom line takes precedence over its social and environmental responsibilities when it's in trouble (Roberts, 2015). To make matters worse, it's unlikely that a company of this size would have the financial wherewithal to provide additional information in order to meet the various stakeholder demands (Meek, 2014). Stakeholder theory holds that a company's financial success is linked to its decision to perform environmental audits.

The authors of Okoye and Ngwakwe (2014) contend that environmental accounting at the corporate level is concerned with documenting environmental costs, liabilities, and risks in a company's financial records for the benefit of both internal and external stakeholders. A "profit and loss statement based on sustainable development accounting standards" or a recalculated "value added statement" that takes into account the depletion of natural resources was supported by Macve and Carey (2014), as well. Green accounting, otherwise also known as environmental accounting relates to the ability of current generation to meet its needs without necessarily harming or preventing future generations from meeting their needs. Environmentally conscious businesses, as significant forces in society, have a greater role to play in accomplishing this goal. Keeping track of, reporting on, and being accountable for an organization's performance to both internal and external stakeholders is what is referred to as green accounting (Sustainability Reporting Guidelines, 2011). The term "green accounting" or "green reporting" refers to a broad concept that encompasses financial reporting as well as reporting on environmental and social impacts. Reporting on an organization's environmental impact should be done in a way that shows both the positive and the negative aspects of that impact. Green accounting is often seen from both quality and quantity perspectives. In this study, green accounting is measured based on these two perspectives.

Financial performance relates to the financial wellbeing of an organization. It addresses among other things the capacity of the organization in terms of profitability, solvency, liquidity, gearing and growth opportunities. In this study, however, financial performance is viewed from the perspective of profitability, particularly, return on total assets (ROA). When calculating a company's profitability, the return on assets (ROA) is an important financial metric (investments). Earnings before interest and taxes are derived from the income statement of the firm.

2 Theoretical Framework

This study was based on the Stakeholder Theory. If a company's actions have a direct impact on a group of people, they are considered a "stakeholder." They emphasized the significance of stakeholder support and acceptance for the long-term viability of the organization. The greater the stakeholder's influence, the greater the need for the company to adjust to their needs. If an organization is to succeed, it must manage all relationships with its stakeholders, a term established by Stanford Research Institute (SRI) to refer to those people without whom a company would not exist (Freema, 2015). According to Myers (2009), the pursuit of growth has resulted in huge environmental and natural capital damage and deterioration. Of course, this poses a threat to long-term development. According to Omotosho (2006), an appropriate macroeconomic green accounting is required if Nigeria is to remain relevant and compete effectively in the global economy. Oil leakage, according to Owolabi (2006), is one of the primary difficulties facing the oil sector, with its associated green pollution. Spills can occur as a result of pipe breakage, weakened integrity, and aging, or as a result of sabotage, according to Ogbeifun (2002).

When oil spills or leaks, harmful hydrocarbons are released into the air, according to Osemene and Olaoye (2009). Humans and other living organisms, they claimed, are at danger from this. People, plants, and microbes are all affected by pollution from petroleum and crude oil. According to Omuta (2009), waste management is woefully inadequate since the system's infrastructure is insufficient. If Nigerians are to enjoy a high quality of life, Asiodu (2007) believes that a comprehensive long-term environmental agenda is essential. Various interested parties are interested in green information, according to Schattegger and Stum (2009). Naturally, owners are concerned about the company's environmental practices. Instead, they're concentrating on how green practices effect the company's bottom line and its ability to recoup its investment. It's important for the company's environmental policy to be noticed by other stakeholders, including customers, suppliers, competitors, government agencies and the media. The purpose of green accounting, according to Jaroslara and Miroslau (2016), is to meet the informational requirements of all key stakeholders. Some stakeholders are primarily concerned about the company's actions, products, and services' environmental implications.

3 Empirical Review

Arshad (2018) evaluated the financial effects of social and environmental accounting on the bottom lines of a few Erbil-based companies. In emerging economies, when detailed accounting disclosure and impotent state control are frequent, economic rationality tends to have a particularly strong impact. This led to numerous studies on environmental accounting in the 1970s, such as those conducted by Vance (1975), Bowman (1975), and Abbot (1979) to examine how environmental accounting affects market execution. Clearly, management owes a huge duty to stockholders, and their capacity to make significant profit is a key determinant in their ability to remain relevant. We are interested in finding out if (SEA), a business located in Erbil, the Kurdistan Region, has an effect on profit. An online questionnaire was sent to the CFO or accountant of each of the 50 participating companies in Erbil, the capital of Iraq's Kurdistan Region (KRG). What we're looking for here is to see if there are any government regulations or policies that must be followed, and how these policies affect annual profits, especially in 2017, in terms of environmental and social concerns.

In Muhammed, Wasif, Shabbir, and Ume (2018)'s investigation of the connection between environmental accounting and non-financial corporate performance, many Karachi Stock Exchange-listed companies were analyzed. They are concerned about the environment and are using green accounting to monitor the ecological performance of their surroundings. The study,

which examined annual data from organizations from 2006 to 2016, used the regression analysis approach (REM). Environmental accounting and firm size have a considerable positive link, according to the empirical investigation. Earnings per share and return on capital, on the other hand, were statistically insignificant. This has resulted in huge firms dedicating more money to environmental protection and social welfare programs. This study, on the other hand, has a restriction due to the small sample size of listed businesses on the Pakistan stock exchange. Results can't be generalized to the full population because of this limitation.

Nwaiwu and Oluka conducted an experimental research on the environmental costs and financial performance of Nigerian listed oil and gas enterprises (2018). The Central Bank of Nigeria's annual financial reporting and economic evaluation data are examined using Pearson product moment coefficient of correlation and multiple linear regression. Financial performance parameters were examined in econometric studies to see if environmental disclosure and compliance with company environmental standards have a positive impact.

Ofunya (2015) studied the influence of green accounting on performance of Kenyan tea sector. The descriptive survey research design is used in this study. This design was chosen because the researcher used a self-designed instrument (questionnaire), with the study population consisting of all tea companies in Kenya that are members of the East Africa Tea Traders Association, which had 73 members as of June 30, 2010. A total of 63 tea manufacturers were chosen to take part in the inquiry, and primary data was obtained through a self-administered questionnaire directed at the enterprises' environmental management representatives. The underlying variance structure of a set of correlation coefficients was investigated using data factor analysis. According to the findings, green accounting adoption is positively associated to the success of Kenya tea companies. The study's findings are hoped to provide various practical methods for the tea industry to ensure environmental sustainability.

Tochukwu (2018) conducted a survey of publicly traded Nigerian oil businesses to investigate environmental expenses accounting and reporting on financial performance. This was accomplished by analyzing data from oil and gas companies listed on the Nigerian Stock Exchange Market between 2006 and 2015. Statistics for Social Sciences (SPSS) was utilized in this regression analysis (SPSS). According to the findings of statistical research, an organization's business value is enhanced when environmental performance is improved. Environmental accounting also enables the company to reduce environmental and social expenses while enhancing performance.

Bilal, Zainon and Tareq (2016) studied the effect of green accounting on sales volume of green cars. A descriptive survey design was used in this investigation. All 332 car dealerships were represented in the study's sample from 2010 to 2014. The questionnaire was sent out to the target audience and received back within a week. According to the study, a green marketing approach can have both a good and a negative impact on sales. Researchers concluded that green car sales may be increased significantly by employing green marketing strategies. Because of this, as compared to green cars, marketing strategies may have a negative effect on non-green car sales.

In Nairobi, Kenya, Raschael, Francis, Munyoki and Kinoti (2017) looked into the link between green accounting methods and customer satisfaction in the soft drink business. A combination of descriptive and inferential statistics (mean scores and measures of dispersion) were used to investigate the expected correlations between green marketing strategies and customer satisfaction. There was a statistically significant positive linear correlation between customer satisfaction and green marketing techniques ($r = .389$, p -value = 0.002). Because the p -value was less than the required 0.05 threshold (p - value = 0.002), the correlation was considered statistically significant. In Nairobi, Kenya's soft drink market, green marketing tactics accounted for 22.3 percent of the variance (R square = 0.223) in consumer satisfaction, according to

regression results. The Nairobi, Kenya, soft drink industry found a link between green marketing tactics and customer satisfaction based on data gathered from tests of the study hypotheses.

Nigerian manufacturing firms' performance was examined by Agbiogwus Ibendinihus Okafor for their environmental and social costs (2016). Data on ten (10) randomly selected businesses in 2014 was obtained from their annual reports and financial summaries. The study uses SPSS version 20 to perform a t-test on the collected data. EPS, net profit margin, and return on capital employed (ROCE) of manufacturing companies were all adversely affected by environmental and social costs, according to the study (ROCE).

2.4 Gap in Literature

The paper's second section looked at green accounting and company performance in Nigeria. The conceptual framework, theoretical framework, empirical evidences, and a summary of the literature were all divided into four sections in the segment. Research applies the Stakeholder Theory, which stresses ensuring that the information needs of all key stakeholders are met through green accounting. Some stakeholders are primarily concerned about the company's actions, products, and services' environmental implications. Accountants in Nigeria need to know about environmental accounting and how it affects their company's success, as well as the relevance of green accounting and the concept of "performance". Despite the extensive literature and concepts discussed in this study, there are still gaps and unanswered problems. As a result, this study was conducted to thoroughly evaluate green accounting and corporate performance: a comparative examination of publicly traded firms in Nigeria.

3. Methodology

Design, demographic and sample data collection procedures as well as the model definition were all discussed in this phase of the study. Ex-post facto research was used in this study. Using variables that cannot be changed during the investigation is called an ex-post-factor design in scientific research. (Onwenmere, 2000). As a result, the Central Bank of Nigeria and other financial institutions have established the data needed for the ex-post-facto study design. The study's population included all of Nigeria's publicly traded companies. A total of five publicly traded companies were chosen for this investigation using a basic random sampling technique. Oando, Shell, Agip, Coin Oil, and ALCON Oil are among the publicly traded companies chosen for the study.

The data was gathered primarily from secondary sources. The information for this study came from the management of the selected quoted companies between 2012 and 2020. From 2012 through 2020, the data includes RCP (Restoration Cost on Performance), RCP (Redemption Cost on Performance), and CCP (Compensation Cost on Performance). The data on Green Accounting (Restoration Cost on Performance, Redemption Cost on Performance, and Compensation Cost on Performance) on publicly traded enterprises in Nigeria was regressed using Ordinary Least Square (OLS) estimation. When two or more nonstationary data series are regressed on a single variable in the model using the test for stationarity, we remove the potential of misleading parameters being formed. For Engle and Granger (1987), parameter values that result from regressing two non-stationary variables on each other are inherently wrong. Testing for stationary variables was done using the Augmented Dickey-Fuller and Phillip Perron (Unit root) tests. Before they can be used in empirical estimation, the variables must pass the unit root test at level 1(0) or the first difference 1(1).

Model Specification

The research model is based on Khan and Knight (1991) and Dada and Oyeranti's structural macroeconomic model (2012). By include open economy metrics, this work improves on the original Khan-Knight model. In Nigeria, there is a dynamic interaction between insurance business activities and equity capital. The following is the functional and parametric model:

The study adopted the Ordinary Least Square (OLS) method to develop a model on the
 $CP = f(RCP, RCP, CCP)$ - - - - - (1)

This is transform to the econometric form:
 $CP = \beta_0 + \beta_1 RCP + \beta_2 RCP + \beta_3 CCP$ - - - - - (2)

Equation (2) is transform into a log form in order to standardize the variables
 $CP = \beta_0 + \beta_1 RCP + \beta_2 RCP + \beta_3 CCP$ - - - - - (3)

CP = Company Performance , RCR = Restoration Cost on Performance
 RCR = Redemption Cost on Performance, CCP = Compensation Cost on Performance
 β = intercept, $\beta_1 - \beta_3$ = Coefficient of the independent variables

Note: All variables are expressed in natural logarithm form.

4. Data Presentation and Analysis and Discussion

4.1 Data Presentation

Table 4.1: Data on Company Performance (CP), Restoration Cost on Performance (RCP), Redemption Cost on Performance (RCP) and Compensation Cost on Performance (CCP) from 2012 to 2020.

Company	CP (₦Millions)	RCP (₦Millions)	RCP (₦Millions)	CCP (₦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
Con Oil	54,204.80	36,833.33	9,186.3	643.1
ALCON Oil	63,258.58	43,039.08	9415.2	694.8

Sources: Central Bank of Nigeria (CBN), Annual Statistical Bulletin of 2020, the World Bank Report and United Nations Conference on Trade and Development (UNCTAD) of 2020

Table 4.1 displays data in millions (NMillions) for the specified variables for publicly traded corporations in Nigeria utilizing Oando, Shell, Agip, Con Oil, and Alcon Oil, all of which are based in Nigeria. According to the study, Oando PLC estimated a total of 20,657.32 million (N) for the company's performance, 83,924.08 million (N) for restoration cost on performance, 5,940.2 million for Redemption Cost (N), and 520.9 million for compensation cost on performance (N). Shell, as a publicly traded company, has also made significant contributions to green accounting. As shown in the table above, the company has a company performance of 24,296.33 million (N), as well as a Restoration cost on performance of 14,629.26 (N), as well as contributions of 6,757.9 (N) on redemption cost on performance and 585.6 million (N) on compensation cost on performance from 2012 to 2020.

Furthermore, Agip also noted that company's performance has a figure of 24,794.24 million (₦), also, the Restoration cost on performance has a figure of 29,327.67 million (₦), the table also shows that redemption cost on performance has a figure of 7,981.4 million (₦). And also, the Agip have also made contribution to the compensation cost on performance with a figure of 612.3 million (₦). The table 4.1 further shows the rate of con oil in its contribution to the green

marketing with a figure of 54,204.80 million (₦) in company performance between 2010-2018, also, Restoration cost on performance has a figure of 36,833.33 million (₦), redemption cost on performance has a figure of 9, 1863 million (₦) and the compensation cost on performance has a figure of 643.1 million (₦) as stated in the table above. As shown in table 4.1, ALCON oil has made a significant contribution to green accounting, with a company performance of 63,258.58 million (N), restoration cost on performance of 43,039.08 million (N), redemption cost on performance of 9415.2 million (N), and compensation cost on performance of 694.8 million (N) between 2012 and 2020.

4.2.1 Descriptive Statistics

Table 4.2: Descriptive statistics

	CP	RCP	RCP	CCP
Mean	20.6544	17334.0397	1478.5477	28262.8441
Median	6.9720	133.5000	17.9500	12.8800
Maximum	131.66	76276.10	11000.00	69024.00
Minimum	0.29	132.37	12.00	5.42
Std. Dev	30.53357	17917.32012	2892.14878	23608.62572
Skewness	3.138	1.193	2.461	0.180
Kurtosis	5.250	0.322	5.250	-1.229
Jargue-bera	2.021046	1.713478	11.05232	9.872199
Probability	0.364029	0.424544	0.003981	0.211231
Sum	598.98	502687.15	42877.88	819622.8441
Observations	34	34	34	34

Source: Author's Computation Using E-view 9

Company performance (CP) has a mean value of 20.6544, a maximum and minimum value of 131.66 and 0.29, respectively, according to the descriptive data in the above table. Restoration Cost on Performance (CP) has a mean of 17334.0397, a maximum of 76276, and a minimum of 132.37. Redemption Cost on Performance (RCP) has a mean of 1478.5477, a maximum of 11000.00, and a minimum of 12.00. Finally, Compensation Cost on Performance (CCP) has a mean of 28262.8441, a maximum of 69024.00, and a minimum of 5.42.

4.2.2 Inferential Analysis

The data were analyzed using E-views software, the model was estimated via the Ordinary Least Square (OLS) technique and the results obtained are presented and discussed below.

Table 4.3: Regression Result of Green Accounting and Corporate Performance in Nigeria
 Dependent Variable: Real Estate Contribution to GDP (RE)

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

Restoration Cost on Performance (RCP): Table 4.3 shows that the performance of Nigerian publicly traded firms and restoration costs have no significant relationship. If restoration costs go up by 0.4173, then business performance will go up by 0.4173. At a statistically significant level, the cost of restoration increases GDP by 5%. (p-value of 0.0618). In terms of significance, tcal (5.117) outranks ttab (4.173) at the 0.05 level (2.0). We reject the null hypothesis because our data demonstrate a robust link between the cost of restoration and the performance of Nigerian publicly listed enterprises.

Redemption Cost on Performance (RCP): The regression findings in the table reveal that redemption costs have an impact on the company's performance. It means that increasing the redemption charge by one unit will boost the company's performance by 0.619 percent. It is statistically significant (p-value of 0.7811 at a significance level of 0.05) that the cost of redemption increases the firm's performance by 5 percent. At the 0.05 significant level, the tcal (3.133) is bigger than the ttab (2.0). Our findings show that there is a high correlation between the cost of a public company's redemption and the company's performance in Nigeria.

Compensation Cost on Performance (CCP): According to the regression results, there is no correlation between the compensation costs of publicly traded Nigerian companies and their performance, as indicated in the table. It means that increasing compensation costs will result in a 0.513 rise in firm performance. At a 0.05 significance level, compensation costs are statistically significant (p-value of 0.0146), and the company's performance improves by 5%. At the 0.05 significant level, tcal (5.367) is bigger than ttab (2.0). As a result, we reject the null hypothesis, implying that compensation costs and public business performance in Nigeria are linked.

Variables in the model account for 93% of change in green accounting, whereas those outside of the model account for just 7%. It is clear from the F-test results that the model is correct when compared to the table value of 3.41 at the 0.05 significance level.

4.2.3 Test of Hypotheses

Hypothesis I: In Nigeria, there is no substantive correlation between the cost of restoration and the performance of publicly traded companies.

Decision Rule: The t-calculated probability value of 0.0218 is more than 0.005, according to the results. As a result, we reject the null postulate and support the alternate assumption, coming to the conclusion that restoration costs in Nigeria are strongly associated with publicly quoted firm performance.

Hypothesis II: There is no significant effect between redemption cost and performance of public quoted firms in Nigeria

Decision Rule: The t-calculated probability value of 0.7811 is more than 0.005, according to the results. There is a strong correlation between redemption costs and public business performance in Nigeria. We therefore reject the null proposition and favor the alternative theory.

Hypothesis III: There is no significant relationship between compensation cost and performance of public quoted firms in Nigeria

Decision Rule: The t-calculated probability value of 0.0891 is more than 0.05, according to the results. Consequently, we conclude that there is a strong correlation between compensation expenditures and the efficiency of publicly traded companies in Nigeria.

4.4 Discussion of Findings

The first goal is to show how restoration costs affect the performance of Nigerian publicly traded companies. According to the study's findings, repair expenses have an impact on the performance of Nigerian listed firms. Okoye and Ngwakwe (2014) claim that environmental expenses and liabilities are taken into account in financial records in order to benefit a variety of stakeholders in the company. Donald (2018) points out that the public's perception of the cost of restoration and other forms of green accounting has had a positive impact on investment and productivity. In addition, Okechukwu (2014) found that restoration costs have shaped the productivity of companies in order to meet the needs of the company.

Effect of redemption cost on performance of public quoted firms in Nigeria

The second of the study's two aims and hypotheses is to examine the influence of redemption charges on the performance of Nigerian publicly listed firms. The cost of redeeming stock in Nigerian publicly listed firms has been found to influence their performance, according to research. According to a study undertaken by Dennison and Fabulous (2011), green accounting and its variants have aided in providing excellent services to corporations, particularly publicly traded firms in Nigeria, and have also aided in enhancing the organization's productivity. In line with the empirical evidence of Okoye and Ngwakwe (2014), green accounting, also known as environmental accounting, is concerned with the present generation's ability to meet its own requirements without causing harm to or impeding the ability of future generations to do the same. Environmentally conscious businesses, as key forces in society, have a greater role to play in achieving this goal.

Impact of compensation cost on performance of public quoted firms in Nigeria

The third research hypothesis is that compensation costs have an impact on the performance of publicly traded companies in Nigeria. Compensation costs are affecting publicly traded companies in Nigeria, according to a recent study. Survey of David (2015) shows that goals and objectives are created in accordance with a company's vision, mission, and values. Goals and plans are formed after a thorough evaluation of the company's strengths and weaknesses, external opportunities and threats. Although it is a commonly believed concept in academics, there is little consensus on how to define and quantify it.

4.5 Policy Implications of the Findings

The findings of this study is very vital to most quoted firms in Nigeria for it will enable them realize the importance of the implementing the green accounting techniques which of relevance to both the company and also the customers and fosters the growth of the organization. Furthermore, the study this study would be of significance to managers and staffs in quoted firms, for it will give them insight on the importance of green accounting and its vital importance in organizational productivity (financial performance and operational performance).

5. Summary, Conclusion and Recommendations

Summary of Findings

Environmental accounting and business performance: a comparative analysis of listed Nigerian firms was the focus of the research. The investigation discovered the following as a result of the analytical findings:

1. In Nigeria, there is a strong correlation between the cost of repair and the performance of publicly traded companies.
2. The redemption cost has a significant impact on the performance of publicly traded companies.
3. There is a notable link between compensation costs and the success of publicly traded enterprises.

Conclusion

According to the study's findings, green accounting has aided in the improvement of organizational performance in the majority of Nigeria's publicly traded companies. It also demonstrates that the majority of the firms mentioned are active in restoration, redemption, and compensation testing. A company's financial success in Nigeria is strongly correlated with its ability to save money on environmental costs, track those savings, and adhere to environmental laws and regulations. Financial performance is improved as a result of the above-mentioned characteristics.

Recommendations

The following proposals have been made in light of the study's findings:

1. First and foremost, a standard should be created for analyzing, treating, and reporting a company's environmental actions. This will make it easier to report on the environment.
2. For the purposes of performance control and assessment, publicly traded companies should establish common environmental reporting and disclosure standards.
3. Companies' competitiveness and overall performance can be enhanced by making their environmental practices public in their annual reports. As a means of enhancing long-term viability, top management should make certain that they are abiding by all of the country's environmental regulations.

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