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Environmental Accounting and Performance of Listed Financial Services Sector Firms in Nigeria

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Abstract
Environmental accounting describes the efforts made by accounting Standard issuers, professional organizations, and government agencies to enable businesses to actively participate in cleaning and maintaining the environment and fully describe their environmental activities in their annual reports. The study investigated the relationship between environmental accounting and performance of financial services sector companies quoted in Nigeria for the period 2010 to 2019. Performance proxy by return on asset was regressed against environmental accounting (explanatory variable) and firm size (intervening variable). Ten banks were sampled out of twenty two listed banks, and the study employed secondary data collected from published annual financial statements of the sampled banks, using multiple regression analysis based on the OLS technique, with the help of E-view. The study found that environmental accounting has a positive and non-significant relationship with return on asset (the adopted measure of performance); while the intervening variable, firm size had a negative non-significant effect on return on asset of deposit money banks in Nigeria. The study concluded that the practice of environmental reporting and accounting is weak among Nigerian deposit money banks; this not surprising as there is lack of strong legislation on environmental accounting practice in the country. The study recommended that regulatory authorities should set out a legal framework and standard requirement that can enhance the practice of environmental accounting and make it mandatory for deposit money banks to disclosure the environmental expenditure and environmental cost charged to their income statement by way of notes to the account at the least.

Keywords: *Environmental Accounting, Deposit Money Banks, Performance, Return on asset*

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I. Introduction

Every shareholders wants the entity he/she invested his/her resources to maximize its earnings to the brim, however this may not be possible if the entity fail to but the right things in place, there is no any entity in the world that exist in isolation, hence all stakeholder must be consider when to planning to achieve the goals and objective of an entity, no entity can operate smoothly in a hostile community or regulation in the same vein no community or government can attract investors if its environment and policy is not friendly to the entity. Environmental disclosure involves the identification, measurement and allocation of environmental costs, and the integration of these costs into business and encompasses the way of communicating such information to the companies' stakeholders. In a nutshell, it is a comprehensive approach to ensure good corporate governance that includes transparency in its societal activities (Magara, Aming, & Momanyi, 2015). As stakeholders are different so also is their motivational factors different, while customer derived value from quality product or service; employment packages such as welfare and remuneration gives employees satisfaction, in the same vein financial value is created for shareholder by the increase in shareholders wealth represented by an increase in entity profit or stock price, also the host community in which the entity also has its motivation factors, hence managers of an entity should be able to identify what gives the entity satisfaction, in contemporary business activities, value is seen as basically being generated from innovation, ideas, people, computer software to mention but are few that are many a time intangible (Marvin, Natarajan & Robert, 2017).

The global movement for environmental awareness and sustainable economic development is directing business attention to environmental sensitivity (Ngwakwe, 2008) as in (Charles, John-Akamelu, & Umeoduagu, 2017). The search for sustainability has led to the emergence of many global institutions to clarify different norms that govern human interaction with the environment. These standards are influencing business enterprises to understand their strategic position in society and have the ability to influence behavior and change the state of the physical, social and economic environment. Environmental accounting describes the efforts made by accounting Standard issuers, professional organizations, and government agencies to enable businesses to actively participate in cleaning and maintaining the environment and fully describe their environmental activities in their annual reports.

Environmental issues have become an important variable in the models used by investors and creditors to determine the risks associated with their investments. When developing scenarios, people generally feel the need to be accountable and report on the environment. Therefore, the accounting treatment of environmental matters, disclosure of environmental matters, and disclosure in annual reports or other means have become an important part of corporate accounting and reporting systems. To improve the quality of company reports, it is necessary to examine how companies include environmental indicators in their company reports (Adegbei & Nwobodo, 2020).

From the foregoing, environmental accounting has received little attention on the importance and problems of environmental accounting in money deposit banks (DMBs). Several studies show that most of the studies centered on economic and social indicator in Nigeria. Furthermore, some previous studies only examined the number of economic and social indicators. Based on their business operations, financial institutions are considered to be less sensitive to the environment.

Since 1997 the GRI standards have been continuously developed to represent the world's best practice for reporting on economic, environmental and social impacts. The Global Reporting Initiative (GRI, 2015) recognizes that financial institutions must be held accountable for their social, economic and environmental impacts and has implemented disclosures in the financial services sector. However, there is very little literature on the impact of environmental accounting and financial performance in Nigeria. The study is intended to fill these gaps identified. The research contributes to the existing literature by exploring the environmental accounting and financial performance of deposit money banks in Nigeria.

Objectives of the Study

The specific objectives are to;

1. Determine the impact of environmental accounting on return on asset of selected deposit money banks in Nigeria
2. Examine the impact of firm size on return on asset of selected deposit money banks in Nigeria.

Research Questions

The study attempts to answer the following questions:

1. What extent does environmental accounting influence return on asset of selected deposit money banks in Nigeria?
2. What is the relationship between firm size and return on asset of selected deposit money banks in Nigeria?

Research Hypotheses

The following hypotheses were formulated in null form:

Ho1: Environmental Accounting has no significant effect on return on assets of selected deposit money banks in Nigeria.

Ho2: Firm size has no significant effect on return on assets of selected deposit money banks in Nigeria.

Other major themes covered in the rest of this paper includes; review of related literature, methodology, results and discussion of findings, and summary, conclusion and recommendation.

II. Review Of Related Literature

Theoretical Framework

The foundation of this study is anchored on the stakeholder theory

Stakeholder Theory

Fontaine, Haarman and Schmid (2006) posit that stakeholder theory suggests that the purpose of a business is to create as much value as possible for stakeholders. In order to succeed and be sustainable overtime, business executives must keep the interest of customers, suppliers, employees, communities and shareholders aligned to go in the same direction. stakeholders theory is very is salient for the survival of every company this is because every entity is designed to meet the needs of all stakeholders, if stakeholders are treated very well they will reciprocated positive attitudes and behaviors towards the organization, such as sharing valuable information, buying more products or services, providing tax breaks or other incentives , providing better financial terms, buying more stock , or working hard and remaining loyal to the organization, even during difficult times, stakeholder theory is practical and realistic because it motivate and compelled all firms to manage stakeholders to act socially. Ackermann and Eden (2010) asserted that the stakeholder theory negated the concept of stockholder by recognizing the vast group of interest in the company and requiring the business executives to manage these interests, relationships and trade-offs in aligned direction to create as much value as possible for stakeholders and manage the distribution of the value.

Empirical Review

Nicholas (2021) investigated Nigeria oil and gas entities on the nexus that exist between environmental accounting and profitability employed secondary data covering from 2012-2017, gathered from annual reports and accounts of the companies available on the websites and on Nigerian stock exchange with the help of regression analysis the output showed that there is no significant relationship between environmental expenditure and net profit of the oil and gas companies in Nigeria under investigation therefore recommended that amongst others that the management of the oil and gas companies should channel efforts towards engaging in adequate environmental spending and its disclosure as way of increasing stakeholders trust and showing more transparency in their operations.

Festus, Rufus and Janet (2020) Investigated 28 Nigeria quoted companies by who employed secondary data from 2009 to 2018 to analyzed the impact of sustainability reporting on turnover growth, the ex-post facto research design with 167, the pooled OLS model was used, company age and financial leverage were used as control variables, economic sustainability reporting, social sustainability reporting, environmental sustainability reporting and governance sustainability reporting was employed as the explanatory variables while turnover growth served as the response variable, the study discovered that the compliance level of the sampled firms with sustainability reporting requirements for the four dimensions are below average, however, sustainability reporting has a significant effect on turnover growth hence opined that management of entities should intensity efforts to ensure optimum compliance with Global Reporting Initiative sustainability guidelines.

Syder, Ogbonna, and Akani (2020) investigated quoted oil and gas companies in Nigeria on the impact of sustainability accounting report on shareholder value employed cross-sectional and ex-post facto research designs with secondary data covering from 2009 to 2018 which comprises of entities that operated both on upstream and downstream sectors of the industry, the Autoregressive Distributed Lag (ARDL) bound test, descriptive statistic, model estimations and diagnostic analysis that adopted Augmented Dicky-Fuller Unit root test, error correction model and co-integration and the multiple regressions was employed with help of E-view software version 7, and discovered that employee training and community development expenditures had positive and significant effect on shareholder value added of the companies. However, the environmental compliance cost has no effect on shareholder value added therefore they recommended that the management of the oil and gas companies in Nigeria should pay adequate attention to the practice of sustainability accounting reporting because it is obvious that investments in sustainability performance which are communicated in sustainability accounting information report may increase expenses however it results in increase shareholders value creation.

Iliemena (2020) examined the effect of environmental accounting practices on the corporate performance of listed oil and gas companies in Nigeria from 2012-2018 using the ex-post facto research design. The data were obtained from the Nigerian Stock Exchange fact book of the sampled firms. The data gathered were analyzed using the simple regression model and the study found that environmental accounting practices had a positive and significant influence on both turnover and Return on capital employed; similarly, the study revealed that net profit had positive and statistically insignificant. The author concluded that environmental accounting had a significant positive impact on the corporate performance of practicing companies. The study recommended that corporate organizations should extend their management accounting and financial reporting systems to environmental accounting as a way of ensuring long-run corporate sustainability.

Ikpor, Ituma & Okezie (2019) explored the environmental degradation costs in the annual reports on the sustainable financial performance of ten petroleum companies operating in the Niger – Delta part of Nigeria from (1970- 2017). The data were analyzed using the ordinary least square regression method. The study found that environmental operating costs and environmental prevention costs had a negative and significant influence on the performance of petroleum firms in Nigeria.

Polycarp (2019) investigated the environmental accounting and financial performance of oil and gas companies in Nigeria using the questionnaires as a source of data collection. The results of this study show that the lack of environmental disclosure and reporting standards has significantly affected the uniformity of environmental-related information disclosure and reported in the financial statements. Therefore, organizations that voluntarily disclose their environmental activities enjoy a high degree of competitiveness. Even so, such disclosures are still guided by social responsibility and the commitment of an entity that is a strong environmental pollutant. Therefore, the study recommended that the government's mandatory environmental reporting in the annual report, because most organizations hardly report their environmental activities in the report.

Iliemena and Ijeoma (2019) investigated the sustainability report on the financial performance of twenty-four (24) listed manufacturing companies in Nigeria for the period from 2012 to 2018. The three hypotheses formulated were tested by regression analysis at a significance level of 5%. The results show that environmental disclosure does not have a significant impact on return on capital used (ROCE). Similarly, Amedu, Iliemena, and Umaigba (2019) explored the value relevance of the three dimensions of the sustainability report information, and it was found that the environmental sustainability report is the result of environmental accounting and has nothing to do with value relevance.

III. Methodology

Research Design

This study used an archive data which resulted in the use of the ex-post facto design. The choice of the design was because of the pre-research nature of the event. The data were obtained from annual financial statements of the selected financial services sector firms (deposit money banks to be specific).

Population and Sample Size

The population of this study consisted of twenty two listed financial institutions in Nigerian stock market covering the year 2010 to 2019; and out of the twenty two firms. The sampled entities for this study comprises of ten (10) of the listed companies in this sector. The companies are; Access Bank, Ecobank, FBN Holdings, FCMB Group, Fidelity Bank, Guaranty Trust Holding, United Bank For Africa, Union Bank Of Nigeria, Sterling Bank, Stanbic IBTC Holdings from which the researcher to collected data needed for the study.

Model Specification

In order to examined environmental accounting and performance of financial services sector firms (that is, Deposit Money Banks) which dummy variables such as 1 and 0 was employed, Festus, Rufus and Janet (2020) asserted that dummy variables can be used to represent a variable, hence for the purpose of this study, any entity that discloses its environmental accounting elements in its financial statement is assigned 1, otherwise is assigned 0. Therefor in order for us to empirically investigate environmental accounting and entities performance the following model is stated:

$ROA = f\ (EVA, FSZ)$

This can be expressed into an equation as follows:

$ROA = \beta_0 + \beta_1 EVA + \beta_2 FSZ + \mu$

Where:

ROA = Return on assets is proxy for performance (the dependent variable)

EVA = Environmental accounting (independent variable)

FSZ = Firm size, served as the intervening variable for the study.

$\beta 0$= server as intercept or constant term

$\beta 1$ = served as the parameters or coefficients of the independent variables to be estimated through the regression.

μ = is the error term of the regression equation (stochastic variable).

Data Analysis Technique

This study employed the use of descriptive statistics and the panel multiple regression technique based on the ordinary least squares analysis, which possesses the unique feature of best linear unbiased estimator (BLUE) technique.

IV. Results And Discussion Findings

In analyzing the data, the study adopted the descriptive statistics and ordinary least square regression to analyze the environmental accounting and financial performance of financial services sector firms (deposit money banks) in Nigeria.

Table 1 Descriptive Statistics

	ROA	FSZ	EVA
Mean	7.327265	6.983491	0.990000
Median	6.964850	6.700250	1.000000
Maximum	53.95940	8.168000	1.000000
Minimum	-179.9173	6.088800	0.000000
Std. Dev.	23.45471	0.604490	0.100000
Skewness	-5.073015	0.469552	-9.849371
Kurtosis	42.47551	1.734301	98.01010
Jarque-Bera	6921.907	10.34963	39229.00
Probability	0.000000	0.005657	0.000000
Sum	732.7265	698.3491	99.00000
Sum Sq. Dev.	54462.22	36.17535	0.990000

Observations	100	100	100

Sources: *Researchers computation with E-views*

The descriptive statistics of the study variables in Table 1 showed the mean of ROA, EVA, FSZ which are 7.33, 0.99 and 6.98 respectively. The maximum value of the study variables are: 53.96, 1.00 and 8.17 respectively. Table 1 also showed that performance (ROA) is the most dispersed among the study variable with a value of 23.5 while environmental accounting (EVA) is least dispersed with a value of 0.1.

Table 2 Regression result

Dependent Variable: ROA
Method: Panel Least Squares
Date: 08/10/21 Time: 10:55
Sample: 2010 2019
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FSZ	-3.174307	3.956793	-0.802242	0.4244
EVA	9.135626	23.91840	0.381950	0.7033
C	20.45074	34.12197	0.599342	0.5503

R-squared	0.070404	Mean dependent var	7.327265
Adjusted R-squared	-0.013062	S.D. dependent var	23.45471
S.E. of regression	23.60740	Akaike info criterion	9.190538
Sum squared resid	54058.99	Schwarz criterion	9.268693
Log likelihood	-456.5269	Hannan-Quinn criter.	9.222169
F-statistic	0.361772	Durbin-Watson stat	0.478306
Prob. (F-statistic)	0.697377		

Sources: *Researchers computation via E-views*

The regression output Table 2 showed that the coefficient of determination (R-squared) value of 0.07 indicates that 7% of changes in the dependent variable are accounted for by the combined impact of variations in the independent variables, also the Adjusted R- squared value of 13% approximately, implies that the model is good and proper fit to be used in testing our hypotheses. The result of the regression used in examining environmental accounting and financial performance of quoted financial services sector firms (deposit money banks) on the Nigeria exchange stock.

Hypothesis testing
In this section, the null hypotheses for the study are been tested against the alternative hypotheses.
Hypothesis one
H_{01} There is no significant relationship between environmental accounting and return on asset.

Table 2 showed that environmental accounting (EVA) has a positive relationship with performance with a coefficient value of 9.135626, and statistical value of 0.7033 which is greater than 5% significant level, this also implies that as environmental accounting increases by one percent performances will also increase by 9.14 units approximately, based on the output we can conclude that environmental accounting has no statistical significant influence on financial performance of deposit money bank in Nigeria, therefore we accept the null hypothesis for our study.

Table 2 however showed that firm size (FSZ) the intervening variable has a negative relationship with performance with a coefficient value of -3.174307, and statistical value of 0.4244 which also is greater than 5% significant level, this implies that as firm size increases by one percent performances will reduce by 3.17 units approximately, based on the output we can conclude that firm size has no statistical significant influence on financial performance of deposit money bank in Nigeria, therefore we accept the null hypothesis for our study.

V. Discussion Of Findings

The hypotheses revealed that environmental accounting has positive and statistically non-significant effect on financial performance of listed financial services sector firms (that is, deposit money banks) in Nigeria. This result is consistent with the findings of Ikpor, Ituma & Okezie, (2019); Charles, John-Akamelu, & Umeoduagu (2017). However, several other studies revealed a contrary results (Iliemena, 2020; Adegbei & Nwobodo, 2020) found a negative relationship with financial performance.

This has provided a clear indication of the fact that there is weak legislation making environmental disclosures among non-manufacturing business entities in Nigeria. This study has shown that event big firms careless about maintaining responsible environmental practices.

VI. Summary, Conclusion And Recommendations

Summary

This study investigated the link between environmental accounting and the performance of listed financial services sector firms in Nigeria; the overall results showed that environmental accounting has no significant effect on return on asset (proxy for performance). The research findings of the study are summarized below:

1. Environmental accounting, the explanatory variable in this study has no significant effect on performance (the response variable).
2. Firm size the intervening variable has no significant effect on return on asset used as proxy for performance.

Conclusion

The study investigated the relationship between environmental accounting and financial performance of financial services sector companies quoted on the Nigerian Stock Exchange for the period 2010 to 2019. Furthermore, firm size was also employed as an intervening variable to test whether quoted financial service firms (deposit money banks) in Nigeria apply environmental responsible practices. Ten banks were sampled out of twenty two listed banks, and the study employed secondary data collected from published annual financial statements of the sampled banks, using multiple regression analysis based on the OLS technique, with the help of E-view. The study found that environmental accounting has a positive and non-significant relationship with return on asset (the adopted measure of performance); while the intervening variable, firm size had a negative non-significant effect on return on asset of deposit money banks in Nigeria. The study concluded that the practice of environmental reporting and accounting is weak among Nigerian deposit money banks; this not surprising as there is lack of strong legislation on environmental accounting practice in the country.

Recommendation

The study recommended that regulatory authorities should set out a legal framework and standard requirement that can enhance the practice of environmental accounting and make it mandatory for deposit money banks to disclosure the environmental expenditure and environmental cost charged to their income statement by way of notes to the account at the least.

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