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An Assessment Of The Impact Of Environmental Accounting Disclosure On Profitability Of Firm In Nigeria

Dr. Fabian Obiora; Ven Dr. J.K.J. Onuora & Ezeogidi Chioma Sandra*

Department Of Accountancy, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Nigeria
***casanadis@gmail.com**

ABSTRACT
This study assessed the impact of environmental accounting disclosure on profitability of quoted firms in Nigeria from 2017 to 2021. Environmental disclosure index was employed as the independent variable while financial performance measures such as return on assets, return on equity and return on capital employed were employed as the dependent variable. Related conceptual, theoretical and empirical literatures were reviewed. The study was anchored on stakeholders' theory. Ex post facto research design was employed. Five firms from different sectors of the economy were sampled. The data used in this study were sourced from annual reports and statement of accounts of the selected firms. Descriptive statistics, correlation analysis and ordinary least Square regression were employed in analyzing the data. The study found that environmental accounting disclosure has a significant impact on return on assets of quoted firms in Nigeria. Environmental accounting disclosure was also found to have significant impact on return on equity of quoted firms in Nigeria. However, environmental accounting disclosure was found to have an insignificant impact on return on capital employed of quoted firms in Nigeria. The study concludes that environment accounting disclosure has significant impact on financial performance. The study recommends that firms should adopt uniform reporting and disclosure standards of environmental practices for the purpose of control and measurement of performance.
Keywords: Environmental Accounting Disclosure, Return on Assets, Return on Equity, Return on Capital Employed

INTRODUCTION

Environment issues arising from business activities have become a source of concern to many stakeholders. Gatimbu and Wabwire (2016) maintained that conventional accounting systems are limiting since they fail to directly address sustainability concerns. They have failed to address economic growth against social and environmental needs in order to balance the different needs of various stakeholders. Of great concern to financial and social critiques is that most business/economic activities of firms often results in social, ecological and humanitarian problems yet firms are to take care of these problems as well as contribute reasonably to improving their environment (Nnamani, Onyekwelu & Ugwu, 2017). Also, Babatunde (2016) noted that "the limited awareness of environmental costing principles and methodology has become an important issue to be addressed. If environmental issues and activities that are vital are not disclosed, financial statement cannot be said to reveal state of a true and fair view of affairs.

Environmental accounting helps to disclose to the outside world their ability to be environmental friendly. The deficient adoption is expected to influence the quality of disclosure. Ali, Ahmed, and Henry (2004) opined that the government regulatory bodies and the accountancy profession of emerging nations suffer from structural weaknesses and often take a lenient attitude towards default of accounting regulations. Consequently, private and institutional investors (local and foreign) are hesitant in investing in such emerging economies due to lack of transparency. Lack of proper use of International Accounting Standards hinders transparency in the financial statements of corporations Babatunde (2016). As a result of this, financial statements fail to provide useful information, on a

timely basis. Since current requirement for reporting on environmental issues is voluntary, it is observed from most financial statements of corporate organizations that it has engendered disclosures of information which totally exclude environmental issues.
Banerjee (2001) maintained that environmental accounting at the corporate level helps the management to know whether the organization has been discharging its responsibilities towards sustainable development while meeting business objectives. Environmental accounting addresses meeting regulatory requirements, operate its factory in a way that environmental damages do not occur, promote a culture and attitude of environmentally safe working conditions amongst its employees, disclosure to shareholders the amount and nature of the preventive measures taken by the management, ensures safe handling and disposal of hazardous waste (Rezaee & Elam, 2000). A progress report by SEEA (2009) says that the scope of environmental accounting is extensive and includes corporate, national and international level. The aspects included in environmental accounting are; the direct investment made by a corporate for minimization of losses to the environment. It includes investment made into the equipment or devices that help in reducing potential losses to the environment. Clarkson, Li, Richardson and Vasvari (2008) noted that disclosure and transparency are critical elements of a robust corporate governance framework as they provide the basis for informed decision-making by shareholders, stakeholders and potential investors with respect to capital allocation, corporate transactions and financial performance monitoring. High quality disclosure, through its influence on investors and lenders who must assess risks and returns and decide where best to place their money, strengthen the efficiency of capital allocation as well as offer the benefit of reducing the costs of capital. Furthermore high quality corporate disclosure provides clarity on the extent to which companies meet legal and ethical requirements. The success or failure of a company may be determined not only by the products or services it deals with but also by the complexity of it environment. It is widely believed that companies that have imbibed the culture of environmental reporting are environmentally responsible and enjoy relative peace within their society of domicile (Utile, 2016). Fodio and Uba (2012) opine that companies who embark on environmental development and report on same are likely to perform well as they are seen to be globally competitive and economically viable.
Academic debate relating to the link between environmental disclosures and profitability is persistent and controversial. For instance, Ahmad, Simon and Mohammad (2017) study indicates that environmental disclosure quantitative has a positive insignificant on return on assets and earnings per share respectively. Nnamani, Onyekwelu and Ugwu (2017) study reveals that sustainability reporting has positive and significant effect on financial performance of firms studied. Utile Tarbo and Ikya (2017) found that environmental reporting has significant effect on firm financial performance. On a similar note, Gatimbu and Wabwire (2016) found that that environmental disclosure has a positive significant effect in the mean financial performance. Also Ezeagba, John-Akamelu and Umeoduagu (2017) found a significant relationship between environmental accounting disclosures and return on equity of selected companies. Mohammad et al (2016) found a positive relationship between environment accounting reporting disclosure index and return on assets. On the contrary, Ezeagba et al (2017) study revealed a negative relationship between environmental accounting disclosures and return on capital employed and net profit margin of selected companies. Ahmad et al (2017) found that environmental disclosure has negative insignificant impact on return on equity. This reveals mixed empirical findings and this shows that the relationship between environmental disclosure and financial performance of firms is not yet resolved.
Also, most of the studies (Ifurueze 2013, Omodero and Ihendinihu, 2016, Ezejiofor, John-Akamelu and Chigbo, 2016, Adediran and Alade 2013, Akinlo and Iredele 2014, Asuquo 2012, Shehu 2010) that covered environmental accounting covered the cost aspects of it ignoring the disclosure aspect of it. The few studies that covered environmental disclosure and financial performance made of firm specific and industry specific data, for instance, Cement and breweries industries (Ahmad, Simon and Mohammad, 2017; Nnamani et al 2017), oil companies (Ifurueze, 2013), manufacturing industries (Utile et al 2017, Onyali, Okafor & Egolum 2014, Mohammad et al 2016), food and beverage companies (Ezeagba et al 2017, Muhammad 2014), building material and brewery industry (Uwuigbe & Olayinka 2011). Therefore, this study will improve on the previous studies by using a wider set of data from sector of the economy and more robust statistical tools. In the light of the above identified gaps, the study will redirect the focus of research by measuring the extent to which environmental

disclosure on profitability of quoted firms from diverse sector of the Nigeria economy. Specifically, the study assessed the impact of environmental accounting disclosure on return on assets, return on equity and return on capital employed.

LITERATURE REVIEW

Environmental Accounting Disclosure

Many authors have given the opinion on what constitutes environmental accounting. Pramanik, Shil and Das (2007) defined environmental accounting as a system that attempts to make the best possible quantitative assessment (in terms of either monetary or physical units) of the costs and benefits to an enterprise due to the environmental preservation activities that it undertakes. Uwuigbe (2007) see it as a management tool which can be used for a variety of purposes, such as improving environmental performance, controlling costs, investing in cleaner technologies, developing greener processes and products, and taking informed decisions relating to product mix, product retention, and product pricing. In addition, environmental accounting can be seen as the generation, analysis and use of monetarized environmentally related information in order to improve corporate environmental and economic performance.

Mohammad et al (2016) noted that environmental accounting is an environmental management strategy to communicate with stakeholders the environmental activities and the concern for environment by the company. It also aims at achieving sustainable development, maintaining a favorable relationship with the community and pursuing effective and efficient environment conservation activities. These accounting procedures allow company to identify the cost of environmental conservation during the normal course of business, recognize the benefit derived from every activity, provide the best possible ways to quantitative measurement and also help to provide the result to the user of such information. The corporate environmental reporting plays a pivotal role in the "greening" of corporate accountability. Lodhia (2005) defined environmental disclosure "as a process through which companies often disclose environmental information to their stakeholders to provide evidence that they are accountable for their activities and the resultant impact on the environment. Gatimbu et al (2016) maintained that environmental disclosure entails reporting on the impact of company activities on the natural environment such as waste management, recycling, carbon management, emission, pollution, wetland and wildlife conservation. Environmental disclosure emphasizes on the disclosure of the contribution of the organizations in the environmental activities as to attract the investors and as to fulfill the demand of stakeholders groups (Norhasimah et al., 2016). Othman and Ameer (2009) see environmental disclosure as a process of communicating the social and environmental effects of firms economic actions to particular interest groups and society at large. It is the disclosure of information regarding companies' interaction with the environment and the immediate community. The issue of environmental disclosure has attained a height to the extent of prosecution of corporate officers in developed economics like the US (McMahon, 1995) for offenses in relation to the environment. In recent years most governments, organizations and individuals have come to realize the significance of environmental information disclosure and this has led to the development and enforcement of standards, guideline, legislation and even treaties.

The objective of environmental disclosure include the need for society to know about the extent of materials covered, determine an organizations' relationship with stakeholders and attracting foreign direct investment (Pramanic et al., 2008). With these objectives investments will be attracted, corporate officials will be prevented against litigation and other legal actions and proper definition of responsibilities will be made. Through environmental disclosure it will also be possible to determine the area the report should cover. This spells out ethical issues in business. Notwithstanding these benefits Beets and Souther (1999), posit that one of the challenges it faces is the increase in professional fees as a result of scarcity of environmental accounting professionals. It was also observed by Asaolu et al. (2011) that the existence of or lack of a unified standard and guideline for reporting sustainability is a threat to uniformity, objectivity and comparability. Despite these challenges the treatment to our environment as shown by the actions of firms in modern times calls for more actions on environmental disclosure. Reporting on sustainability is therefore, a necessity to stakeholders especially the immediate community.

Profitability

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is measured with income and expenses. Income is money generated from the activities of the business. For example, if crops and livestock are produced and sold, income is generated. However, money coming into the business from activities like borrowing money do not create income. This is simply a cash transaction between the business and the lender to generate cash for operating the business or buying assets. The profitability measures used in this study are discussed below:

Return on Assets: Return on assets is an accounting-based measurement that gauges the operating and financial performance of the firm (Klapper & Love, 2002). This is a measure of profitability that is return on assets. ROA reflects the ability of management to generate profits from the bank's assets, although it may be biased due to off-balance-sheet activities. Return on asset measure the effectiveness of the economic unity in using its assets to generate profit especially manufacturing, the higher this ratio, the better the economic unity of them as it indicates the management efficiency in using its assets to generate profit and also it represents the ratio of how much a has earned on its assets base, and the return on assets (ROA) is can be obtained by dividing net profit with total assets. Micah, Ofurum and Ihendinihu (2012) noted that return on Asset (ROA) is measured as Profit before Tax/Average Total Assets. ROA is a measure of profitability that takes into consideration the assets necessary to produce income. The measurement is such that the higher the Return on assets, the effective is the use of assets to the advantage of shareholders (Haniffa & Huduib, 2006). Higher return on assets also reflects the company's effective use of its assets in serving the economic interests of its shareholders (Ibrahim & AbdulSamad, 2011).

Return on Equity: Return on equity is one of the all time favourites and perhaps most widely used overall measure of corporate financial performance (Firer, Ross, Westerfield & Jordan, 2004). This was confirmed by Monteiro (2006) who stated that return on equity is perhaps the most important ratio an investor should consider. The fact that ROE represents the end result of structured financial ratio analysis contributes towards its popularity among analysts, financial managers and shareholders alike (Correia, Flynn, Uliana & Wormald, 2003). Return on equity ratio (ROE) is treated as an important measure of a company's earnings performance. Ratios Return on Equity (ROE) shows the extent to which companies manage their own capital (net worth) effectively, measure the profitability of the investment that has been made owners of their own capital or shareholders of the company. Ang (2001) which states that the higher the ratio Return on Equity (ROE) will increase the profit growth. Return on Equity (ROE) indicates the profitability of own capital or often referred to as business profitability (Sawir, 2005).

Return on Capital Employed: Return on capital employed (ROCE) is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed. Return on capital measures the operating profit of the tangible investment (capital) that company management uses to generate that profit. In other words, return on capital measures how much profit a company earns on every dollar invested in inventory and property, plant and equipment. The higher the return on capital, the greater the company's ability to expand in order in grow earnings. The return on capital employed (ROCE) ratio compares a firm's earnings from its primary operations with the capital invested in the company and can serve as a reliable measure of corporate performance (McClure, 2010). ROCE provides a means of measure to determine how well a company invests funds in its basic business operation. The financial ratio used to express ROCE uses Operating Income in the numerator and Capital Employed in the denominator (Elliott & Elliot, 2001). ROCE is widely used as a performance measure in the profit-seeking sector (Rutherford, 2002) and effectively measures how well management is able to employ a firm's assets to generate returns. ROCE is generally characterized as being a measure of the ability and efficiency of management. High ROCE in firms will therefore be indicative of potential outperforming shares. It can thus be argued that a portfolio consisting of higher ROCE companies should outperform a portfolio comprising lower ROCE firms over the long term. ROCE is calculated as: ROCE = Earnings Before Interest and Tax (EBIT) / Capital Employed.

Theoretical Framework

This research work is anchored on stakeholder theory. The basic proposition of the stakeholders theory is that the firm's success is dependent upon the successful management of all the relationships that a firm has with its stakeholders- a term originally introduced by Stanford research institute (SRI) to refer to those groups without whose support the organization would cease to exist (Freeman 1983). Freeman's stakeholders' theory asserts that, managers must satisfy a variety of constituents (example, employees, customers, suppliers, local community and so on) who can influence the firm's outcomes. According to this view, it is not sufficient for managers to focus exclusively on the needs of stockholders, or the owners of the business. This implies that it can be beneficial for the firm to engage in certain environmental activities that non-financial stakeholders perceive important, because without this, these groups might withdraw their support from the business.

In the first model, the stakeholder analysis focuses on developing and evaluating the approval of corporate strategy decisions by groups whose support is required for the firm's continued existence. The stakeholders identified in this model include the owners, customers, public groups and suppliers. Although these groups are not adversarial in nature, their possibly conflicting behavior is considered a constant on the strategy developed by management to best match their firm's resources with the environment (Deegan & Gordon, 1966). In the second model, the corporate planning and analysis extends to include external influences which may be adversarial to the firm. These adversarial groups may include the regulatory environmentalist and/or special interest groups concerned with social issues (Guthrie and parker, 1990). The second, model enables managers and accountants to consider a strategic plan that is adaptable to change in the social demands of non -traditional stakeholders groups. The stakeholders' theory proposed an increased level of environmental awareness which creates the need for companies to extend their corporate planning to include the non-traditional stakeholders like the regulatory adversarial groups in order to adapt to changing social demands (Trotman, 1999). The main concern of the stakeholders' theory in environmental accounting is to address the environmental cost elements and valuation and its inclusion in the financial statements.

Stakeholder theory suggest than an organization will respond to the concerns and expectations of powerful stakeholders and some of the response will be in the form of strategic disclosures Stakeholders theory provides rich insights into the factors that motivate managerial behaviour in relation to the social and environmental disclosure practices of organizations. Previous social and environmental accounting research which utilized these theories indicate that organizations respond to the expectations of stakeholders groups specifically and generally to those of the broader community in which they operate, through the provision of social and environmental information within annual reports.

This study is anchored on stakeholders' theory, as its concern is to encourage business managers to carry out environmental practices which the non- financial stakeholders consider very important so as to maximize stakeholders' value as well as minimize environmental costs. The main concern of the stakeholders theory in environmental accounting is to address the environment cost elements and valuation and its inclusion in the financial statements. Stakeholder theory, therefore, is concerned typically with how the organization manages its stakeholders. Thus the information disclosed to the stakeholders may be assumed more properly by the organization to be part of a legitimacy and/or social process.

Empirical Literatures

Uniamikogbo and Ifeanyichukwu (2021) investigated the relationship between environmental accounting disclosure and financial performance of manufacturing firms in Nigeria. Precisely, the study examined the effect of environmental accounting disclosures on Share Price, Return on Asset and Return of equity of selected manufacturing firms in Nigeria. The ex-post-facto research design was engaged in this study, using a sample of 40 manufacturing firms. The secondary source of data collection method was employed using the convenience sampling technique. Data were harvested from the content analysis disclosure index and corporate annual reports of the sampled manufacturing firms listed on the Nigerian Stock Exchange for the period 2010-2019 financial years. The descriptive statistics, correlation matrix and regression analysis were the statistical tools used in the study. Data were analysed with the aid of the panel data regression technique. The findings revealed that

environmental accounting disclosures had a significant effect each on Share Price, Return on Asset and Return on equity of manufacturing firms in Nigeria.
Nwambeke, Udama and Oko (2019) investigated the impact of environment accounting disclosure on financial performance in cement companies in Nigeria from 2006 to 2017. Specifically, the study sought to ascertain the impact of employee safety costs, charitable contribution costs and community development costs on the financial performance of cement companies in Nigeria. The study adopted *Ex-Post Facto* research design while data obtained from individual annual reports of cement companies were analyzed using panel data regression model. The study found that employee safety costs has negative and significant impact on the financial performance of cement companies in Nigeria; the level of charitable contribution costs has positive and significant impact on the financial performance of cement companies in Nigeria while the level of community development costs has positive and significant impact on the financial performance of cement companies in Nigeria. The implication of the finding is that companies with better environmental accounting disclosures have higher level of financial performance. The study concluded that environmental accounting disclosure contributes significantly to the profitability of cement companies in Nigeria. The
Ahmad, Mohammad and Inuwa (2017) investigated the impact of environmental disclosure on performance of cement and brewery companies in Nigeria. The population of the study consists of nine cement and breweries companies listed on the Nigerian stock exchange. Three listed cement and four breweries companies were selected as a sample for this study. Secondary data were used and were collected from annual reports of selected companies for the period of five years from 2011 – 2015. Ordinary Least Square regression technique was employed to analyze the data. Content analysis was used for measuring quantitative environmental disclosure and outweighed approach was used to rank environmental disclosure indices for measuring qualitative voluntary environmental disclosure. Return on Asset (ROA), Return on Equity (ROE), and Earning per Share (EPS) were used as proxies for measuring performance. The empirical result indicates that environmental disclosure quantitative (EDQN) has a positive insignificant on ROA and EPS at 0.707 and 0.616 respectively, it has negative insignificant impact on ROE at 0.756. On the other hand, environmental disclosure qualitative (EDQL) has positive significant impact on ROAat0.025 also with EPS at 0.00, it however has positive insignificant impact on ROA at 0.660 and is statistically significant, also negative impact on ROE and EPS and is insignificant. The control variable firm size (FRMS) has positive significant impact on EPS at 0.009.
Utile Tarbo and Ikya (2017) examined corporate environmental reporting and the financial performance of listed manufacturing firms in Nigeria using time series data from 2011 to 2015. The study aimed at determining the effect of erosion control reporting, waste management reporting and air pollution reporting on the financial performance of listed manufacturing firms in Nigeria. The study adopted an ex-post facto research design. The sample of the study was drawn from ten manufacturing firms listed on the Nigerian Stock Exchange. Regression analysis was employed as the major technique for data analyses. It was found that both erosion control reporting and air pollution reporting has significant effect respectively with firm financial performance while waste management reporting has negative but significant effect on firm financial performance of companies under investigation. The major conclusion reached by this study is that environmental reporting has significant effect on firm financial performance.
Ezeagba et al (2017) investigated environmental accounting disclosures and financial performance in selected food and beverage companies in Nigeria for the period 2006 to 2015. Data for the study were collected through secondary sources and analyzed using Pearson's correlation statistical technique and multiple regression with the aid of SPSS version 20.00. In this study, environmental disclosure index was employed as the independent variable while return on equity, earnings per share, return on capital employed and net profit margin was employed as the dependent variable. The study revealed that there is a significant relationship between environmental accounting disclosures and return on equity of selected companies. It also revealed a negative relationship between environmental accounting disclosures and return on capital employed and net profit margin of selected companies.
Mohammad et al (2016) examined environmental accounting reporting disclosure and company profitability using listed manufacturing companies of Bangladesh for the period of between 2014 to 2015. All the listed manufacturing companies in Dhaka Stock Exchange (DSE) have been selected as the research sample. Return on asset was employed as the dependent variable while environment

accounting reporting disclosure index was employed as the independent variable. Content analysis technique was employed in order to analyze the score of the companies in environment accounting reporting disclosure index (EARDI). ANOVA Test and Karl Pearson's correlation was employed in analyzing the data. The study found a significant positive relationship between environment accounting reporting disclosure index and return on assets.

Okoye et al (2016) investigated the effect of non-disclosure of environment cost on the performance of selected firm listed on Nigeria. The study adopted ex post facto research design to address the problem under investigation. It sampled three cement industries listed on Nigeria stock Exchange for the period 2010 to 2014 through simple random sampling techniques. The researcher used content analysis of corporate annual reports for method of data collection. This was analyzed using multiple linear regressions and the hypotheses were tested using analysis of variance. It was found that non-environmental cost disclosures have significant effect on the firms' profitability, efficiency and liquidity. The study recommends that firms should disclose their environmental costs to their stakeholders (investors) despite the fact that doing so would reduce their profit, liquidity and efficiency so that the stakeholders and the general public will be aware of their actual environmental impact.

Gatimbu et al (2016) examined the effect of corporate environmental disclosure on financial performance of firms listed at Nairobi Securities Exchange, Kenya from 2009 to 2013. The study made use of longitudinal secondary data from the annual reports and financial statements of listed companies at the Nairobi Securities Exchange. Content analysis of sampled listed companies' annual reports was undertaken to examine environmental disclosure practices. A checklist of environmental disclosure items and categories was developed and environmental disclosure indices computed. Casual research design was employed to determine the cause-effect relationship between corporate environmental Disclosure and financial performance. Target population of the study was 61 listed companies. Purposive sampling was employed in selecting firms that have been listed for entire period of study and whose annual reports are available at the Nairobi Securities Exchange. Linear regression was employed in analyzing the data. Findings reveal that environmental disclosure has a positive significant effect in the mean financial performance. The study recommends that firms should engage in environmental disclosure because it leads to increased financial performance.

METHODOLOGY

The study adopted ex-post facto research method. The study comprise of all quoted companies on the floor of the Nigerian Stock Exchange as at the end of December, 2021. Firms from different sectors of the economy were selected for the study. They include Con oil Nigeria Plc, Evan Medical, PZ Cussons Nigeria, Dangote Floor Mills and Diamond Bank Plc. The study made use of secondary data from the annual report of the sampled companies. The study adopted and modified the model of Uniamikogbo and Ifeanyichukwu (2021). The models were expressed in functional and econometric forms. The regression model is represented as:

$Y = \alpha + \beta_1 X_1 + ẹ$ - - - (1)

Where:

Y = Dependent variables

α = Constant Term

β= Beta coefficients

X_1 = Independent variables

ẹ = Error Term

The Regression Model can be restated in econometric form as:

$ROA = \alpha_{O} + \beta_1 ENDI + \varepsilon$ - - (1)

$ROE = \alpha_{O} + \beta_1 ENDI + \varepsilon$ - - (2)

$ROCE = \alpha_{O} + \beta_1 ENDI + \varepsilon$ - - (3)

Where

ENDI = Environmental Disclosure Index

ROA = Return on Assets

ROE = Return on Equity

ROCE = Return on Capital Employed

Descriptive statistics, correlation analysis and ordinary least Square regression were employed in analyzing the data.

RESULTS

The data generated from the quoted companies were analyzed and presented below:

Descriptive Statistics

The descriptive statistics reveals the individual characteristics of the variables used in this study highlighting their median, mean, maximum and minimum values, standard deviation, skewness, kurtosis, Jarque-Bera and probability.

Table 1: Result of the Descriptive Statistics

	ENDI	ROA	ROE	ROCE
Mean	14.40000	0.127760	0.290000	0.388400
Median	15.00000	0.120000	0.230000	0.290000
Maximum	16.00000	0.430000	0.770000	1.400000
Minimum	12.00000	0.004000	0.040000	0.040000
Std. Dev.	1.322876	0.102236	0.233184	0.367545
Skewness	-0.110217	1.076367	0.824846	1.550530
Kurtosis	1.568027	4.090226	2.293147	4.582498
Jarque-Bera	2.186601	6.065476	3.355337	12.62590
Probability	0.000109	0.048184	0.046809	0.001813
Sum	360.0000	3.194000	7.250000	9.710000
Sum Sq. Dev.	42.00000	0.250851	1.305000	3.242136
Observations	25	25	25	25

Source: E-View 8.0

The individual characteristics of the variables such as median, mean, maximum and minimum values, standard deviation and Jarque-Bera statistics (normality Test). The table indicates that environmental disclosure index, return on assets, return on equity and return on capital employed recorded means values of 14.4, 0.127760, 0.290 and 0.3884 with a standard deviation of 1.322976, 0.102236, 0.233184 and 0.367545 respectively. The variables recorded a Jarque-Bera values and probability values which are within the acceptable threshold indicating that they are normally distributed.

Correlation Analysis

This was used to check if multi-collinearity exists among the explanatory variables. This is because the presence of multicollinearity in a set of data forces the standard error to go up, and then in reverse, forces the t-statistics to be low. The result is presented in table 2 below.

Table 2 Correlation Matrix

	EDI	ROA	ROE	ROCE
EDI	1.000000			
ROA	0.187438	1.000000		
ROE	0.334982	0.759901	1.000000	
ROCE	0.310733	0.647009	0.738094	1.000000

Sources: E-view 8.0

From the rule of Thumb, if correlation coefficient is greater than 0.8, we conclude that there is multicolinearity but if the coefficient is less than 0.8 there is no multicolinearity. We therefore, conclude that the explanatory variables are not perfectly linearly correlated.

Regression Analysis

The results of the regression analysis are discussed below:

Table 3 Environmental Disclosure Index and Return on Assets

Dependent Variable: ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.080834	0.228859	-2.353206	0.0072
ENDI	0.014486	0.015829	2.915139	0.0096
R-squared	0.535133	Mean dependent var		0.127760
Adjusted R-squared	0.476818	S.D. dependent var		0.102236
S.E. of regression	0.102583	Akaike info criterion		-1.639662
Sum squared resid	0.242037	Schwarz criterion		-1.542151
Log likelihood	22.49577	Hannan-Quinn criter.		-1.612616
F-statistic	27.37480	Durbin-Watson stat		1.641816
Prob(F-statistic)	0.000614			

Sources: E-view 8.0

Environmental disclosure (EDI) recorded t statistics value of 2.915139 and p-value of 0.0096 indicating that environmental accounting disclosure has a significant impact on return on assets of quoted firms in Nigeria.

Table 4 Environmental Disclosure Index and Return on Equity

Dependent Variable: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.560286	0.500709	-1.118984	0.2747
ENDI	0.059048	0.034631	2.705027	0.0017
R-squared	0.472213	Mean dependent var		0.290000
Adjusted R-squared	0.413614	S.D. dependent var		0.233184
S.E. of regression	0.224438	Akaike info criterion		-0.073819
Sum squared resid	1.158562	Schwarz criterion		0.023691
Log likelihood	2.922741	Hannan-Quinn criter.		-0.046774
F-statistic	32.07118	Durbin-Watson stat		1.951398
Prob(F-statistic)	0.001662			

Sources: E-view 8.0

Environmental disclosure (EDI) recorded t statistics value of 2.705027 and p-value of 0.0017 indicating that environmental accounting disclosure has a significant impact on return on equity of quoted firms in Nigeria.

Table 5: Environmental Disclosure Index and Return on Capital Employed

Dependent Variable: ROCE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.854800	0.796146	-1.073673	0.2941
ENDI	0.086333	0.055065	1.567836	0.1306

R-squared	0.496555	Mean dependent var	0.388400
Adjusted R-squared	0.457275	S.D. dependent var	0.367545
S.E. of regression	0.356864	Akaike info criterion	0.853693
Sum squared resid	2.929091	Schwarz criterion	0.951204
Log likelihood	-8.671169	Hannan-Quinn criter.	0.880739
F-statistic	12.58110	Durbin-Watson stat	1.871427
Prob(F-statistic)	0.000576		

Sources: E-view 8.0

Environmental disclosure (EDI) recorded t statistics value of 1.567836 and p-value of 0.1306 indicating that environmental accounting disclosure has no significant effect on return on capital employed of quoted firms in Nigeria.

CONCLUSION

The study assessed the impact of environmental accounting disclosure on the profitability of quoted firms in Nigeria from 2017 to 2021. The data generated were subjected to statistical analysis. The result of the descriptive statistics indicates that all the variables were normally distributed. The correlation matrix indicates that the explanatory variables are not perfectly linearly correlated. The regression result indicates that environmental accounting disclosure has significant impact on return on assets and return on equity. However, it was found that have insignificant impact on return on capital employed. Based on the foregoing, the study concludes that environmental accounting disclosure has significant impact on profitability of quoted firms in Nigeria. Therefore, firms should adopt uniform reporting and disclosure standards of environmental practices for the purpose of control and measurement of performance. Firms should be encouraged to disclose their environmental practices in their annual reports to enhance their competitiveness which would subsequently lead to high corporate performance. Also, financial Reporting Council and other relevant bodies in the standard setting process draft should a comprehensive framework for environmental reporting practices for Nigerian firms.

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