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ENVIRONMENTAL COSTS AND FINANCIAL PERFORMANCE OF LISTED FIRMS IN NIGERIA

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ABSTRACT

This research studied environmental costs and financial performance of quoted companies in Nigeria. The study set out to determine impact of environmental costs on Earnings Per Share, Dividend Per Share, Net Profit Margin, Return on Capital Employed on environmental costs of the quoted companies studied. The study employed ex post facto research design, anchored on Stakeholder's Theory and adopted a purposeful sampling method to select Conoil PLC, Forte Oil PLC, Japaul and Maritime Service PLC. The study covers four (4) years period of annual report of the company under study covering period from 2014 to 2017. Descriptive and inferential statistics plus multiple Regression model were used to analyze the data collected from the annual report of the companies. The results and the findings show that there is highly negligible impact between environmental costs and financial performance in the companies studied. The study therefore recommends that the companies search for other factors which accounted for high cost and think of how to tackle them towards profitability. New technological approaches on cost reduction should be applied in the normal discharge of management functions geared towards improving financial performance.

Key Words: Environmental Costs, Financial Performance, Earnings Per Share, Dividends Per Share, Net Profit Margin, Return on Capital Employed.

Introduction

Nations and responsible corporate management are seen to have incorporated environmental accounting dating back to 1990s. The justification behind this action emanates from inside and outside of the company so also the global level on the need to incorporate environmental cost in accounting for the profitability of the firm. On the verge of protecting the environment, various government rules and regulations, laws, enactments and decrees such as the Environmental Impact Assessment Act (EIA) 1992, Environmental Guidelines and Standards for Petroleum Industry Nigeria (EGASPIN) 2002 and the Department of Petroleum Resource (DPR) have been enacted in most part of the world and Nigeria not been an exception is fast responding to its adoption. This demands management to account for the environmental implication of all internal decisions of the management as it affects the stakeholders of the organization.

A teething economy like Nigeria, facing systematic destruction of the environment as a challenge due to the inability to manage the environment is fast degrading and has exaggerated the level of poverty. Emissions and toxic wastes from industries constitute great menace to the atmosphere, farmers also are threatened by the ozone layer, the seas, oceans and land. Their biodiversity is systematically destroyed through continuous subsistence farming, bush burning, falling of trees, to mention but a few without replacing the natural resources (Hasan & Hasan, 2012).

Previously, organizations have ranked businesses based on profitability. All indirect expenditures such as overhead have been considered without taking a look at the environment. Conventional accounting practice has not taken cognizance of environment accounting for energy, water, materials and the usage of natural resources. Until a few people in the developed countries considered that having great profit is not good enough, if it is at the detriment of large scale of the ecosystem by which we are nourished. Habitats of the ecosystem are being threatened due to pollution, degradation, destruction of the ecosystem and the depletion of non-renewable environmental biodiversity. (Enahoro, 2009). Environmental accounting is the identifying, measuring and allocating of costs relating to the environment, and integrating of such costs into businesses and communicating same to stakeholders of the firm. It enables excellent corporation governance that ensures transparency in its societal actions (Bassey and Sunday, 2013).

Environmental requirements and costs are drastically growing as the populaces are becoming environmentally conscious. Corporate organizations are socially responsible and accountable to the society. Environmentally friendly products attract more customers who are eager to pay extra for such products thus increasing their competitive advantage.

Statement of the Problem

Financial performance is below average or erroneous due to the nonchalant attitude towards environmental expenditures which companies incur (Okon, Sunday and Bassey, 2013). Negative impact and environmental degradation could affect the financial statement and have adverse influence on asset values (Enahoro, 2009). The limited knowledge of environmental accounting, its ideologies and procedures are vital issues begging for urgency to foster trueness and fairness in the state of affairs of the company. Valuing damages, degradation of the environment externalities as well as depleting of the ozone layer is a problem calling for attention.

Salomone and Galluccio (2001) stated in Enahoro (2009) that both accounting and environmental sectors are interested in identifying, measuring, reporting and managing environmental impacts. The study concluded that the evaluation of environmental effects on company's financial performance requires improvement in reporting of environmental data. Currently, reporting environmental issues is optional, the financial statements of companies have excluded environmental issues entirely, even though when reported, are approximately inadequate. Therefore, companies that their activities have influence on the environment should consider designing and implementing environmental accounting in an emerging environmental policy changing environment. Consequently, the research seeks to investigate if companies listed in the Nigeria Stock Exchange practice Environmental Accounting and if so how the practice of environmental accounting affects the financial performance.

Objectives of the Study

The general objective of this study is to establish the impacts of environmental accounting on the financial performance of quoted companies in Nigeria. However, the specific objectives are as follows:

1. To determine impact of environmental cost on earning per share of the listed firms in Nigeria.

2. To ascertain the impact of environmental cost on dividend per share of the listed firms in Nigeria.
3. To investigate the impact of environmental cost on net profit margin of the listed firms in Nigeria.
4. To establish the impact of environmental cost on return on capital employed of the listed firms in Nigeria.

Research Hypotheses

H_{01}: Environmental cost does not significantly affect earnings per share of the listed firms in Nigeria.

H_{02}: Environmental cost has insignificant impact on dividend per share of the listed firms in Nigeria.

H_{03}: Environment cost has insignificant effect on net profit margin of the listed firms in Nigeria.

H_{04}: Environmental cost has insignificant effect on return on capital employed of the listed firms in Nigeria.

Review of Related Literature

Conceptual Review

Environmental Accounting

Environmental Accounting is a subsection of accounting that ascertains resources usage, measures the resources and communicates the environmental impact in costs of the company's activities to the users. The ever increasing awareness of the social and environmental well-being result to the emergence of environmental accounting (Deegan, 2013) in (Mohammed, Mohammad and Abdul, 2016). Environmental Accounting is a common term that measures its unfavourable effects and forecast them in the accounting system applications. Environmental management to a large extent, considers the environment and the ecosystem when carrying out managerial decision-making, and achieving its objectives. This is a reduction or abolishing completely of the damage to the environment owing the company's actions, activities and changing designs and packaging of its products as well as restructuring of its production process to protect the ecological environment and making endeavours to being socially responsible to the society (Hasan and Ahmet 2016).

In recent times, there has been an increasing concern about depletion of resources and ozone layer, degradation of the environment, and sustainable economic activity have made Environmental Accounting significant in Nigeria. A company profit or loss is not always determined by the products and services it deals with only but also by the complexity of its environment. The side effects of production activities and consumption resulting to an imbalance in the environmental system should be documented in the company annual report. (Adediran and Alade, 2013). Environmental Accounting is required by internal users for generating environmental information for efficient managerial decision-making on price, capital budget, overhead control among others, and disclosing environmental information of interest to varying stakeholders (Beredugo and Mefor 2012).

Environmental Protection

Over the years, companies' activities are ever increasing environmental problems due to technological mismanagement that interferes with the ecosystem. These diverse activities have directly affected the environment with pollution, soil erosion, global warming and green -house effect threatening the natural resources, man's health, the ecosystem and the economy (Rakesh, 2015).

This technological development made by man affects the environment in diverse ways disturbing entirely nature balance and endangering man's lives including the extinction of lives in future. However, maintaining a balanced nature grows, develops and nourishes living things in the globe as well as achieving a healthy environment, (Rakesh 2015).

In recent times, Organizations are aware of the essence of environmental protection, as they are conscious of not only problems involved by their activities and actions but also their functions in protecting the environment through the consciousness of policymakers aimed at adopting environmental friendly business policy (Akabom 2012). Protecting the right of members of the society, maintaining a healthy and proper environment and ensuring a better guarantee legal certainty are parts of the extension. Environmental protection covers the planning, controlling, utilizing, preserving, supervising, enacting and reviewing laws that systematically integrate efforts to preserve the environmental functions and prevent destruction (Adediran & Alade, 2013).

Environmental Cost Variables/Costs Responsiveness

Environmental Operating Expenditure (EOPEX): Corporate organization complies with environmental rules, regulations. Some of these criteria are having a written environmental plan, communicating this plan to stakeholders, rewarding environmental performances, conducting frequent environmental audits, having the executives support for environmental programs and motivating employee environmental training.

These organizations will also try to incorporate environmental programs into strategic planning process. Among the strategic actions influenced by environmental concerns are decisions such as costs for obtaining pollution control equipment, costs incurred for treating and disposing of toxic wastes, maintaining pollution prevention equipment, licensing facilities for producing contaminants, costs resulting from recycling scraps.

Environmental External Failure Costs (EEXFC): These are Costs incurred on undertakings executed beforehand aimed at managing waste in the environment. This refers to value costs related to defects after delivery to the customers which are measured as costs incurred in the cleaning of polluted natural land, lake and environment, cleaning up contaminated soil and oil spill, restoring land to natural state.

Environmental Capital Expenditure (ECE): Corporate business increases their investments in environment protection especially for pollution abatement, waste management, sewage category and control processes.

Environmental Pollution Prevention Costs (POPREV): Pollution prevention cost can save industrial production process costs, and also make available a new source of income. Several pollution prevention costs are quite cheap to implement and can be relatively profitable and some others must be analyzed carefully to consider their profitability. The analysis involved is in a current process and is likely a pollution prevention option.

Environmental Detection Cost (PODET): This refers to cost incurred to make sure that the organization complies with regulations and voluntary standards including costs for investigating environmental transactions, reviewing goods and developments, increasing ecological activities processes, analysing pollution and assessing adulteration extent.

Financial Performance

Performance is however the outcome of an activity. Business Encyclopedia (2011) explains performance measurement to be those relating to the results or outcomes and those that determine the results such as resource utilization, innovation, quality, flexibility. Performance measurement framework can be centred on the concepts of results and determinants, (Jat, 2006 in Aondoakaa, 2015).

Overtimes, corporate organizations centre on the use of financial performance measurement for evaluation purposes. Financial performance of a firm indicates the financial health of the firm over a given period of time (Magara, Aminga and Momanyi, 2015). The measurement of a company viability is always ratios produced after financial statements or share market prices to permit comparison of the firm's previous and recent financial performances. It helps to improve the performance of management; and serves as performance indicator (Lin and Liu, 2008). Financial Ratios can be viewed as a preliminary reference for analyzing the performance of firms. There are two aspects of financial performance of a business; firstly, its financial performance may be assessed by its capacity to generate revenue. It considers profit as the most suitable measure of a firm's performance. Thus, ratios of financial efficiency focuses on the relationship between profit and sales and profit and capital employed. Secondly, the financial performance may be assessed in terms of the value of its shares to investors. In this section, the ratios of financial performance focus on earnings per share (EPS), dividend per share (DPS), net profit margin (NPM) and return on capital employed (ROCE)

Financial performance variables
Earnings per Share (EPS)

This is usually used in the measurement of entity's performance. It depicts the amount of PAT, Non-Controlling Interest (NCI), and extraordinary items attributed to each ordinary share in issue and ranking for dividend in the period (Ofoegbu, 2003).

EPS is used in measuring entity's performance. An essential part of Earnings Per Share which is neglected is the net income; the capital required to generate the earning in the computation.

Firms might create equivalent EPS number, nonetheless, the business could carry out this with less investment. Such corporation is considered more efficient in generating income from its capital and from all ramifications viewed as all well performing company. The rate of growth of EPS is very essential and this may be compared between different companies and overtime within the same company. Having considered EPS to be the most accepted method for measuring firm's profitability, it is vital to have in mind that earning can often be influenced by changes and restatements in accounting.

Anti-dilution is an increase in EPS or a reduction in loss per share as a result of the assumption that convertible instruments are converted, that options and warrants are applied giving the holder the right to buy ordinary shares or that ordinary shares are issued upon the satisfaction of specific conditions and Dilution is a reduction in EPS or an increase in loss per share as a result of the assumption that convertible instruments are converted.

It is given by the formula: .

$$\frac{profit\ after\ tax}{number\ of\ ordinary\ shares\ outstanding}$$

Dividend per share

This is commonly used to measure the amount of distributable profit accruing to each shares of the organization, indicating the sum of dividend each share in issue will receive.

Dividend per share is an essential metric to investors because the amount a company pays for dividends is directly converted as income for the shareholder, and dividend per share is the most straightforward figure a shareholder can use to calculate his or her dividend payments from owing shares of a stock overtime. Dividend per share increasing over time signifies that the management trusts that its earnings growth can be maintained.

It is given by the formula

$$\frac{dividend}{number\ of\ outstanding\ shares}$$

Net Profit Margin

This is a sum of the amount of the naira sales which is left after all expenses have been deducted. The balance of income after deducting business payments, interests and taxes is net profit; and consecutive high net profits depict more competitive advantages. Margins differs drastically among companies, for this reason, it is important to compare firm's profitability (or lack thereof)

It is given by the formula:

$$\frac{Net\ profit(before\ interest\ and\ taxes)}{net\ sales}$$

Return on capital employed (or Return on Investment)

This is an efficiency measure depicting the intensity and profitability of the overall capital employed. ROCE is a useful measure for comparing profit between companies as regarding the amount of capital utilized.

- A higher ROCE indicates more efficient use of capital. ROCE will be low if a company does not utilize its resources or capital effectively and not generating shareholders value.
- ROCE is essential when companies' performances are compared in terms of their capital intensive sectors, because ROCE considers liability and debt also. This offers a better indication of financial performance for companies with significant debt.
- ROCE is a vital performance indicator in general, as investors favour companies with rising and stable ROCE numbers over companies where ROCE is volatile and bounces around from one year to the next.

It is given by the formula: Net profit (before interest and taxes)

$$\frac{Net\ profit(before\ interest\ and\ taxes)}{capital\ employed}$$

Theoretical Framework

Stakeholder's Theory

The theory centers on business code of conducts, ethics and organization management. Lan Mitroff in 1983, gave a comprehensive view in his book "stakeholders of the organizational mind". The stakeholder's theory proposed that the success of a business organization is dependent on effective management of the organization in relation with its stakeholders which without them the organization will not be in existence (Freeman, 1983). Stakeholders include creditors, managers, suppliers, customers, government, employees and the public. The theory stressed that organization focusing only on the stockholders or owners of the business is not enough but engaging in environmental actions and activities that nonfinancial stakeholders consider vital, because without this, the members of the society might retreat from supporting the organization and the going concern concept of the organization will not be obtainable, if the stakeholders do not support the activities of the organization.

According to Gray et al (1998) in Raymond (2016) Organization identifies various stakeholder groups to determine which group needs to be managed to enhance organization's interest. Corporate activities and actions are explained using stakeholder agency approach which focuses on how relationships with stakeholders are managed by companies in term of acknowledging the society operations.

In respect to this study, Stakeholder's theory holds that organizations meet demands by providing adequate and sophisticated environmental reports, when stakeholders receive the report they are motivated to release the resources under their control and invest in the organization and it will in turn affect the financial performance of the organization (Kihamba 2010).

Empirical Review

Enahoro (2009) examined the extent of independence in tracing costs impact on the environment; level of efficiency and appropriateness of environmental costs and disclosure reporting. The research instruments used for the study were questionnaire and elucidation from secondary data. In their analysis, they carried out longitudinal and cross sectional content analyses. The test statistics applied in the study were the t-test, Pearson correlation tests, ANOVA, and Multivariate Linear Regression Analysis. The study investigated environmental accounting best practice of companies operating currently in Nigeria. The result indicates that environmental operating costs are not charged independently of other costs. The study also indicates that tracking of externality costs is inappropriate as a result of deficiency in costing system. Environmental accounting disclosure does not however, take the same pattern among listed companies in Nigeria.

Juhmani (2014) studied Corporate Social and Environmental Disclosure on Website. This study was centred on examining and information disclosure of companies and website. Historical research design and secondary data was utilized for their analysis. It was found that 2012 annual reports and websites showed social and environmental cost information of about 57.57%.

Makori and Jagongo (2013) investigated the relationship between environmental accounting and profitability of selected quoted companies in India. The study utilized multiple regression and found that a significant negative association between Environmental Accounting and Earnings Per Share (EPS) and Return on Capital Employed (ROCE). It also documents a strong positive association between Environmental Accounting and Dividend per Share and Net Profit Margin.

Aggarwal (2013) considered impact of sustainability on financial performance of Indian companies. Using regression analysis the work established significant impact of sustainability on financial performance.

Beredugo and Mefor(2017) evaluated the relationship between environmental accounting reporting and sustainability in Nigeria. Their study utilized the Pearson moment correlation model and OLS for their data analyses. Their finding shows that there exists a significant connection between environmental accounting and sustainability in Nigeria. They assert that environmental accounting promotes the tracking of the emissions of greenhouse gases and other environmental data, and consequences exist for not complying with environmental cost reporting. They recommended the adoption of graphical indicators which show the performance of the organization against set target for timely corrective measures to be taken and the recognition of standards like ISAR to enhance the achievement of sustainable development

Afzal (2014) investigated extent and nature of environmental accounting and its effect on performance of Bangladesh banks from 2010 to 2014 and found significant impact on bank performance. Yearly comparison indicated that environmental information disclosure increased persistently from sixteen percent in 2010 to eighty-three percent in 2014. The study recommends that Bangladesh professional accounting bodies, government policy makers aided by international organizations should draft out frameworks for environmental cost accounting for the country.

Ayoib, Nosakhare and Chijioke (2015), demonstrated effect of environmental accounting on financial performance of firms in Nigeria. The study employed cross-sectional and content analysis, using regression techniques, to ascertain the disclosure of environmental information from the annual reports. The findings indicate a significant association between disclosure of environmental cost information and company's financial performance while moderating environmental accounting by variables such as auditor firm type, firm size, and industry type. The major contribution of their study is that it presents a more realistic assessment of the relationship between disclosure of environmental cost and financial performance of firms by utilizing models that account for both firms' individual effects and effect of interactions between disclosure of environmental information and firm-specific variables on financial performance of firms.

Morhardt, Baird and Freeman (2002) noted the consequences of undertaking environmental and social improvements is not as clear as it might be, due to the test causality. The study seeks to ascertain whether environmental and social improvements are the cause good or bad performance. They found that in 1991 and 1992 the financial performance variables have a significant relationship with emissions reductions.

Olayinka & Oluwamayowa (2014) carried out a research on Corporate Environmental Disclosure and market value of Quoted Companies in Nigeria. The objective of the study focused on ascertaining the aggregate and individual impact of Corporate Environmental Disclosure, it regressed on market value. Their study adopted the descriptive research design and secondary data only was used. A sample size of fifty firms quoted in Nigeria Stock Exchange (NSE) were purposively selected for analysis based on the availability of environmental disclosures in their annual financial reports. The hypotheses were tested using correlation coefficient. The findings review that the addition of environmental disclosure will improve market value. The study recommends that company ought to take prudence in areas where environmental activities have negative impact on the value of the company and invest in areas that add value to firm's profitability.

From the above summary, no study has been undertaken in the area of Environmental Accounting and Financial Performance in quoted companies in Nigeria. Thus, a gap in knowledge exists and this work seeks to fill in the gap.

Methodology

The design specifically employed by this study is *ex post facto* design as it analysed existing data and involve event that have happened over a number of years. The targeted population of the study comprises quoted companies which have consistently submitted their annual financial reports to the Nigeria stock exchange. The sample frame of the research includes; 11 plc, Anino international plc, Capital oil plc, Conoil plc, Eterna plc forte oil plc, Japaul oil and maritime service plc, MRS oil nigeria plc, Oando plc, Seplat petroleum development company ltd, Total Nigeria plc and Rak Unity Pet. Comp. plc. Purposive sampling method is used.

The sample for the study is three (3) oil and gas companies only selected from the above sample frame of twelve (12) based on the availability of data for the study period 2014-2017(4years). The selected oil and gas companies include Conoil plc, forte oil plc, and Japaul oil and maritime service plc.

Variable Definitions and Measurement

Independent Variable: these are variables that explain or determine the outcome of the dependent variable. In this study, the independent variable is environmental cost.

Dependent Variables: These include variables that depend on the outcome or activity of the predictor variables. In this work, dependent variable is the financial performance.

Operationalization of Variables Hypothesized

Independent variable = Environmental Costs

Dependent variable = Financial performance

$Y = F(X)$

Where

Y = dependent variable (finPERF)

X = independent variable (Environmental Costs)

Financial Performance = f(Environmental Costs)

X_1 = Environmental Costs (ENVC)

Y_1 = Earnings Per Share (EPS)

Y_2 = Dividend Per Share (DPS)

Y_3 = Net Profit Margin (NPM)

Y_4 = Return on Capital Employed (ROCE)

Therefore, (Earnings Per Share, Dividend Per Share, Net Profit Margin, Return on Capital Employed) = f(Environmental Costs)

Model Specification

$Y_1, Y_2, Y_3, Y_4 = f(ENVC)$

$$EPS = \alpha_0 + \beta_1 ENVC + \varepsilon \quad ..... (1)$$

$$DPS = \alpha_0 + \beta_1 ENVC + \varepsilon \quad ..... (2)$$

$$NPM = \alpha_0 + \beta_1 ENVC + \varepsilon \quad ..... (3)$$

$$ROCE = \alpha_0 + \beta_1 ENVC + \varepsilon \quad ..... (4)$$

Where

ENVC = Environmental Costs

EPS = Earnings Per Share

DPS = Dividend Per Share

NPM = Net Profit Margin

ROCE = Return on Capital Employed

α_0 = constant

β_1 = coefficients of independent variable

ε = Error term

Data Analysis

Table 1 Descriptive Statistics

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
Environmental Cost	7400.00	239052.00	87244.3333	92327.30108
Earning s Per Share	-3.47	4.39	1.1775	2.43139
Dividend Per Share	.00	5.49	2.0017	1.78233
Return on Capital Employed	-56.00	19.50	-9.1417	26.75418
Net Profit Margin	-55.30	6.10	-12.0417	23.76868

Source: IBM SPSS Version 20

Table 1 above shows the mean values of the variables: Earnings Per Share (EPS), Dividend Per Share (DPS), Return on Capital Employed (ROCE), Net Profit Margin (NPM) as 87244.3333, 1.1775, 2.0017, -9.14, 17, and-12.0417 respectively; with standard deviation of 92327.30108, 2.43139, 1.78233, 26.75418, 23.76868. A high standard deviation shows that the data are widely spread (less reliable) and a low standard deviation depicts that the data are clustered around the mean.

From the above table, it can be seen that for DPS, ROCE, and NPM are reliable most especially NPM while data for EPS is less reliable.

Testing of Hypotheses

Objective One: To determine impact of Environmental Costs (ENVC) on Earnings Per Share of the quoted companies in Nigeria.

Research Hypothesis One:

H_{01}: Environmental Costs (ENVC) does not significantly affect Earnings Per Share of the quoted companies in Nigeria.

Table 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.341[a]	.116	.028	2.39762

Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 3

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.542	1	7.542	1.312	.279[b]
	Residual	57.486	10	5.749		
	Total	65.028	11			

a. Dependent Variable: Earning Per Share

b. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 4

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.395	.972		.406	.693
	Environmental Cost	8.969E-006	.000	.341	1.145	.279

a. Dependent Variable: Earning Per Share

Source: IBM SPSS Version 20

Interpretation

From Table 2 above, the correlation coefficient (r) of 0.341 shows a positive but weak relationship between environmental costs and earnings per share. The R squared value of 0.116 shows that environmental costs account for 11.6% of the variations in earnings per share of quoted companies in Nigeria.

The t-value of 1.145, p-value of 0.279 > 0.05 show that the result is not significant at the 0.05% alpha level. This means that the large value of t-value of 1.145 and small p-value of 0.279 depict that environmental costs do not have a significant impact on earnings per share of the quoted companies used for this study. To confirm the extent of insignificance of the relationship, the adjusted R square shows a small value of 0.028. In the light of the foregoing, the researcher empirically document that environmental costs have no significant impact on earnings per share of quoted companies on the floor of Nigeria Stock Exchange (NSE). The research question is hereby answered and the research objective one achieved.

Objective Two: To investigate the impact of

Environmental Costs (ENVC) on Dividend Per Share of quoted companies in Nigeria.

Research Hypothesis Two:

H_{02}: Environmental Costs (ENVC) has insignificant effect on Earnings Per Share of quoted companies in Nigeria

Table 5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565[a]	.320	.251	1.54202

a. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 6

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.166	1	11.166	4.696	.055[b]
	Residual	23.778	10	2.378		
	Total	34.944	11			

a. Dependent Variable: Dividend Per Share

b. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 7

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.050	.625		1.678	.124
	Environmental Cost	1.091E-005	.000	.565	2.167	.055

a. Dependent Variable: Dividend Per Share

Source: IBM SPSS Version 20

Interpretation

From table 5 above, the correlation coefficient (r) of 0.565 shows a positive and strong relationship between environmental costs and dividend per share. The R squared value of 0.320 shows that environmental costs explain 32% of the variations in dividend per share of quoted companies in Nigeria.

The t value is 2.167 and p-value is 0.055 > 0.05 indicating that the result is not significant at the 0.05% alpha level. This means that environmental costs do not impact on dividend per share of the quoted companies used for this work. The adjusted R shows a positive value of 0.251. Based on the above results, it evident to accept the null hypothesis that Environmental Costs (ENVC) has insignificant effect on Earnings Per Share of quoted companies in Nigeria. The research question is hereby answered and the research objective two also achieved.

Objective Three: To investigate the impact of Environmental Costs (ENVC) on Net Profit Margin of quoted companies in Nigeria.

Research Hypothesis Three:

H_{03}: Environmental Costs (ENVC) has insignificant effect on Net Profit Margin of quoted companies in Nigeria

Table 8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.380[a]	.144	.059	23.06291

a. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 9

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	895.471	1	895.471	1.684	.224[b]
	Residual	5318.979	10	531.898		
	Total	6214.449	11			

a. Dependent Variable: Net Profit Margin

b. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 10

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-20.567	9.354		-2.199	.053
	Environmental Cost	9.772E-005	.000	.380	1.298	.224

a. Dependent Variable: Net Profit Margin

Source: IBM SPSS Version 20

Interpretation

From table 8 above, the correlation coefficient (r) of 0.380 shows a positive and weak relationship between environmental costs and Net Profit Margin. The R squared value of 0.144 shows that environmental costs explain 14% of the variations in Net Profit Margin of quoted companies in Nigeria.

The t value is 1.298 and p-value is 0.224> 0.05 indicating that the result is not significant at the 0.05% alpha level. This means that environmental costs do not impact on Net Profit Margin of the quoted companies used for this work. The adjusted R shows a positive value of 0.059. mBased on the above results, it evident to accept the null hypothesis that Environmental Costs (ENVC) has insignificant effect on Net Profit Margin of quoted companies in Nigeria. The research question three is hereby answered and the research objective three also achieved.

Objective four: To establish the impact of Environmental Costs (ENVC) on Return on Capital Employed of quoted companies in Nigeria.

Research Hypothesis four:

H_{04}: Environmental Costs (ENVC) has insignificant effect on Return on Capital Employed of quoted companies in Nigeria

Table 11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.096	.005	26.68388

a. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 12

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	753.355	1	753.355	1.058	.328[b]
	Residual	7120.294	10	712.029		
	Total	7873.649	11			

a. Dependent Variable: Return on Capital Employed

b. Predictors: (Constant), Environmental Cost

Source: IBM SPSS Version 20

Table 13

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-16.962	10.823		-1.567	.148
	Environmental Cost	8.963E-005	.000	.309	1.029	.328

a. Dependent Variable: Return on Capital Employed

Source: IBM SPSS Version 20

Interpretation

From Table 11 above, the correlation coefficient (r) of 0.309 shows a positive but weak relationship between environmental costs and Return on Capital Employed. The R squared value of 0.096 shows that environmental costs account for 9.6% of the variations in Return on Capital Employed of quoted companies in Nigeria.

The t-value of 1.029, p-value of 0.328> 0.05 show that the result is not significant at the 0.05% alpha level. This means that the large value of t-value of 1.029 and small p-value of 0.328 depict that environmental costs do not have a significant impact on Return on Capital Employed of the quoted companies used for this study. To confirm the extent of insignificance of the relationship, the adjusted R square shows a small value of 0.005. In the light of the foregoing, the researcher empirically document that environmental costs have no significant impact on Return on Capital Employed of quoted companies on the floor of Nigeria Stock Exchange (NSE).

Discussion of findings

Hypothesis one was tested to determine the effect of environmental costs on Earnings Per Share (EPS) of quoted companies in Nigeria.

Environmental costs have shown to have no impact on Earnings Per Share (EPS) of quoted companies in Nigeria. This implies that since environmental costs does not account for meaningful per cent, only 11.6%, of the variations in Earnings Per Share (EPS), other variables that must contributed the remaining 88.4% were not captured by the model. This is as a result of the type of model used (simple regression). Such variables may include firm size, firm age, board size, ownership concentration and so forth.

Hypothesis two was tested to determine the effect of environmental costs on Dividend Per Share (DPS) of quoted companies in Nigeria. Environmental costs have shown to have no impact on Dividend Per Share (DPS) of quoted companies in Nigeria. This implies that since environmental costs does not account for meaningful per cent, only 32%, of the variations in Earnings Per Share (EPS), other variables that must contributed the remaining 68% were not captured by the model. This is as a result of the type of model used (simple regression). Such variables may include firm size, firm age, board size, ownership concentration and so forth.

Hypothesis three was tested to determine the effect of environmental costs on Net Profit Margin (NPM) of quoted companies in Nigeria. Environmental costs have shown to have no impact on Net Profit Margin (NPM) of quoted companies in Nigeria. This implies that since environmental costs does not account for meaningful per cent, only 14% of the variations in Net Profit Margin (NPM), other variables that must contributed the remaining 86% were not captured by the model. This is as a result of the type of model used (simple regression). Such variables may include firm size, firm age, board size, ownership concentration and so forth.

Hypothesis four was tested to determine the effect of environmental costs on Return on Capital Employed (ROCE) of quoted companies in Nigeria. Environmental costs have shown to have no impact on Return on Capital Employed (ROCE)of quoted companies in Nigeria. This implies that since environmental costs does not account for meaningful per cent, only 9.6% of the variations in Return on Capital Employed (ROCE), other variables that must contributed the remaining 90.4% were not captured by the model. This is as a result of the type of model used (simple regression). Such variables may include firm size, firm age, board size, ownership concentration and so forth.

Conclusion/Recommendation

The findings of the hypotheses show that there is weak and negligible relationship between environmental costs and financial performance of quoted companies in Nigeria. The study concludes that the tool of environmental costs used in this study does not significantly impact on financial performance. Therefore, the research document that the heavy costs of operations reported in these companies' financial statements have no significant relationship with environmental costs.

There is urgency for quoted companies to research into other overriding factors that impact significantly on their financial performances. These could be attributed to cost of governance, bad management, heavy materials, poor inventory management, insider abuse, loss of job satisfaction by workers, heavy cost of power supply, and so forth.

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