

## Environmental Cost and Financial Performance of Quoted Oil and Gas Companies in Nigeria: A Critical Examination.

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### ABSTRACT

In real sence, environmental issues are not new. They are always there with us and no organized business entity can ignore them intoto.However ,the preference of their ranking in different corporate organisations remain the newest aspect of this issues.Nevertheless,about two decades has witnessed an increase in matters relating to entity's with the environment in which they operate. This in essence has form the basis of a central to the future well-being of both the business and those actually affected in the quoted oil and gas companies of the Nigerian economy. The central aim was to examine Environmental Cost (Health related cost, Infrastructural development cost and education programme cost) influences on financial performance in the quoted Oil and Gas Companies in Nigeria.A sample of relevant five quoted companies were considered between 2009 to 2019 fiscal years. However, the generated data were analysed using descriptive and inferential statistics while regression analysis model was adopted for estimating the test result. Findings however revealed that a significant positive influence by a segment of the environmental cost (health) on financial performance as against an insignificant influence by other segments of the environmental cost (infrastructure and education) on financial performance of quoted oil and gas companies in Nigeria. It was concluded that environmental cost contributes to financial performance in the long range of the selected quoted companies in Nigeria. Since most quotedcompanies pay taxes to relevant government agencies in Nigeria, it was recommended that, government should dominate the base of corporate social responsibility in the aspect of providing basic infrastructure to the relevant communities. Nonetheless, environmental goods and services in this context should be supportive by the oil and gas companies as a strategy for boosting their economic returns in the long run, though in moderation to avoid negative effect on their financial performance.

Keywords: Environmental Cost, Financial Performance and Quoted Oil and Gas Companies

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### INTRODUCTION

The state of the world environment and its impact on mankind in the society has led to the increased public concern and security of operations and performance of companies. Companies are now expected to demonstrate their awareness in addressing the impact of its operations on the environments and the society at large. The rapid growth in business activities has again brought the need for companies to disclose it economic responsibilities, by taking cognizance of the social interest and expenditure in economic activities. Therefore, environmental cost involves activities concerned with the

measurement of economic performance of organizations and their role in maintaining the environment and providing different services to their local communities, directly or indirectly and reporting such result to attest to the social performance undertaken by the organisation [1].

However, environmental cost attributes include a wide range of activities such as employment, training, and advancement of disable persons, health, safety rehabilitation, empowerment, transportation, orphanage support, sport development and educational programmes among others. In spites of

these, other community development projects, involvement of employees in decision making process and performance constitute the social responsibility cost attributes [2]. However, environmental cost was introduced in 1930 by Berle and means at Harvard University, United State of American (USA) during the one decade depression of 1929 - 1939 that resulted in the collapse of many companies. Therefore Environmental Cost become an issue in the United Kingdom in the Seventy's [3]. But today, environmental cost has impacted business activities and has become a global practices base on Global Reporting Initiative (GRI) or International Standards Organisation (ISO) framework.

In Nigeria, there is no mandatory requirement for quantitative disclosure of social information in financial report either under the companies act or as per International Financial Reporting Standard (IFRS). Therefore, any social responsibility costs attributable to Nigerian companies are purely voluntary. In as much as environmental cost is voluntary, it is assumed to be of bias in its report and presentation.

[4] discovered that most companies in Nigeria presently report environmental cost information in their annual report via Directors and chairman's statement respectively and notes to the account. To ascertain the extent of environmental cost in Nigeria, [5] carried out a study on social accounting disclosure in financial report of Nigeria companies. It was discovered that of 40 companies, 33 representing 82.5% from various industries grouping include social accounting disclosures and at least one year in their financial report between 2005 to 2007. And these disclosures were voluntary and quantitative derived from Directors report and notes to the account.

Nevertheless, investment in environmental activities may result in creation of assets or liabilities. Therefore, managers have the obligations to balance their needs toward making social consideration. Although environmental cost theory and empirical research undertaken in developed countries may not be the same as undeveloped nations, as a result of profit increment. These

assumptions do not hold true in less developed nations like Nigeria due to the recent practices in environmental cost. Also, the benefit accruable in environmental cost could pose a challenge in measurement due to its current practices. Be that as it may, [6] observed difficulties in social cost valuation. Other researchers like [7] found a positive relationship considering social cost and revenue growth. But [8] observed a positive relationship against Fodayin, [9] with a negative relationship in social cost and profitability. In this study, profit margin was adopted as the basis for measuring financial performance. However, the involvement of environmental transactions from shareholders perception is based on owner's investment returns. Thus the influence of Environmental Cost Attributes from ones perception (profit margin) using Nigeria as a contact point was the hub in the study.

However, the focal objective of this study is to examine the influence of Environmental cost (EC) on the financial performance of quoted companies in Nigeria. Conversely, the determinants of Environmental cost are health related cost (HRC), Infrastructural Development Cost (IDC) and Education programme Cost (EPC). In related approach, financial performance is measured by the profit margin (ie profit for the year divided by the Revenue). Meanwhile, the choice of the quoted companies in Nigeria stems from their influential and significant contribution to the economy at large and the consistency in reporting corporate social responsibility in the country. In addition to this, the issues of environmental degradation and depletion of natural resources, especially in the region of the Niger Delta in Nigeria are attracting local, national and international concerns. Thus, resulting to an increasing public outcry by a greater number of stakeholders for more corporate social responsibility (CSR) by incurring additional environmental cost by such companies. Although the influence of environmental cost on financial performance is still subject to empirical examination in the study, the researchers assume the following hypotheses:

- Ho<sub>i</sub>:** There is no significant influence of health related cost on profit margin of listed oil and gas companies in Nigeria.
- Ho<sub>ii</sub>:** There is no significant influence of infrastructural development cost on profit margin of listed oil and gas companies in Nigeria.
- Ho<sub>iii</sub>:** There is no significant influence of education programme cost on profit margin of listed oil and gas companies in Nigeria.

This paper therefore considers the following; introduction, theoretical framework and empirical literature, methodology, data analysis and interpretation, discussion of findings and the conclusion and recommendations.

**Methodology**

Owing to the historical nature of annual financial report which is the main source of data for this study, the researcher adopted ex-post facto design. To that extent, secondary panel data

were obtained from the relevant firms through contents analysis and was summarized using descriptive statistics and hypotheses tested through regression model. Besides, the population of the study consist of eleven quoted companies in the oil and gas sector up to year 2021 from which 5 companies were selected using taro Yamane technique as sample size for the period of 2009 to 2019. The sample size was purposively selected on the basis of pilot precondition of consistence in publishing environmental cost for the years under review. The sample companies are Mobil oil, Forte oil Plc, Oando oil Plc, Total oil Plc and MRS oil Plc respectively.

The theoretical model specified for this study is Environmental cost (EC) impact model drawn from corporate social responsibility. The model describes the relationship between EC and financial performance and is represented as follows:

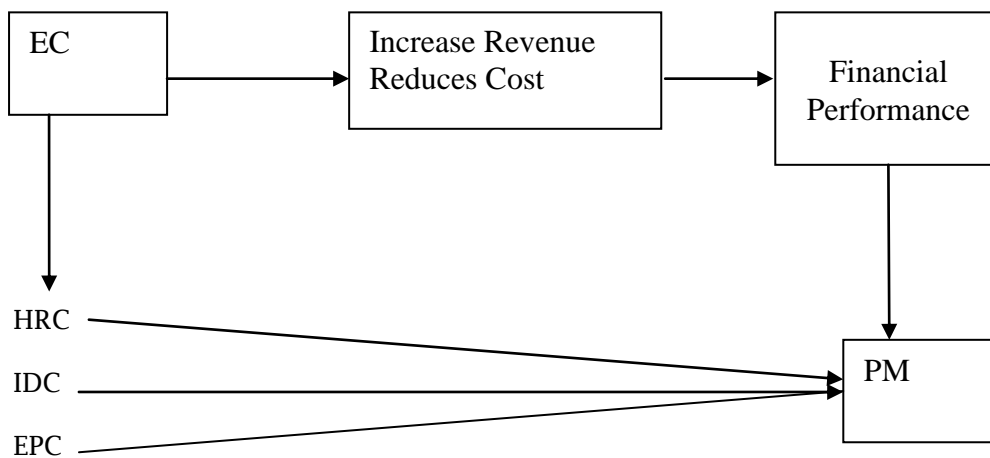


Figure 1.0 - EC Impact model  
 Source: Authors Compilation (2021)

Environmental cost represented in this study are the health related cost(HRC),Infrastructural Development Cost(IDC) and Education Programme Cost(EPC) which are expected to positively influence financial performance .However, financial

performance is represented by the profit margin which is the ratio of profit for the year to Revenue. Simple regression analysis was adopted in estimating the test result in this study. The model is stated as follows;

$$\begin{aligned}
 \text{PM} &= \beta_0 + \beta_1 (\text{HRC})_{it} + e_{it} \dots\dots\dots \text{i} \\
 \text{PM} &= \beta_0 + \beta_1 (\text{IDC})_{it} + e_{it} \dots\dots\dots \text{ii} \\
 \text{PM} &= \beta_0 + \beta_1 (\text{EPC})_{it} + e_{it} \dots\dots\dots \text{iii}
 \end{aligned}$$

Where; PM = Profit Margin,  $\beta_0$  = Constant,  $\beta_1$  = Intercept, HRC= health related cost, DC = Infrastructural development cost,

EPC = Education programme cost, I = Number of companies, t = Number of years and e = error term.

**Data Analyses and Interpretation**

The three independent variable of the hypotheses were tested as isolated cases in a simple regression model using the

statistical package for social science (SPSS) version 20 at 5% level of significance. However, data used for the analyses are shown in appendix 1 and 2

**Table 1.0: Descriptive Statistics of Environmental Cost represented by the logarithm of HRC, IDC and EPC of quoted companies in Nigeria,**

	N	Minimum	Maximum	Mean	Std. Deviation
PM	55	-.06	1.24	.0807	.23663
LOGHRC	55	.00	11.00	4.8000	3.40152
LOGIDC	55	.00	8.00	4.8727	2.93797
LOGEPC	55	.00	8.00	5.3273	2.67398
Valid N (listwise)	55				

Source: Researcher’s Computation via SPSS (2021)

Table 1.0 showed the descriptive statistics of the variables with it minimum value for each of independent as zero while the minimum value for the dependent variable (Profit margin) was -0.06. Similarly, the maximum values for each of the variables were; profit margin of 1.24, Logarithm of HRC of 11.00, Logarithm of IDC of 8.00 and logarithm of EPC of 8.00 respectively. On the average, the selected companies had a profit margin of 0.0807 within the period under review. The sampled companies spent an average of 4.8000 on health related cost, 4.8727 on

infrastructural development cost and 5.3273 on Education programme cost correspondingly. Also, the data set were normally distributed as revealed by the standard deviation. A total of 55 items were used for the analysis from the five quoted oil and gas companies in the study.

**Test of Hypotheses**

The guiding decision rule for the test states that the null hypothesis should be rejected if the p-value is less than 0.05 level of significance. The result of the regression analysis is shown thus;

**Table 2.0: Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.420 <sup>a</sup>	.177	.161	.21673

a. Dependent variable: Financial Performance(FM)

b. Predictor: (constant) HRC, IDC and EPC

Source : Researcher compilation via SPSS (2021)

**Table 3.0: ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.534	1	.534	11.371	.001 <sup>b</sup>
	Residual	2.489	53	.047		
	Total	3.024	54			

a. Dependent variable : Financial Performance(PM)

b. Predictor : (constant) HRC, IDC and EPC

Source : Researcher compilation via SPSS(2021)

**Table 4.0: Regression Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients	Standardized Coefficients	T	Sig.	
		B	Std. Error	Beta		
1	(Constant)	-.060	.051		-1.172	.246
	LOGHRC	.029	.009	.420	3.372	.001

a. Dependent variable: Performance.

Source: Researcher Compilation via SPSS (2021).

$H_{0i}$ : there is no significant relationship between health related cost and profit margin of Quoted oil and gas companies in Nigeria. The regression coefficient shown in table 4.0 indicates that the p-value of 0.001 is less than

0.05, hence the null hypothesis is rejected. This implies that that there is a significant relationship between health related cost and profit margin of quoted oil and gas companies in Nigeria.

**Table 5.0: Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.214 <sup>a</sup>	.046	.028	.23330

a. Dependent variable: Financial Performance(PM)

b. Predictor : (constant) HRC, IDC and EPC

Source : Researcher compilation via SPSS(2021)

**Table 6.0: ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.139	1	.139	2.551	.116 <sup>b</sup>
	Residual	2.885	53	.054		
	Total	3.024	54			

a. Dependent variable: Financial Performance(PM)

b. Predictor : (constant) HRC, IDC and EPC

Source : Researcher compilation via SPSS(2021)

**Table 7.0 : Regression Coefficients<sup>a</sup>**

Model		Unstandardized		Standardized	T	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	-.003	.061		-.055	.956
	LOGIDC	.017	.011	.214	1.597	.116

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Source: Researcher compilation via SPSS (2021)

$H_{0ii}$ : there is no significant relationship between Infrastructural Development cost and profit margin of quoted oil and gas companies in Nigeria. The regression coefficient shown in table 6.0 indicates that the p-value of 0.116 is greater than 0.05, hence the null hypothesis is accepted. This implies that there is no significant relationship between Infrastructural development cost and profit margin of quoted oil and gas companies in Nigeria.

**Table 8.0: Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.193 <sup>a</sup>	.037	.019	.23434

a. Dependent variable: Financial Performance (PM)

b. Predictor : (constant) HRC, IDC and EPC

Source : Researcher compilation via SPSS(2021)

**Table 9.0: ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.113	1	.113	2.059	.157 <sup>b</sup>
	Residual	2.911	53	.055		
	Total	3.024	54			

a. Dependent variable: Financial Performance(PM)

b. Predictor : (constant) HRC, IDC and EPC

Source : Researcher compilation via SPSS (2021)

**Table 10: Regression Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	-.010	.071		-.147	.884
	LOGEPC	.017	.012	.193	1.435	.157

Source: Researcher compilation via SPSS (2021)

$H_{0iii}$ : there is no significant relationship between Education Programme cost and profit margin of quoted oil and gas companies in Nigeria. The regression coefficient shown in table 10 indicates that the p-value of 0.157 is greater

than 0.05, hence the null hypothesis is accepted. This implies that there is no significant relationship between Education programme cost and profit margin of quoted oil and gas companies in Nigeria.

#### DISCUSSION OF FINDINGS

The regression analysis reveals a R-square value of 0.177, 0.046 and 0.037 respectively. These indicate that 17.7%,4.6% and 3.7% of the variation in the profit margin is contributable by the health related cost, infrastructure development cost and education

programme cost respectively. These mean that, Environmental Cost especially health related cost exert a significant influence on profit margin while Infrastructural development cost and education programme cost work in opposite to the assertion. In the same

vein, a better value of 0.420, 0.214 and 0.193 respectively for health related cost, infrastructure development cost and education programme cost implies that if other variables are held constant, every unit change in health related cost result to 42% variation in the profit margin of quoted oil and gas companies in Nigeria. The positive influence indicate that the larger the health related cost, the better the profit margin of the company. Also, another isolated result on infrastructural development cost furnishes a result of 0.214. This implies that, if other variables are held constant, a unit change in infrastructural development cost result to 21.4% variation in the profit margin of quoted oil and gas companies in Nigeria. The positive influence indicates that, the larger the infrastructural cost,

the better the profit margin of the company. Similarly, another analysis in table 4.9 resulted into a better of 0.193 for education programme cost. This implies that if other variables are held constant, every unit change in education programme cost result to 19.3% variation in the profit margin of quoted oil and gas companies in Nigeria. The positive influence indicates that the larger the education programme cost, the better the profit margin of the company. These of course coincidentally in convergent with the result of Wan, [10] and aligned with the belief of [11] that if company create value for its stakeholder such gesture would be to the shareholder as well. Also, the result affirmed with the findings of [12] and [13] which shows a positive relationship.

#### CONCLUSION AND RECOMMENDATIONS

Drawing from the test result of this study, there are negative influences by infrastructural development cost and education programme cost on profit margin of quoted oil and gas companies in Nigeria. Whereas, there is a positive influence of health related cost on the profit margin of companies selected for the study. Therefore, the researcher recommended as follows;

- i. The state government should take responsibility of providing basic amenities since companies pay taxes to them. Nonetheless, oil and gas companies should support their quest of providing some of these amenities to better the lot of the citizenry in the country.
- ii. Investment in environmental activities should not be made mandatory for companies in Nigeria since social development is outside the cores expertise of the companies in solving

- environmental problems of the state. Be that as it may, companies should strive to support the government in area of health facilities especially in this period of pandemics, this would help ameliorate the deteriorated condition of the citizenry.
- iii. Investment in education is expected to yield good return in the long run. Therefore companies should key into this developmental stride to boost human capital development, a panacea for improved profit margin.
- iv. Environmental cost generally should be seen as a welcome development to companies who may wish to promote their profit margin in the long run, since enabling environment and peaceful co-existence is the tool for profit making.

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