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Effect of Environmental Information on Financial Performance of Oil and Gas Firms in Nigeria

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ABSTRACT: *This study determined the effect of environmental information on the financial performance of oil and gas firms in government in Nigeria. It adopted a research design as secondary data were used in the study. The study spanned seven years period (2014-2020). Sample of four (4) out of nineteen (19) oil and gas companies for the study were used through random sampling technique for selection. The study adopts the ex-post facto research design which resulted in the extraction of data from secondary sources; such as audited corporate annual reports of oil gas industries. Descriptive statistics and regression analysis. The latter is based on community development costs, employee health costs and security costs, and profit for the year. Hypotheses testing were done with regression analytical techniques using E-view analytical software package. The study's findings show that community development costs have a positive and significant influence on oil and gas companies' financial performance in Nigeria. Further research shows that employee health and security expenses have a positive and non-significant effect on the financial performance of Nigerian oil and gas companies. According to the findings, Community development costs have a favorable and considerable impact on the financial performance of Nigerian oil and gas companies, while employee healthcare costs and security costs have a favorable but non-significant impact on the financial performance of Nigerian oil and gas companies. Consequently, it is recommended petroleum industry executives should be conscious of spending on community development, and the government should implement policies that benefit both sides.*

KEYWORDS: *Community development, financial performance, Health, Security*

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I. INTRODUCTION

Environmental information is information about specific locations and activities in the natural world and covered information about the air, water, soil, land, flora and fauna, energy, noise, waste, and emissions (/www.cranfield.ac.uk/). Crude oil accounts for 65 percent of Nigeria's revenue and 88 percent of its foreign exchange earnings (https://www.legit.ng/1120356-importance-crude-oil-nigeria-economy.html).

The financial performance of companies is of interest to financial analysts, researchers, the general public, and business executives. However, there are still disagreements about how to assess a company's financial performance (Liargovas & Skandalis, 2008). Profitability, liquidity, solvency, and dividend growth are all factors that companies consider when evaluating their financial success. For many stakeholders in many sorts of firms, financial performance has been a major cause of concern. In the business and corporate finance literature, its appraisal and determining variables have garnered increased attention. This is especially true in emerging nations (Dioha, Mohammed, and Okpanachi, 2018). High performance displays management effectiveness and efficiency in employing the firm's resources, which benefits the country's entire economy (Naser and Mokhtar, 2004). A corporate organization's primary purpose is to generate money and achieve various secondary goals that are relevant to the business group, in addition to maximizing profit. Firms try to improve their performance and survival by enhancing their value, profitability, and financial performance in terms of higher wealth for their shareholders and increased satisfaction for their customers' other stakeholders.

The majority of publicly traded company's financial statements in Nigeria are deficient, as they lack information on environmental and social issues (Wallace, 1988; Nzekwe, 2009). For example, Wallace (1988), Okike (2000), and Ofoegbu and Okoye (2006) all conclude that financial statements issued by Nigerian corporations are deceptive. Only 35% of corporations demonstrate social disclosure in their annual reports, according to Owolabi (2008), who used content analysis on 20 listed companies on the Nigerian Stock Exchange from 2002 to 2006, encompassing 10 sectors of the economy. Companies are more likely to reveal this information to comply with industry practices, pressures from environmental activists and supporters, ownership structure, size and profitability, and so on.

Moreover, despite the increased attention on environmental issues, studies have revealed a gap in the field of environmental accounting in emerging countries (Abu-Baker & Naser, 2000; Imam, 2000; Belal, 2001; Uwuigbe & Jimoh 2012). Arong, Ezugwu, and Egbere (2014) found a lack of understanding of environmental costing principles and methodology in Nigeria. The majority of researches have focused on companies in the oil and gas industry, although some have looked at a random sample of organizations from various industries. This research aims to provide empirical evidence on environmental information, and the financial performance of government-owned oil and gas companies in Nigeria. This study aims to determine the effect of environmental information on the financial performance of oil and gas firms in government in Nigeria. Hypothetically, the research tries to ascertain whether community development costs, employee health costs and security costs have a significant effect on the financial performance of the oil and gas industry in Nigeria.

II. REVIEW OF RELATED LITERATURE

A. Community Development Cost

Companies are encouraged to reconcile social and environmental duties with profit through social responsibility. Consequently, profit maximization or a continual market-share increase should be the foremost objective for companies (Badulescu, Badulescu, Saveanu, & Hatos, 2018). As businesses evolve, other objectives persevere adding similarly, to an ever-bigger extent, to guide to synergic effects. These objectives must also consider the results of business decisions on stakeholders. The event of the link between companies, the state, and society, has led to an increase within the pressure on the business environment to form serious efforts to adopt and/or implement an outsized range of CSR activities (Mensah, Agyapong & Nuertey, 2017). Academics and business leaders are drawn to the legitimacy and impact of corporate social responsibility (CSR) as results of the growing interest in it. Stakeholders are significant to the firms' financial growth (Sanchez-Hernandez, Gallardo-Vazquez, Barcik, Dziwinski, 2016). As a result, businesses have implemented CSR practices in areas except for taxation, like human rights, environmental protection, corporate donations (sponsorships and philanthropic actions), area people development, and workplace-related issues.

Companies implementing CSR activities in their business strategy can strengthen clients' loyalty, boost the company's image and reputation, offer a competitive advantage, and attract and maintain the best employees (Glavas & Kelley, 2014). The adoption of CSR practices by firms to enable them increase their profitabilty. Ionascu, Ionascu, Sacarin, Minu (2018) underlined that organizations real responsibility is only to increase shareholder wealth. According to Hategan, Sirghi, Curea-Pitorac, and Hategan (2018), CSR just adds to the company's costs, diminishing shareholder wealth. Furthermore, Chou, Chang, Darcy, and Yan (2017) discovered a negative link between corporate financial success and community development expenses (CFP).

B. Employee Health Cost

Effective employee training will improve skills, knowledge, productivity, and morale, similarly as replace and forestall workplace mishaps. Employee health and safety costs are a fantastic way for workers to realize new skills and knowledge while also reinforcing good work habits, resulting in a shift in workplace behavior. As a function, health and safety focus on ensuring and promoting the protection and health of the company's employees, encompassing both physical and condition (Amahalu, Agbionu, & Obi, 2017). Ignoring health and safety can cost you lots of cash. As an example, occupational accidents cost money to the companies within which they occur. They result in financial losses for the personnel who are affected, similarly as costs to society in terms of health care and lost working capability.

C. Security Costs

Beland (2005), views Insecurity as "a situation of safety brought on by dread or worry as a result of an alleged lack of security or safety". Insecurity, in line with Achumba, Ighomereho, & Akpan-Robaro (2013), might be a state of being exposed to impending societal harm from the environment and avoidable threats of danger. The costs of insecurity are incalculable. Businesses face immediate financial expenditures as results of property damage and other litigation costs (Sohnen, 2012). In line with Ewetan and Urhie (2014), a scarcity of security impedes commercial activities and discourages foreign investment. Adegbami (2013) also hinders citizens' well-being, damages companies, and causes others to relocate.

III. THEORETICAL FRAMEWORK

This study anchors on stakeholder theory because it focuses on the relationships between organizations, governments, individuals, associations, and societies. There are two categories of stakeholders in an organization: internal and external (Internal and external). Internal stakeholders include management, staff, and the board of directors, whereas external stakeholders include shareholders, communities, creditors, debtors/customers, government agencies, and the environment (Johnson-Rokosu & Olanrewanju, 2016). Stakeholder theory is founded on the concept that a company's success or failure is determined by how well it manages all of its connections with its stakeholders (Uwuigbe & Jimoh, 2012). Stakeholder theory, it's stated, is one in each of the theories that try to describe the practice of delivering social information, with a spotlight on the function it might play in relationships between organizations, governments, individuals, associations, and societies as a complete (Magnaghi & Aprile, 2014). Keep with Gray et al. (2002), stakeholder theory is founded on the thought of accountability for all actors, whether or not they need normative, descriptive, or explanatory authority within the context of CSR; and it encompasses the company's responsibilities and transparency of its actions. a giant component that the firm can utilize to manage stakeholder relationships is that the data (financial, sustainability, or both) is used to gain stakeholders' support and approval of the business plan without objecting. Both the stakeholder theory and also legitimacy theory advocate voluntary disclosure as a viable means of maintaining and growing connections between various interest-bearing groups.

Furthermore, stakeholder theory provides another theoretical framework for analyzing the connection between diverse stakeholders and management, and it should be beneficial in examining or influencing corporate social disclosures or sustainability reporting in annual company reports. As a result, the stakeholders' Theory was used because of the theoretical foundation for this research. In line with this, one cause for the expansion of voluntary environmental rules and policies is that the industry's true recognition of responsibility to the environment. Second, these codes are a response to shareholder, customer, grouping, and public pressure for firms to be more open and accountable in their environmental management, allowing industry to demonstrate environmental responsibility while also enhancing promotion. Third, firms have chosen these cooperative and versatile approaches to environmental management to avoid prescriptive and expensive command and control systems.

IV. EMPIRICAL REVIEW

Abdulsalam, Sani, Mohammed, Shafiu, and Aminu (2020), examined influence of environmental protection costs on return on equity of petroleum marketing businesses in Nigeria. The panel data was gathered from the Nigerian securities market Fact Book and therefore the annual accounts and reports of twelve (12) petroleum marketing companies in Nigeria over a fifteen-year period, from 2004 to 2018. The paper's hypothesis was tested using regression. The study discovered that environmental protection costs have a positive and considerable impact on petroleum marketing businesses' return on assets in Nigeria. As a result, the paper suggests that management of petroleum marketing companies in Nigeria increase their involvement in environmental protection, environmental remediation, and pollution control in their host communities in order to maximize profitability, notably the return on assets of the tested Nigerian petroleum marketing organizations

Between 2010 and 2019, Samuel, Aruna, and Amahalu (2020) investigate the impact of environmental cost disclosure on the profitability of oil and gas companies listed on the Nigerian exchange. Eleven (11) publicly traded oil and gas companies were randomly selected. Waste management costs, employee health, and safety costs, and environmental remediation costs were used as proxies for environmental cost disclosure, whereas lucre margin was used as profitability metric. The study's hypotheses were tested using content analysis, further as Pearson parametric statistic and Panel Least Square (PLS) multivariate analysis using STATA 13 statistical software. A study has shown that disclosure of environmental and employee health and safety costs have a big positive effect on net margin. The study recommends that since the environmental cost is value-relevant in making strategic business decisions, oil and gas firms should constantly reposition their method of accounting to produce information on environmental costs.

From 2012 to 2016, Jamil and Rodiel (2020) want to evaluate how environmental accounting affects the profitability and value of 24 publicly traded mining and oil firms in the Philippines. With cross-sectional and time-series data, panel regression was used. Environmental accounting disclosures and environmental cost reporting were wont to assess environmental accounting. Income margin and return on equity were wont to determine profitability, whereas Tobin's Q was accustomed determine company worth. The auditor-firm type, firm size, board size, number of years listed on the Philippine securities market (PSE), and site were considered as moderating variables. The most business result was that environmental accounting disclosure has no substantial influence on profitability or company value, but it's a substantial effect on return on equity when tempered by location. When business size, board size, number of years listed within the PSE, and site are moderated, environmental costs reporting contains a considerable effect on income margin, return on equity, and Tobin's Q.

Onyekachi, Ihendinihu, John, and Azubike (2020) examine the impact of environmental spending on the revenues of publicly traded Nigerian oil and gas companies (2008-2017). Secondary data was gathered from the financial records of the five selected organizations using an ex-post facto research design. Data analysis was conducted using the normal least square regression method and findings indicate those firms' investments in the environment associate significantly with their earnings. Hence the study recommended for all business units in Nigeria to stay pace with contemporary financial reporting issues by engaging in, and adequately reporting their investments in the replenishment of the world as which will promote their organizational image and business. The study also noted that there's a niche within the reporting of environmental activities of firms largely drawn from the unavailability of the world accounting standard to make sure accountability and harmonization of environmental reports, and so-called on the International Accounting Standards Board to deliver a frenzied standard to fill this gap thus enabling the accounting profession to effectively contribute its quota towards a sustainable plane.

Ikpor, Ituma, and Okezie (2019) re-examine the impact of the ignored but critical topic of environmental accounting on the long-term financial performance of Nigerian businesses. Data was acquired from ten petroleum companies operating in Nigeria's Niger Delta from 1970 to 2017. Our findings reveal that environmental operating expenses and environmental preventive costs have a significant and negative impact on the performance of petroleum enterprises in Nigeria when analyzed using the ordinary least square regression approach. However, we discovered significant disparities in the factors that influence a firm's long-term financial performance. As a result, the findings of this study have significant policy consequence

Iheduru and Ike (2019) investigate the link between environmental and social costs and manufacturing company performance in Nigeria. The study's data came from the annual reports and accounts of fourteen (14) manufacturing enterprises in Nigeria that were chosen at random. Multiple regression models were used to assess the data. Environmental and social costs have a strong negative association with Return on Capital Employed (ROCE) and Earnings per share (EPS), but a significant positive link with Net Profit Margin (NPM) and Dividend per Share, according to the study's primary findings (DPS). Based on this, it was suggested that the government give tax credits to organizations that follow its environmental laws in order to reduce their environmental costs and that environmental reporting be made mandatory in Nigeria in order to improve the performance of both organizations and the country as a whole.

Wei-Lun and Yan-Kai (2018) investigate the relationship between corporate environmental and financial performance. More and more corporations would implement the system of environmental accounting, and then they would disclose their environmental performances, in order to raise people's environmental consciousness, companies' social responsibility, and government environmental policies and legislation. From there view of literature and the statistics results on the financial and environmental performances of listed companies that had adopted the environmental accounting system in Taiwan, the results are: the adopting on the system of environmental accounting might make the corporations' financial performances worse, but not significantly make corporations' environmental performance better. 2. There should be a positive relationship between the environmental performance and financial performance of companies

Umoren, Akpan, Moses, and Okafor (2018) look into the relationship between environmental accounting reporting and the performance of Nigerian oil companies. Eleven (11) publicly traded oil companies were picked at random from the Nigerian Stock Exchange. The secondary data came from the audited financial statements of the oil companies. Environmental accounting reporting was based on the costs of air pollution, water pollution, land degradation, staff welfare, community welfare, and litigation. The oil companies' performance was assessed using return on capital employed (ROCE), net profit margin (NPM), dividend per share (DPS), and profits per share (EPS). Multiple linear regression is the statistical method used to evaluate the hypothesis. Environmental accounting reporting and performance factors such as return on capital employed ($P = 0.175$), net profit margin ($P = 0.95$), earnings per share ($P = 0.423$), and dividend per share ($P = 0.542$) were found to have insignificant associations. According to the conclusions, the government should make environmental disclosure mandatory and impose consequences on any oil business in Nigeria that violates the law; compliance by oil corporations should be treated seriously so that the environment is safe for economic growth and development.

The influence of environmental costs on the performance of oil and gas businesses (upstream) in Nigeria is

In conclusion, different scholars worked in different sectors and with different variables, such as Abdulsalam, Sani, Mohammed, Shafiu, and Aminu, 2020, who evaluated the effect of environmental protection costs on return on equity of petroleum marketing companies in Nigeria; Samuel, Aruna, and Amahalu, (2020), who evaluated the effect of environmental cost disclosure on profitability of oil and gas firms; Samuel, Aruna, and Amahalu, (2020), who evaluated the effect of environmental cost disclosure on profitability Environmental accounting's impact on corporate profitability, Ikpor, Ituma, and Okezie, 2019. Jamil and Rodiel, 2020; Ikpor, Ituma, and Okezie, 2019. Onyekachi, Ihendinihu, John, and Azubike (2020) examine the impact of environmental spending on the revenues of Nigeria's publicly traded oil and gas companies. Iheduru and Ike, 2019; Umoren, Akpan, Moses, & Okafor, 2018; Agbiogwu, Ihendinihu, & Okafor, 2016) investigate the link between environmental and social costs and manufacturing company performance in Nigeria. Ahmed and Muhammed (2017) look into the impact of environmental expenses on oil and gas businesses' (upstream) performance in Nigeria. Demirel and Eskin (2017) look into the financial structures of cement companies that are subject to environmental rules and consequences. It's perfectly legal. Florence and Willy (2016) investigate the impact of environmental cost identification on the quality of shipping line disclosure. Wei-Lun & Yan-Kai (2018) investigated the link between corporate environmental and financial performance in Taiwan. As a result, there has been little research into the impact of environmental data on the financial performance of Nigerian oil and gas companies. This is the void that the research intends to fill.

V. METHODOLOGY

The research focuses on an empirical investigation of the impact of environmental information on the profit capacity of Nigerian oil and gas companies. Because the event had already occurred, ex-post-facto research was chosen. Data was acquired from the firms' published annual report accounts for a period of seven years (2014-2020). All thirteen (13) publicly traded oil and gas businesses that were listed on the Nigeria Stock Exchange Market in 2020 were included in the study's population. From a pool of five (4) oil and gas businesses registered on Nigerian stock exchanges, thirteen (13) were picked. The variables tested were community development cost, employee health service costs, and security costs and profit for the year were proxies for the dependent variable.

Model specification

The model is a multiple regression which states that the dependent variables Y is a function of the independent variables, X. mathematically, $Y = f(xi)$

Such that $Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e_i$ in this study, we have that

$FINPER = \beta_0 + \beta_1 CDC_1 + \beta_2 EHSC + \beta_3 SCei$

Where

FINPERF = Financial performance

CDC= Community Development Cost

EHSC = Employee Health and Safety Costs

SC = Security Costs

$\beta_{0} =$ Constant

β_1, β_2 and β_3

e_i = Schochastic error associated with the model.

VI. DISCUSSION OF FINDINGS

The data collected for this study were analyzed using descriptive statistics and regression. The results are presented in tables one and two below.

Table 1: Descriptive Statistics

	PFY	CDC	EHSC	SC
Mean	2877329.	33011969	142130.2	155485.6
Median	2063385.	10000000	128512.0	79576.00
Maximum	14797095	1.32E+08	548170.0	613628.0
Minimum	-1613082.	10135.50	82.23000	23352.00
Std. Dev.	3369518.	44280086	134768.9	143530.6
Skewness	1.966040	1.135175	1.261555	1.334337
Kurtosis	7.543104	2.828415	4.465941	4.933001
Jarque-Bera	37.60525	5.399928	8.869857	11.31075
Probability	0.000000	0.067208	0.011856	0.003499
Sum	71933224	8.25E+08	3553255.	3887141.
Sum Sq. Dev.	2.72E+14	4.71E+16	4.36E+11	4.94E+11
Observations	25	25	25	25

Source: E View 8Statistical Software.

Community development costs (CDC), employee health service costs (EHSC), and security costs (SC) have mean values of 2877329, 33011969, 142130.2, and 155485.6, respectively, while the median values are 2063385, 10000000, 128512.0, and 79576.00. The standard deviations are 3369518, 44280086, 134768.9, and

143530.6, which are all volatile over time, whereas Jarque-Bera Statistics, a crucial statistical method for testing data distribution, reveals that all of the data sets are normally distributed except for community development costs. The significance values of the variables, with the exception of community development, are all significant at a 5% level of significance.

Table 2: Ordinary Least Square Regression Analysis

Dependent Variable: PFY
Method: Least Squares
Date: 10/26/21 Time: 08:17
Sample: 1 28
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CDC	0.047082	0.014362	3.278229	0.0036
EHSC	2.201543	4.165858	0.528473	0.6027
SC	2.003109	4.219527	0.474724	0.6399
C	698710.3	944726.1	0.739590	0.4677

R-squared	0.481380	Mean dependent var	2877329.
Adjusted R-squared	0.407292	S.D. dependent var	3369518.
S.E. of regression	2594109.	Akaike info criterion	32.52103
Sum squared resid	1.41E+14	Schwarz criterion	32.71605
Log likelihood	-402.5129	Hannan-Quinn criter.	32.57512
F-statistic	6.497369	Durbin-Watson stat	1.399547
Prob(F-statistic)	0.002782		

Source: EView 8.0 Statistical Software

A. Test of Hypothesis one: community development costs do not have a significant effect on the financial performance of oil and gas firms in Nigeria.

Community development costs have a favorable and considerable impact on the financial performance of Nigerian oil and gas companies, according to Table 2. When the statistic is greater than two, the null hypothesis is always rejected, according to the decision rule (2). The number in this example is 3.278229, which is substantially over 2.0. As a result, the null hypothesis is rejected, whereas the alternative hypothesis is accepted. 0.407292 is the adjusted R-squared. This suggests that community development costs could account for around 41% of financial performance variances, while other factors not addressed in this study could account for 59 percent of financial performance variations. The F-statistic of 6.497369 shows a significant probability value of 0.002782 which means that the effect of Community development costs on the financial performance of oil and gas firms in Nigeria may not have occurred accidentally. This means that the relations between CDC and financial performance are not sustainable in the long run.

Discussion of finding one: Table 2 shows that community development costs have a positive and significant impact on Nigerian oil and gas firms' financial performance. This conclusion coincided with the findings of Samuel, Aruna, and Amahalu (2020) and Abdulsalam, Sani, Mohammed, Shafiu, and Aminu (2020), but disagreed with the findings of Umoren, Akpan, Moses, and Okafor (2018) and Iheduru and Ike (2019).

B. Test of Hypothesis Two: employee health service costs do not have a significant effect on the financial performance of oil and gas firms in Nigeria.

According to the regression results in table 2, employee health-care costs have a favorable but non-significant impact on the financial performance of Nigerian oil and gas companies. When the statistic is greater than two, the null hypothesis is always rejected, according to the decision rule (2). The statistic in this situation is 0.528473, which is far below 2.0. As a result, the null hypothesis has been accepted. 0.407292 is the corrected R-Squared. This suggests that community development costs could account for around 41% of financial performance variances, while other factors not addressed in this study could account for 59 percent of financial performance variations. The F-statistic of 6.497369 shows a significant probability value of 0.002782 which means that the effect of employee health service costs on the financial performance of oil and gas firms in Nigeria may have not occurred accidentally. This means that the relations between CDC and financial performance are sustainable in the long run.

*Discussion of findings two:*Table 2 shows that employee health-care costs have a positive but non-significant impact on Nigerian oil and gas businesses' financial performance. This research concurred with Umoren, Akpan, Moses, and Okafor (2018), but differed from Ahmed and Muhammed's findings (2017).

VII. CONCLUSION AND RECOMMENDATION

The study investigated the impact of environmental information on the financial performance of government-owned oil and gas companies in Nigeria and concluded that the effect of Community development costs on the financial performance of oil and gas firms in Nigeria may not have occurred accidentally.The financial performance of Nigerian oil and gas companies is positively impacted by employee health care expenditures, but this effect is not large. The findings revealed that community development has a negative impact on profit for the year, whilst employee health and security have no impact on profit for the year. According to the report, petroleum industry executives should be conscious of spending on community development, and the government should implement policies that benefit both sides.

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