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ENVIRONMENTAL COSTS, EARNINGS CAPACITY AND HEIGHTENING INSECURITY IN NIGERIA OIL AND GAS FIRMS

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ABSTRACT

This study examined the effect of environmental costs on the earnings capacity of quoted oil and gas companies in Nigeria. Environmental cost represents an independent variable while gross profit margin, return on investment, and earnings per share concentrate on the earnings capacity of oil and gas companies. A random sampling technique was used in selecting a sample of four (4) out of thirteen (13) oil and gas companies for the study. The study adopts the ex-post facto research design which resulted in the extraction of data from secondary sources based on the audited corporate annual reports of oil and gas industries and the Nigeria Stock Exchange fact book. Data collected were analyzed using descriptive statistics, correlation, and regression analysis. A hypothesis testing was done with linear regression analysis techniques using SPSS analytical software package. The results indicated that environmental costs have a non-significant but positive effect on the gross profit margin of sampled oil and gas firms in Nigeria; the environmental cost was positive and non-significant effects on return on investment and earnings per share of oil and gas industries in Nigeria. The study recommended that: (1) Management of the oil and gas industry should maximize revenues by creating sales outlays to enable the oil and gas firms to increase gross profit; (2) The management of oil and gas companies should utilize their investment opportunity to ensure a good return on investment; and (3) Management of petroleum companies should provide good policies and strategies that would increase earnings per share

Keywords: Earnings capacity, Earnings per share, Environmental cost, Gross profit,

1.0 INTRODUCTION

Oil production brings in about a billion dollars to Nigeria's GDP. Furthermore, it provides new job opportunities for Nigerians and improves their living conditions. Nigeria is first in Africa and seventh globally in terms of oil exports. Crude oil accounts for 65 percent of the Nigerian government's revenue. Despite government efforts to diversify into agriculture and mining, the oil and gas industry has remained the backbone of the Nigerian economy (Wale, 2019). Environmental measures are widely considered in Nigeria as an opportunity cost of economic growth (Joshua & Chiedu, 2019). Both economic and environmental data are considered in environmental accounting. The meaning in terms of cooperative entities is to drive the cooperative's objective to reflect its social responsibilities. The rise in cooperative organizations' social responsibility programs cannot be over-emphasized.

Environmental accounting is defined by the International Federation of Accountants (IFAC, quoted in Uwuigbe, 2011) as the development and implementation of an adequate environmentally linked accounting system for the management of environmental and economic performance. Most businesses believe that creative accounting in the financial statement allows them to meet their social and environmental responsibilities. The profit maximization goal of the corporation should be balanced against the requirement to reduce environmental costs.

Companies have enormous influence over the preparation and disclosure of social and environmental data, as evidenced by the fact that environmental disclosures are discretionary. Until some developed countries discovered that it was not appropriate to have corporate profit without making adequate provision for ecosystem cost management, little attention was paid to environmental depletion and deterioration. Recent events have reawakened corporate attention to the strategic and competitive role that environmental stewardship plays in a company's performance. Many businesses are becoming increasingly interested in leveraging the benefits of environmental sustainability. Environmental Management Systems (EMS) has emerged as a viable strategy for reducing costs (Tsoutsoura, 2004, Ahmed, Muhammed, & Yero, 2017).

Environmental expenditures are a highly realistic way to the managerial justification of Environmental Management System (EMS) expenditures when seen in terms of effective organizational cost reduction. The ability of a company to recoup its costs from generated revenue while still making a profit is known as earnings capacity (Enyi, 2018). These ratios also aid in the analysis of a company's performance, which aids investors in making decisions.

Ecosystem degradation may come from a lack of environmental protection. Environmental cost information and measurement of corporate environmental activities are in great demand from a number of stakeholders. Petroleum companies in Nigeria are frequently plagued by youth rebellions because of unemployment and a lack of social amenities. The main objective of the study is to examine the effect of environmental costs on the earnings capacity of quoted oil and gas companies in Nigeria. Other specific objectives include determining whether environmental costs have an impact on oil and gas firms' gross profit margins, return on investment, and earnings per share in Nigeria.

2.0 REVIEW OF RELATED LITERATURE

2.1 Environmental costs

The empirical works reported there was a want for standards to define environmental costs, which are considered the core component of accounting. This nonexistence in standards has shifted the problem to the definition of environmental management accounting in general and environmental cost accounting specifically (Beer and Friend, 2006; Jasch, 2002). All costs that directly influence organizational Financial Performance were included in the definition of environmental cost introduced by the Environmental Protection Agency in the middle of the 1990s. Such costs include costs to society, the community, the environment, and the individual for which the company is not considered. The EPA (Environmental Protection Agency) is a federal (1995) Internal environmental costs are broken down into materials,

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equipment, and supplies, as well as hidden environmental costs, which are the consequences of allocating environmental costs to overhead cost pools, contingency costs, and image costs. Internal environmental expenses comprise the last cost category, image and association costs. Contingent environmental costs are costs that are not yet known but are contingent on uncertain events that may arise. By definition, these items are not immaterial. (Gale & Stokoe, 2001; Beer et al., 2006).

External environmental costs, on the other hand, include environmental degradation for which firms are not legally responsible, as well as negative human impact. Understanding the sorts of environmental expenses, whether internal or external, is a critical component in determining the scope of the costing system (Beer & Friend, 2006). Environmental costs are the costs that businesses incur in trying to protect and restore the environment. Jasch (2003) defines environmental costs as internal and external expenses - that is, the organization's assets and benefits that aren't always compensated for by legal frameworks (Environmental Protection Agency, 1995).

Oroge & Agboola (2019) Environmental expenses within a business area are costs for initiatives to mitigate the environmental effect that happens due to important business operations inside the business area. The business area is the area of operations where the corporation has direct environmental influence. The cost of pollution control cost of environmental performance, and the cost of resource recycling make up the environmental cost in this example. The environmental cost is the monetary value incurred for environmental effect prevention and mitigation, as well as the cost of rehabilitation and removal after damage. It has to do with all allocated costs for the prevention, reduction, and or avoidance of environmental impact, removal of such impact, restoration in the case of occurrence of a disaster, and other activities.

Environmental costs are made up of environmental measures and losses. They include cleanup expenses, materials recycling costs, energy conservation costs, closure costs, environmental costs, and development costs. These expenditures are incurred in the prevention, reduction, or repair of environmental damage, as well as resource conservation. Environmental losses, on the other hand, are expenses that provide no advantages to the company. Fines, penalties, compensation, and disposal losses related to assets that must be demolished or abandoned due to environmental degradation (Wright & Noe, 2006) (Nwaiwu & Oluka,2018). Environmental costs are the costs that an entity incurs as a result of its operations to the environment and its users. There is also a widespread fear that environmental costs diminish operating flexibility and slow company output.

2.2 Gross Profit Margin

The percentage of income that surpasses the cost of sales or the cost of products sold is known as the gross profit margin (COGS). The greater the figure, the more effective management is in making a profit for every naira spent (James, 2021). The gross profit margin of a corporation is the difference between revenue and cost of sales (Gross margin). Total revenue is divided by the cost of products sold to arrive at this figure. The gross margin result is normally multiplied by 100 to show the value as a percentage.

2.3 Return on Investment

Return on investment (ROI) is used to evaluate the efficiency of a particular investment. It is a widely used metric due to its versatility and simplicity. That is, if an investment has a negative return on investment (ROI) or if other options with a higher ROI are available, the investment should be avoided (Investopedia, 2015). It is an advantage to the investor as a result of resource investment. A high return on investment indicates that the investment rewards outweigh the investment expense.

Chris (2014) return on investment (ROI) is the amount of money you receive (or lose) about the amount invested. Nzewi (2007), referred to return on investment as earning power provides an index for determining how profitable the company has been in the use of the assets. If the assets of the company have been efficiently managed, it will reflect a high return on investment. He went on to argue that it is the ultimate test of commercial success as a result of this.

The term, return on investment, was coined by Garrison and Noreen (2000) to define the rate of return. It's calculated by dividing operating income by total investment, where total investment equals total assets. The higher the ratio the larger the returns to investors (Nzewi, 2007). Consequently, all companies desire to earn a high return on investment than the industrial average. They are, however, constrained by the fact that in a competitive environment no single firm can significantly influence the product price or industry cost structure. They face a trade-off between sales to total assets and return on sales. Return on investment is an excellent measure of the ability of a firm to successfully husband all the resources available to it in generating income for the benefit of all classes of investment in the firm (Nzewi, 2007).

2.4 Earnings per Share

Earnings per share (EPS) are a crucial financial number that determines how profitable a firm is. Earnings per share, according to James (2021), are the fraction of a company's earnings that is distributed to each share of common stock after taxes and preferred stock distributions. The Economic Times (2021) states that EPS is calculated by dividing a company's net income by the total number of outstanding shares. It's a standard metric that market participants use to evaluate a company's profitability before investing in its stock. Earnings per share are one of the most important metrics to examine when assessing a company's profitability on an absolute basis. The fraction of a company's profit allotted to each individual piece of stock is referred to as earnings per share or EPS. It's a crucial term for stock market traders and investors. A company's profitability improves as its earnings per share increases. Because the number of outstanding shares can change over time, it's best to utilize the weighted ratio when calculating EPS.

2.5 Costs of Security

Insecurity, according to Beland (2005), is a state of safety brought on by fear or worry as a result of a perceived absence of security or safety. According to Achumba, Ighomereho, and Akpan-Robaro (2013), insecurity is a state of being exposed to impending environmental harm and avoidable threats of danger. Insecurity has unquantifiable costs. Property damage and other lawsuit costs force businesses to make fast financial decisions (Sohnen, 2012). A lack of security, according to Ewetan and Urhie (2014), impedes commercial activity and

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inhibits foreign investment. Adegbami (2013) also jeopardizes citizens' well-being and harms businesses.

2.6 Empirical Review

Abdulsalam, Sani, Mohammed, Shafiu, and Aminu (2020) examined the influence of environmental protection costs on the return on equity of petroleum marketing businesses in Nigeria. Panel data was gathered from the Nigerian Securities Market Fact Book hence the use of 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 suggested that the management of petroleum marketing companies in Nigeria should increase 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.

Samuel, Aruna, and Amahalu (2020) investigated the impact of environmental cost disclosure on the profitability of oil and gas companies listed on the Nigerian exchange between 2010 and 2019. 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 a 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 has a big positive effect on net margin. The study recommended that since the environmental cost is value-relevant in making strategic business decisions, oil and gas firms should constantly reposition the methods of accounting to produce information on environmental costs.

From 2012 to 2016, Jamil and Rodiel (2020) evaluated 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 used to assess environmental accounting. Income margin and return on equity were used 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, the board size, the number of years listed within the PSE, and the 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) examined the impact of environmental spending on the revenues of publicly traded Nigerian oil and gas companies (2008-2017). Secondary data were 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 indicated that those firms' investments in the environment were associated significantly with their earnings. Hence the study recommended for all business units in Nigeria stay pace with contemporary financial reporting issues by engaging in and adequately reporting investments in the replenishment of the world which will promote organizational image and business. The study also noted that there is 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 plan.

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

Iheduru and Ike (2019) investigated 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 analyze 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 (DPS). Based on this, it was suggested that the government should give tax credits to organizations that follow its environmental laws in order to reduce the firms' 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) investigated the relationship between corporate environmental and financial performance. The authors were of the opinion that more and more corporations would implement the system of environmental accounting, and then would disclose the firms' environmental performances, in order to raise people's environmental consciousness, companies' social responsibility, and government environmental policies and legislation. The study showed that the environmental accounting system was practiced in Taiwan, and the results were: (i) that the adopting of the system of environmental accounting might make the corporations' financial performances worse, but not significantly make corporations' environmental performance better; and (ii) that there should be a positive relationship between the environmental performance and financial performance of companies.

Umoren, Akpan, Moses, and Okafor (2018) looked 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 was 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 non-significant associations. The study recommended that: (i) the government should make environmental disclosure mandatory and impose consequences on any oil business in Nigeria that violates the law, and (ii) compliance by oil corporations should be treated with seriousness 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 investigated by Ahmed and Muhammed (2017). The research relied on panel data from four (4) national petroleum management investment services. The research was conducted between 2007 and 2016, and annual reports and accounts were the key data collection sources. The findings revealed that: (i) environmental costs have a significant effect on the performance of oil and gas firms; and (ii) the models showed that three of the four environmental costs used as proxies have a significant impact on the performance of Nigeria's publicly traded oil and gas companies. Based on the findings, the study recommends that the amount spent by Nigerian oil and gas companies on environmental remediation control costs be increased, while prevention control costs are reduced to a significant extent, as this will help to improve the performance of Nigeria's publicly traded oil and gas companies. The amount spent on environmental laws and compliance penalties should be increased as this will eventually translate into better performance for the listed oil and gas firms in Nigeria.

Demirel and Eskin (2017) examined the financial structure of cement companies that are subject to environmental rules and consequences. The study collected for three years, from 2011-2013, and the financial ratios of 16 cement companies listed on the Istanbul stock exchange were examined. The primary idea of this study is that environmental data has the greatest impact on debt ratios and financial structure at cement companies in emerging markets. To investigate the relationship between the environment and financial structure, the study devised two equations. It was discovered that a substantial association between emission levels and financial ratios exists, but no such relationship exists between carbon dioxide levels and financial ratios. Industry emission levels were influenced by sales, gross profit margins, and current ratios. EBITDA before interest and taxes, liquidity, financial leverage, and accounts receivable turnover ratios all have a detrimental impact on industry emission levels.

Lawal, Florence, and Willy (2016) investigated the impact of environmental cost identification on the quality of shipping line disclosure. The population of this study was the registered shipping lines in Nigeria, and it used a descriptive design and correlation analysis. The study targeted the legal, financial, and accounting departments, as well as the technical and maritime departments of shipping corporations. The research relied on original data and primary data was gathered by distributing questionnaires to the employees of Nigerian

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shipping lines. Data analysis was done using Statistical Package for Social Sciences (SPSS) v.20.0 generating both descriptive and inferential statistics like Pearson's correlation. Descriptive statistics include; frequencies, mean and standard deviation. The findings show that the identification of environmental costs influences the quality of disclosure on shipping lines in Nigeria and it recommended that corporations should assess whether expenditures or costs should be included under the environmental expenses or costs at their discretion as a result of the research. Production-related expenditures and product research and development expenses that are only incurred for environmental protection as opposed to product improvement have been classified as expenses associated with environmental measures by operating expenses. This procedure will improve or create the quality of disclosure on Nigerian shipping lines.

The impact of environmental and social costs on the performance of Nigerian manufacturing enterprises was investigated by Agbiogwu, Ihendinihu, and Okafor (2016). Secondary data was obtained from the annual reports and financial summaries of ten (10) randomly chosen enterprises in 2014. For the analysis of the acquired data, the study used SPSS version 20.0 with the analysis with a t-test as the main tool. The results of the analysis revealed that the sample companies' environmental and social costs have a considerable impact on their net profit margin, earnings per share, and return on capital employed. According to the experts, the government should ensure that manufacturing enterprises in Nigeria follow all environmental rules.

2.7 Theoretical Framework

This study was anchored 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). Management, employees, and the board of directors are the most important internal stakeholders, whereas external stakeholders include shareholders, communities, creditors, debtors/customers, government agencies, and the environment (Johnson-Rokosu & Olanrewanju, 2016). Stakeholder theory is founded on the idea 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 is stated, is one of the theories that attempt to describe the practice of delivering social information, with a focus on the function it might play in relationships between organizations, governments, individuals, associations, and societies as a whole (Magnaghi & Aprile, 2014).

According to Gray et al. (2002), stakeholder theory is founded on a concept of accountability for all actors, whether they have normative, descriptive, or explanatory authority in the context of CSR; and it encompasses the company's responsibilities and transparency of its actions. A significant component that the firm can utilize to manage stakeholder relationships is the information (financial, sustainability, or both) used to gain stakeholders' support and approval of the business plan without objecting. Both the stakeholder theory and the legitimacy theory advocate voluntary disclosure as a viable means of maintaining and growing connections between various interest-bearing groups.

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

3.0 METHOD OF RESEARCH

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 fifteen years (2005-2019). All thirteen (13) publicly traded oil and gas businesses that were listed on the Nigeria Stock Exchange Market in 2019 were included in the study's population. From a pool of four (4) oil and gas businesses registered on the Nigerian stock exchange, thirteen (13) were picked. The variables tested were environmental cost, return on investment, return on equity, and earnings per share. It was generated from the annual report of sample industries.

The model is an ordinary least square (OLS) which states that the dependent variable Y is a function of the independent variables, X. Mathematically, $Y = f(xi)$such that $Y = \beta0 +\beta1x1+\beta2x2+\beta3x3+ei$ in this study, we have that:

$EC= \beta0 +\beta1GPM1 + \beta2ROI+ \beta3EPS + ei$

Where:

EC = Environmental cost; GPM = Gross Profit Margin; ROI = Return on Investment; EPS = Earnings per Share; $\beta0$ = Constant; $\beta1$, $\beta2$ and $\beta3$; ei = Stochastic error associated with the model.

Decision Rule: Reject the null hypothesis if the p-value is less than 0.05 otherwise, do not reject

4.0 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.

Summary Table 1: Regression Result for Hypothesis One.

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Variables	B	Beta	T	P-value
Environmental costs	3.074E-011	.000	.002	0.998
.026				Adjusted R^2
.000				F-value
.998				P-value

Source: Author's Computation Using SPSS 20 Statistical Software

The regression result in Table 1 indicates that environmental costs have no effect gross profit margin of firms in the oil and gas firms in Nigeria. The extent of influence employed on environmental costs is insignificant and positive. The adjusted R2 is 0.026 and this reveals that about 2.6% of variations in environmental costs could be explained by gross profit margin while 98.4% could explain by other factors not defined here.

4.1 Decision

The P-Value of 0.998 for gross profit margin is higher than p-value = 0.05; Ho is therefore accepted and the alternative hypothesis is rejected. The study concluded that environmental costs have a non-significant but positive effect on the gross profit margin of sampled oil and gas firms in Nigeria.

Summary Table 2: Regression Result for Hypothesis Two.

Variables	B	Beta	T	P-value
Environmental costs	4.866E-007	0.281	1.806	.079
.055				Adjusted R^2
.3.261				F-value
.079				P-value

Source: Author's Computation Using SPSS 20 Statistical Software

The regression result in table 2 indicates that environmental costs have no effect return on investment of firms in the oil and gas firms in Nigeria. The extent of influence employed on environmental costs is insignificant and positive. The adjusted R2 is 0.055 and this reveals that about 5.5% of variations in environmental costs could be explained by return on investment while 94.5% could explain by other factors.

Summary Table 3: Regression Result for Hypothesis Three.

Variables	B	Beta	T	P-value
Environmental costs	-6.184E-007	.055	.341	.735
-.123				Adjusted R^2
.116				F-value

.735				P-value

Source: Author's Computation Using SPSS 20 Statistical Software

4.2 Decision

The P-Value of 0.079 for return on investment is high than the p-value of 0.05; Ho is therefore accepted and rejected the alternate hypothesis. The study concluded that environmental costs have an insignificant but positive effect on the return on investment of sampled oil and gas firms in Nigeria.

The regression result in Table 3 indicates that environmental costs do not affect earnings per share of firms in the oil and gas industry in Nigeria. The extent of influence employed on environmental costs is insignificant and positive. The adjusted R2 is 0.123 and this reveals that about 12.3% of variations in environmental costs could be explained by earnings per share while 87.7% could explain by other factors.

4.3 Decision Rule

The P-Value of 0.735 for earnings per share is high than the p-value = 0.05; H0 is therefore accepted and rejected the alternate hypothesis. The study concluded that environmental costs have a non-significant but positive effect on earnings per share of sampled oil and gas firms in Nigeria.

The findings show that environmental cost has an insignificant but positive effect on the earnings capacity (gross profit margin, return on investment, and earnings per share) of the firms in the oil and gas sector in Nigeria. These findings are similar to Wei-Lun & Yan-Kai (2018) on the relationship between the environmental and financial performance of Corporate in Taiwan. In their findings, the relationship between the environmental and financial performance of Corporate was not significant. The findings are the same in Umoren, Akpan, Moses, & Okafor, (2018) on the nature of the relationship existing between environmental accounting reporting and oil companies' performance in Nigeria. The findings confirmed the nature of the relationship existing between environmental accounting reporting and Oil companies' performance is non-significant.

But Abdulsalam, Sani, Mohammed, Shafiu, and Aminu, (2020) have different results on the effect of environmental protection cost on the return on equity of petroleum marketing companies in Nigeria. Their findings on the effect of environmental protection costs on the return on equity of petroleum marketing companies were positive and significant. Samuel, Aruna, and Amahalu, (2020) on the effect of environmental cost disclosure on the profitability of oil and gas firms listed on the Nigeria Stock Exchange between 2010 and 2019. The results were significantly positive on the net profit margin. Also, the findings agree with the outcome in Onyekachi, Ihendinihu, John, and Azubike (2020) relating to the effect of environmental investments on the earnings of listed oil and gas firms in Nigeria. In that study, the findings were that environmental investments have a significant effect on the earnings of listed oil and gas firms was significant.

5.0 CONCLUSION AND RECOMMENDATION

The application of environmental costs has a positive but insignificant influence on the earning potential of Nigerian oil and gas companies. The study looked at the impact of environmental costs on the capacity of the profit of Nigerian energy corporations. Gross profit margin, return on investment, and earnings per share were shown to be statistically insignificant. According to the report, oil and gas executives should optimize revenue by generating sales outlays that will allow them to improve gross profit. According to the study's authors, the petroleum industry's management should create a good policy and strategy to raise their revenues per share.

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Appendix 1

COMPANIES	YEARS	EC =N=000	GPM =N=	ROI =N=	EPS =N=
Total	2019	764,899	0.11996	0.01703	6.71
	2018	494,807	0.11294	0.06007	23.45
	2017	785,906	0,10169	0.07426	23.62
	2016	636,543	0.16875	0.10806	43.58
	2015	769,150	0.16876	0.04837	11.92
	2014	659,503	0.12183	0.05538	15.58
	2013	725,195	0.11596	0.06045	15.71
	2012	648,403	0.12032	0.06139	13.76
	2011	683,300	0.12888	0.06493	11.23
	2010	683,150	0.02472	0.13092	16.01
AP	2019	393,632	0.06389	0.08326	3.00
	2018	338,730	0.08410	0.01031	0.48
	2017	713,141	0.18629	0.02031	0.97
	2016	615,145	0.13852	0.04403	2.48
	2015	91,192	0.31556	0.04758	4.39
	2014	395,753	0.24133	0.03200	2.20
	2013	405,958	0.09862	0.04780	4.32
	2012	30,411	0.11150	0.02226	0.93
	2011	372,995	0.01481	-0.41010	4.32
	2010	372,995	0.00568	0.06755	0.93
Conoil	2019	2,285,472	0.09615	0.04453	2.85
	2018	1,996,955	0.10448	0.04213	2.59
	2017	1,941,079	0.11296	0.03665	2.27
	2016	2,239,867	0.16630	0.06128	4.09
	2015	2,101,054	0.13913	0.04969	3.33
	2014	2,185,467	0.10743	0.01769	1.20
	2013	2,304,734	0.02867	0.05554	4.42
	2012	2,180,229	0.01077	8.60427	1.03
	2011	2,155,276	0.09533	0.04845	4.32
	2010	2,034,760	0.03907	0.06741	4.02
MRS	2019	170,630	0.05775	-0.03255	-5.59
	2018	228,259	0.04797	-0.01593	-4.15
	2017	569,237	0.07184	-0.00930	4.54
	2016	219,505	0.07985	0.02086	5.77
	2015	220,579	0.01768	0.01676	3.68
	2014	106,726	0.07536	0.06324	2.94
	2013	199,345	0.05440	0.06564	2.50
	2012	54,351	0.07163	0.00474	0.81
	2011	413,585	0.01976	0.05451	2.42
	2010	50,549	0.00857	0.06801	1.75

Source: Audited Annual Reports of Total Plc, AP Plc, Conoil Plc, and MRS Plc

