

# **Environmental Accounting Practices and Corporate Performance: A Study of Listed Oil and Gas Companies in Nigeria**

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## **Abstract**

*This study examined environmental accounting practices and corporate performance: a study of listed oil and gas companies in Nigeria. The study specifically examined the effect of environmental cost on turnover, return on capital employed and net profit margin of quoted oil and gas companies in Nigeria. The research design adopted for this study is the ex-post facto. The study made use of purposive sampling technique. Result of the analysis shows that Environmental accounting cost has significant effect on the turnover of quoted oil and gas companies in Nigeria it was also observed that environmental accounting cost has significant effect on the return on capital employed of quoted oil and gas companies in Nigeria. The study further shows that environmental accounting cost has significant effect on the net profit margin of quoted oil and gas companies in Nigeria. Based on the findings, the researcher recommends among others that environmental disclosures should be made mandatory on firms so as to give a true and fair view of corporate financial performance and position.*

**Keyword:** *Environmental, Turnover, return on capital employed, Net profit margin.*

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## **I. Introduction**

Environmental accounting includes the recognizable proof, estimation and allotment of environmental expenses, and the combination of these expenses into business and incorporates the method of conveying such data to the organizations' partners. In this sense, it is an exhaustive way to deal with guarantee great corporate administration that remembers straight forwardness for its cultural exercises. As of late, the antagonistic environmental impact of monetary advancement has turned into an issue of incredible public concern everywhere.

Bookkeepers, as overseer of financial advancement can at this point not shut their eyes with the impact of environmental issues on business the board, accounting, evaluating and revelation framework. A cautious appraisal of the advantages and expenses of environmental harms is important to observe the resistance further stretches of environmental debasement and the necessary degree of improvement. It might create the impression that more prominent consideration regarding environmental issues might prompt an increment in costs and subsequently lower benefits. Environmental expenses and commitments are essentially developing as the world is turning out to be all the more environmentally cognizant. Public companies are being considered more mindful and responsible to the general public. Many individuals will pay more for an item that is environmentally agreeable.

It can't be rejected that environmental accounting and revealing thereof is of principal significance today. Environmental accounting needs to fill in as an apparatus to quantify the monetary effectiveness of environmental preservation exercises and the environmental proficiency of the business exercises of organization in general. As indicated by Ema (2018) can create data about the utilization of assets with environmentally related effects and influences the monetary position and execution of Organization.

The reaction of firms to environmental liabilities has achieved the reconfiguration of corporate execution lists in a bigger setting under the inconspicuous impact of environmental and social variables, to

foster an all-encompassing scene of an element's presentation. This has prompted a developing interest from different partners for estimation of an organization's environmental practices and ensuing public divulgence of this data. Subsequently, another space of accounting has arisen in regards to environmental accounting. The premium of accounting in the climate rose up out of the truth that administration required monetary information on environmental uses because of the expanding needs of various partners, for example, government, financial backers, banks, overall population, clients, and so forth to have monetary information on environmental exhibitions of various associations announced in fiscal summaries ( Guthrie, and Parker,2015). Thus, the shortfall of far reaching and obvious data on environmental acts of organizations might flag a training where organizations can dirty the climate but then show up more monetary effective than others which bring about expenses to secure the climate. It is against this backdrop that the researcher has decided to examine environmental accounting practices and corporate performance: a study of listed oil and gas companies in Nigeria.

The aim of this research work is to evaluate environmental accounting practices and corporate performance: a study of listed oil and gas companies in Nigeria. The specific objectives of this research work include to examine the effect of; Environmental cost on turnover of quoted oil and gas companies in Nigeria, Environmental cost on the return on capital employed of quoted oil and gas companies in Nigeria. Environmental cost on the net profit margin of quoted oil and gas companies in Nigeria.

## **II. Review Of Related Literature**

### *A. The Concept of Environmental Accounting*

Environmental accounting covers data identifying with all parts of the climate. It incorporates climate related consumption, environmental advantages of items and insights about practical activities (Freeman, 2017). Environmental accounting gives subtleties of the pretended by the common habitat in the economy. It gives information which features both the commitment of regular assets to monetary prosperity and the expense forced by contamination of asset debasement (Hackston, and Milne, 2013). Environmental accounting as per Hackston, and Milne, (2013) empowers associations to follow their environmental information and other ozone depleting substance (GHG) emanations against decrease targets, and works with environmental answering to give support ability related information that is complete, auditable, and opportune to progress and fortify the reliant and commonly building up main stays of manage able execution and advancement and environmental assurance in Nigeria.

Letmathe and Doost (2018) called attention to that Environmental accounting as a predominant subject in the world wide local area isn't yet a need in Nigeria. Ngwakwe, (2018) noticed that environmental expense doesn't just allude to costs paid to follow administrative principles and costs which have been brought about to lessen or wipe out arrivals of perilous substances however incorporates any remaining expenses related with corporate cycles which diminish unfriendly impact on the climate.

### *B Turnover*

Lerner, (2010) sees turnover as an accounting term that ascertains how rapidly a business gathers money from records receivable or how quick the organization offers its stock. Two of the biggest assets claimed by business are records of sales and stock. Both of these records require a huge money speculation, and a It is imperative to quantify how rapidly a business gathers money. Turnover proportions figure how rapidly a business gathers money from its records receivable and stock speculations.

Lowry and Schwert (2003) opined that records receivable speaks to the aggregate dollar measure of unpaid client solicitations anytime. Expecting that credit deals are deals not instantly paid in real money, the records receivable turnover recipe is credit deals partitioned by normal records receivable. The normal records receivable is essentially the normal of the start and completion debt claims adjusts for a specific day and age, for example, a month or year.

The records receivable turnover equation reveals to you how rapidly you are gathering installments, when contrasted with your credit deals. On the off chance that credit deals for the month add up to N300,000 and the record receivable equalization is N50,000, for instance, the turnover rate is six. The objective is to boost deals, limit the receivable equalization, and produce a substantial turnover rate.

### *C Net Asset*

Ritter, (2001) fights that in back, net resources insinuates the assessment of an association's resources less its liabilities. For individuals, the idea is the identical as total assets. Total assets are the aggregate by which resources outperform liabilities. Total assets are an ideal material to individuals and associations as a vital extent of how much a substance is worth. A steady addition in total assets shows incredible cash related prosperity; on the other hand, total assets may be depleted by yearly working mishaps or a liberal decreasing in resource regards as for liabilities.

A circumstance where liabilities are higher than resources. Set back total assets can occur for a collection of reasons, yet ordinarily it arises when current or future resource regards crumble unexpectedly. For example, when home assessments fall, every now and again one is left owing to a greater degree toward their home advance than the house is before long worth. Essentially, in boon docks days, land and property consistently got or lost regard out of nowhere depending up on where the nearest rail road was found. In any case called negative total assets.

#### *D. Return on Capital Employed (ROIC)*

This valuation framework appraises how much cash the association makes each year per measure of contributed capital. Contributed Capital is the proportion of cash put assets into the association by the two financial backers and obliged people. The extent is conveyed as a percent and one looks for a percent that approximates the degree of advancement that ordinary. In its most un-troublesome definition, this extent gauges the endeavor return that organization can get for its capital. The higher the number, the better the return (Raghbendra, 2003).

Raghbendra,(2003)underlined that to cycle the extent, take the expert forma net compensation (same one used in the EPS figure referenced above) and detach it by the contributed capital. Contributed capital can be assessed by including the financial backers esteem, the total, and after that taking away cash due and cash (these numbers can be found on the association's latest quarterly bookkeeping report).

#### *E. Net Profit Margin*

Profitability ratio refers to a firm's capability to make profits through the use overall resources available to it like cash, capital, number of employees, number of branches and so on. According to the study, profitability ratio is beneficial in assessing a firm's ability to generate profits. Several factors affect the net profit margin of a firms, they include, current ratio, liquidity, leverage and sales growth. One factor that influences the net profit margin is current ratio which patens to the liquidity condition of a firm and its ability to pay their maturity short term business obligation as and when due. When a company possesses a high liquidity, they are able to pay their short-term liabilities. Firm liquidity affects net profit margin because it represents firm's cash used to determine the company's profit margin. Another factor that might influence net profit margin is leverage. Leverage ratio is the ratio of firms' debt to the total capitalization of the firm. Sales growth is also another factor affecting net profit margin. The more the sales, is the more the net profit margin all things being equal (Husna and Desiyanti, 2016).

Profit margins are expressed as a ratio, specifically "earnings" as a percentage of sales. By expressing margins as a percentage, we are able to compare the profitability of different companies more easily. Margins allow investors to judge, overtime, management's ability to manage costs and expenses and to generate profits. Management's success or failure determines the company's profitability. Strong sales growth is meaningless if management allows costs and expenses to grow disproportionately (Ditaa and Murtaqi2014).

### **III. Theoretical Framework**

#### *A. Marris's Theory of Firm*

This theory was propounded by Morris in 1964. The proponent of this theory puts that best in class firms are interested in growth maximization rather than profit maximization. The theory relies upon observation of association's conduct. A critical idea in this theory is that profit is satisfying, which is the organizations go for a level of profit rather than the most outrageous profit. According to Marris (1964), chiefs of colossal firms target propelling the growth and security of their organizations. The executives' pay rates are immense in this way, the driving force to enhance the size of the firm beyond profit- boosting size. As such, they make their position increasingly confirmed by the administrators. The theory prescribes that organizations may create in size by expanding new advertises through the creation of new things and new demands. In a comparative vein, Marris underscored the ever-present danger of takeover. On the off shot that the assets of a firm are in efficiently utilized, it is arousing power for various firms to expect control over the firm. Most chiefs wish to avoid it since they are likely going to lose their positions.

To setup a connection between such a growth rate and the firm, Marris developed a suffering state growth rate model in which the managers picks a constant rate of growth at which his business, profits, assets, power, status, and boss steadiness and soon are intensified. Nonetheless, if they pick a higher growth rate, they will spend more on promotion; creative work in order to make more demand and new things. Consequently, the executives hold higher proportion of current profits for such growth propelling activities. Consequently, profit to Shareholders will be downsized and the offer costs will fall and association's performance diminishes. It is left for the executive to pick the growth rate that lifts the organization's reasonable worth and performance.

*B. Agency cost theory and trade-off theory.*

Organization cost and exchange off hypothesis is work of two investigators Stephen, Ross and Barry Mitnick made in 1972. As indicated by the hypothesis, organization clashes ascend out of the possible uniqueness of enthusiasm between budgetary masters (principals) and supervisor (heads) of firms. The essential (Elliot and Elliot, 2002). According to Boodhoo (2009), the responsibility of office cost theory is that impact firms are better for scholars as duty level can be used for watching the chiefs. Consequently, higher impact is required to hack down office costs, decline inefficiency and hence lead to advance incorporate execution, (Akintoye, 2008). As appeared by (Raheman, 2007), if firms are intensely helpful, they lean toward responsibility financing when stood apart from a propelling power for advantage. This position is driven by three forces to intertwine:

1. On the off plausibility that a firm has a low benefit, there exist dynamically obvious odds of liquidation. So, if the firm put it all on the line more commitments there are threats that it is bankrupt and as necessities be, money related bosses can't have trust on it. Then again, on the off chance that a firm has more benefits, by then exists less odds of insolvency with the target that budgetary ace's trust raised and the firm will all things considered increase more benefits.
2. The office cost which must be borne by scholars is an expense in from of financing cost since leasers reliably check the situation of the association and screen the organization. So if a firm has a superior than normal picture that it can get advance at a lower cost since leasers are not stressed over obligation and their organization cost is incredibly low, it can acquire more commitments.
3. More commitment in an association's financing exercises considers more cost decreases as their assessment liabilities become lower and even sometimes it is waved off. Two or three firms having a more prominent number of benefits go for a more noteworthy number of commitments instead of worth.

From the prior, this assessment considers the organization cost hypothesis and exchange off hypothesis as the foundation of using the advantage identified with the connection between income and corporate execution of oil and gas firms in Nigeria. This paper anchored on Marris's Theory of Firm.

#### **IV. Empirical Review**

In Australia, Tilt (2001) concentrated on the example of environmental exposure among Australian firms. Proof assembled in the review shows that even where a firm has a particular corporate environmental strategy, they place a low need on revealing environmental execution information to outer gatherings. This infers that Australian firms like to reveal their exercises and explicit projects, rather than their innovative work, capital use, strategies or execution. Likewise, in the Australian setting, Cowan and Gadenne (2005) directed a review which utilized substance examinations in understanding of the budget reported at a exposure. Their research tracked down an inclination by their examined Australian firms to unveil more elevated levels of positive environmental news. Further in 2006, Mitchell, Percy and MCKinlay analysed the environmental exposures of twenty Australian firms subject to an effective EPA indictment somewhere in the range of 1994 and 1998 utilizing content investigation. Results uncover that the exposures made by the inspected firms were dominatingly certain in nature.

In Canada, Bewley and Li (2000) inspected the environmental exposures of Canadian assembling firms. Their review depended on wilful exposure hypothesis and utilized Wiseman file to quantify the 1993 yearly report divulgences of 188 firms. Industry enrolment was additionally used to intermediary for contamination affinity. The investigation discovered that organizations with a higher contamination inclination and more prominent media inclusion of their environmental exhibition are bound to uncover general environmental data.

In America, Hughes, Anderson and Golden (2001) inspected environmental exposures made by U.S. fabricating firms somewhere in the range of 1992 and 1993 utilizing an adjusted Wiseman file to quantify exposures in the president's letter, MD&A, and notes areas of the yearly report, and the CEP rankings to intermediary for environmental execution. Their examination uncovered that organizations evaluated as poor by the CEP by and large make the most exposures of environmental expense data. Freedman and Patten (2004) analysed the budget summary report on environmental divulgences of 112 US organizations as far as their revelation under the 1986 Toxic Release stock guidelines. The review took on the occasion concentrate on strategy. The discoveries of these investigations uncover that elements that uncovered those environmental occasions experienced negative market responses, those substances with more significant levels of environmental answering before the occasion experienced more positive responses than those elements with less environmental announcing.

In UK, Murray, Sinclair, Power and Gray (2006) researched the connection between UK organizations 'social and environmental exhibition revelation and their monetary market execution. Social and environmental revelation was estimated by the all-out number of pages of deliberate and compulsory social and environmental exposure by the organizations in their yearly reports over a time of 10 years utilizing cross-sectional

examinations. Discoveries uncover a persuading connection between reliably exceptional yields and significant degrees of social and environmental revelation while low market returns is likewise observed to be related with low friendly.

### V. Methodology

The examination configuration embraced for this review is the ex-post facto as the review depended on noteworthy information. This examination concentrated on every one of the organizations in the Nigerian oil industry cited on the Nigerian Stock Exchange. Be that as it may, for the examination, the review zeroed in on the oil and gas firms working in Nigeria. The time of the review, is 10 years, from 2011-2020.

The idea of information for this review is auxiliary and sourced from the yearly reports and records of tested oil and gas firms for review quality factors. Company's yearly assertions and reports are considered to be a dependable well spring of information since public firms are legally needed to be reviewed by a perceived inspecting firm and yearly execution spread the word about for investors through the distribution of yearly articulations of records. The number of inhabitants in the review comprise of the relative multitude of 14 firms grouped under the Oil and Gas area of the Nigerian Stock Exchange. Just oil and gas firms whose offers are cited on the Nigerian Stocks Exchange and which have a total information for the period under survey were considered by the review. Out of the fourteen (14) oil and gas firms, the specialist chose three (3) firms dependent on the requirement for accessibility, dependability and exactness of information. The inspected firms incorporate, Eterna Oil Plc, MRS Oil Plc and Oando Oil Plc. The reason for choosing three organizations from the cited fourteen firms is that the 3 chose firms have their total yearly reports and Account distributed.

The standard Ordinary Least Squares (OLS) or relapse investigation was applied to a progression of information accumulated from the yearly reports and records of the examined oil and gas firms in Nigeria as determined previously. The indications of the coefficients were depended upon in depicting the bearing and strength of direct connection between the reliant and autonomous variable while the-insights and p-worth will be depended upon in deciding the effect and importance between the factors. The information examination strategy was supported by the EVIEWS factual programming. The examining strategy took on in this review is a blend of separated irregular inspecting technique and purposive testing technique. The separated irregular testing technique includes the determination of an example dependent on classes or gatherings with each gathering or layer having some unmistakable attributes or highlights. In view of the above mentioned, firms cited on the Nigerian Stock Exchange are now arranged into areas and hence forth the oil and gas area. The purposive inspecting technique included the expert to critically testing the populace things dependent on firms with the essential accessible information. Utilizing the purposive testing and depending especially on information accessibility standards, the oil and gas firms that have total yearly report for the extension 2011-2020 were purposively chosen. In light of the prior examining strategies, three (3) oil and gas firms were chosen.

The models used were stated as follows;

The general model is represented thus:

$$ENVC_{it} = a + b_1 TOV_{it} + b_2 ROCE_{it} + b_3 NPM_{it} + \epsilon_{it} \dots \dots \dots (1)$$

Where:

- a = constant;
- ENVC = Environmental Cost
- TOV = Turnover
- ROCE = Return on Capital employed
- NPM = Net profit margin

### VI. Discussion of Findings

**Table 4.1:** Multiple Regression Result

DependentVariable:ENVC  
 Method: Panel Least Squares  
 Date:05/26/21Time:17:56  
 Sample:20112021  
 Periodsincluded:10  
 Cross-sectionsincluded:3  
 Totalpanel(balanced)observations:30

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Variable	Coefficient	Std.Error	t-Statistic	Prob.
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TOV	0.068869	0.066326	1.038336	0.3146
ROCE	-0.025417	0.079064	-0.321475	0.7520
NPM	0.459228	0.104859	4.379478	0.0005
C	3.254254	0.625077	5.206165	0.0001

R-squared	0.798253	Mean	7.210428
AdjustedR-squared	0.760425	S.D	0.137631
S.E.ofregression	0.067365	AIC	-2.380516
Sumsquaredresid	0.072609	SCHC	-2.181370
Loglikelihood	27.80516	HQC.	-2.341641
F-statistic	21.10235	DWS	1.123617
Prob(F-statistic)	0.000008		

**SOURCE:** *Eview output version 9.0*

Table 4. 1 indicates that any change in turnover will increase environmental cost by 0.068869 while change in net profit margin will result in an increase of 0.459228 in environmental cost. However, any change in return on capital employed will decrease environmental cost by -0.025417. In summary, environmental cost is influenced positively by turnover and net profit margin while environmental cost is influenced negatively by earnings per share. The extent of effect of TOV and NPM on ENVC are positive and significant, while the extent of the effect of Return on capital employed is negative and insignificant.

The table indicates that an increase in Turnover, return on capital employed and net profit margin of Nigerian Oil firms will decrease environmental cost by 0.067365. This implies that environmental cost is affected by Turnover, return on capital employed and net profit margin of Nigerian Oil firms.

The Durbin-Watson statistic is 1.123617 which is not up to 2. In this case, the Durbin Watson statistic is closer to 2 than 0 which indicates the absence of auto correlation in the series. The result indicates the absence of positive serial correlation in the time series data extracted from the annual report and accounts of the firms.

Findings from the trial of the theories show that natural bookkeeping cost has a huge impact on the turnover of cited oil and gas organizations in Nigeria. This finding approves the discoveries of Al-Tuwaijri et al. (2004) which saw that the relations among ecological revelation, natural execution and monetary execution are extremely critical.

The consequence of speculation two shows that natural bookkeeping cost has a huge impact on the profit from capital utilized of cited oil and gas organizations in Nigeria, this is in accordance with the investigations of Bewley and Li (2000) who spoke to intentional exposure hypothesis to analyse the ecological divulgements of Canadian assembling firms, which shows that organizations with a higher contamination inclination and more noteworthy media inclusion of their ecological presentation are bound to reveal general ecological data.

The consequence of speculation three demonstrates that natural bookkeeping cost has a huge impact on the net overall revenue of cited oil and gas organizations in Nigeria, this is in accordance with the investigation of (Rajapakse, 2003) on the connection between corporate monetary execution and corporate social and ecological exposure shows that critical positive monetary returns were estimated for solid natural administration while huge negative monetary returns were estimated for feeble ecological administration.

## VII. Conclusion

At the end of this study on environmental accounting practices and corporate performance: a study of listed oil and gas companies in Nigeria, the study shows the following;

1. Environmental accounting cost has significant effect on the turnover of quoted oil and gas companies in Nigeria.
2. It was also observed that environmental accounting cost has significant effect on the return on capital employed of quoted oil and gas companies in Nigeria.
3. The study further shows that environmental accounting cost has significant effect on the net profit margin of quoted oil and gas companies in Nigeria.

Environmental costs cover all costs incurred concerning environmental protection such as emissions treatment as well as wasted material, capital and labor which so called 'non product output' as a result of inefficiency production activities. Different firms may consider different elements into environmental costs but it is that all significant and relevant costs are incorporated for sound decision making purpose. The general picture, which emerges from current reporting, is that since the disclosures of

environmental are voluntary, there is a diversity of reporting practice. Large companies tend to report more environment in their annual reports than the medium-scale businesses; and the disclosure, tend to be more qualitative than quantitative despite the fact that there is a significant relationship between environmental Accounting and Corporate performance.

In light of the discoveries, the review suggests the accompanying;

1. The requirement for companies to embrace uniform detailing and exposure norms of ecological practices with the end goal of control and estimation of execution.
2. Foreign organizations ought to be urged to uncover their natural practices in their yearly reports to upgrade their intensity which would hence prompt high corporate execution.
3. Top administration ought to guarantee that they follow the natural laws of the country as it will go far in upgrading supportability.

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**Appendix 1**

**4.1 Data Presentation**

**Table4.1: Logged data obtained from oil firms**

Company	Year	TOV	ROCE	NPM	ENVC
<b>OANDOil</b>	2011	7.409943	2.531479	7.493115	7.106253
	2012	7.445761	2.567026	7.540742	7.167793
	2013	7.481903	2.603144	7.611166	7.210269
	2014	7.584716	2.705864	7.844234	7.28643
	2015	7.580271	2.701568	7.929143	7.381471
	2016	7.634279	2.755875	8.016865	7.422121
	2017	7.628596	2.749736	8.011714	7.450875
	2018	7.580349	2.683047	8.012639	7.379659
	2019	7.453269	2.553883	7.983715	7.341925
	2020	7.518636	2.61595	7.998406	7.337415
<b>EternaOil</b>	2011	7.074117	2.905256	7.489138	7.074117
	2012	7.131657	2.962843	7.413942	7.131657
	2013	7.137872	2.96895	7.456666	7.137872
	2014	7.25353	3.084934	7.537518	7.25353
	2015	7.166465	2.997823	7.54004	7.166465
	2016	7.074221	2.899273	7.559981	6.998141
	2017	6.98107	2.803457	7.548129	7.00053
	2018	6.89181	2.71433	7.586683	7.110107
	2019	6.304466	2.127105	7.504421	7.115528
	2020	6.284142	2.10721	7.521514	7.136392
<b>MRSOil</b>	2011	7.628596	2.749736	8.011714	7.450875
	2012	7.580349	2.683047	8.012639	7.379659
	2013	7.453269	2.553883	7.983715	7.341925
	2014	7.409943	2.531479	7.493115	7.106253
	2015	7.445761	2.567026	7.540742	7.167793
	2016	7.481903	2.603144	7.611166	7.210269
	2017	7.074221	2.899273	7.559981	6.998141
	2018	6.98107	2.803457	7.548129	7.00053
	2019	6.89181	2.71433	7.586683	7.110107
	2020	7.628596	2.749736	8.011714	7.450875

**Source:***Firms Financial Statements*