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EFFECT OF SUSTAINABILITY REPORTING ON CORPORATE PERFORMANCE OF QUOTED OIL AND GAS FIRMS IN NIGERIA

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ABSTRACT

The objective of this study is to determine the effect of sustainability reporting on corporate performance of quoted oil and gas firms in Nigeria. This study adopted time-series and cross-sectional analysis of selected oil and gas firms quoted on the Nigerian Stock Exchange as at 31st December 2017 for a period of seven years spanning from 2011 – 2017. This study made use of Ex-Post Facto research design. Data were gotten from secondary sources obtained from fact books, annual reports and accounts of the studied quoted oil and gas companies in Nigeria as at 31st December, 2017. The relevant data obtained were subjected to statistical analysis using Pearson correlation coefficient and multiple regression analysis via E-View 9.0 statistical software. The results of this study revealed that sustainability reporting (proxied by economic, environmental and social performance indices) has a significant positive effect on return on equity, net profit margin and earnings per share at 5% level of significance. The study recommended amongst others the need to adopt standardized Sustainability Index as this will help in putting pressure on companies to pay more attention to their environment and take much more seriously the issues of sustainable development.

Keywords: Sustainability Reporting, Corporate Performance, Corporate Governance.

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1. Introduction

A sustainability report gives information about economic, environmental, social and governance performance. Sustainability reporting is not just report generation from collected data; instead it is a method to internalize and improve an organization's commitment to sustainable development in a way that can be demonstrated to both internal and external and stakeholders. The overall objective of any organization is to consistently grow and survive on a long term basis. Most managers are also aware that their organizations are part of a large system which has profound direct and indirect influence on their operations. This implies that if these organizations must effectively and efficiently meet their objectives, they should properly adapt themselves to their environments (Abiahu & Amahalu, 2017). Adapting organizations (especially firms) to their environments signifies a reciprocal or symbiotic relationship between the 'duos' as typified by systems model of viewing business. Considering the current environmental crisis, businesses must give more to their environment.

The environment in which businesses operate is on an unsustainable course. We are now faced with serious challenge of environmental changes such as global warming, health care and poverty. This situation is similar to what Welford (1997) described as tangible environmental crises (serious water shortage across around the world, global food insecurity and decline in fish catches). There is continuing concern about nature fragmentation and loss of biodiversity, shortages in freshwater availability, over-fishing of the seas, global warming, extreme weather events, air pollution, water pollution, environmental noise and utter neglect and disregard for the protection of the immediate environment, much more the future environment. This type of environmental unsustainability associated with continuously rising demand and a shrinking resource base now spills over into social and economic instability. According to Amahalu, Okoye, and Obi (2018), sustainability development concerns tend to focus on how to organize and manage human activities in such a way that they meet physical and psychological needs without compromising the ecological, social or economic base which enable these needs to be met.

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The role of companies in this process is significant in most countries around the globe, and especially in developing economies: the epicenter of the choices which drive the majority of the environmental threats to human survival. The use of Sustainability Reporting (a term used to describe a company's reporting on its economic, environmental and social performance) techniques has been increasing rapidly in recent years. An understanding of the basis of this reporting system, and its impact on corporate performance is very crucial in determining the essence of its application.

It is noted that business leaders and most academic literature on sustainability reporting widely recognize that this reporting system is beneficial. Therefore, any company that is not involved in sustainability reporting could be considered as striving towards unsustainable development. So far it is unclear what impact sustainability reporting has actually had on organization strategies, practices and outcomes. Ballon, Heitger, and Landes (2009) in Agbionu, Amahalu, and Egolum (2017), observe that organizations have over the time realized that meeting stakeholders' expectations is a necessary condition for sustainability and therefore needed to achieve overall strategic business objective. The results of most researchers conducted on sustainability reporting and financial performance are either inconclusive or contradictory, reporting positive or sometimes negative results. In the light of these problems, this study is therefore set to find out the positive impact of sustainability reporting on corporate performance of selected quoted companies in Nigeria. The study formulates the following hypotheses in the null form as follows:

Ho_1: Economic performance disclosure, social performance disclosure and environmental performance disclosure has no significant effect on return on equity of quoted oil and gas firms in Nigeria.

Ho_2: Economic performance disclosure, social performance disclosure and environmental performance disclosure has no significant effect on net profit margin of quoted oil and gas firms in Nigeria.

Ho_3: Economic performance disclosure, social performance disclosure and environmental performance disclosure has no significant effect on earnings per share of quoted oil and gas firms in Nigeria.

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2. Review of Related Literature

2.1 Conceptual Review

2.1.1 Sustainability Reporting

Sustainability which is also called triple bottom line was coined in 1994 by John, the founder of a British consultancy Sustain-Ability (Elkington, 2004). His argument was that companies should be preparing three different (and quite separate) bottom lines. One is the traditional measure of corporate profit. The "Bottom line" of the profit and loss account. The second is the bottom line of a company's "people account"- a measure in some shape or form of how socially responsible an organization has been throughout its operations. The third is the bottom line of the company's "planet" account –measure of how environmentally responsible it has been. The triple bottom line or sustainability reporting consists of three 'Ps' profit, people and planet. It aims to measure the financial, social and environmental performance of the business entity over a period of time.

There is no single, generally accepted definition of sustainability reporting. It is a broad term generally used to describe a company's reporting on its economic, environmental and social performance. It can be synonymous with triple bottom line reporting, corporate responsibility reporting and sustainable development reporting, but increasingly these terms are becoming more specific in meaning and therefore subset of sustainability reporting (KPMG, 2008). Schaltegger (2004) in Jasch and Stasiskiene (2005) defines sustainability reporting as a subset of accounting and reporting that deals with activities, methods and systems to record, analyse and report, firstly, environmentally and socially induced financial impacts and secondly, ecological and social impacts of a defined economic system (example, a company, production site, and nation). Thirdly, sustainability reporting deals with the measurement, analysis and communication of interactions and links between, environmental and economic issues constituting the three dimensions of sustainability. According to Parliament of Australia (2010) sustainability reporting involves companies and organizations demonstrating their corporate responsibility through measuring and publicly reporting on their economic, social and environmental performance and impacts. Global Reporting initiative (GRI) (2011) defines sustainability reporting as the practice of measuring, disclosing and being accountable to internal and external stakeholders of organistional performance towards the goals of sustainable development.

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2.1.2 Corporate Performance

Performance is however, a difficult concept, in terms of definition and measurement. According to Encyclopedia of Business (2011) performance measures can be grouped into two basic types: those that relate to results (outputs or outcomes such as competitiveness or financial performance) and those that focus on the determinants of the results (inputs such as quality, flexibility, resource utilization, and innovation). This suggests that performance measurement frameworks can be built around the concepts of results and determinants. It has been defined as the end result of activity, and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated and the objectives to be achieved through that evaluation (Amahalu, Nweze, & Obi, 2017).

2.2 Theoretical Framework

2.2.1 Stakeholder Theory

The study is anchored on stakeholder theory. The traditional definition of a stakeholder is 'any group or individual who can affect or is affected by the achievement of the organization's objectives' (Freeman 1984 in Fontaine, Harman & Schmid, 2006). The general idea of the stakeholder concept is a redefinition of the organization. In general the concept is about what the organization should be and how it should be conceptualized. Friedman (2006) in Fontaine, Harman, and Schmid (2006) states that the organization itself should be thought of as grouping of stakeholders and the purpose of the organization should be to manage their interests, needs and viewpoints. The main groups of stakeholders are: customers, employees, local communities, suppliers and distributors, shareholders, the media, the public in general, business partners, future generations, past generations (founders of organizations), academics, competitors, government, regulators, policymakers etc. Thus, sustainability reporting provides a frame work to create value for stakeholders which translate to satisfying the interest of diverse group of stakeholders.

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3. Design and Methodology

This research employed ex-post facto research design since the events have already taken place and therefore the research is been concluded after the fact. In this study, both the independent and dependent variables exist and are observed at the same time because the effect of the former on the latter took place before this time. The population of this study consists of eleven (11) oil and gas firms listed on the floor of the Nigerian Stock Exchange (NSE) as at 31st December, 2017. They include; Capital Oil, Japaul Oil & Maritime Services Plc, Oando Plc, Beco Petroleum Products Plc, Conoil Plc, Eterna Oil Plc, Forte Oil Plc, Mobil Oil Plc, MRS Oil Nigeria Plc (formerly Texaco Nigeria Plc), Total Nigeria Plc and Rak Unity Petroleum Plc. Purposive random sampling was employed to select seven (7) oil and gas firms that that have embraced sustainability reporting in line with global best practices, and have integrated sustainability information in their annual reports and consistently submitted their annual reports to the NSE from 2011-2017. These include: Capital Oil Plc, Conoil Plc, Rak Unity Petroleum Plc, Eterna Oil and Gas Plc, MRS Oil Nigeria Plc (formerly Texaco Nigeria Plc), Mobil Oil Nigeria Plc, Total Nigeria Plc. The study utilised secondary data. The sources of data include annual reports and accounts of the studied companies.

3.1 Model Specification

In order to test for the relevance of the hypotheses regarding the effect of sustainability reporting on corporate performance, the following regression models were adopted for the respective hypotheses:

The general form of the regression is specified below as follows:

$$Y = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + E_{it}$$

Where:

Y = is the dependent variable which describes corporate performance
X = is the independent variable which represents the components of sustainability reporting disclosure
X_1 = Economic performance disclosure
X_2 = Social performance disclosure
X_3 = Environmental performance disclosure
E = is the error term capturing other explanatory variables not explicitly included in the model
β_0 = is the intercept of the regression
$\beta_1, \beta_2, \beta_3$ = coefficients of sustainability reporting indices

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The above equation can be represented for the three hypotheses, thus;

$ROE_{it} = \beta_o + \beta_1 ECPD_{it} + \beta_2 SOPD_{it} + \beta_3 ENPD_{it} + E_{it}$ - - - **Ho_1**

$NPM_{it} = \beta_o + \beta_1 ECPD_{it} + \beta_2 SOPD_{it} + \beta_3 ENPD_{it} + E_{it}$ - - - **Ho_2**

$EPS_{it} = \beta_o + \beta_1 ECPD_{it} + \beta_2 SOPD_{it} + \beta_3 ENPD_{it} + E_{it}$ - - - **Ho_3**

Where:
ROE_{it} = Return on Equity for firm í in period t
NPM_{it} = Net Profit Margin for firm í in period t
EPS_{it} = Earnings per Share for firm í in period t
$ECPD_{it}$ = Economic performance disclosure for firm í in period t
$SOPD_{it}$ = Social performance disclosure for firm í in period t
$ENPD_{it}$ = Environmental performance disclosure for firm í in period t

3.2 Measurement of Variables

3.2.1 Independent Variables

The independent variables were measured by scoring index based on performance indicators selected from Global Reporting Initiative (GRI) guidelines as applied in previous studies (Burhan & Rahmanti, 2012; Khaveh, et. al., 2012). The economic, environmental and social disclosure index is calculated based on the number of indicators that are disclosed (occurrence) and the level of disclosure (quantitative and qualitative). If a company disclosed about any indicator, that is the occurrence of an indicator in the company's financial statement, the researcher assigned 1 or that company did not disclose about any indicator, the researcher assigned 0. On the other hand, if the level of the indicator disclosed is quantitative, the researcher assigned 3 and a qualitative disclosure, the researcher assigned 2.

Economic, Environmental or Social Index = Total Level of Disclosure / Total Occurrence.

3.2.2 Dependent Variables

The dependent variables in the study were corporate performance proxies; measured by

1. **ROE:** $\frac{\text{Net profit (after interest, taxes and preference dividend)}}{\text{Shareholders' Equity}}$

2. **NPM :** $\frac{\text{Net profit (before interest and taxes}}{\text{Net sales}}$

3. **EPS:** $\frac{\text{Profit after taxes}}{\text{Number of equity stock outstanding}}$

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4. Data Presentation and Results

Table 1: Correlation matrix

	ROE	NPM	EPS	ECPD	SOPD	ENPD
ROE	1.0000					
NPM	0.7379	1.0000				
EPS	0.1480	0.5549	1.0000			
ECPD	-0.0160	-0.0824	-0.1941	1.0000		
SOPD	-0.2189	-0.3183	0.0539	0.4173	1.0000	
ENPD	-0.1644	-0.1395	0.5611	0.2937	0.2497	1.0000

Source: E-Views 9.0 Correlation Output, 2019

The correlation result shows that the variables does not possess multicollinearity problem, since none of the degree of relationship amongst the variables is higher than 0.75

4.1 Test of Hypotheses

4.1.1 Hypothesis One

Ho_1: Economic performance disclosure, social performance disclosure and environmental performance disclosure has no significant effect on return on equity of quoted oil and gas firms in Nigeria.

Table 2: Least squares output for hypothesis one

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.037351	3.131240	5.970015	0.0000
ECPD	0.099995	0.506030	3.197607	0.0040
SOPD	0.406183	1.068652	3.380089	0.0002
ENPD	-0.229820	0.951103	-3.241635	0.0034
R-squared	0.572813	Mean dependent var		1.670000
Adjusted R-squared	0.454373	S.D. dependent var		1.235584
S.E. of regression	1.682561	Akaike info criterion		4.174070
Sum squared resid	8.493030	Schwarz criterion		4.143161
Log likelihood	-10.60924	Hannan-Quinn criter.		3.792047
F-statistic	9.078531	Durbin-Watson stat		1.614943
Prob(F-statistic)	0.000083			

Source: E-Views 9.0 Regression Output, 2019

Interpretation of Regression Analysis

As could be seen from the results of regression result in table 2, Sustainability Reporting indices under investigation are positively related to ROE except the environmental index. The social index is more significantly related to ROE than environmental and economic indices. The Adjusted R-square of 0.45 suggests that variation in ROE is explained by Sustainability Reporting indices by 45% while the remaining 55% is explained by other factors outside the model. The coefficient of Sustainability Reporting index is positive as shown by the t–value of 3.197607 and 3.380089 for ECPD, SOPD respectively while the t-value for ENPD is -

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3.241635. The result shows that there is a significant impact of Sustainability Reporting indices on ROE. That is, one unit increase in ECPD and SOPD will lead to 0.10% and 0.41% increase in returns on equity, however; on the other hand, an increase in ENPD by one unit, holding others constant will reduce ROE by 23%. This suggests that the Sustainability Reporting indices have combined to exert significantly on ROE. Again, in order to ascertain the whole impact of Sustainability Reporting indices on ROE, the Prob (F-Statistic) value of 0.000083 further implies the positive impact of Sustainability Reporting indices on ROE.

Decision:

Since the P-value of F-statistics of 0.000083 is less than the level of significance of 0.05, the null hypothesis is rejected at 5% level of significance implying that, Sustainability reporting indices have significant and positive impact on return on equity of oil and gas companies listed on the Nigeria Stock Exchange.

4.1.2 Hypothesis Two

Ho_2: Economic performance disclosure, social performance disclosure and environmental performance disclosure has no significant effect on net profit margin of quoted oil and gas firms in Nigeria.

Table 3: Least squares output for hypothesis two

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.742616	2.028967	1.351730	0.2693
ECPD	0.042447	0.327895	3.129454	0.0042
SOPD	0.378806	0.692460	3.547044	0.0024
ENPD	0.085684	0.616292	3.139032	0.0039
R-squared	0.810104	Mean dependent var		1.560000
Adjusted R-squared	0.779792	S.D. dependent var		0.817231
S.E. of regression	1.090258	Akaike info criterion		3.306266
Sum squared resid	3.565990	Schwarz criterion		3.275357
Log likelihood	-7.571930	Hannan-Quinn criter.		2.924243
F-statistic	9.123727	Durbin-Watson stat		0.659439
Prob(F-statistic)	0.000068			

Source: E-Views 9.0 Regression Output, 2019

Interpretation of Regression Analysis

As could be seen from the results of regression result in table 3, Sustainability Reporting indices under investigation are positively related to ROE. The social index is more significantly related to NPM. It was also noticed that the explanatory power of Sustainability Reporting index in determining NPM is 78%. The Adjusted R-square of 0.78 suggests that variation in NPM is explained by Sustainability Reporting indices by 78% while the

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remaining 22% was explained by other factors outside the model. The coefficient of Sustainability Reporting index is positive as shown by the t–value of 3.129454, 3.547044 and 3.139032 for ECPD, SOPD and ENPD respectively. One unit increase in ECPD, SOPD and ENPD will lead to 0.04%, 0.38% and 0.09% increase in net profit margins. Again, in order to ascertain the whole impact of Sustainability Reporting indices on NPM, the Prob (F-Statistic) value of 0.000068 further implies the positive impact of Sustainability Reporting indices on NPM.

Decision:

Since the P-value of F-statistics of 0.000068 is less than the level of significance of 0.05, the null hypothesis is rejected at 5% level of significance implying that, Sustainability reporting indices have significant and positive impact on net profit margin of oil and gas companies listed on the Nigeria Stock Exchange.

4.1.3 Hypothesis Three

Ho_3: Economic performance disclosure, social performance disclosure and environmental performance disclosure has no significant effect on earnings per share of quoted oil and gas firms in Nigeria.

Table 4: Least squares output for hypothesis three

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.365965	0.284493	5.286375	0.0000
ECPD	0.039921	0.045976	3.868300	0.0011
SOPD	0.012441	0.097094	0.128136	0.9061
ENPD	0.128525	0.086414	4.487318	0.0007
R-squared	0.658797	Mean dependent var		0.527143
Adjusted R-squared	0.482405	S.D. dependent var		0.146937
S.E. of regression	0.152871	Akaike info criterion		-0.622881
Sum squared resid	0.070109	Schwarz criterion		-0.653789
Log likelihood	6.180083	Hannan-Quinn criter.		-1.004904
F-statistic	11.87736	Durbin-Watson stat		0.942317
Prob(F-statistic)	0.000000			

Source: E-Views 9.0 Regression Output, 2019

Interpretation of Regression Analysis

As could be seen from the results of the regression result of Sustainability Reporting and EPS in Table 4; the Adjusted R-square of 0.482 suggests that variation in EPS is explained by Sustainability Reporting indices by 48% while the remaining 52% is explained by other factors outside the model. This shows that, given a unit increase in economic index, EPS will increase by 0.04%. If environmental reporting increases by one unit holding others constant,

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EPS will increase by 0.13%. It also shows that if social index increases by one unit, EPS will increase by 0.01%. Table 4 displays the t-values for the independent variables as 3.868300, 0.128136 and 4.487318 respectively for economic, social and environmental reporting indices respectively. This shows that the t-values for the economic and environmental indices are statistically significant at the 5% level of significance except the social index.

Decision:

Since the P-value of F-statistics of 0.000000 is less than the level of significance of 0.05, the null hypothesis is rejected at 5% level of significance implying that, Sustainability reporting indices have significant and positive impact on net profit margin of oil and gas companies listed on the Nigeria Stock Exchange.

5. Conclusion and Recommendation

Generally, it can be seen from this study that sustainability reporting has impacted positively on corporate performance indicators used in the study. A detailed analysis shows that the social index has exerted impact on all the performance variables. This implies that, if sustainability reporting is imbibed upon by the sampled companies, there will be significant impact on financial performances as shown by the social index. Environmental reporting index is the most negative index among all the sustainability indices. This may be largely due to its non–reporting nature in most companies investigated. Increased environmental reporting may likely change or affect the impact it may exert on the performance measures used in the study. Based on the findings, the following recommendations are put forward:

1. There is need for the adoption of unified reporting standards and guidelines, as this will enhance uniformity in reporting and comparison.
2. Regulatory authorities like Corporate Affairs Commission and the legislative arm of government should put in place regulations that encourage sustainability reporting in Nigeria.
3. There is the need to adopt standardized sustainability index as used in this work in ranking companies. This will help in putting pressure on companies to pay more attention to their environment and take much more seriously the issues of sustainable development.

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REFERENCES

Abiahu, M. C., & Amahalu, N. N. (2017). Business combination and key performance of quoted deposit money banks in Nigeria. Paper presented at the 3rd annual Institute of Chartered Accountants of Nigeria (ICAN), University of Lagos, Nigeria.

Agbionu, C. U., Amahalu, N. N., & Egolum, U. (2017). Attitudinal change, power of thought and empowerment: *The Indisputable Nexus. Contemporary Issues in Business Management: A Multidisciplinary Approach*, 354-360.

Amahalu, N. N., Ezechukwu, B. O., & Obi, J. C. (2017).Corporate social responsibility and financial performance of quoted deposit money banks in Nigeria. *Asian Journal of Science and Technology*, *8*(12), 7183-7191.

Amahalu, N. N., Nweze, C. L., & Obi, J. C. (2017). Effect of backflush accounting on financial performance of quoted food and beverage firms in Nigeria. *EPH - International Journal of Medical and Health Science, 2*(3), 58-80.

Amahalu, N. N., Okoye, P.V. C., & Obi, J. C. (2018). Effect of sustainability reporting on economic value added of quoted brewery firms in Nigeria. *Journal of Accounting, 7*(1), 1-20.

Burhan, A. H., & Rahmanti, A. (2012). The impact of sustainability reporting on company performance. *Journal of Economics, Business, and Accountancy Ventra, 15*(2), 257 – 272.

Deegan, C. (2007). Organizational legitimacy as a motive for sustainability reporting, in Unerman, J., Bebbington, J., & O'Dwyer, B. (Eds.) *Sustainability accounting and accountability* (PP.127-149), London: Routledge.

Fontaine, C., Harman, A., & Schmid, S. (2006). The Stakeholder theory. Retrieved From http://www.edalys.fr/documents/stakeholders%20theory.pdf on 22nd September, 2011.

Freeman, R. E., Wicks, A. C., & Parmar, B. (2004). Stakeholder theory and the corporate objective revisited, *Organization Science* 15(3), 364-369.

Jasch, C., & Stasiskiene, Z. (2005). From environmental management accounting to sustainability management accounting, *Environmental Research, Engineering and Management* 4(34). 77-8

Khaveh, A., Nikhashemi, S., Yousefi, A., & Haque, A. (2012). Voluntary sustainability disclosure, revenue, and shareholders wealth – A perspective from Singaporean companies, *Business Management Dynamics 1(9)*, 06-12.

Unerman, J., Bebbington, J. & O'Dwyer, B. (Eds.). (2007). *Sustainability accounting and accountability*, London: Routledge.

Viek, C., & Steg, L. (2009). Human behaviour and environmental sustainability: Problems, driving forces, and research topics. *Journal of Social Issues, 63* (1), 1 – 19.

White, G. B. (2009). *Sustainability reporting: Managing for wealth and corporate health*. New York: Business Expert Press LLC.

Zuriekat, M., Salameh, R., & Alrawashdeh, S. (2011). Participation in performance measurement system and level of satisfaction, *International Journal of Business and Social Science,* 2(8).

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