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Sustainability Reporting and Financial Performance of Quoted Oil and Gas Companies in Nigeria

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Abstract: This research was conducted to investigate the relationship between sustainability reporting and financial performance of quoted oil and gas companies in Nigeria. Data was collected from a sample of 10 companies for period of 10 years from 2010 to 2019. Financial performance was measured using return on assets (ROA) and return on equity (ROE). Sustainability reporting was measured using environmental performance indicator (ENVPI); social performance indicator (SOCPI); and economic performance indicator (ECOPI). The panel least square (PLS) regression estimation technique was adopted for data analysis. In addition, common sample descriptive and Pearson correlation were also used to enhance data analysis. Findings of the research revealed that there was a positive and significant relationship between environmental, social and economic performance indicators and return on assets. Environmental and social performance indicators had a positive non-significant relationship with return on equity while economic performance indicators had a significantly positive relationship with return on equity. Based on the findings, it was concluded that sustainability reporting activities are important factors in enhancing financial performance. It is was recommended that oil and gas companies should properly articulate the environmental issues they intend to respond to on the basis of those that will have the most direct and largest effect on their financial performance. It is further suggested that companies conduct critical review of their corporate social activities and whittle down on those that do not make commensurate contribution to financial performance while at the same time channeling more resources to the more financial value enhancing activities. Finally, industry leaders and policy makers liaise to develop an industry standard and template for sustainability reporting that will be legally binding on all companies in the industry.

Background to the Study

Sustainability Reporting deals with the measurement, analysis and communication of interactions and links between social, environmental and economic issues constituting the three dimensions of sustainability. Sustainability reporting is progressively becoming more prevalent, driven by a growing need to engage in business activities that has less negative impact on the environment and society in general. Also the recognition that sustainability related issues can materially affect a company's performance. Demands from various stakeholder groups for increased levels of transparency and disclosure and the need for companies (and the business community more generally) to appropriately respond to issues of sustainable development. It is the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goals of sustainable development (Jasch & Stasiskiene, 2005).

Corporate sustainability is a kind of strategic weapon to ensure long term growth and survival of business organizations. This is because it can be utilized to maintain a quality relationship with stakeholders by demonstrating that the organization considers issues relating to the environment and society very seriously and would take concrete steps to remedy whatever negative impact the the operations of the business has. Moreover, it has emerged that corporate sustainable practices contribute highly to sustainable development and is becoming an essential aspect of firms' practices. Scholars delved into this matter and how it impacts the competitive advantage and revealed that sustainable corporate practices are a prime source of competitive advantage (Simnet, Vanstraelen & Chua, 2009).

Furthermore, corporate sustainability is known to bring direct benefits to business organizations, primarily by increasing self-esteem and productivity. Additionally corporate sustainability reporting offers external benefits that improve a company's image, especially in the market. It is worth mentioning that a company's image is a vital intangible resource, which they can use to improve their competitive advantage. This is because business organizations tend to become more attractive to stakeholder when it is known to operate in a sustainable fashion (Camilleri, 2017).

Globally, corporations are facing increasing pressures from stakeholders to integrate their efforts in environmental, social, and economic realms to ensure a sustainable world. Oil and Gas companies are particularly vulnerable to such pressures due to the nature of their business. Two of the identifying characteristics of the oil and gas industries are depleted products used as inputs for many finished products and do not renew in a short time frame along with the activities of extraction of oil and gas which leave environmental and social footprints. The demands for these inputs are increasing as they are needed worldwide to improve the standards and quality of living. Unless these activities are properly managed, they can result in irreversible harm to the communities (Lee, Niranjan, & James, 2011).

In Nigeria for example, the situation is no different because the industry that gives great concern for the effect of their activities on the environment is the oil and gas industry. The Nigerian crude comes from production fields situated in the swamplands of the Niger Delta. The multinationals corporations operating in the the oil and gas industry have been consistently accused of lacking transparency, insensitivity to stakeholders concern, environmental degradation and have continually been targets of community unrest and public criticisms. Nigeria is however classified in the corporate sustainability reporting quadrant tagged "starting behind (Asaolu et al., 2011).

As a matter of fact, Nigeria has no mandatory environmental or social reporting requirement for public companies, though there have been significant efforts like the Nigerian Exchange (NGX) sustainability disclosure guideline 2016. Prior studies in Nigeria (Olayinka &Temitope, 2011; Uwuigbe & Uadiale, 2011; Akinlo & Iredele, 2014) all evaluated corporate social responsibility and environmental disclosure on firm performance in Nigeria. Various studies have examined the link between Sustainability Performance and Financial Performance the results are often non-conclusive. Based on the above background, this study basically in examines the link between sustainability reporting and firm performance in the oil and gas industry in Nigeria.

Research Problem

Sustainability reporting increase firm's transparency, improving its reputation, motivating its employees and supporting its control processes (Hahn & Kühnen, 2013). Herzig and Schaltegger (2006) added two further benefits: gaining a competitive advantage and enabling comparison with competitors. Moreover, previous literature had stated that sustainability reporting enabled firms to increase revenues and reduce costs (Hahn & Kühnen, 2013). Hence, we can infer that sustainability reporting and its effect on firm performance vary because of the variation in the country's institutional and regulatory setting. Based on the above, the present research is poised to investigate the relationship between sustainability reporting and the financial performance of corporate organizations with emphases on the oil and gas industry.

Numerous empirical studies have investigated the relationship between a firm's sustainability reporting and disclosures and its financial performance. Despite this, many researchers claim that results of this research are ambiguous, inconclusive, or contradictory (Brooks & Oikonomou, 2018). On the one hand, many researchers have found a significant positive relationship between sustainability reporting variables and firm performance (Nnamani, Onyekwelu & Ugwu, 2017; Iheduru & Okoro, 2019; Chikwendu, Okafor & Jesuwunmi, 2019). On the other hand, other scholars have identified a negative relationship (Mark, Wasara & Ganda 2019; Asuquo, Dada & Onyeogaziri, 2018; Sarita & Rasmini, 2018; Landi & Sciarelli, 2019) or an insignificant relationship (Asuquo, Dada & Onyeogaziri, 2018; Atan, Alam, Said, & Zamri, 2018) between the two.

Finally, most of the previous researchers including the one cited above have tended to focus on the manufacturing and other industrial sectors with little research towards the oil and gas industry. Thus, this research is intended focus on the oil and gas industry. This will contribute to knowledge by bringing to the fore issues of sustainability reporting in the oil and gs industry. It will also contribute to knowledge by unifying the divergent findings in previous research.

Aim and Objectives

The purpose of this research is to investigate the relationship between Sustainability Reporting and Financial Performance of Oil and Gas Companies in Nigeria. The specific objectives of the research include the following.

1. Investigate the relationship between environmental performance reporting and return on assets of oil and gas companies
2. Investigate the relationship between social performance reporting and return on assets of oil and gas companies
3. Investigate the relationship between economic performance reporting and return on assets of oil and gas companies
4. Evaluate the relationship between environmental performance reporting and return on equity of oil and gas companies
5. Evaluate the relationship between social performance reporting and return on equity of oil and gas companies
6. Evaluate the relationship between economic performance reporting and return on equity of oil and gas companies

Research Hypotheses

Ho_1: There is no significant relationship between environmental performance reporting and return on assets of oil and gas companies

Ho_2: There is no significant relationship between social performance reporting and return on assets of oil and gas companies

Ho_3: There is no significant relationship between economic performance reporting and return on assets of oil and gas companies

Ho_4: There is no significant relationship between environmental performance reporting and return on equity of oil and gas companies

Ho_5: There is no significant relationship between social performance reporting and return on equity of oil and gas companies

Ho_6: There is no significant relationship between economic performance reporting and return on equity of oil and gas companies

Legitimacy Theory

The theory refers to a contract between society and corporation, in which the corporations adopt socially and environmentally oriented activities in order to gain the approval of society to operate. The existence of social contracts between the society and business organizations is fundamental to the purpose of legitimization. Such contracts are stipulated, though in non-concrete (abstract) between the businesses and individuals that make up a local or host community. The local community supplies to the company the natural and human resources; the companies produce, for the community, the goods and services and they generate waste - and must find a way to deal with the generated waste in such a way that will be acceptable to society so as to maintain its legitimacy. Legitimacy is based on societal perceptions, and the only way to influence these perceptions is to provide the society with relevant information. As a response to a change in stakeholders' expectations, companies use disclosures to report on their progress in innovation, or to explain why no changes are made. In both cases, companies' actions are rooted in their legitimacy, and these actions and strategies constitute the actual focus of the legitimacy theory (Deegan, 2002).

It is often argued that the key goal of a business is to generate acceptable returns for its shareholders. The larger the business is the more diverse interests its stakeholders share. And this is the reason why the triple bottom line (a model where social, environmental and financial aspects are equally employed in a company's decision-making. Hopwood (2010) principle becomes so popular in companies of different sizes and scopes of operation. Despite the fact that legal requirements to sustainability reporting are getting more wide-spread, this practice still remains quite voluntary. This means, in its turn, that the question of motivation behind this voluntary type of accountability is very interesting and still not profoundly researched (Deegan, 2002).

Sustainability reporting can be explained by legitimacy theory (Gray, Kouhy, & Lavers, 1995). It assumes an implicit contract between companies and society. By reporting on economic, social and environmental issues a company can demonstrate that it fulfils its part of the contract and that its activities coincide with the value systems of society. This can prevent or mitigate future regulatory requirements that would constrain the strategic options of the company. Thus, the company can maintain its status and reputation in society. The benefits of sustainability reporting go beyond relating firm financial risk and opportunity to performance along environment, social and governance dimensions and establishing license to operate. Sustainability disclosure can serve as a differentiator in competitive industries and foster investor confidence, trust and employee loyalty. Analysts often consider a company's sustainability disclosures in their assessment of management quality and efficiency, and reporting may provide firms better access to capital.

Concept of Sustainability Reporting

Sustainability Reporting is a subset of accounting and reporting that deals with activities, methods and systems to record, analyze and report, firstly, environmentally and socially induced financial impacts and secondly, ecological and social impacts of a defined economic system (Jasch & Stasiskiene, 2005). Sustainability Reporting deals with the measurement, analysis and communication of interactions and links between social, environmental and economic issues constituting the three dimensions of sustainability. Sustainability Reporting is becoming more prevalent, driven by a growing recognition that sustainability related issues can materially affect a company's performance, demands from various stakeholder groups for increased levels of transparency and disclosure and the need for companies (and the business community more generally) to appropriately respond to issues of sustainable development (Ivan, 2009). It is the practice of measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goals of sustainable development.

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, analyses 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 social, environmental and economic issues constituting the three dimensions of sustainability. Sustainability Reporting involves companies and organizations demonstrating their corporate responsibility through measuring and publicly reporting on their economic, social and environmental performance and impacts. Sustainability reporting has several dimensions which in environmental, social and economic dimensions.

Empirical Review

Aifuwa (2020) examined the impact of sustainability reporting on firm performance in developing climes. A systematic content analysis approach was adopted in the study. The findings of reviewed extant literature showed that there were inconclusive findings on the impact of sustainability reporting on firm performance. However, a large number of works submitted a positive relationship between sustainability reporting and firms' performance. Secondly, financial performance measures often used by researchers include the profitability measures (ROA and ROE) and market-base measure (EPS and DPS), and the fourth version of the Global Reporting Initiative (GRI) framework in calculating sustainability disclosure index via content analysis.

Powei (2020) evaluated the relationship between corporate social responsibility activities and organizational performance of international oil companies in Nigeria was investigated. The research which adopted the descriptive and correlation techniques for data analysis revealed that CSR was positively and significantly correlated with organizational performance of IOCs. Voluntary contributions also significantly affected organizational performance. The implications for positive social change include the potential for policy makers to use the findings to create mutually beneficial relationships that could contribute to resolving persistent adverse issues involving oil exploration and production.

Oncioiu, et al, (2020) attempted to identify the accessibility of corporate sustainability reporting instruments for Romanian managers and their role in increasing the financial performance of organizations. The study concluded that corporate social reporting indicators can be integrated into the reporting of the financial performance of a company and can transform sustainability into tangible value for all interested parties. In addition, the empirical results contribute to the understanding of corporate social responsibility practices; although being non-financial, these seem to be financially meaningful at a certain level after other financial factors are controlled for.

Iheduru and Okoro (2019) examined the effect of sustainable reporting on the profitability indicators of Nigeria quoted firms between 2008-2017 using cross sectional data which were sourced from the annual reports of firms. The data model was tested using the Hausman test. The results found that economic disclosure and social disclosure have positive but insignificant effect on return on equity of the selected firms while environmental and corporate governance disclosure have negative and insignificant effect on return on equity, all the predictor variables have positive and insignificant effect on earnings per share of the firms and that economic, social and environmental disclosure have positive effect on return on investment while corporate governance disclosure have negative effect on return on investment of the selected firms in Nigeria. It was thus recommended that operating environment of the firms should be well examined and policies advanced to manage factors such as economic, social, environmental and corporate governance disclosures to leverage the environmental challenges and enhance profitability, companies should ensure strict compliance to all forms of sustainability reporting.

Chikwendu, Okafor and Jesuwunmi (2019) investigated the effect of sustainability reporting on company's performance using twenty selected Nigerian companies over the period of five years. The hypotheses developed for the study were tested using multiple regression analysis via SPSS. The study revealed that economic performance disclosure and environmental performance disclosure have no significant effect on return on asset while social performance disclosure has significant effects on company's performance. In conclusion for every increase in economic, environmental and social performance disclosure, there is a positive insignificant, negative insignificant and positive significant effect respectively on return on asset. The study therefore recommended that mandatory localized reporting framework in line with international best practices should be put in place to encourage sustainability reporting.

Asuquo, Dada and Onyeogaziri (2018) examined the effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. To determine the association between sustainability reporting and corporate performance, data was obtained from the audited financial statements of the three brewery firms under study for a period of five years (2012-2016). The result of the study shows that Economic Performance disclosure (ECN), Environmental Performance disclosure (ENV) and Social Performance disclosure (SOC) have no significant effect on return on asset (ROA) of selected quoted firms in Nigeria.

Uwuigbe, et. al. (2018) analyzed the bi-directional relationship between sustainability reporting and firm performance in quoted Deposit Money Banks (DMBs) in Nigeria. Data was collected from the annual reports and stand-alone sustainability reports of the selected banks were analyzed through the use of content analysis and coded in order to obtain the sustainability disclosure index. Findings showed that there is a bi-directional relationship between sustainability reporting and firm performance of quoted Deposit Money Banks (DMBs) in Nigeria. This finding confirms the proposition of the legitimacy theory.

Methodology

A research is said to be valid when conclusions drawn from it are accurate. Research design provides the conceptual blueprint within which research is validly conducted. Research design is described as the framework of methods of research adopted by a research in his work. Claybaugh(2020) described the research design as the overal strategy used in carrying out a research. Gupta and Gupta (2011) opined that research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure. While there are several types of research design - and the choice of which to adopt in a research depends on the nature of the research. For the purpose of this study, the ex post facto research design is adopted. This designs allows a researcher to collect already existing data for the purpose of investigating a phenomena that has already occurred. The nature of the present research is such that its data sources will be from annual reports of the companies that are selected as part of the research. Thus, the ex post facto design is deemed the appropriated research design.

The industry of interest is the oil and gas industry. Thus, all companies in the industry that is listed on Nigeria Exchange (NGX) are deemed as part of the research population. This comprise ten companies. Considering the limited number of quoted companies in oil and gas sector, it is deemed appropriate that all companies in the sector be included in the sample. However, some sample members may be removed if they do not have the required data for the research. Thus, it is proposed (tentatively) that the sample consisted of all ten (10) oil and gas companies. Period to be covered for the study is ten (10) years covering 2010-2019.

The content analyses method is utilized for data collection from secondary sources specifically form the annual published reports and accounts of the concerned companies. Collected data will consist of those on corporate financial performance metrics such as return on assets (ROA) and Return on Equity (ROE). Sustainability reporting data will be gathered by creating a performance disclosure index (PDI) that includes Environmental Performance Indicators (ENVPI); Social Performance Indicators (SOCPI); and Economic Performance Indicators (ECOPI). The independent variables (Environmental, Social and Economic Performance Indicator) will be measured by scoring index based on performance indicators (see appendixes 1) selected from Global Reporting Initiative (GRI) guidelines as applied in (Burhan and Rahmanti, 2012).

The Economic, Environmental and Social Disclosure indicators are calculated based on the number of indicators that are disclosed (occurrence) and the level of disclosure (quantitative and qualitative). The Pearson Correlation method is used to explore the correlation between the dependent and independent variable. Finally, the Ordinary Least Square (OLS) regression method will be used to further explore the relationship between that variables. Where financial performance is further measured in terms of Return on Assets (ROA) and Return on Equity (ROE) and Sustainability Reporting Indicators is measured in terms of: Environmental Performance Indicators (ENVPI); Social Performance Indicators (SOCPI); and Economic Performance Indicators (ECOPI). And Firm Size (FMSIZ) is used as a moderating variable, the equation is stated as:

$$ROA = a_0 + b_1ENVPI + b_2SOCPI + b_3ECOPI + b_4FMSIZ + \mu \ldots . (1) \text{ and}$$

$$ROE = a_0 + b_1ENVPI + b_2SOCPI + b_3ECOPI + b_4FMSIZ + \mu \ldots . (2)$$

Performance Indicators (ENVPI); Social Performance Indicators (SOCPI); and Economic Performance Indicators (ECOPI) will have positive signs and thus greater that zero. This will be an indication that the sustainability reporting activities of financial oil and gas companies makes a positive contribution to their financial performance. This is stated mathematically as:

The a priori expectation is that b_1, b_2 and $b_3 > 0$

Data and Results

Table 1. Pearson Correlation Matrix for all Variables

	ROA	ROE	ENVPI	SOCPI	ECOPI	FMSIZ
ROA	**1.0000**					
ROE	0.6388	**1.0000**				
ENVPI	0.4238	0.0091	**1.0000**			
SOCPI	0.3154	0.2416	0.0732	**1.0000**		

ECOPI	0.4440	0.2899	0.1488	0.1717	**1.0000**	
FMSIZ	-0.0321	-0.2970	0.1947	-0.0558	0.2360	**1.0000**

The Pearson correlation matrix in table 1 shows that the correlation between return on asset (ROA) and environmental performance indicator (ENVPI) had a positive value of 0.4238 - implying that the strength of relationship between the variables is about 42.38. Thus, increase in environmental performance is related to an increase in return on assets and vice versa. In the same vein, return on assets had a positive relationship with social performance indicator (SOCPI) with a coefficient of correlation value of 0.3154 implying that the strength of the relationship between the variables stood at 31.54%. Economic performance indicator (ECOPI) had a positive relationship with return on assets with a value of 0.4440 implying that the stregnth of the relationship between the variables was 44.40%. However, firm size is shown to have a negative correlation with return on assets with a correlation value of -0.0321 implying a weak negative correlation between the variables. Thus, increasing firm size is indicated to negatively affect return on assets which may not be uncommented with efficiency in resource utilization. Return on equity (ROE) had a weak positive correlation with environmental performance indicator (ENVPI) with a value of 0.0091 indicating that the strength of the relationship between the variables was less than 1% (0.91%). Return on equity had a much stronger correlation with social performance indicator (SOCPI) with a correlation value of 0.2416 (24.16%). Economic performance had also had a positive correlation with return on equity with a value of 0.2899 implying that the strength of the relationship between the variables was 28.99%. Finally, firm size had a negative correlation of -0.2970 with the implication that the strength of the relationship between the variables was a negative 29.70%. In all, it can be observed that return on assets had a much stronger correlation with the sustainability reporting indicators than return on equity. Furthermore, in both cases, the moderating variable - firm size had a negative correlation with both return on assets (ROA) and return on equity (ROE).

Table 2. Summary of Panel Least Square (PLS) Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.4566	0.1564	-2.9189	0.0044
ENVPI	0.1239	0.0259	4.7767	0.0000
SOCPI	0.0941	0.0363	2.5933	0.0110
ECOPI	0.0972	0.0204	4.7676	0.0000
FMSIZ	-0.0411	0.0180	-2.2858	0.0245
R-squared: 0.4112; F-stat: 16.5849; Prob. (F-stat): 0.000: Durbin-Watson stat: 1.5109				

The panel least square regression result in table 2 shows that there is a positive relationship between return on assets (ROA) and three measures sustainability reporting vis-à-vis: environmental performance indicator (ENVPI); social performance indicator (SOCPI); and economic performance indicator (ECOPI). This implies that increasing environmental, social and economic performance indicators is predicted to increase in financial performance in terms of return on assets (ROA). All three indicators had coefficient of regression values of 0.1239;0.0941; and 0.0972 respectively Furthermore, all three sustainability reporting indicators were statistically significant implying that these indicator were important in determining the return on assets of companies in the oil and gas industry. This can be observed from the computed t-statistic values for environmental performance indicator (ENVPI); social performance indicator (SOCPI); and economic performance indicator (ECOPI) with values of 4.7767; 2.5933; and 4.7676 respectively. The computed probability of t-statistic values of 0.0000; 0.0110; and 0.0000 respectively. A comparison of these values to the critical t-statistic value of 1.984 and probability of t-statistic value 0.05 indicates that critical t-statistic is lower than the computed t-statistic in all cases - and the probability of t-statistic indicates that all three measures are statistically significant at the 0.05 level.

The moderating variable also had a statistically significant but negative relationship with return on assets. Finally, the R-squared value of 0.4112 indicates that all the sustainability reporting variables put together plus the moderating variable (firm size) can account for about 41.12% of the variations in return on assets (ROA) of listed oil and gas companies in Nigeria.

Table 3. Summary of Panel Least Square (PLS) Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.339852	0.35082	0.968736	0.3351
ENVPI	0.00053	0.058194	0.00911	0.9928
SOCPI	0.144172	0.081375	1.771697	0.0797
ECOPI	0.170893	0.0457	3.739447	0.0003
FMSIZ	-0.16022	0.040348	-3.97093	0.0001
R-squared: 0.2503; F-stat: 7.9283; Prob. (F-stat): 0.000; Durbin-Watson stat: 0.7973				

The panel least square regression result in table 3 shows that there is a positive relationship between return on equity (ROE) and all three measures sustainability reporting vis-à-vis: environmental performance indicator (ENVPI); social performance indicator (SOCPI); and economic performance indicator (ECOPI). This implies that increasing environmental, social and economic performance indicators is predicted to lead to increase in financial performance in terms of return on equity (ROE). All three indicators also had a coefficient of regression values of 0.00053; 0.1442; and 0.1709 respectively. Furthermore, of the three sustainability reporting indicators, only economic performance indicator (ECOPI) was statistically significant implying that the indicator was important in determining the return on equity (ROE) of companies in the oil and gas industry. This can be observed from the computed t-statistic values for environmental performance indicator (ENVPI); social performance indicator (SOCPI); and economic performance indicator (ECOPI) with values of 0.00911; 1.7717; and 3.7395 respectively. The computed probability of t-statistic values of 0.9928; 0.0797; and 0.0003 respectively. A comparison of these values to the critical t-statistic value of 1.984 and probability of t-statistic value 0.05 indicates that critical t-statistic is lower than the computed t-statistic only in the case of economic performance indicator (ECOPI) - and the probability of t-statistic indicates that of the three measures, only economic performance indicator was statistically significant at the 0.05 level. The moderating variable also had a statistically significant but negative relationship with return on assets. Finally, the R-squared value of 0.2503 indicates that all the sustainability reporting variables put together as well as the moderating variable (firm size) can account for about 25.03% of the variations in return on equity (ROE) of listed oil and gas companies in Nigeria.

Discussion of Results

From the data analyses, it was found that there was a positive relationship between environmental performance indicator and ROA, ROE. This result implies that oil and gas companies who report higher performance threshold in their audited annual reports are likely to have higher financial performance in terms of return on assets and return on equity. Thus, improving environmental performance and reporting same will tend to lead to better financial performance. However, while the relationship between environmental performance was statistically significant, the relationship with return on equity was not statistically significant. Thus, environmental performance indicators had more influence on return on assets than on return on equity. Uwuigbe, et. al. (2018) who assessed the bi-directional relationship between sustainability reporting and firm performance in quoted Deposit Money Banks in Nigeria determined that there was a bi-directional relationship between sustainability reporting in the form of environmental performance and the financial performance of deposit money banks in Nigeria. The research by Aifuwa (2020) suggested an insignificant positive relationship between environmental performance measures and financial performance.

In the same vein, there was a positive relationship between social performance indicator (SOCPI) and ROA and ROE. The result indicate that companies who performance corporate social services and accounting/report same in the published statements perform better financially measured in terms of ROA, and ROE than those who do not. Thus, conducting corporate social responsibility activities help to improve financial performance. However, the effect size of the influence is more pronounced in the case of return on assets (ROA) as the relationship is statistically significant while the relationship with return on equity is not statistically significant. Asuquo, Dada and Onyeogaziri (2018) revealed in their research that there was no significant relationship between social performance disclosure and financial performance. They asserted that size effect of social accounting on financial performance was not materially important in the determination of the financial performance of the brewery industry in the Nigeria. Oncioiu, et, al. (2020) asserted that sustainabilty reporting especially as it concerns corporate social responsibility was meaningful in explaining financial performance to a limited extent. Powei (2020) in a study of international oil companies operating in Nigeria asserted that social performance indicators as is reflected in corporate social responsibility accounting and reporting significantly correlated with organizational performance.

Furthermore, there was a positive relationship between economic performance indicator (ECOPI) and ROA and ROE. The positive relationship between the variables implies that increase in economic performance indicators as reported by listed oil and gas companies is predicted to lead to improvement in financial performance in terms of ROA and ROE. The findings also revealed that the relationship between economic performance indicator (ECOPI) and both return on assets (ROA) and return on equity (ROE) was statistically significant - thus, economic performance indicator is an important factor for improving the financial performance of listed oil and gas companies both in terms of return on assets and return on equity. Iheduru and Okoro (2019) in a similar study found a positive but non-significant relationship between economic performance disclosures and financial performance of listed manufacturing companies. In another study, Chikwendu, Okafor and Jesuwunmi (2019) also confirmed a positve albeit non-significant relationship between economic performance disclosures and financial performance. This affirms the fact that economic performance and its reporting has the potential to improve financial performance. However, what is largely inconsistent is the level of significance of the variable on financial performance. This however, may to some extent be attributed to the differing backgrounds in the different research.

Conclusions

Environmental performance and its reporting by quoted oil and gas companies in Nigeria contribute to improving their financial performance. However, while its contribution is quite meaningful in some cases especially when measured in terms of return on assets. In other cases, the contribution is minimal. Ultimately, is concluded that companies can enhance financial performance by continuously improving on their environmental performance and reporting. Corporate social performance and its reporting contribute to financial performance. Thus, companies continually contribute (responsibly) to the attainment of social goals, their financial performance is bound to improve in tandem to their social activities. As observed in this research, embarking on social programs and reporting makes meaningful contribution to financial performance in terms of return on assets. Thus, Social performance and reporting contributes significantly to return on assets. However, this may not hold true for all financial performance metrics as illustrated in the case of return on equity which shows that even though social performance and reporting contributes positively to return on equity, its contribution is minimal. Finally, it is concluded that economic performance and reporting is an important contributor and determinant of financial performance both in terms of return on assets and return on equity. Thus, when companies improve their economic performance and take steps to ensure that such performance is properly reported, their financial performance witnesses a remarkable improvement over time.

Recommendations

From the findings and conclusions as discussed above, it is concluded that sustainability reporting activities in oil and gas companies to a large extent contribute to the financial performance of these companies. To the end, the logical outcome of this conclusion is for oil and gas companies to continue to enhance financial performance by improving their sustainability reporting practices. On this premise, the following recommendations are made by the researcher:

There should be proper articulation of the environmental issues companies intend to respond to on the basis of those that will have the most direct and largest effect on their financial performance. Thus, environmental performance activities that have the least impact on their financial performance should be discarded - provided that such environmental activities are not mandated by the government. Furthermore, corporate social performance has received enormous interest from companies in the recent. However, there is still much to be done that can benefit corporations and contribute to their financial performance. Thus, it is suggested that companies conducted critical review of their corporate social activities and whittle down on those that do not make commensurate contribution to financial performance while at the same time channeling more resources to the more financial value enhancing activities. For example, channeling more attention and resources to local communities can be quite value enhancing as the subsisting peace and harmony achieved between the corporation and local communities through such activities can reflect positively on reputation, improve patronage and hrlp companies protect critical assets with the help of the local communities. However, less impactful donations to mushroom charities most often for feel-good effect merely consume resources but add very little value to these firms should be discontinued.

Economic performance is at the very heart of financial performance for corporations. Thus, it is important that companies improve their economic performance which directly linked to financial performance metrics such as return on assets and return on equity. More importantly, disseminating information relating to economic performance to stakeholders will help to boost confidence and improve access to financial resources made available to corporations by investors and other funds providers. Finally, it is recommended that industry leaders and policy makers liaise to develop an industry standard and template for sustainability reporting that will be legally binding on all companies in the industry. This should be aimed at streamlining sustainability reporting activities in such a manner as to make reporting easier and impact on the firm more discernible.

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