



Gusau Journal of Accounting and Finance (GUJAF)

Vol. 2 Issue 3, April, 2021 ISSN: 2756-665X

A Publication of
Department of Accounting and Finance,
Faculty of Management and Social Sciences,
Federal University Gusau, Zamfara State –Nigeria

SUSTAINABILITY REPORTING AND FINANCIAL PERFORMANCE OF LISTED OIL AND GAS FIRMS IN NIGERIA

Yazid Kabir Ibrahim

Department of accounting and Finance
Federal University Gusau, Zamfara State, Nigeria
Email: yazidkabirdabai@gmail.com
Phone: 08064988783

Ahmed Nma Mohammed, PhD

Department of Accounting
Nigerian Defence Academy, Kaduna Nigeria
nmaahmed64@gmail.com

Samuel Eniola Agbi, PhD

Department of Accounting
Nigerian Defence Academy, Kaduna Nigeria
Samagbi@yahoo.com

Nasiru Abdussalam Kaoje, PhD

Department of accounting
Usmanu Danfodiyo University Sokoto
kaoje73@gmail.com

Umar Farouk Abdulkarim

Department of Accounting and Finance
Federal University Gusau, Zamfara State, Nigeria
elfaroukumar@fugusau.edu.ng

Abstract

Sustainability report is a report produced by firms which disclose their economic, environmental and social performance. These reports are normally geared toward the attainment of the United Nations sustainable development goals (SDGs). Even though compliance is voluntary in Nigeria, its effects on firm's financial performance are enormous and as a result, it is essential for firm's prosperity as well as better financial performance. This study examines the effect of sustainability reporting on financial performance of quoted Nigerian oil and gas firms. The population of the study comprises 12 listed oil and gas firms in Nigeria. Census sampling technique was adopted and filter was used. For firm to be selected it must be listed on or before 1st January 2009 and remain listed up to 31st December 2019. The firm must also publish their annual reports for the relevant period of the study. Based on these, five firms that failed to meet the set criteria were filtered out. This study makes use of Return on Asset to measure financial performance. Secondary source was used to collect the relevant data. Data in relation to sustainability reporting were extracted from the firm's annual reports as well as standalone sustainability reports. However, data in relation financial performance were collected from the firm's annual reports. Data for this study were analyse using STATA 13 statistical software. The regression result revealed that economic sustainability has a positive insignificant effect on ROA; environmental sustainability has a positive significant effect on ROA while social sustainability has a positive insignificant effect on ROA. Based on the findings, this study therefore, concludes that sustainability reporting has a significant effect on the financial performance of listed oil and gas firms in Nigeria. This study therefore, recommends among others that, listed Nigerian oil and gas firms should emphasize more on reporting their sustainability activities as it is capable of improving their financial performance. The policy makers and standard setting organisations should facilitate the issuance of a sector specific reporting guidelines to facilitate compliance.

Keywords: Sustainability Reporting, Environmental Reporting, Return on Assets, Oil and Gas Firms

1. Introduction

Business organizations are known with the main objective of maximizing shareholders' wealth. Therefore, to achieve the main objective of establishing business firms, business organizations should also take into consideration the interest of other stakeholders who are generally or specifically been influenced by the activities of modern business. Firms are normally acknowledged with an objective to improve shareholder's welfare and at the same time remain profitable. However, in most cases, operations and activities carried on by these organizations affect the environment in which they are situated as well as the larger environment. As from 2010, sustainability has gradually become a subject of interest around the globe. Apart from the compulsory reporting of financial performance, some companies or firms engaged in reporting some of their non-financial performance and activities which are indeed significant and integral to the improvement of their financial performance. Therefore, necessary gauge should be taken to determine and reports the degree to which the firm has impacted on the society from period to period. Sustainability Reporting (SR) offers the best option for reconciling all the doubts and information needs of the stakeholders.

Financial performance (FP) refers to a financial benefit accruing to a firm as a result of investing in a particular business activity. FP is also described as the reward of an entrepreneur for investing his recourses in a particular business activity. FP is the bottom line that indicates the efficiency of an entrepreneur or company's management in managing shareholder's wealth. The firm's profitability is the yardstick through which firm's performance is measured. It's an important aspect in determining the efficiency and effectiveness of management particularly in the utilization of investment made by shareholders to create more wealth as a return to the amount invested. The concept of FP can be referred to as the act of measuring the firms' policy and operations in monetary term, the results of this is determine in the firm's Return on Assets (ROA), Return on Equity (ROE), Earning per Share (EPS) and net profit margin (Abbas & Olatoro, 2018).

Sustainability Reporting (SR) is one of the non-financial reports produce by firms either as a standalone sustainability report or integrated in the company's annual reports and accounts. SR can be described as the practice of reporting by firms or companies of such factors that are integral to the attainment of the United Nations' sustainable development goals. Sustainability is one of the most crucial issues faced by many organizations. Global Reporting Initiative, GRI (2011) defines SR as the activities and practice which is concern with measuring, disclosing, and being accountable to the needs and interest of firm's internal and external stakeholders for organizational effort towards the attainment of sustainable development goals.

The expectation to maximize shareholders' fund have traditionally dominated the corporate policy of many business entities. The reasons had been that since the company's management control its affairs on behalf of shareholders, the shareholders main interest of profit maximization would be regarded vital in order for the business to remain successful. Similarly, from the beginning of the year 2000, environmental and social issues arising from business operations and activities, such as increasing social and ecological setbacks specifically, economic and gender inequality, human rights abuses, carbon emissions, oil spillage, gas flaring, global warming, and various levels of environmental degradation requires firms to be socially and environmentally responsible (Enquist et al., 2007; Lowitt et al., 2009). However, various stakeholders are constantly pushing business organisations to published reports that will specifically disclose the

contribution made by such organisations toward environmental protection, health and safety; pollution control, ecological safety as well as human right protection. Despite regulatory measures taken through regulatory authorities like the Securities and Exchange Commission (SEC) and the Environmental Protection Agency (EPA) that ensure compliance and accountability by companies, malpractice still occurs. This and many other issues can adversely affect firm's reputation there by affecting firm's performance. Based on these issues, many companies are aware that they can no more act as separate entities that pay no attention to society and environment (Whetman, 2017). As a result, firms are expected through sustainability reporting to make proper disclosure of their economic, environmental and social performance.

Many researchers in Nigeria undertook studies with the objective of evaluating the effect of SR on FP, for instance, Agu and Amedu (2018) assessed the impact of SR on the profitability of pharmaceutical companies listed in Nigeria, Kabir et al. (2019) examined the effect of environmental accounting on the profitability of quoted Nigerian oil and gas companies. Asoquoa et al. (2018) evaluated the impact of SR on business FP in some selected listed breweries firms in Nigeria, Ndukwe and Nwakanma (2018) examined sustainable development practices and FP of 34 listed firms from different sectors of Nigerian economy.

Based on the above empirical studies, only few studies consider oil and gas firms. Similarly, most studies make use of their local sustainability reporting index or social responsibility reporting index. Therefore, this study will consider listed Nigerian oil and gas firms using the GRI G4 sustainability reporting index. The study will also use firm leverage as control variable. The justification for using leverage as control variable is that finance charge usually reduce the amount of firms distributable profit and as a result affect the firms overall financial performance.

The main objective of this study is to examine the effect of sustainability reporting on financial performance of listed oil and gas firms in Nigeria. In line with the foregoing objective, the study hypothesised that sustainability reporting has no significant effect on financial performance of listed oil and gas firms in Nigeria.

2. Literature review

The purpose of this section is to make an extensive review of relevant literature in respect to the concept of sustainability reporting as well as financial performance. It also consist a theoretical review as well as the review of relevant empirical literature.

Sustainability report is a term used to describe reports on the economic, environmental and social impacts of companies, in which the positive and negative impact of the company are described clearly (Atu, 2013). It is an intensive effort to include social, economic and environmental parameters in the evaluation and decision-making process of the reporting entity (Amacha & Dastane, 2017). Therefore, the concept of SR has been proposed to assess and disclose these business impacts of organizations in addition to traditional accounting reports (Atu, 2013).

Kowal and Kustra (2016) believed that SR is a source of information on the effectiveness of companies in the non-financial spheres related to economic, environmental and social efficiency. The information disclosed in the above areas is able to fill the information gap due to the limitations of the standard financial statements, which focus on the tangible assets of the companies and the resulting financial transactions. However, this information gap is the reason

for the underestimation of the stable value of the stakeholders. Therefore, closing this gap and Proper valuation of value for stakeholders should be based on both financial and non-financial statements in the form of SR. Companies must ensure or maintain performance based on economic, environmental and social dimensions of sustainability (GRI, 2013).

Asuquo et al. (2018) argued that the expectations of all firms are to be transparent about the way they manage their environment, how they handle governance issues, as well as the treatment given to their employees, and how they manage their host communities. Sustainability seeks to focus on how to organize and coordinate human activities so as to satisfy physical and psychological needs without hindering the ecological, social or economic basis that allows these needs to be met. Unerman et al. (2007) emphasized that the responsibility for social, ecological and economic performance has increased among organizations. The SR of a company can affect its financial performance, this implies that the larger the company in terms of SR expression, the greater it's FP (Fuadah et al., 2019).

Dobre et al. (2015) suggested that publicly traded companies understand that reporting on financial performance alone is not sufficient to achieve sustainable growth. To be competitive, it must also report information about the company's environmental policies and benefits to its employees, as well as the company's impacts on water, air and energy which reflect environmental performance. Social performance is also determined in relation to the impact of the organization's activities and functions on the host community. An organization's economic performance is its financial performance.

According to the Naz et al. (2016), financial performance (FP) largely reflects the performance of the corporate sector and the results that reflect the overall financial condition of the industry over a period of time. It shows how well a company manages its resources to increase shareholder wealth and profitability. Although many other criteria are taken into account to understand a company's financial performance, the most commonly used indicators in finance and statistics are financial indicators. Hubbard (2009) believed that financial performance can be measured in terms of earnings growth, return on equity, return on investment and gearing ratio.

Return on Assets (ROA) is used to measure profitability over the entire assets of a company. A higher company ROA leads to a more efficient company, so this can be seen as a positive incentive for investors to invest in the company, which increases the company's stock market capitalization. In other words, ROA affects the value of a firm (Rosika et al., 2018). ROA is used to assess the capital gains on investment made in a company by ordinary shareholders, preferred shareholders and debt financing providers (Financial Report and Analysis, 2012). ROA is computed as after tax profit divided by the total assets. This criterion evaluates the profitability of a firm's operations based on the return on the firm's total assets (Kabajeh et al., 2012).

Freeman developed the basic concept of stakeholder perspective in 1984 (Freeman, 1984). Stakeholder theory refers to an ethical (moral) or normative aspect and a positive (managerial) aspect. The ethical (regulatory) aspect of stakeholder theory states that all stakeholders have the fundamental right to be treated fairly by business firms and that power issues with stakeholders are directly irrelevant. Despite the consequences of whether stakeholder consideration leads to improved FP, managers must manage the affairs of the company in such a way that it is beneficial to all stakeholders. Hoffmann (2011) emphasized that stakeholder theory, known as good management theory, is meant to do good to those with whom the business interacts to

create an environment in which the business can gain a competitive advantage. This approach assumes that a good corporate citizen can also make a more profitable business.

Freeman and Reed opined that stakeholders can be regarded to as any identifiable group or individual that can influence the attainment of an organization's goals is influenced by the attainment of an organization's objectives. Based on the above definition, for example, many people can be classified as stakeholders, future generations, creditors, local communities, shareholders, government, media, employees, employee families, local charity organizations, and so on. In the ethical (regulatory) or moral perspective of the stakeholder theory, all stakeholders have certain rights that should not be violated. It is believed that this perspective can be extended to the idea that all stakeholders also have the right to receive information about organizational implications for them through service provision, community sponsorship, pollution control, safety initiatives, etc., even if they decide not to use the available information, and even though they cannot have a direct impact on the continuity of the organization (Deegan, 2000).

In contrast, from a stakeholder perspective, the stakeholder theory argues that a firm is responsible to its stakeholders, which includes government, suppliers, customers, employees, and the general public (Ferrell et al., 2010). SR is considered to be an important issue for a variety of stakeholders. McElroy and Van Engelen (2012) pointed that stakeholders play a key role in ensuring that companies manage benchmarks and report on their sustainability strategies. Therefore, a business is not only based on the maximum profit but also on the maximum value of sustainability (Martirosyan and Vashakmadze, 2013). However, the central theme of stakeholder theory is that companies should not act to achieve profit maximization goals, but should also focus more on the well-being of people as well as other interest groups directly or indirectly affected by the company's activities. The acceptance of stakeholders on corporate organization is directly related to the perception of stakeholders about the commitment of the corporate organization to meet their needs and protect their rights, which will lead to a long-term improvement in business performance. Therefore, the stakeholder theory will play a vital role in explaining the concept SR as it affects FP.

Ndukwe and Nwakanma (2018) examined sustainable development practices and FP. The study uses an ex post-facto research design. The survey data was obtained from 34 selected publicly traded companies in various sectors of the Nigerian economy in 2011-2015. The study used content analysis and multiple regression analysis methods using the SPSS 23 statistical software. The results show that a negative relationship exists between ROE and sustainability practices. In this study, the sustainability benchmark may not be the ideal method for assessing the sustainability behavior of the firms. In addition to the full sustainability benchmark, the study should be analyzed from an economic, ecological and social point of view with regard to sustainability behavior.

Asoquoa et al. (2018) evaluated the impact of SR on business FP in some selected listed breweries firms in Nigeria. Data were collected over a five-year period (2012-2016) from audited financial statement of selected firms. The findings show that the disclosure of financial results (ECN), environmental performance (ENV) and social work (SOC) does not have any significant effect on the ROA of selected companies. The sample size of three enterprises over five-year period cannot stand to measure sustainability reporting practices.

Agu and Amedu (2018) assessed the impact of SR on the profitability of pharmaceutical companies listed in Nigeria using an ex post factor research model. The average data were taken from the annual report of seven (7) companies, from 2012 to 2017. The data were analyzed by using OLS. The results showed that there was a negative and insignificant correlation between the economic reporting index and ROA, while environmental and social information have insignificant positive correlation with ROA. The results also showed that the environmental reporting index had a statistically negative and insignificant correlation with ROE, while a positive but insignificant correlation exist between economic and social indices and ROE of selected companies. Finally, the results showed that economic and social information indicators have a statistically positive and insignificant correlation with NMR, but there is a negative and insignificant correlation between the environmental reporting index of the Nigerian Pharmaceutical Company and NMP. By the way, the study suggested that the management of pharmaceutical companies in Nigeria needs to provide comprehensive sustainability information in order to maximize profitability. The study failed to consider adequate time period as the sample size is also small resulting to a low number of observations, the study should also use multiple regression to analysed the panel data instead of ordinary linear regression.

In Whetman (2017) using a sample of 95 US companies that were publicly traded in different sectors during the years 2015-2016. The study examined how corporate SR affects corporate FP. The results show that SR has a positive and significant impact on the company's ROE, ROA and profit margin over the next year. However, this relationship only exists in companies with low institutional responsibility. The results show that SR represents a significant use of company resources for the benefits of its stakeholders. In addition, SR appears to be an effective substitute for monitoring by institutional investors. Although the sample size was considered sufficient in the study, the benefits of a longer period was not utilize.

Kasbun et al. (2016) examined the SR relationship with FP in Malaysia. The results of the regression show that the economic, social and environmental SR is positively correlated with the measure of FP using ROA and ROE. No different performance measures were used in the study, ROA and ROE are calculated from a single source (net profit).

Siew et al. (2013) examined the non-financial reporting status of public construction companies on climate change, environmental management, environmental performance, health and safety, human capital, stakeholder participation, governance and other issues of interest to investors. The study also examines the impact of the publication of non-financial statements as the sustainability practices of companies (represented by ESG estimates) on the FP of the companies selected. PF is measured using several financial ratios. The results of the study showed that most of the construction companies selected have low level of reporting in terms of sustainability behaviour. While construction companies that produce non-financial reports, despite FP's interdependence, generally exceed in term of FP those that did not. However, the study examines the relationship between the variables rather than the effects.

Amer and Othman (2012) sampled 100 sustainable global firms in 2008, using four metrics to highlight their commitment to sustainable practices. The study shows that companies that focus on SR have higher FP measured in terms of ROA and profit before tax (PBT), and operating cash flow of companies compared with those that do not have such commitments. The study only covers 2008, so one-year coverage cannot be used to assess the SR behavior of a firm.

Kabir et al. (2019) examined the effect of environmental accounting on the profitability of quoted Nigerian oil and gas companies. The population of the study is made up of 12 oil and gas companies listed on the NSE. In addition, samples were selected from 8 companies using census sampling techniques and annual data for 2014-2018 were taken from annual reports of companies selected using the secondary data collection method. Study data were analyzed using STATA 13. The regression results show a significant positive effect of environmental accounting on company profitability and therefore conclude that an increase in environmental expenditure leads to a significant increase in business efficiency in terms of profitability. The study therefore recommends that firms should make adequate provision to increase their environmental expenditure as it leads to better performance in terms of profitability. The study considers only environmental expenditures to represent environmental reporting without considering other aspect of environmental reporting.

Motwani and Pondya (2016) explored how SR affects the operations and profitability of companies. The study used the GRI guidelines to determine sustainability measures as overall sustainability reporting scores (OSR) as well as the scores of 4 key SR variables, these are community (COM), Employees (EMP), Environment (ENV) and governance (GOV). In the study, the impact of these variables on profitability of companies listed on the NSE using ROA, ROE, ROCE and PBT were assessed using a sample of 103 companies listed on the NSE. Data were collected over a six-year period from 2009 to 2015, using multiple regression analyses to determine the impact of the firm's sustainability. According to the study, the general practice of SR has a significant positive effect on the profitability of the company. The profitability measures used in the study are almost measuring the same aspect of profitability and thus related to one another.

Monokaran et al. (2018) examined in their study the effects of CSR on FP using the content analysis method in annual reports of Malaysian insurance companies for a period of 9 years (2008-2017). Content analysis data using the CSR GRI Disclosure Index table were matched with the FP indicators (ROA, ROE and EPS). The relationship between CSR and ROA, ROE and EPS is tested using correlation analysis. The results show a significant relationship between CSR and FP. CSR has a significant impact on ROA. The relationship between CSR and ROE & EPS is negligible. According to the study, insurance companies in Malaysia should step up their efforts to link their CSR activities to regulatory reporting standards so as to have a positive impact on current prospect.

Burhan and Rahmanti (2012) examined the effect of SR behavior as a whole and its components on FP of 32 companies listed on the Indonesian Stock Exchange in 2006-2009. Independent variables are sustainability reports, economic, environmental and social performance determinants. These variables are measured using the disclosure index. GRI SR guidelines were used as a basis for calculating the index unit. The dependent variable is ROA as a measure of economic activity. The study uses secondary data collected from Indonesian exchanges as well as the company's website. The result shows that SR affects business performance. However, only partially the disclosures of social work influence the performance of the company. The study did not take into account the long-term conditions as it used only 4 year terms.

3. Methodology and Models

This study adopts an ex-post factor research design because historical data were used in the study. The population of this study is made up of the 12 listed oil and gas firms in Nigeria from 2009 to 2019. Census sampling technique was adopted and filter was used. For firm to be selected it must be listed on or before 1st January 2009 and remain listed up to 31st December 2019. The firm must also publish their annual reports for the relevant period of the study. Based on these, five firms that failed to meet the set criteria were filtered out. Data for this study were collected using the secondary sources of data collection from the annual report as well as the stand alone sustainability report of the selected firms. Data for this study were analysed using STATA 13 statistical software.

This study adapts the econometric model used by Asoquoa, et al. (2018) and Burhan and Rahmanti (2012) with little modifications. The model used in this study is presented below;

$$\text{Financial Performance} = f(\text{Sustainability Reporting}) + \mu_1 \quad (1)$$

$$\text{ROA} = f(\text{Economic Performance Disclosure, Social Performance Disclosure, and Environmental Performance Disclosure}) + \mu_1 \quad (2)$$

Therefore, in order to add control variable the model was modified below:

$$\text{ROA}_{it} = \beta_0 + \beta_1 \text{ECN}_{it} + \beta_2 \text{ENV}_{it} + \beta_3 \text{SOC}_{it} + \beta_4 \text{LEV}_{it} + \mu_1 \quad (3)$$

Thus;

ROA = Return on assets measured as net profit after tax divided by total assets (Asuquo et al. (2018); Burhan & Rahmanti, (2012); Fuadah et al. (2019)).

ECN = economic sustainability disclosure measured as number of items disclose divided by total disclosure under economic sustainability (Burhan & Rahmanti, (2012); Bowers, (2010); Fuadah et al. (2019)).

ENV = Environmental sustainability disclosure measured as number of items disclose divided by total disclosure under environmental sustainability (Asuquo et al. (2018); Burhan & Rahmanti, (2012)).

SOC = Social sustainability disclosure measured as number of items disclose divided by total disclosure under social sustainability (Gunarsih & Ismawati, (2018); Kasbun et al, (2019)).

LEV = firm leverage measured as total debt divided by total assets (Fuadah et al. (2019); Pouraghajan et al. (2012); Yahaya, (2018)).

β_0 = constant/intercept, β_{1-4} = coefficient of independent variables, μ_1 = error term, i = firm under consideration, t = time period.

4. Data presentation, analyses and discussion of findings

The purpose of this section is to analyse the data for the study in order to assess the effect of SR on FP of the selected firms. The hypotheses formulated in section one were also tested here. Similarly, this section also includes an extensive discussion of the findings of this study.

Table 1: Result of descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
ROA	.005	.147	-.715	.162
ECN	.506	.134	.222	.777
ENV	.108	.125	0.000	.558
SOC	.206	.080	.0417	.375
LEV	.277	.272	0.000	1.262

Source: STATA 13 OUTPUTS, 2020

Table 3 shows the result of descriptive statistics of the study variables. From the table, Returns on Assets (ROA) has a mean of 0.006 and standard deviation (SD) of 0.147. The mean explains on the average that, the oil and gas firms in Nigeria have a return on assets of 0.6%. This means that for every N1 invested in firm's assets, there is a 0.6kobo returns. The SD of 0.147 deviates to a large extent from the mean, this is as a result of the fact that some firms recorded a negative ROA in some years and as a result, the SD is not very close to the mean. The minimum mean of -0.716 represent a negative return on assets and indeed the lowest returns. This is due to the high losses recorded by some firms in some years signifying a poor performance. However, the highest return to the firm's assets is 16.2%.

The economic sustainability disclosure (ECN) has a mean of 0.507 and SD of 0.134 meaning that the Nigeria oil and gas firms report about 50.7% of their economic performance. The minimum and maximum mean of 0.222 and 0.778 imply that none of the firms report lower or higher than 22.2% and 77.8% of their economic performance respectively. On the environmental dimension (ENV), the average report of the entire firms under consideration stands at 0.108 meaning that, firms report 10.8% of their environmental performance. The SD of 0.125 indicates that almost all the firms have similar environmental reporting behaviours. The minimum mean of 0 explains that some firms failed to report their environmental performance in a particular year. Maximum mean of 0.558 emphasizes that firms reports not more than 55.8% of their environmental performance.

On the social aspect (SOC), the average reporting rate is 20.6% with SD of 0.080. The minimum reporting rate is 4.17% while the maximum reporting rate of social sustainability reporting is 37.5% of the total required disclosures. Lastly, Table 3 shows (LEV) that on the average, about 27.7% of the total assets of the oil and gas firms is financed by debt. However, the SD of 0.272 affirms that most of the firms used debt in financing their assets. Minimum mean of 0 implies that some firms used zero debt to finance their assets in some years and the maximum mean of 1.262% confirms that the debt of some firms is about 126% of their total assets.

Table 2: VIF test for multicollinearity

Variable	VIF	1/VIF
SOC	1.62	0.617
ECN	1.43	0.700
ENV	1.21	0.825
LEV	1.15	0.871
Mean VIF	1.35	

Source: STATA 13 OUTPUTS, 2020

The rule of multicollinearity states that the VIF value should not be greater than 4. However, a value of less than 10 is still within the acceptable level even though a VIF value of greater than 4 indicates some element of multicollinearity. From table 2 all variables have a VIF value of less than 4 and therefore signify that independent variables of this study are not related with one another and hence signify the absence of multicollinearity among the independent variables.

Table 3: Breush-pagan / cook-weisberg test for heteroskedasticity

Variables	ECN	ENV	SOC	LEV	OVERALL
chi2(1)	16.21	8.06	21.12	63.59	68.55
Prob> chi2	0.000	0.005	0.000	0.000	0.000

Source: STATA 13 OUTPUTS, 2020

Table 3 shows the result of Breush-pagan/cook-weisberg test for heteroskedasticity. The assumption of the linear regression model is that the independence variables (I.V) should not correlate with the residuals or the error term, meaning that the residuals should not change with IV. To satisfy the regression assumptions and be able to trust the results, the residual should have a constant variance. Therefore the null hypothesis states that the data sets are not heteroskedastic. From Table 3, all variables have a probability Chi² value of less than 0.05 which indicates that they are all significance at 5% and therefore, implies the acceptance of null hypothesis which signifies the absence of heteroskedasticity.

Table 4: Chen-Shapiro QH* test for normal data

Variable	Obs	QH	QH*	P-value
ROA	77	0.81489	1.62431	< 0.0001
ECN	77	1.04277	-0.37531	> 0.2000
ENV	77	0.90798	0.80750	< 0.0001
SOC	77	0.98952	0.09200	0.00522
LEV	77	0.90451	0.83793	< 0.0001

Source: STATA 13 OUTPUTS, 2020

Table 4 shows the result of Chen-Shapiro QH* test for normal data. The purpose of normality test is to determine if the data set is well modelled by a normal distribution and to determine how likely it is for a random variable underlying the data set to be normally distributed. It is common for large data set especially the continuous data not to be normally distributed due to variations in the data set. The H0 states that the data set is not normally distributed. From Table 4, ROA shows a p-value of less than 0.0001, ECN has a p-value of greater than 0.2. On the other hand, ENC and LEV also shows a value of less than 0.0001 while SOC has a value of 0.005. These indicate that the p-values of ROA, ENV, SOC and LEV are less than 0.005 which is significance at 5% and signifies that the data set is not normally distributed. However, a p-value of 0.2 as in the case of SOC which is not significant at 5% signifies that SOC is normally distribution. Considering the overall result of the normality test, the study concludes that the data set are not normally distributed and therefore, accept the null hypothesis which states that the data set is not normally distributed. To take care of normality problem, the study used robust standard error estimate.

Table 5: Model specification test

(a) Omitted variable test	(b) Random effect test	(c) Hausman test for fixed effect
F(3, 69) = 6.48	chibar2(01) = 0.04	chi2(4) = 7.32
Prob> F = 0.0006	Prob> chibar2 = 0.424	Prob>chi2 = 0.120

Source: STATA 13 OUTPUTS, 2020

The result of Ramsey RESET test using powers of the fitted values of ROA to test if there is omitted variable is shown in Table 5(a). The null hypothesis as regard to omitted variable bias error test state that there is no omitted variable in the model. From the table, the Ramsey test result for ROA shows an F value of 6.48 and prov>F value of 0.0006 which is significance at 5% indicating that there is no omitted variable in the ROA model. Table 5(b) shows the result of Breusch and Pagan Lagrangian multiplier test for random effects on the models for this study. The null hypothesis for random effect model specification test states that there is no random effect in the model. From the Table, the ROA shows a chi2 value of 0.04 and p-value of 0.424 which is not significance at 5% and hence necessitate the rejection of null hypothesis which implies that there is panel effect among the data set.

Table 5(c) provides a summary of the result of hausman specification test for fixed effect in relation to ROA model. The purpose of Hausman test is to determine the appropriate model between the fixed effect and random effect. Therefore, the null hypothesis for hausman test states that the difference in coefficients not systematic. From the Table, the result shows an overall chi2 value of 7.32 and prob>chi2 value of 0.120 which is not significance at 5% level and as such implies that the difference in coefficients is systematic. Therefore, the null hypothesis should be rejected and hence random effect model will be used.

Table 6: ROA Regression Result

ROA	Coef.	Robust Std. Err.	z	P>z	[95% Conf.	Interval]
ECN	.008	.163	0.05	0.961	-.312	.328
ENV	.127	.067	1.89	0.058	-.004	.259
SOC	.323	.289	1.12	0.264	-.244	.890
LEV	-.320	.096	-3.30	0.001	-.509	-.130
_cons	.0100	.028	0.36	0.719	-.044	.064
R ² : overall	0.554					
Wald chi ²	57.22					
Prob> chi ²	0.000					

Source: STATA 13 OUTPUTS, 2020

Table 6 shows the panel regression result on the effect of sustainability reporting on the return on assets of listed oil and gas firms in Nigeria. ROA is used to represent financial performance. From Table 6, the economic sustainability reporting (ECN) has a positive coefficient of 0.008 and p-value of 0.961 which implies that ECN has a positive effect on ROA of listed oil and gas

firms in Nigeria. However, the p-value of 0.961 is not significance and as such ECN has a positive but insignificance effect on ROA of the selected firms. This implies that a change in economic sustainability reporting of listed oil and gas firms in Nigeria will not lead to a change in return on assets. This finding is in line with that of Agu and Amedu (2018) and Asoquaoa et al. (2018). Therefore, this implies the acceptance of null hypothesis.

Furthermore, environmental sustainability reporting (ENV) has a positive coefficient of 0.127 and p-value of 0.05. The coefficient value signifies a positive effect of environmental sustainability on the return on asset of the selected firms; this effect is however significance with p-value of 0.05 which is significance at 5% and as such implies that ENV has a positive and significance effect on ROA of the listed oil and gas firms in Nigeria. This means the more a firm increase their environmental reportage the better their financial performance in term of ROA. This implies that for a firm to have a sustainable financial performance attention should be given to reporting their environmental performance. This finding supports the findings of Kabir et al. (2019); whetman et al. (2017) and Amer and Othman (2012). It also supports the proposition of the stakeholders' theory. The study revealed that environmental reporting shows the firms commitment toward satisfying environmental needs of the society and host community who are among stakeholders in Nigerian oil and gas firms and as a result satisfying stakeholders information need can improve firm's financial performance. Based on this, the hypothesis two will be rejected and as such imply that environmental sustainability has a significance positive effect of the financial performance of listed oil and gas firms in Nigeria.

Similarly, the social sustainability reporting (SOC) shows a positive coefficient value of 0.323 signifying a positive effect of SOC on ROA of the selected firms. However, a p-value of 0.264 is not significance at 5% and therefore making an insignificant effect of SOC on ROA of listed oil and gas firms in Nigeria. This implies the acceptance of hypothesis three. Leverage (LEV) as control variable in the study has a negative coefficient of 0.320 and a p-value of 0.001 which is significance at 1% and as such means that LEV has a negative significance effect on ROA of listed oil and gas firms in Nigeria.

From the regression result shown in Table 6, the cumulative adjusted R^2 overall (0.554) which is the multiple coefficient of determination gives the proportion of the total variation in the dependent variable explain by independent variables jointly. This signifies that about 55% of changes in return on assets of listed oil and gas firms in Nigeria are cause by their sustainability reporting behaviour represented by economic, environmental and social disclosures. The wald chi2 of 57.22 with p-value of 0.000 which is significance at 1% indicate that sustainability and return on assets model is fit. This indicates that the independent variables are properly selected combine and used in the model. It implies that for any change in sustainability reporting of oil and gas firms in Nigeria, the return on assets will be affected significantly.

5. Conclusion and Recommendations

Based on the findings of the study and test of hypothesis, the study therefore concludes that sustainability reporting of the listed oil and gas firms in Nigeria affect their financial performance. However, this effect is positive and significance in terms of environmental sustainability. Based on this conclusion the study therefore recommends that;

Listed oil and gas firms in Nigeria should emphasize more on reporting their sustainability performance as it is capable of improving their financial performance. This can be achieved

through proper and accurate reporting of their economic, environmental and social sustainability all together because reporting only economic behaviour without giving emphasis to environmental and social behaviour can adversely affect firm's performance.

Government and regulatory organisations should encourage firms to report more of their sustainability performance. This is because the reporting rate on the part of oil and gas and other listed firms is very low as it compliance is voluntary. Therefore, to achieved maximum compliance government should make sustainability reporting compliance compulsory for companies listed in the Nigerian stock exchange.

The policy makers and standard setting organisations should facilitate the issuance of a sector specific reporting guidelines to capture the peculiarities of different sectors and to ensure the reliability of the reports by different sectors since the guidelines are specific to the sector in question.

References

- Abbas, A., & Oloroto, F. (2018). Corporate governance mechanism and financial performance of listed deposit money banks in Nigeria. *Journal of Accounting and Management, 1*(1), 29-37.
- Agu, S. I., & Amedu, J. M. A. (2018). Relevance of sustainability disclosure to profitability of listed pharmaceutical firms in Nigeria. *International Journal of Scientific & Engineering Research, 9*(11), 1195-1202.
- Amacha, E. B., & Dastane, O. (2017). Sustainability practices as determinants of financial performance: A case of Malaysian corporations. *Journal of Asian Finance, Economics and Business, 4* (2), 55-68. doi:10.13106/jafeb.2017.vol4.no2.55.
- Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on top global corporations. *Journal of Business Ethics, 108*, 61-79. doi:10.1007/s10551-011-1063-y.
- Asuquo, A. I., Dada E. T., & Onyeogaziri, U. R. (2018). The effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria, *International Journal of Business & Law Research, 6*(3), 1-10.
- Atu, O. O. K. (2013). Triple bottom line accounting: a conceptual expose. *IOSR Journal of Business and Management, 13*(4), 30-36.
- Bowers, T. (2010). From image to economic value: A genre analysis of sustainability reporting. *Corporate Communications: An International Journal, 15*(3), 249-262.
- Burhan, A. H. N., & Rahmanti, W. (2012). The impact of sustainability reporting on company performance, *Journal of Economics, Business, and Accountancy Ventura 15*(2), 257-272.
- Deegan, C. (2000). *Financial Accounting Theory*, McGraw Hill.
- Deegan, C. (2002). The legitimising effect of social and environmental disclosures: A theoretical foundation. *Accounting, Auditing & Accountability Journal, 15*, 282-311. doi:10.1108/09513570210435852.
- Dobre, E. Stanila, G. O., & Brad, L. (2015). The influence of environmental and social performance on financial performance: Evidence from Romania's listed entities. *Sustainability, 7*, 2513-2553; doi:10.3390/su7032513.
- Enquist, B., Edvardsson, B., & Petros, S. S. (2007). Values based service quality for sustainable business. *Managing Service Quality, 17*(4), 385-403.

- Ferrell, O. C., Gonzalez-Padron, T. L., Hult, G. T. M., & Maignan, I. (2010). From market orientation to stakeholder orientation, *Journal of Public Policy & Marketing*, 29(1), 93-96.
- Financial reporting and analysis. (2012). Schweser Notes for the CFA Exam, level 1, Book 3.
- Freeman, R. E. (1984). *Strategic Management, a Stakeholder Approach*, Pitman Publishing Inc,
- Fuadah, L. L., Safitri, R. H., & Yuliani, A. (2019). Factors influencing financial performance through sustainability reporting in Indonesia. *Sriwijaya International Journal of Dynamic Economics and Business (SIJDEB)*, 3(1), DOI:<https://doi.org/10.29259/sijdeb.v3i1.53-72>.
- Global Reporting Initiative. (2011). *G3.1 Sustainability Reporting Guidelines*, Global Reporting Initiative.
- Global Reporting Initiative. (2013). *Sustainability Reporting Guidelines*, Global Reporting Initiative G4 Guidelines Standard Disclosures: Performance Indicators. Retrieved from <https://www.globalreporting.org/Pages/default.aspx>
- Gunarsih, T., & Ismawati, Y. (2018). Sustainability report and firm performance: Study in mining and metal and food processing industry Indonesia stock exchange. *Journal of Governance and Integrity (JGI)*. 2(1), 9-26.
- Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom line. *Business Strategy and the Environment*, 18, 177-191. <https://doi.org/10.1002/bse.564>.
- Kabajeh, M. A., Ahmed, S M., & Dahmash, F. N. (2012). The relationship between the ROA, ROE and ROI ratios with Jordanian insurance public companies market share prices. *International Journal of Humanities and Social Science*. 2(11), 115-120
- Kabir, Y. I., Ibrahim, R., Magaji, M., & Sulaiman M. H. (2019). Environmental accounting and profitability of listed oil and gas firms in Nigeria. *Journal of Accounting and Management, Nigerian Defence Academy, Kaduna, Nigeria*. 2(2), 121-127.
- Kasbun, N. F., Teh, B. H., & Ong, T. S. (2016). Sustainability reporting and financial performance of Malaysian public listed companies. *Institutions and Economies*. 8(4), 78-93.
- Kowal, B., & Kustra, A. (2016). Sustainability reporting in the energy sector. *E3S Web of Conferences*, 10, 00129, DOI: 10.1051/1000129e3sconf/2016
- Manokaran, K. R., Ramakrishnan, S., Hishan, S. S., & Soehod, K. (2018). The impact of corporate social responsibility on financial performance: Evidence from Insurance firms. *Management Science Letters*, 8, 913–932, doi: 10.5267/j.msl.2018.6.016.
- Martirosyan, E., & Vashakmadze, T. (2013). The SUN CUBE stakeholder management system for M & A deals in PMI (post-merger management), *6th Annual EuroMed Conference of the EuroMed Academy of Business, Conference Readings Book Proceedings*, July, 1078-1087.
- McElroy, M. W., & Van Engelen, J. M. (2012). *Corporate Sustainability Management: The Art and Science of Managing Non-Financial Performance*, Routledge, London.
- Naz, F., Ijaz, F. & Naqvi, F. (2016). Financial performance of firms: evidence from Pakistan cements industry. *Journal of Teaching and Education*, 5(01), 81–94.
- Ndukwe, M., & Nwakanma G. (2018). Sustainable development practices and corporate financial performance: a survey of selected quoted companies in Nigeria: *Asian Journal of Economics, Business and Accounting*, 7(1), 1-13.
- Pouraghajan, L., Malekian, k., Emamgholipour, H., Lotfollahpour, L., & Bagheri, B. (2012). The relationship between capital structure and firm performance evaluation measures:

- Evidence from the Tehran stock exchange. *International Journal of Business and Commerce*, 1(9), 166-188.
- Rosikah, Prananingrum, D. K., Muthalib, D. A., Azis, M. I., & Rohansyah, M. (2018). Effects of return on assets return on equity, earning per share on corporate value. *The International Journal of Engineering and Science (IJES)*. 7(3), 6-14. DOI:10.9790/1813-0703010614.
- Siew, R. Y. J., Balatbat, M. C. A., & Carmichael, D. G. (2013). The relationship between sustainability practices and financial performance of construction companies, *Smart and Sustainable Built Environment*, 2(1), 6 – 27, <http://dx.doi.org/10.1108/20466091311325827>.
- Whetman, L. L. (2017). The impact of sustainability reporting on firm profitability. *Undergraduate Economic Review*. 14(1).
- Yahaya, O. A. (2018). Environmental Reporting Practice and Financial Performance of Listed Environmentally Sensitive Firms in Nigeria, *Journal of Environmental and Social Sciences*, 24(2), 403-412.

