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Assessment of the Relationship between Sustainability Activities and Financial Performance of Oil and Gas Companies in Nigeria.

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Abstract: *The main objective of this longitudinal paper is to empirically examine the bi-directional relationship between sustainability activities and the financial performance of oil and gas companies in Nigeria. Secondary data were collected from six oil firms, over fifteen years. The paper is based on stakeholder and institutional theories. For the empirical analysis, eight multivariate regression models and Granger causality models were formulated, and for the analysis, the paper utilized STATA version 15. The findings drawn from the paper demonstrated positive relationships in both directions, meaning that sustainability activities are profitable and profitable is sustainability activities, thus originating a positive feedback virtuous circle. The paper thereby recommended oil firms to reflect a preference for measurement and segmenting information into quantifiable component to explain both the success and failure if any of sustainability investment.*
Keywords: *Bi-directional, Sustainability*

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I. Introduction

Disclosing non-financial information to multifarious stakeholders is relatively new in the corporate world. Nevertheless, access to economic, environmental and social information is internationally acknowledged as a civil right, it holds that every stakeholder shall have access to organizational sustainability activities. Sustainability reporting is an organizational report on economic, environmental, and social impact.Conventional financial reporting has been criticized for not representing the multiple dimension of a corporation's value. The increasing need for non-financial disclosure and the growth of global ecological awareness and the movement for sustainable economic growth are bringing to the attention of firms towards making its operations sustainable and ecological Sensitivity.

The vision that incorporated financial and non-financial performance to business objective has received significant attention from scholars in various areas of business and strategic management and has also been the primary concern of all profit-oriented organizations since financial performance has direct bearing with the organization's health and its ultimate survival.

Oil companies seek a competitive edge over one another and their activities have grown complex and quite industrious, affecting the internal and external environment of the business. Industrial development is largely accompanying economic, social and environmental threats, ranging from environmental degradation, oil spillage, soil, and Air and water pollution. Causing loss of habitats for aquatic and terrestrial animals. This has resulted in seeking to mitigate the adverse impacts of the oil company's activities as well as to address the potential risks associated with environmental change. Disclosing core organization information encompassing financial and other non-financial data. Thus, it is worthwhile to look at how the widely used concept originated in developed economies extends to less developing ones, particularly in Nigeria and whether the concept needs modification to fit the Nigerian context.

Therefore, it is against this background that this paper intended to evaluate the bi-directional relationship between sustainability reporting and the financial performance of oil and gas companies in Nigeria. Secondary data of six oil and gas companies spanning a period from 2004 to 2018 was judiciously tested.

1.2 Statement of the Problem

Sustainability activities had elicited reactions not only from the accounting professionHH but the academia and the business world. The economic world had never had anything as commonly discussed in recent times as these sustainability activities. Corporate Managers might prefer a bounded concept in similitude to quality control or financial accounting, instead of facing issues as diverse as animal rights, corporate governance, environmental management, corporate philanthropy, stakeholder management, labor rights, health

issues, and community development. This has brought about issues of concern to the preparers of financial reports and various stakeholders in the oil and gas industry (Robert et al., 2011).

The issue of concerned is that Sustainability implementation has often been viewed to be expensive to undertake in many companies. The cost of adopting sustainability is one of the reasons advanced by some previous studies (Nwaiwu&Oduka, 2018; Wright & Noe, 2006; Shehu, 2014) that defied companies from adopting sustainability practices. The cost of implementing sustainable practices remains an open question (Xiaohu, Christopher, Nick & Evan 2012; Laurence, Micheal& Jeremy 2015). Additionally, Fleming, (2010); Wood & Ross, (2006); Hong & Modi, (2011); Norhasimah et al., (2016) further argued that the more investments on sustainability practices, the less the profits and the more it erodes the competitiveness of the organization. For example, costs for implementing green are not at all clear and it is difficult to realize a return on investments (ROI) from required capital investments to support green initiatives. Though there are numerous scholars who have a contrary view, for example, Abdulsalam, (2017); Shafat and Nasir, (2018); Sie and Azlan, (2018); Mark, (2017); Sean, (2013); Daniel and Ambrose, (2013) found that sustainability investment has a positive impact on financial performance.

The affirmation Studies testified the pervasive dichotomy between sustainability reporting and financial performance, there exists no clear conclusion that clarifies the positive, negative or inexistent correlation. The reasons behind these variations lay in the imperfection of the previous studies caused by the problem of measuring financial performance.Another factor is the Problem in measuring sustainability reporting and the omission of significant variables in the formulation of models and methodological inadequacies and a shortfall in the theory underpinned previous studies.Therefore, this paperformulated two broad hypotheses and more rigorous statistical tools, panel data multiple regression techniquesto address the affirmations weaknesses.

1.3 Theoretical Framework

This paper suggests that a single theory cannot be used in isolation to effectively and holistically examine how sustainability reporting influences the financial performance in one hand, and how financial performance influences sustainability reporting of oil and gas companies on another hand. The suggested theories to support this paper include the stakeholder theory, The Stewardship theory, The Signaling/Disclosure Theory, The Institutional theory, The Legitimacy Theory, and The Organizational Theory. Worthy to note that, this paper was underpinned by the stakeholder theory in one hand and the institutional theory on the other hand.

1.3.1 The Stakeholder Theory

This theory postulated that the steering group known as boards of directors and other management teams are responsible not only to the shareholders but to multifarious stakeholders (Prado-Lorenz et al., 2009; Fasan& Mio, 2016). In support of this motion, Freeman, (1984) pointed that, the behavior and activities of the board of directors can affect shareholders, employees, customers, suppliers, government, public, and many others who have a stake in the business.Amran&Haniffa, (2011) affirmed that the stakeholder theory deals with the ever-changing and complex relationship that companies have with their environment as well as the company's ability to balance the contradictory demands by multifaceted stakeholders.

1.3.2 The Institutional Theory

This theory described how both deliberate and accidental choices lead organizations to concur with the established norms, values, and ideologies of the environment. As a matter of certainty the organizations that comply with economic, social, and environmental issues, in return received legitimacy and prove worthy of resources by society and the broader environment (Toma, Dubrow, &Hartly, 2005). It is no longer enough to invest in new technology or implement an effective production process, but the concern is who is best when it comes to economic, social, and environmental activities.

Institutional theory is a theory on a highly significant aspect of social structure. It provided viable methods by which structures, including schemes, rules, norms, and routines can be integrated with establishing guidelines for social behavior. Different components of the theory explain how these elements are created, diffused, adopted, and adapted (Scott, 1995). The theory pays attention to the organization and how it interacts and interfaces with these institutions. The success of every organization largely depends on its ability to identify, intermingle, and incorporate the needs of multifarious stakeholders that made up the environment. Simply put, organizations have to incorporate the rules instituted by the groups, communities, villages, towns, and states into their practices and culture to be seen as legitimate. Thus, it can be argued that sustainability disclosures are a consequence of companies adapting to the institutionalized rules (and in an effort to mitigate the pressures from these institutions) to gain the support of society and appear legitimate - rather than because disclosure results in better outcomes - (Dillard, et al., 2004; Fogarty & Rogers, 2004; Momin& Parker, 2013).

II. Review of Empirical Studies

The empirical literature reveals that quite a several studies are carried out on sustainability reporting, for example, there are studies of Orazalin, et al., (2019);Karambu and Joseph, (2016); Gray Kouhy and Layers, (1995); Florida and Davison, (2001); Hoppe et al., (2018);Shafat, and Nasir, (2018);Edeltraud, Holger, and Clandia, (2007); Jennifer et al., (2013);Emmauel, (2013); Robert, Ioannis and George, (2012); Mark, (2017);Wingard and Voster, (2001); Stone, (1995); Norhasimah, (2016);Malarvizhi and Ranjani, (2016);Marori and Jagongo, (2013);Sie and Azlan, (2018); Aggarwal, (2013); Pereira, (2018); Cemil and Ali, (2017) Deegan and Gordon, (1996); Deegan and Blomquist, (2006); Daniel and Ambrose, (2013);Belal and Owen, (2007) and paper by Becchetti, Giacomo and Pinnachio, (2005).

Certainly, almost all of the studies largely focused on the experiences of oil and gas companies in the disclosure of economic, environmental and social performance, viz, sustainability reporting, and also used similar statistical tools such as content analysis, Binary Logistic Regression, and chi-square.The main conclusions drawn after this extensive review of the existing literature supports the selection of the proxies of sustainability reporting used to build the models of this empirical paper. In accordance with the exposed studies outlined above, and filling the gaps in the existing Nigerian literature where the bi-directional relationship between sustainability reporting and financial performance has not been measured before, and taking into account that all companies have to satisfy sustainable development Goals, thereby accounting to society as a whole as suggested by stakeholder theory, the paper expect greater sustainability reporting to be positively related with higher levels of financial performance and vice-versa.

Therefore, the identified existing gaps in the literature makes this paper very unique. Thus, one can conclude without mixing words that this paper is the first of its kind that looks into the inverse relationship between sustainability reporting and financial performance of Oil and Gas firms operating in Nigeria, using panel techniques. Therefore the following hypothesis was developed.

H_{01}: sustainability activities do not enhance the greater financial performance of oil and gas companies in Nigeria.

H_{02}:the level of profitability does not have any significant influence on the sustainability activities of oil and gas companies in Nigeria.

2.1Sustainability Implementation and Organizational Competitiveness

Orazalin, et al., (2019), Hoppe et al., (2018),Shafat, and Nasir, (2018), andEdeltraud, Holger, and Clandia, (2007) opined that Sustainability implementation enhanced economic advantages and accelerated organization to a competitive edge over its rivals. Sustainability reporting is associated with a Conducive working environment that would ultimately reduce health and safety costs and lower recruitment and labor turnover costs.Sustainability issues would motivate employees which eventually increases productivity. Any increase in productivity will increase sales turnover and profitability.

Companies that proactively address environmental and social concerns can influence government regulation, when this regulation is modeled after a company's production and supply chain processes, lead to difficult-to-replicate competitive advantage for companies and their suppliers. Reduced costs, shorter lead times and better product quality related to the execution of ISO 14000 standards, which provide a model for environmental management systems. Engaging in sustainable behavior can make an organization more attractive to suppliers and customers, thereby becoming accepted by the local community, prospective workers and the shareholders.Couple with economic objectives to develop a clear, long-term strategy, the integration of sustainability may create a longer-lasting and less imitable set of procedures (Rakesh, 2014).

2.2 Drivers of Sustainability

According to Stead and Stead, (1995), drivers of adopting sustainability strategies could be classified into economic, environmental and legal enablers. What is not clear from the previous research is whether certain types of organizations are more internally or externally motivated to integrate sustainability into their strategic plan or not (Walker & Jones, 2012). Drivers of sustainability issues are relevant to managers because their stakeholders (customers, regulatory bodies, non-governmental organizations, and even their employees) are increasingly demandingorganizations to implement sustainable development activities (Carter& Easton, 2011; Walker & Jones, 2012; Gopalakrishnanet al., 2012).

The most relevant stakeholders are those who can put more pressure on the economic entity to invest from a triple bottom line perspective. Such stakeholders can be societal stakeholders, such as governments, NGOs, stock exchanges, shareholders, investors, trading partners, and customers, they demand higher transparency on a company's sustainability performance (Mark, 2017). Companies are expected to encompass sustainability as part of their corporate strategy. Stakeholders play a key role in increasing corporate responsiveness with regards to ecology.

In many countries, middle managers, employees, pressure groups, customers and investors played a significant role in influencing organizations to implement sustainability practices. Workers' morale is directly proportional to the efficiency and efficacy of any organizational change. In many organizations employees have been associated with an effort to implement sustainability.

On the other hand, worker resistance can lead to the failure of an organization to implement sustainability. Furthermore, customers have also been recognized as an agent of sustainability practices in many organizations. Consumer concerns were viewed as a more critical force on sustainability practices in companies outside the USA and Europe. Customers and markets play an important role in providing an incentive for the growth of sustainability operations. Customers today are tolerant of defects and poor quality products. Most customers are willing to pay a premium price for an environmentally friendly product or process.

A business approach to sustainability performance has evolved significantly, transforming from mere compliance due to pressure from various stakeholders to the present day commercial incentive. At the infant stage, government, stock exchange, and financial institutions were the main drivers of sustainability compliance and performance (Natalia, 2017). Sustainability reporting has become a key factor or a strategic tool used by businesses in the brand and product differentiation, enhances reputation, and a new frontier of innovation.

III. Methodology

3.1 Model Specification

A longitudinal research design was adopted for this paper and the following panel modelswere adopted with modification to fitting the variables used in establishing the bi-directional relationshipbetween sustainability activities and financial performance. This approach is most appropriate when no importance is given to any specific user-groups as justified by Acti et al., (2013); Karambu and Joseph, (2016); Beredugo and Sunny, (2014), Nwaiwu andOluka, (2018);Ogbebe, (2013); Nnamani, Onyekwelu, and Ugwu, (2017). The model states that profitability = sustainability and sustainability = profitability. Simply put, the model is based on the theory that sustainability activities and financial performance relates.

Sustainability Reporting is measured byEconomic, social, environmental, and health activities. While financial performance proxied by Return on Asset, Return on Equity, Net Profit Margin, and Firm Size. For the empirical analysis eight multivariate regression models were formulated, four for each of the main objectives. To carry out the statistical analysis the econometric software STATA version 15 which is widely used in empirical research was also used in this paper. To estimate a micro panel consisting of 6 firms over 15 years (2004-2018), a panel model is specified as shown in equation (1). The advantage of a panel model comes with a possibility of controlling for individual or time heterogeneity, which the pure cross-section or pure time-series data cannot accommodate (Baltagi, 2005).

$y_{it} = \alpha + \beta_1 x_{1it} + \beta_2 x_{2it} + \beta_3 x_{3it} + \beta_4 x_{4it} + u_{it};\ \ i = 1,\ 2, \ldots N.; T, , - - (1)$

Wherei represents individual firms 1……..6 at time T. α_0 represent$_s$ the intercept term, $\beta_1 \ldots\ldots\ldots \beta_n$ are the model parameters to be estimated, y represents the dependent variables while $x_1 \ldots\ldots x_4$ represents performance measures.

To test the causality relations between the dependent variable and explanatory variables in panel data,this paperadopted Dumitrescu and Hurlin, (2012) causality model but with modification to suit the variable. The models were specified in equations 2, 3, 4 and 5.

$$y_{i,t} = a_i + \sum_{k=1}^{k} \gamma_{it} y_{i,t} - k + \sum_{k=1}^{k} \beta_{it}\, x_{i,t} - k + \mathcal{E}_{i,t} \text{with } i = 1, \ldots . N \text{ and } t = 1, \ldots \ldots T \quad \ldots\ldots\ldots (2)$$

Where $x_{i,t}$ and $y_{i,t}$ represents the observation of two stationary variables for individual i in period t. Coefficients differed across individuals (the i subscripts attached to coefficient) but are assumed time-invariant. The lag order K is assumed to be identical for all individuals and the panel must be balanced. As in Granger, (1969) the procedure to determine the existence of causality is to test for significant effects of past values of X on the resent values of Y.The granger causality model investigates this causal relationship based on an F-test with the following null hypothesisdefined as:

$H_{0:}\beta_{i1} = \ldots.. = \beta_{ik} = 0 \quad \square i = 1, \ldots\ldots\ldots, N \ldots\ldots\ldots\ldots\ldots\ldots (3)$

This equation corresponds to the absence of causality for all individuals in the panel. Dumitrescu and Hurlin, (2012) assume there can be the causality for some individuals but not necessary for all. Therefore, the alternative hypothesis thus writes:

$H_{1:}\beta_{i1} = \ldots.. = \beta_{ik} = 0 \quad \square i = 1, \ldots\ldots\ldots, N_1 \ldots\ldots\ldots\ldots\ldots\ldots .. (4)$

$\beta_{i1} \neq 0$ or…..$\beta_{ik} \neq 0 \quad \square i = N_1 + 1, \ldots\ldots\ldots, N \ldots\ldots\ldots\ldots\ldots\ldots .. (5)$

Where$N, \mathcal{E}\ [0,\ N - 1]$ is unknown. If$N = 0$. There is causality for all individuals in the panel. N_1 must be strictly smaller than N, otherwise, there is no causality for all individuals and H_1 reduces to H_0.

3.2 Estimation Procedure

Descriptive statistics were used in this paper to compute statistics that describe the central tendency, as well as to describe the dependent and independent variables of the paper by computing the mean, median, standard deviation of the variables, correlation matrix, and significance of each correlation.

The estimation commences with various Pre-estimation to selected variables that fit the paper models. The stationarity of the data was equally tested. Therefore, the estimation of the equations commenced with the estimation of a Pool OLS model, Fixed Effects models, and Random Effects Models. The appropriateness of the Pool OLS model over the fixed effects model and the Random-effects model was tested by conducting the Poolability test. This is necessary to identify the regression model with the highest explanatory power.The Breusch-Pagan Langragian Multiplier test was conducted. A significant probability value of chi-square indicates the appropriateness of the random effects model over the pool OLS model. To choose between fixed effects and random effects models, the Hausman test was carried out.Lastly, the paper adopted Dumitrescu&Hurlin, (2012) Granger non-causality test to test the causal effect between dependent and independent variables.

The paper used Heteroskedasticiy and Serial Correlation Test in an attempt to test the validity of results and its appropriateness for policy implementation.Multicollinearity includes checking for correlations between the variables in the model. In case there are presence of Heteroskedasticiy, fixed or random-effects models with a robust error term that control the presence of Heteroskedasticiywere further estimated.

IV. Findings

Table 4.1: Panel Results

Dependent Variable: Social Cost				
Independent Variables	Social Issues Random Effects Model with Robust Error Term	Environmental Issues Random Effects Model with Robust Error Term	Economic Issues Fixed Effects Model with Robust Error Term	Health Issues Fixed Effects Model with Robust Error Term
Constant	17.28891	26.41335	13.13101	19.63659
ROA:				
Coefficient	-.0402139**	-.049183***	-.0754445**	-.0415657**
t-value	-2.04	-3.09	-3.71	-2.30
p-value	0.044	0.003	0.014	0.024
ROE:				
Coefficient	-.0012929	.0080167**	.0001102	-.0016705**
t-value	-0,25	1.88	0.02	-0.35
p-value	0.807	0.064	0.984	0.731
NPM:				
Coefficient	0.0269928	-.0068894	.0688474**	.0186601
t-value	0.99	-0.31	2.87	0.75
p-value	0.326	0.756	0.021	0.458
F-Size				
Coefficient	.8787596***	.3801956**	.7599341**	.8707438***
t-value	3.18	1.70	2.84	3.44
p-value	0.000	0.093	0.036	0.001
Poolability Test	1895.36 (0.0000)	3568.60(0.0000)	147.37 (0.0000)	3228.48 (0.0000)
Heteroskedacitity Chi-Sq Test	29.73 (0.0000)	816.53(0.0000)	249.55 (0.0000)	23.57 (0.0006)
Langragian Multiplier Test	123.47 (0.0000)	120.39 (0.0000)	115.84 (0.0000)	127.09 (0.0000)
No. of Obs.	90	90	90	90
R^2	0.3073	0.1759	0.4094	0.3858
Adj-R^2	0.2920	0.2698	0.1036	0.1576
F-Statistics	9.18	4.21	249.55	12.56
Prob.	0.0000	0.0035	0.0000	0.0000
Sigma_u	9.5366072	10.542713	2.3959632	11.260905
Sigma_e	0.445731701	0.36977873	0.43832088	0.41899694
Rho	0.99977057	0.9987713	0.96761625	0.99861747
Hausman Test 1.02 (0.9074)	0.58 (0.9650)	24.93 (0.0001)	24.93 (0.0001)	
Autocorrelation Test	0.650 (0.4569)	0.842 (0.4010)	1.161 (0.3304)	11.760 (0.0186)

Source: Author's Computation from STATA Version 15 Output (*=10% level of significance, **= 5% level of significance, ***= 1% level of significance).

The results of the sustainability activities Proxied by Social Issues, Economic Issues, Environmental Issues, and Heath Issues using Fixed Effects and Random Effects estimation models for the panel with a robust error term that control the presentation of hetroskedacitityfor the sample of companies during the period 2004 to 2018 are shown in Table 4.2. A total of 90 observations were included in the analysis. The R-Squared values

show that the models account for approximately 31%, 18%, 41%, and 39% of the variance in social, environmental, economic, and health issues responsibility.

The models in this paper reach statistical significance (Sig. equals 0.0000 this implies that p is less than 5%). The result of the Pool OLS model with specific firm effects was rejected by the Poolability test.The Breusch-Pagan Langragian Multiplier test was conducted. A significant probability value of chi-square indicates the appropriateness of the random effects model over the pool OLS model.The Hausman specification test was used as prescribed in Clark and Linzer (2012) to choose between the Random Effects model and Fixed Effects model.Furthermore, the estimation of the modified Wald Test for GroupWise Heteroskedasticiy was also conducted to ascertain whether the data is Homoscedacitity or Heteroskedacitity. The significant P-values of 0.0000<0.05 shows the presence of Heteroskedasticity.

Holding all other variables constant, on average, a one percent increase in ROA would result in a 0.04, 0.05, 0.08, and 0.04 in sustainability activities, proxy by social, environment, economics, and health issues. Return on Assets is significantly related to sustainability activitiesat a 1 percent level. Holding all other variables constant, companies that adequately engaged in sustainability activities have about 0.04, 0.05, 0.08, and 0.04 Return on Asset than their counterparts that do not contribute to sustainability activities. On average, companies that contributed to environmental and health issues proxies of sustainability activities have about 0.008 and 0.002increase in ROE than their counterparts that do not incorporate social responsibility. Simply put Return on Equity exerts a positive and statistically significant impact on sustainability activities.

Furthermore, firm size shows a positive and statistically significant effect on sustainability activities. This suggested that a 1% increase or decrease in the size of the oil and gas firms will result in a proportionate increase or decrease in sustainability activities. Simply put, a 1% increase in firm size will lead to a 0.89, 0.38, 0.76, and 0.87 increase in sustainability investment in terms of social, environmental, economic, and health issues.

Table: 4.2: Dumitrescu and Hurlin (2012) Causality Test

Details	Z-bar Value	Prob. Value
Sustainability Activities Does Not Granger Cause ROE	2.4770**	0.0132
ROE Does Not Granger Cause Sustainability Activities	4.4632***	0.0000
Sustainability Activities Does Not Granger Cause Firm Size	4.0056***	0.0001
Firm Size Does Not Granger Cause Sustainability Activities	1.9659**	0.0493
Sustainability Activities Does Not Granger Cause ROA	1.8446**	0.0765
ROA Does Not Granger Cause Sustainability Activities	3.8707***	0.0001
Sustainability Activities Does Not Granger Cause NPM	-0.6581	0.5105
NPM Does Not Granger Cause Sustainability Activities	2.9191**	0.0035

Source: Author's Computation from STATA Version 15 Output (H_0: X does not Granger-cause Y and H_1: X does Granger-cause Y).

Table 4.11 presents Granger Causality tests, on the aggregate observation of the relationship between sustainability activities proxied by economic, social, environmental, and health issues as well as financial performance proxied by ROA, ROE, NPM, and Firm Size, the result exerts that sustainability activities does Granger causes financial performance of the sample companies.Consequently, there is a causal relationship running from financial performance to sustainability activities at 1% levels of significant. Simply put, there is a bi-lateral causality effect between sustainability activities and financial performance.Therefore, the null hypothesis that states there is no causal effect running from sustainability activities to financial performance is rejected and accepts the alternate hypothesis that says there is a causal effect running at a 1% level of significance.

V. Findings, Recommendations, and Conclusion

The following major findings were derived from the data presented and analyzed in Tables 4.1 to 4.41. The paper found that there exists a Bi-directional relationship between sustainability reporting and the financial performance of oil and gas companies in Nigeria. This finding validated the stakeholder theory which suggested that sustainability is profitable and profitable is Sustainability and institutional theory, business organizations operate within social structures, rules, and norms that are capable of influencing their decision-making. The finding also concurs with the findings of Mercedes, (2015) who argues that the social is profitable and that the profitable is social, thereby originating a positive feedback virtuous circle. Other scholars such as Surroca et al., (2010) and Uwalomwa et al., (2018) who posited that there is a bi-directional relationship between sustainability reporting and firm performance of quoted deposit money banks in Nigeria. However, the finding contradicts and differ with the findings of Oyewo, (2014); Aggarwal, (2013) and Humphrey, Darren &Yaokan, (2010).

The paper, therefore, recommends that since sustainability is profitable oil firms who prioritize organizational growth and success (return on investment) should invest more in sustainability issues. The paper further recommended oil firms to reflect a preference for measuring and segmenting information into a

quantifiable component to explain both the success and failure if any regard to sustainability activities. Conversely, the paper recommends the government at all levels to create a conducive business environment to attract foreign and potential investors.

Conclusively, the paper has enriched the literature of sustainability with something new, it brings for the first time in the literature of sustainability the concept of Bi-directional relationship between sustainability and financial performance. In this research, the actual cost expense on sustainability activities is brought into focus, the emphasis is on how sustainability implementation leads to maximization of Return on Asset, Return on Equity, Net Profit Margin, and Firm Size. Since profit maximization is the main objective of companies, therefore, for companies to accept and implement anything new, they must be convinced beyond a reasonable doubt that such a concept will maximize their profit level otherwise the companies will not implement it. Therefore, this paper suggests that many companies refused to implement sustainability activities because they assumed that sustainability will increase their cost of production and minimize their profit. For the first time, this paper reveals empirical evidence that in addition to environmental protection, sustainability implementation will reduce the cost of production and maximize the profitability of companies.

Reference:

[1]. Abdulsalam, N. K., (2017). Firm characteristics and sustainability reporting of Oil marketing companies in Nigeria. Ph.D. thesis,UsmanuDanfodio University, Sokoto.

[2]. Acti, Ifurueze, Lyndon &Bingilar, (2013). The Impact of Environmental Cost on Corporate Performance: A Paper of Oil and Gas Companies in the Niger Delta States of Nigeria.

[3]. Aggarawal P., (2013). Impact of Sustainability Performance of Company on its Financial Performance: A Paper of Listed Indian Companies. Global Journal of Management and Business Research. 13(11), 61-70.

[4]. Amran, A. &Haniffa, R. (2011). Evidence in Development of Sustainability Reporting: Case of A Developing Country. Business Strategy and the Environment, **20**: 141-156.

[5]. BaltagiBadi H. (2005). Econometric Analysis of Panel Data. Third Edition. John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex PO198SQ, England.

[6]. Becchetti, Giacomo &Pinnachio, (2005). Corporate Social Responsibility and Corporate Performance: Evidence from a Panel of US Listed Companies. Working Paper 78, University of Rome Torversata, Rome. 37(4), 51-73.

[7]. Belal, A.R., and Owen, D.L. (2007). The views of corporate managers on the current state of, and future prospects for, social reporting in Bangladesh: An engagement-based paper. Accounting, Auditing & Accountability Journal, **20(3)**, 472-494. DOI: 10.1108/09513570710748599

[8]. Beredugo& Sunny B. (2014). Environmental Accounting and Social Responsibility on the Earning Capacity of Selected Nigerian Manufacturing Companies. Journal of Economics and Sustainable Development. 5(140), 32-35.

[9]. Carter, C. R., and Easton, P. L. (2011). Sustainable Supply Chain Management: Evolution and Future Directions: International Journal of Physical Distribution and Logistics Management, VOL. 41 (1): 46-62

[10]. Cemil,Kuzey,&Uyar, Ali. (2017). Determinants of sustainability reporting and its impact on firm value: Evidence from the emerging market of Turkey. Journal of cleaner production, 143, 27-39.

[11]. Daniel, M. M. & Ambrose, J. (2013). Environmental Accounting and Firm Profitability; An Empirical Analysis of Selected Firms Listed in Bombay Stock Exchange; India. International Journal of Humanities and Social Science, 3 (18).

[12]. Deegan, C. & Rankin, M. (1996). Do Australian Companies Report Environmental News Objectively? An Analysis of Environmental Disclosures by Firms Prosecuted Successfully by the Environmental Protection Authority', Accounting, Auditing and Accountability Journal, 9 (2): 50-67.

[13]. Deegan, C., and Unerman, J. (2006). Extended systems of accounting: the incorporation of social and environmental factors within external reporting. In: Financial accounting theory, Deegan, C. and J. Unerman, (Eds.). London: McGraw-Hill, pp: 374-409. ISBN No 0077108965. Retrieved from http://highered.mheducation.com/sites/dl/free/0074716719/363733/ch09.ppt

[14]. Dillard, J., Rigsby, J. & Goodman, C., (2004). The Making and Remaking of Organization Context, Duality, and the Institutionalization Process. Accounting, Auditing and Accountability Journal, 17(4): 506–542.

[15]. Dumitrescu, E. I., &Hurlin, C. (2012). Testing for Granger non-causality in heterogeneous panels. Economic modeling, 29(4), 1450-1460.

[16]. Emmanuel, A., O., (2013).The Impact of Sustainability Reporting on Organizational Performance of the Malaysia Experience. International Journal of accounting and Business Management.Vol.1 (No.2), P.82-100, ISSN: 2289-4519.

[17]. Fasan, M., Mio, C.,&Ros, A. (2016). Owners' preferences for CEOs characteristics: did the world change after the global financial crisis?. Corporate Governance: The International Journal of Business in Society, 16(1), 116-134.

[18]. Freeman, R. E. (1984). Strategic management: A stakeholder approach. Boston, MA: Pitman. USA.

[19]. Gray, R.; Kouhy, R. & Layers, S. (1995). Corporate Social and Environmental Reporting: A Review of the Literature and a Longitudinal Paper of UK Disclosure. Accounting, Auditing and Accountability Journal, 8(2): 47-77.

[20]. Hong p. & Modi S.B. (2011). Impact of Lean Manufacturing and Environmental Management on Business Performance: An Empirical Paper of Manufacturing Firms. Production Economics 129(2), 251-261.

[21]. Karambu& Joseph, (2016). Effect of Corporate Environmental Disclosure on Financial Performance of Firms Listed at Nairobi Securities Exchange. International Journal of Sustainability Management and Information Technologies. 2(1), 1-6.

[22]. Laurence, A., Foley, J. E., Farthing, D. E., Gress, R. E., Eckhaus, M. A., ... & Cheng, A. V. (2015). Bone Marrow-Derived Mesenchymal Stromal Cells Harness Purinergenic Signaling to Tolerize Human T h1 Cells In Vivo. Stem Cells, 33(4), 1200-1212.

[23]. Malarrizhi&Ranjani, (2016). The link between Corporate Environmental Disclosure and Firms Performance. Perception or Reality? Review of Integrated Business and Economic Research. 5(3), 23-26.

[24]. Mark, A. C., (2017). Corporate sustainability and responsibility: creating value for business, society and the environment. Asian Journal of Sustainability and Social Responsibility. 2:59–74

[25]. Momin, M. A. & Parker, L. D. (2013). Motivations for Corporate Social Responsibility Reporting by MNC Subsidiaries in an Emerging Country: The Case of Bangladesh. The British Accounting Review, 45 (3): 215-228.

[26]. Nnamani, J. N. Onyekwelu U. L., Ugwu O. K. (2017). Effect of Sustainability Accounting and Reporting on Financial Performance of Firms in the Nigerian Brewery Sector. European Journal of Business and Innovation Research Vol.5, No.1 pp. 1-15. ISSN: 2053-4027
[27]. Norshimah, Norhabibi, NorAmiera, S. Mohammad, S. Kamal &Inaliah, (2016). The Effect of Environmental Disclosure on Financial Performance in Malaysia. Procedia and Economic Finance. 35(1), 117-126.
[28]. Nwaiwu N. J. Oluka N. O. (2018). Environmental Cost Disclosure and Financial Performance of Oil and Gas in Nigeria. International Journal of Advanced Academic Research/Financial Management/ ISSN: 2488-9849. Vol. 4.
[29]. Orazalin, N., & Mahmood, M. (2019). The financial crisis as a wake-up call: corporate governance and bank performance in an emerging economy. Corporate Governance: The International Journal of Business in Society, 19(1), 80-101.
[30]. Prado-Lorenzo, J., Gallego-Alvarez, I. & Garcia-Sanchez, I. (2009). Stakeholder Engagement and Corporate Social Responsibility Reporting: The Ownership Structure Effect', Corporate Social Responsibility and Environmental Management, 16 (2): 94-107.
[31]. Rakesh, K., (2014). A Paper on Sustainability Reporting Practices in Indian and Global Companies with Special References to the Petroleum Companies.Abhinav National Monthly Refereed Journal of Research in Commerce & Management. Volume 3, Issue 4. Online ISSN-2277-1166
[32]. Robert, E. G., Ioannou, I., &Serafeim, G. (2012). The impact of a corporate culture of sustainability on corporate behavior and performance (No. W17950). Cambridge, MA, USA: National Bureau of Economic Research.
[33]. Scott, M., & Scully, T. (Eds.). (1995). Building democratic institutions: Party systems in Latin America (p. 1). Stanford: Stanford University Press.
[34]. Sean P., (2013). Environmental Sustainability: Drivers for Change and the Role of Projects. Master of Science dissertation, Chalmers University of Technology.
[35]. Shafat, &Zameer, M. N Nasir Zameer, (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. Future Business Journal, 4(1), 84-93.
[36]. Shehu U., Farouk, M. A., & Hassan, (2014). Impact of audit quality and financial performance of quoted cement firms in Nigeria. International Journal of Accounting and Taxation, 2(2), 1-22.
[37]. Sie B., N., and Azlan A., (2018). Board Diversity and Materiality Disclosure in Sustainability Reporting: A Proposed Conceptual Framework. International Academic Journal of Economics. Vol. 5, No. 3, 2018, pp. 1-14. ISSN 2454-2474.
[38]. Stead, W. E., and Stead, J. G. (1995). An Empirical Investigation of Sustainability strategy Implementation in Industrial Organizations', Research in Corporate Social Performance and Policy, Supplement 1 (1995): 43-66
[39]. Surroca J., Tribo J. A. &Waddock S. (2010). Corporate Responsibility and Financial Performance: the Role of Intangible Resources. Strategy. Management J. 31,463-490.
[40]. Toma, J. D., Dubrow, G., & Hartley, M. (2005). Understanding institutional culture. ASHE Higher Education Report, 31(2), 39-54.
[41]. Uwalomwa U., Obarakpo T., Olubukola R. U, Ozordi E., Osariemen A., Gbenedio A.E., &Oluwagbemi S. T. (2018). Sustainability Reporting and Financial Performance. A Bi-directional Approach. Academy of Strategic Management Journal.
[42]. Walker, H. and Jones, N. (2012). Sustainable Supply Chain Management across the UK Private Sector. Supply Chain Management: An International Journal, VOL. 17 (1): 15–28
[43]. Wingard, A., &Voster, M. (2001). Strategic Aggressitivity and Response of Companies in Integrating Environmental, Health, and Safety Management and its Effects on Financial Performance. International Journal of Organizational Innovation, 9(2).
[44]. Wood, D., & Ross, D. G. (2006). Environmental social controls and capital investments: Australian evidence. Accounting & Finance, 46(4), 677-695.
[45]. Wright PM., Noe, R. A., Hollenbeck, J. R., & Gerhart, B. (2006). Human Resources Management: Gaining a Competitive Advantage.
[46]. Xiaohu, W., Hawkins, C. V., Lebredo, N., & Berman, E. M. (2012). Capacity to sustain sustainability: A paper of US cities. Public Administration Review, 72(6), 841-853.

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