GOVERNANCE SUSTAINABILITY DISCLOSURES AND CORPORATE PERFORMANCE OF QUOTED OIL AND GAS COMPANIES IN NIGERIA

By

Etim, R.S., Ndon, E. M. and Asuquo, M. V.
Department of Accounting,
Faculty of Business Administration
University of Uyo
Corresponding author: etimralph@yahoo.com/08035048148

ABSTRACT

This study examined the effect of governance sustainability disclosures on corporate performance of quoted oil and gas companies in Nigeria. The objective was to examine the effect of governance sustainability disclosure on Return on Assets (ROA) of quoted oil and gas companies in Nigeria. The research design adopted was ex-post facto research design. Simple random sampling was used in selecting twelve (12) oil and gas companies that were quoted on the Nigerian Stock Exchange (NSE). Data on governance sustainability disclosures and Return on Assets (ROA) were collected from the published annual reports and financial statements of sampled oil and gas firms in Nigeria. The independent variables were controlled in the model with firm age and firm size. The data covered twelve (12) years which ranged from 2009 to 2020. Data were analyzed using panel linear regression technique. From the results, it was observed that when control variables of firm age and size were not included in the model, governance sustainability disclosure (GOSD) had a direct and insignificant effect on Return on Assets (ROA) of quoted oil and gas firms in Nigeria and when the control variables of firm age and size were included in the model, governance sustainability disclosures had a negative and significant effect on Return on Assets (ROA). It was concluded that governance sustainability disclosure showed mixed effects on the corporate performance of firms in the oil and gas industry in Nigeria. It was recommended that firms in the oil and gas sector should continually disclose fully their governance issues, and that they should improve on these disclosures as firms grow in age and size to enhance their performances over time.

Key words: Governance, Sustainability disclosures, Performance

1.1 Introduction

Sustainability disclosures underline both the legal and industry-standard requirements for the proper reportage of activities of the firm periodically for the benefit of all the stakeholders. These stakeholders include but are not entirely limited to shareholders, investors, government, customers, creditors, employees, and society, given the dynamic nature of the business environment. As such all firms are expected to show due diligence in reporting all their activities within the sustainability disclosure framework of economic, environmental, governance, and social issues (Akbukut and Kaya, 2019). This is more often and in recent times referred to as

Environmental, Social and Governance (ESG) reporting in different sectors or industries (Backstrom and Karlsson, 2015). As such sustainability disclosures involve the process of managing the firms' weight on economic, governance, social, and environmental issues towards identifying opportunities, and risks that actively and latently underline the fortunes of the firms' through steering performance gains and enhanced competitiveness (Backstrom and Karlsson, 2015). Based on this, a firm is required to report the impact of its activities economically, socially, environmentally, and in terms of corporate governance.

The essence of this is to ensure the accurate presentation of facts that relate to all the activities of the firm, and through this communication to all the relevant stakeholders, all the information on which its performance is predicated upon. Sustainability disclosures accentuate the need for transparency and accountability of all information that could help stakeholders and other interested parties to establish the true nature and degree of the reported performance of the firm (Al-Dhaimesh and AlZobi, 2019; AlQudah, Azzam, Aleqab and Shakhatreh, 2019). This is the reason why some authors refer to sustainability disclosures as primarily economic, environmental, social, and governance reporting responsibility (Arowoshegbe and Uniamikogbo, 2016; Asuquo, Dada and Onyeogaziri, 2018).

Economic sustainability disclosure encapsulates all information that covers all the firms' impact on the economic conditions of all the stakeholders and economic systems at domestic, national, and global levels (Baboukardos and Rimmel, 2016). The economic disclosure component of sustainability disclosure is captured in the financial statements or reports that are produced at the end of every financial year. At the same time, environmental sustainability disclosure deals with the reportage of the effect of the organization's activities that directly or indirectly impact the environment or the ecosystem. Various aspects of this disclosure include activities that cause pollution, gas flaring, erosion, toxic wastes deposition, toxic gas emission, and climate change. Social aspect of sustainability disclosure deals with how the activities of the organization affect the entire social systems, social strata, culture, and norms, as well as community relations (Baboukardos and Rimmel, 2016; Ballina, Valdes and Del Valle, 2020). Finally, the governance aspect of sustainability disclosures is attuned to the controlling and the monitoring of the firms' boardroom activities towards vital decision-making with regards to financial and non-financial performance (Bolton and Mattila, 2015). This component of sustainability disclosure is on

corporate governance practices in the firms, which is expected to ensure that the organization is managed as it should be.

According to Buallay (2019) if firms are managed as it should, then the primary objective of any firm that embarks on sustainability disclosure is that of an expected financial return (Bolton and Mattila, 2015). This implies that no organization will not want to disclose the impacts of its activities on economic, environmental, and social, if there are governance issues. This could make them work at cross-purposes, and as such may affect their performance. This underscores the importance of governance in the proper reporting of sustainability disclosures that may supplant better performances. This implies that governance sustainability disclosures are expected to in one way or affect the performance of the firm especially in terms of assets utilization as indicated by Return on Assets (ROA) (Birkey, Michelon, Patten and Sankara, 2016). There are suggestions that it may also negatively affect performance since it has been shown that some of the sustainability disclosures may negate higher return on assets (Buallay, Hamdan and Zureigat, 2017). Similarly, there are empirical positions that also support that sustainability disclosure relates to assets of the firm directly, especially as the firm grows in age and assets, thereby enhancing performance (Riedl and Smeets, 2017).

Given the nature of the oil industry in Nigeria with all the complexities and expectations in Nigeria, governance sustainability disclosures are considered as an important domain of sustainability reporting. These are depicted in their various annual and sustainability reports as required legally and obligatory, based on the needs of their various stakeholders. The need to investigate how governance sustainability disclosure in the oil and gas industry in Nigeria affect corporate performance is considered necessary.

1.2 Statement of the Problem

Sustainability disclosures in corporate annual reports has attracted considerable research attention in developed nations than in a developing economy like Nigeria (Diantimala, 2018). Findings in the developed nations have encouraged their governments to reform reporting mechanism for the achievement of corporate sustainability drive. Only few studies have been carried out on associated catalyst of corporate governance sustainability reporting on corporate performance in Nigeria.

Developing nations have been under pressure to improve their corporate sustainability reporting, especially in governance. This is because reports on corporate sustainability have been

found to be incomplete overtime since in most cases only economic, environmental, and social components are reported. Annual reports of listed oil and gas companies in Nigeria hardly convey information on the frictions within the board of management, insider abuses, disagreements over policies and programmes especially when it concerns serious issues such as gas flaring, oil spillages, waste management, corporate relations with staff and immediate community. The sustainability reporting on governance impact of these companies are mischievously circumvented for short-term profit (Dhaliwal, Li, Tsang and Yang, 2014).

Other exposures abound where financial and social critiques are of the opinion that expenditures on corporate sustainability leads to diminution of return on investment, while exponents of corporate sustainability reporting lend credence to the fact that it would enhance return on investment in the long run (Elena, Mehmet, Rob and Sabri, 2018). The cost of capital reduction perspective argues that ESG disclosures increases cost and has economic consequences stressing that the fundamental purpose of a business is to increase financial profitability and any other non-financial obligation will reduce profitability. They believe that non-financial disclosures especially governance should be performed by non-profit making organizations and charity homes. The value creation perspective on the other hand believe that sustainability governance reports strengthens trust in the organization, generate competitive advantage, motivates employees and leads to superior performance. This corroborates several researches (Fazzini and Dal, 2016; Kaspereit and Lopatta, 2016) over the years on the effect of sustainability disclosures on corporate performance which have often been contradictory. It is also important to note that there are no clear findings existing on how corporate governance sustainability reporting improves returns on assets (ROA). It is against this backdrop that this study examines the effect of governance sustainability reporting on corporate performance of quoted oil and gas companies in Nigeria.

1.3 Objectives of the Study

The general objective of this study was to examine the governance sustainability disclosures and corporate performance of quoted oil and gas companies in Nigeria. This study specifically sought to:

i. establish the influence of governance sustainability disclosure on the Return on Assets (ROA) of quoted oil and gas companies in Nigeria.
ii. examine the combined effect of governance sustainability disclosures, firm size and firm age on Return on Assets (ROA) of quoted oil and gas companies in Nigeria.

1.4 Research Questions

The following research questions were expected to guide this study:

i. How does governance sustainability reporting influence the Return on Assets (ROA) of quoted oil and gas companies in Nigeria?

ii. How significant is the combined effect of governance sustainability disclosures, firm age, and firm size on Return on Assets (ROA) of quoted oil and gas companies in Nigeria?

1.5 Hypotheses of the Study

The following hypotheses were developed in this study:

Ho_1: Governance sustainability disclosure has no significant effect on Return on Assets (ROA) of quoted oil and gas companies in Nigeria.

Ho_2: The combined effect of economic, environmental, social and governance sustainability disclosures on Return on Assets (ROA) of quoted oil and gas companies in Nigeria is not significant.

2.0 Review of Literature

2.1 Sustainability Disclosures

The concept of sustainability disclosure maintains that while a firm strives to achieve its traditional objectives of profit and wealth maximization, it is imperative that this profit is maximized through activities that seek to integrate, economic, environmental, and social and governance considerations into the decision-making process (Diantimala, 2018). Sustainability is defined as the concept of meeting the social, environmental and economic needs of the present without compromising the ability of future generations and assuring these needs are met through the adoption of corporate governance practices (Diantimala, 2018). This definition consists of three dimensions of firm sustainability other than the economic-namely, environmental, social and governance.

Corporate environmental sustainability refers to a firm's activities associated with protection of natural resources and efforts to preserve the environment. The second dimension of firm sustainability is social sustainability, which refers to long-term efforts that affect the welfare of the society (Kaspereit and Lopatta, 2016). The third dimension is economic sustainability, which refers to a firm's maintaining a long-term presence in the market (Bolton and Mattila, 2015; Diantimala, 2018) by enhancing its financial performance (Laskar, 2019). The fourth dimension

in firm sustainability is governance, which refers to the firm's implementing principles to assist the stakeholders in monitoring controls, solving conflicts of interest and enforcing transparency (Kim and Lyon, 2016).

Sustainability should be defined broadly, although not so broadly as to lack specificity, but containing all the dimensions, economic, environmental, social, and governance. Sustainability also means incorporation of social, environmental and economic (Malik, Ali and Ishfaq, 2015). However, to ensure that those three sustainability dimensions (social, environmental and economic) are incorporated into corporate strategy, governance practices should be implemented (Mohammed, Hassan and Bala, 2020).

Thus, sustainability disclosures cover the provision of economic, environmental, social, and governance information to enable others, who are mostly stakeholders of the company to assess how sustainable an organization's operations are (Rose, 2016). Sustainability disclosure practices are also referred to as sustainability reporting or corporate social responsibility (CSR) reporting, non-financial reporting, triple bottom line reporting, or value reporting (Nnamani, Onyekwelu and Ugwu, 2017). Sustainability disclosure is described as the integration of reporting and accounting for social, environmental and economic issues in corporate reporting or simply the "triple bottom line reporting".

2.2 Governance Sustainability Disclosure

Sustainability in governance refers to the firm's implementing principles to assist the stakeholders in monitoring controls, solving conflicts of interest and enforcing transparency (Nurlan, Monowar and Timur, 2019). Good corporate governance ensures that rules, regulations and laws, particularly those associated with economic, environmental and social issues, are followed and that corrective action is implemented to maintain the firm's long-term sustainability (Riedl and Smeets, 2017). A well governed firm in terms of corporate performance assist the management in using the resources efficiently and improve performance, hence increasing the stakeholders' trust in the firm's profitability, continuity and sustainability. Therefore, corporate governance is a crucial dimension of sustainability, as it assures a firm's sustainability (Platonova, Asutay, Dixon and Mohammad, 2018).

Governance sustainability disclosure incorporates a firm's implementation of principles to assist the stakeholders in monitoring controls, solving conflicts of interest and enforcing transparency (Rose, 2016; Riedl and Smeets, 2017). Governance sustainability disclosure subsists

good corporate governance which captures the rules, regulations and laws, particularly those associated with economic, environmental and social issues, ensuring that they are followed, and that corrective action is implemented to maintain the firm's long-term sustainability (Ruhnke and Gabriel, 2013). By adopting governance practices, firms can sustain themselves over the long term, as these governance practices assure that their operations are on the right track; can anticipate and resolve governance-related problems, such as implementing anti-corruption, anti-extortion and anti-bribery initiatives; and can integrate sustainability into management decisions (Ruhnke and Gabriel, 2013). Therefore, governance improves a firm's reputation and builds or maintains community trust, which indeed enables firms to continue and sustain themselves.

Governance sustainability disclosure have been described variously by different scholars, regulators and policy makers as one of the fundamental elements that determine the state of health or otherwise of any organization and its ability to meet its organizational objectives and survive economic turbulence (Ruhnke and Gabriel, 2013). Stakeholder theories underlines that firms develop governance to align environmental and social goals with economic goals, track performance against goals, and convert goals into actions to meet stakeholder expectations (Taouab and Zineb, 2019). The contents of governance sustainability disclosure include disclosure of policies, procedures, board independence and diversity, executive compensation and evaluation of firm's culture of ethical leadership and compliance. It also subsumes the alignment of corporate policies and practices with sustainability goals; transparency to stakeholders; integration of sustainability principles from top down into day-to-day operations of company (Selvam, Gayathri, Vasanth, Lingaraja and Marxiaoli, 2016). Governance focuses on how management is committed to sustainability and corporate responsibility at all levels (Backstrom and Karlsson, 2015).

2.3 Governance Sustainability Disclosure and Corporate Performance

Governance disclosure refers to implementing principles to assist stakeholders in monitoring controls, solving conflicts of interest and enforcing transparency (Taouab and Zineb, 2019). Firms report on governance issues to improve the firm's reputation and build or maintain community trust (Taouab and Zineb, 2019). They also anticipate and resolve governance-related problems, such as implementing anti-corruption, anti-extortion and anti-bribery initiatives; integrating sustainability into management decisions; and safeguarding reputations (Taouab and Zineb, 2019).

Firms report on governance issues to improve the firm's reputation and build or maintain community trust (Hahn and Kühnen, 2013). They also anticipate and resolve governance-related problems, such as implementing anti-corruption, anti-extortion and anti-bribery initiatives; integrating sustainability into management decisions; and safeguarding reputations. Vander and Slawinski (2015) found that governance disclosure improved a firm's financial performance, whereas Rose (2016) found that governance disclosure has a negative impact on ROA and ROE. Wasara and Ganda (2019) found that governance disclosure is not significant for market performance. As discussed previously, studies of the relationship between sustainability reporting and firm performance (operational, financial and market) have produced mixed results; this could be due to a firm's nature. Riedl and Smeets (2017) and Taouab and Zineb (2019) claimed that ESG characteristics vary across industries, making it difficult to generalize results when a study is conducted across several industries at once. Studies have shown that the performance of Indian firms has been enhanced significantly as a result of increasing the pillars of sustainability disclosure, specifically in governance disclosure (Uwuigbe and Egbide, 2012). At the same time positive effects of governance sustainability disclosures have been reported for manufacturing firms' and banks in Greece (Taouab and Zineb, 2019). This was also shown for Russian firms with reports indicating the importance of governance disclosure in enhancing the performance of oil and gas firms.

However, using data extracted from a hundred United States firms', weak evidence of an effect was shown for the role of governance disclosure in enhancing firms' performance. This was corroborated through the reporting of the existence of a negative link between governance disclosure and financial performance in Nigerian firms (Uwuigbe, Obarakpo, Uwuigbe, Ozordi, Asiriuwa, Eyitomi, Taiwo, 2018) Thus previous studies have shown mixed results. These variance in results have been attributed to various reasons such as awareness levels in terms of sustainability disclosures and the financial market's characteristics (Ruhnke and Gabriel, 2013). However, it must be stated that in general, governance sustainability disclosure is expected to enhance a firm's performance ether positively or negatively.

2.2 Theoretical Review

There are theories that substantiates the existence of a relationship between sustainability disclosures and performance of firms. The theories in support of sustainability theories include the legitimacy theory, and stakeholders' theory.

2.2.1 Legitimacy Theory

This theory is credited to Mark C. Shusman in 1995. This theory was derived from the political economy theory and relies on the idea that the legitimacy of a company to operate in society depends on an implicit social contract between the company and society. The assumption of this theory is that the actions of an entity are desirables, proper or appropriate within the socially constructed system of norms, values, beliefs, and definitions. As such the theory states that firms are bound by social contracts, which they are expected to perform in return for the approval of its objectives (Nuber, Velte and Hörisch, 2020). This implies that the accomplishment of the goals or objective of a firm, depends closely to this social contract that requires them to become socially responsible in the society.

Furthermore, the legitimacy theory posits that organizations continually seek to ensure that they operate within the bounds and norms of their respective societies, that is, they attempt to ensure that their activities are perceived by outside parties as being legitimate (Rose, 2016). Contextually, the legitimacy theory subsists that when firms achieve transparent and appropriate sustainability reports, they have asserted their good performance in corporate social responsibility, good business practices, and compliance to standards and regulations (Laskar, 2019). This can improve the stakeholders' perception of the firm's social responsibility performance and transparency. Consequently, a firm's value can be enhanced with a high level of stakeholder perceptions and support (Nnamani *et al*., 2017).

This theory links the importance of disclosing governance issues relating to the firm such that the firm can reassure that its operations is within the boundaries of the legitimacy that it holds through its incorporation (Mohammed *et al*., 2020). When these disclosures are made, all the stakeholders are reassured that all the operations of the company are proper and in accordance with the perceived social contract that exists between all the parties. Governance and other sustainability disclosures are in conformity of legitimization of the operations of the firm (Malik *et al*., 2015). This theory is considered relevant to this study because it captures two important components of sustainability disclosures. These are social and environmental sustainability disclosures which form part of the variables in this study. At the same time, it links sustainability disclosures, indicating that perceptions of the responsibilities of the firm in showing that they care about the immediate and general society can add value to the firm. This theory is an anchor theory of this study.

2.2.2 Stakeholders' Theory

This theory is propounded by Edward Freeman in 1984. The basic assumption of this theory is that firms need to manage their relationship with all their stakeholders to grow and survive. Based on this, reporting on specific types of information can be used to attract or sustain the patronage of a given group of stakeholders (Kaspereit and Lopatta, 2016). As such the success or failure of the firm to a reasonable proportion depends on the support of its stakeholders (Arowoshegbe and Uniamikogbo, 2016). This theory proposes that for a firm to survive and grow, all the stakeholders must be carried along through the different financial and non-financial information (Diantimala, 2018). Thus, via sustainability disclosure that covers governance issues, the firm will be able to satisfy all the stakeholders' needs. The requirements of governance sustainability disclosures target the provision of vital information to different stakeholders of the firm. Not only has that it captured that it is not only financial information that a firm requires to provide these stakeholders', but also non-financial information, required to satisfy all the stakeholders. This non-financial information is very much a part of the governance sustainability disclosures, which are the focus of this study, hence the relevance of this theory to this study.

2.3 Empirical Review

Mohammed *et al.* (2020) examined the association between sustainability disclosures and the financial performance of Jordanian firms. The researchers used a panel data set of 1,705 firm-year observations of firms listed on the Amman Stock Exchange. Fixed effect regression with robust standard errors was used to analyse the data. The findings revealed that while social and governance disclosures are positively associated with financial performance, environmental disclosures do not have this association. Also, when sustainability disclosures were analysed collectively, a highly positive and significant association was found between them. The researchers recommended that the dimensions of sustainability disclosures complement each other to enhance firms' financial performance.

Hardiningsih, Januarti, Yuyetta, Srimindarti and Udin (2020) investigated the moderating role of country's sustainability reporting law on the relationship between the level of sustainability reporting and firm performance A secondary data was used for this study, the data was sourced through the Bloomberg database. The sample of the study included data from 3,000 firms of 80 countries covering 10 years (2008-2017), which provided 23,738 observations. The results from the study showed that sustainability reporting disclosure (environmental, social and governance)

affects a firm's operational performance (ROA) negatively. However, when the components of ESG were considered separately, the results showed it has a positive effect on a firm's operational performance (ROA). On the other hand, sustainability reporting disclosure (ESG) does not affect a firm's financial and market performance (ROE and TQ).

Wasara and Ganda (2019) examined effect of sustainability reporting and corporate social responsibilities on firm value with mediation of financial performance to 132 manufacturing companies listed on Indonesia Stock Exchange (IDX) in 2017-2018. Quantitative research method was used. Data was analyzed using multiple linear regression model to examine the impact of the disclosure of sustainability reporting and the disclosure of corporate social responsibility toward firm value with the mediation of financial performance. The findings indicated that the disclosure of sustainability reporting and corporate social responsibility do not affect financial performance.

Platonova *et al*. (2018) explored the relationship between corporate sustainability performance (CSP) and corporate firm performance (CFP) for a sample of the top 500 Indian firms covering the period from 2008 to 2018. A causality design was used and the CSP variables considered were both aggregate and disaggregate levels of environmental, social and governance performance. Analysis of data was conducted to determine bidirectional causality and intensity of the CSP-CFP relationship using the Granger causality test and multiple regression for panel data. Again, there was a sectoral level trend analysis dividing the firms in various industries and classifying them in ESI vs non- ESI sectors. The findings from the study indicated the absence of causality among CSP and CFP variables in either direction or suggested that the CSP-CFP linkage is mostly insignificant for Indian firms at the aggregate level. At an individual firm level, some negative association was found between CSP and CFP. This relationship was also shown to have an adverse impact on CSP-CFP linkage in both cases, which means that Indian firms don't get the financial performance benefits of investments done for sustainability.

Akbukut and Kaya (2019) examined sustainability reporting and its relation with firm performance. Panel data logistic regression analysis of 155 automotive firms from 20 different countries, between 2010-2018 years was used. Also, financial data such as Tobin's Q ratio of the public companies as well as firm size, financial leverage ratio and return on assets were used in measuring the firm performance. The data were sourced through GRI's reports on GRI Sustainability Disclosure Database. The researchers' found similar results with some prior literature explaining that sustainability reporting has a significant positive relationship with firm

performance. The findings of study also showed the existence of a positive significant relationship between firm size and sustainability reporting, and a negative significant relationship between financial leverage and sustainability reporting in the automotive industry.

Asuquo *et al.* (2018) examined the effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. Multiple regression method was used by the researchers. 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 showed 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. Again, governance performance disclosure was omitted from the indicators of sustainability disclosures. Also, the study covered just five (5) years only and was focused on selected quoted brewery firms. These are gaps.

Uwuigbe *et al*. (2018) examined the bi-directional relationship between sustainability reporting and firm performance in quoted Deposit Money Banks (DMBs) in Nigeria. Descriptive research design was used. The population size comprised of all deposit money banks quoted on the floor of the Nigerian Stock Exchange, while judgmental sampling technique was used in the selection of the sampled banks. Considering the period 2014-2016, the annual report 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. The panel regression technique was used to analyze the data. The empirical findings showed that there is a bi-directional relationship between sustainability reporting and firm performance of quoted Deposit Money Banks (DMBs) in Nigeria.

Diantimala (2018) investigated the mediating effect of sustainability disclosure on the relationship between financial performance and firm value. The purpose of the study was to examine the effect of financial performance on sustainability disclosure and then to examine the effect of sustainability disclosure on firm value. The researchers used path analysis to examine the hypothesis. The sample used in this study is companies listed on the Jakarta Islamic Index (JII) for the period 2013-2015. However, it was shown that the effect of leverage, profitability, and firm size was not significant. Regarding the indirect effect of financial performance on firm value, the results show that leverage and profitability have a positively indirect effect on firm value. Furthermore, size and liquidity had no indirect effect on firm value.

Backstrom and Karlsson (2015) conducted a study to analyse the relationship between corporate sustainability performance and financial performance in Sweden. The researchers based their study on stakeholder theory and from previous empirical findings, a positive relationship between sustainability performance and financial performance was hypothesised. Furthermore, with support from previous studies on the effect of board diversity on sustainability and financial performance, the second and final hypothesis predicted a positive impact of board diversity components on the relationship between the two components. Deductive approach using a multivariate regression method. The sample of the study constituted of 1,015 observations of firms listed on the NASDAQ OMX Stockholm during 2009-2013. The results from the study showed a positive relationship between corporate sustainability and financial performance. However, the findings of a robustness test suggested a more complex relationship. Instead of a complete positive relationship, there are indications that the positive relationship is only true for low and moderate sustainability performers.

Buallay (2019) examined the effects of sustainability report disclosure on the company's financial performance which were measured by profitability, liquidity, leverage, activity, and dividend payout ratio. Independent variables used in this study were the Sustainability Report disclosure which was measured by using the GRI (Global Reporting Initiatives) index. The dependent variables used were Return on Assets (ROA), current ratio (CR), Debt Equity Ratio (DER), Inventory Turnover (IT) and Dividend Payout Ratio (DPR). The samples were taken from the manufacturing companies that revealed Sustainability Report Listed on the Indonesian Stock Exchange (IDX). The statistical methods used in this study was linear regression analysis. The results showed that the Sustainability Report disclosure positively influences ROA, but it has no significant effect on CR, DER, IT, and DPR. The researchers concluded that the presence of SR disclosure of the company will increase of the profitability of the company.

Aggarwal (2013) examined impact of sustainability performance of company on its financial performance: A study of listed Indian Companies. The purpose of this paper was to examine impact of sustainability rating of company on its financial performance in an Indian context using secondary data. The researcher also separately analyzed the impact of four key components of sustainability (i.e. Community, Employees, Environment and Governance) on financial performance. The findings showed the existence of a no significant association between

overall sustainability rating and financial performance. However, further analysis revealed that four components of sustainability have significant but varying impact on financial performance.

Eccles *et al*. (2014) investigated the effect sustainability reporting has on companies' financial performance. The researchers adopted an event study method to estimate abnormal returns for a 31-day event window for a sample of 68 listed companies, 17 listed in New Zealand Stock Exchange (NZX) and 51 listed in the Australian Stock exchange (ASX). The findings indicated that sustainability reporting was statistically significant in explaining abnormal returns for the Australian companies. It was found that only the CSR type of sustainability report was significant in explaining the abnormal return of New Zealand companies.

3.0 Methodology

The research design adopted in this study is ex-post facto design. This design aligns with the use of quantitative methods in the collection and analysis of data required for examining governance sustainability disclosures and corporate performance of quoted oil and gas companies in Nigeria. The area of this study is the oil and gas sector in Nigeria. The population of this study comprises of all the listed oil and gas companies in the Nigerian Stock Exchange (NSE) as of 31st December 2020. These include twelve (12) companies who are trading in the Nigeria Stock Market currently.

The data sources include the audited annual and sustainability reports published by the oil and gas companies that form the sample of this study from the year 2009 to 2020, and the Bloomberg Database on Environmental, Social, and Governance (ESG) of various years. Content analysis was used the collection of data on sustainability governance disclosures. This is based on the information provided in the annual reports and sustainability reports of the quoted oil and gas companies in Nigeria

3.1 Empirical Specification of Model

Multiple linear regression models were used in this study. This is in line with those used in Buallay *et al*. (2017), Muhammed *et al*. (2020). These models were slightly modified to capture the effect of time lag since it has been suggested in several works of literature that sustainability disclosure will not immediately lead to better performance, and that also it is a strategic concept, which effects may not occur immediately or in the same year that it is reported (Buallay *et al*., 2017). This model is specified as follows:

Corporate Performance = f(Governance Sustainability Disclosure) - - Equation 1

$CP = f(SD)$ - - - - - - - - - Equation 2

$CP = \alpha_0+\beta_i X_{i,t-1}+v_i+\mu_{i,t}$ - - - - - - - Equation 3

Where:

CP is corporate performance (Explained Variable)

$X_{i,t-1}$ is the independent or explanatory variable for a given firm in a year lagged by 1 year

α_0 is the estimated regression intercept or constant

V_i is the individual effect in the model

$\mu_{i,t}$ is the stochastic or error term

The hypotheses for this study are specified as follows:

$ROA = f(GOSD, SIZE, FAGE)$ - - - - - - Equation 4

$ROA= \alpha_0+\beta_1 GOSD_{i,t-1}+v_i+\mu_{i,t}$ - - - - - - - Equation 5

$ROA= \alpha_0+\beta_4 GOSD_{i,t-1}++\beta_2 SIZE_{i,t-1}+\beta_3 FAGE_{i,t-1} v_i+\mu_{i,t}$ - - - - Equation 6

Where:

ROA is Return on Assets for a firm i and in a given period t,

$GOSD_{i,t-1}$ is Governance Sustainability Disclosure for a firm i, and period t, lagged by one year

SIZE is Firm Size for the firm i, and period t

FAGE is Firm Age for the firm i, and period t

α_0 is the estimated regression constant

$\beta_1, \beta_2, \beta_3$ are the estimated coefficients of the independent or explanatory variables

v_i are the individual effects in the model

$\mu_{i,t}$ is the error or stochastic term for a firm i, in period t.

i is for an individual oil and gas company

t is the given period

3.3 Data Analysis Technique

Panel regression techniques was used in the analysis of data in this study. The assumption in this technique is that all the Ordinary Least Square (OLS) assumptions in a transformed variable are met, issues relating to normality and linearity will not arise given that most of the variables are either transformed or in ratio form, and that a deviation from normality will not institute a pronounced or substantial variation in the analysis (Backstrom and Karlsson, 2015).

4.0 Analysis and Discussion

Descriptive Statistics Analysis

The results for the descriptive test conducted for this study is presented in Table 1.

Table 1: Descriptive Statistics Analysis of Data for the Study

Statistic	ROA	GOSD	SIZE	FAGE
Mean	0.170588	77.05629	7.344274	19.98611
Median	2.856240	75.00000	7.561048	21.00000
Maximum	151.0478	93.75000	9.325628	42.00000
Minimum	-166.1215	50.00000	3.028368	0.000000
Std. Dev.	26.79531	10.00268	1.521618	11.02000
Skewness	-1.467267	-0.555971	-1.545100	-0.087456
Kurtosis	22.01325	3.064664	5.065526	2.203897
Jarque-Bera	2189.849	7.391882	81.74308	3.986245
Probability	0.000000	0.024824	0.000000	0.136269
Sum	24.22344	11019.05	1042.887	2878.000
Sum Sq. Dev.	101236.4	14207.62	326.4604	17365.97
Observations	142	143	142	144

Source: Author's Computation (2021)

Table 1 shows that the mean and median of Return on Assets (ROA) was obtained as 0.17% and 2.86%. This indicates that the average of Return on Assets (ROA) for all the twelve (12) companies that were selected for this study for the period of 12 years is 0.17%, while the most central of the ROA for all the companies is 2.86%. . The level of variability in the ROA was further showed by the skewness results obtained with a value of -1.467. This indicates that the data on ROA is negatively skewed. This implies that asymmetry of the mean and the median in the distribution. The data on ROA could be said to be fairly negatively skewed.

For governance sustainability disclosure, (GOSD) the outcome of their mean, median, standard deviation, skewness, and kurtosis values indicates the relative normality of the data respectively with a Jarque Bera probability of 0.02. The control variables used in this study are

firm size (SIZE), and firm age (FAGE). The mean values obtained for SIZE and FAGE are 7.344 and 19.98 respectively, while the median values obtained were 7.56 and 21.00 respectively. This the average firm age of all the firms used in the study is 19.96 years, indicating that these all the firms used in the study are approximately twenty (20) years old in the operations in the oil and gas industry in Nigeria. Generally, all the data for the variables in the study were shown to have a moderately negatively skewed distribution, and different levels of variability.

Bivariate Correlation Analysis

This analysis was conducted to examine the strength of the correlation among all the variables used in this study. The essence of this was to avoid multicollinearity problems that may arise with further estimation using the data collected for the variables. The existence of a very high strength or degree of correlation in the variables may indicate the presence of a multicollinearity problem which may affect the outcome of estimation results using the data for the variables. The simple bivariate correlation analysis result is presented in Table 2.

Table 4.2: Simple Bivariate Analysis Results for the Variables

	ROA	GOSD	SIZE	FAGE
ROA	1.000000			
GOSD	0.109834	1.000000		
SIZE	-0.065223	-0.511651	1.000000	
FAGE	-0.152443	0.227880	-0.050750	1.000000

Source: Researchers' Computation (2021)

Table 4.2 shows that the correlation coefficient between Return of Assets (ROA), and the independent variables which include GOSD, SIZE AND FAGE, was obtained as -0.2321, 0.1098, -0.0652, and -0.1524 respectively. This shows that the correlation between ROA and variables such as SIZE, and FAGE is negative, while the correlation between ROA and GOSD is positive. Again, the strength of the correction coefficient between ROA and these variables were not very high. This may indicate in simple terms the absence of multicollinearity among the variables of ROA, GOSD, SIZE and FAGE, in the data set used in the study.

Panel Unit Root Analysis

This test was conducted to establish the suitability of the data series in estimating possible long-run relationship using the Kao cointegration method. The panel unit root tests were conducted with the assumption of common unit root processes and individual unit root processes adopting Levin, Lin & Chu (LLC), Im, Pesaran and Shin W-stat and Augmented Dickey Fuller (ADF) - Fisher Chi-square methods respectively for all the variables in the study. The tests were conducted

at different levels of integration (0,1, and 2) until all variables were found to be stationary. The results from the panel unit root analysis are presented on Tables 4.3:

Table 4.3: Panel Unit Root Analysis Results for Variables

Variable	LLC Statistic	Prob.	Im, Pesaran and Shin W-stat	Prob.	ADF-Fisher Statistic	Prob.	Order of Integration	Decision
ROA	-28.4223	0.0000	-10.5862	0.0000	82.3337	0.0000	I(1)	Stationary
GOSD	-5.77221	0.0000	-3.23287	0.0006	47.4562	0.0005	I(1)	Stationary
SIZE	-3.60285	0.0002	-1.81214	0.0350	36.9716	0.0440	I(1)	Stationary
FAGE	-4.00016	0.0000	-1.87335	0.0305	7.85198	0.0197	I(1)	Stationary

Source: Author's Computation (2021)

The null hypothesis before the conduct of this test is that all the variables have unit root problem. However, the conduct of the panel unit root test based using Levin, Lin & Chu (LLC), Im, Pesaran and Shin W-stat and Augmented Dickey Fuller (ADF) - Fisher Chi-square methods at level (order of integration equal to zero) indicates that the null hypothesis was not rejected given that none of the variables were found stationary. Thus, Return on Assets (ROA) and Governance Sustainability Disclosure (GOSD), Firm Age and Firm Size (SIZE) were all found to be stationary at First Difference (Order of Integration = 10). This indicated the absence of unit root in these variables.

Cointegration Analysis

Cointegration analysis explains the possibility that the combination of the variables may result to a long-run relationship. This test was conducted using the Kao Cointegration Test method. The tests result of the cointegration of the dependent and independent variables in the study with and without the control variables are presented in Tables 4.4.

Table 4.4: Kao Cointegration Results

	t-Statistic	Prob.
ADF	-3.057335	0.0011
Residual variance	599.6733	

HAC variance	430.8993

Source: Author's Computation (2021)

From the extracted result, there was cointegration between the variables used in the study with and without the control variables. The implication of this result is that governance sustainability disclosures (GOSD) and Return on Assets (ROA) relates in a long-run relationship when the age and size of the firm are considered.

4.3 Test of Hypotheses

Regression analysis in the study was conducted based on the number of hypotheses in the study. This implies that each model earlier raised in the study will be analysed based on the regression results obtained first without the control variables, and then with the control variables in every case of the model.

The null hypotheses states that, governance sustainability disclosure has no significant effect on Return on Assets (ROA); and that governance sustainability disclosure, firm size and firm age has no significant effect on Return on Assets (ROA). The regression results with the control variables and without the control variables that captures this research hypotheses are restated as follows:

Table 4.5: Regression Results for Hypotheses

Variables	Equation 4.7 (Without control) Coefficients	t-stat (Prob.)	Equation 4.8 (With Control) Coefficients	t-stat (Prob.)
Constant	-44.03	-1.1709 (0.2440)	-36.15	-1.159535 (0.2484)
GOSD	0.57	1.1625 (0.2474)	0.565	1.9378(0.0549)
SIZE			0.24	0.1317(0.0024)
FAGE			-0.46	-2.0468 (0.0428)
R^2	0.1723 (17.23%)		0.055 (5.5%)	
F-stat	2.029 (0.0027)		2.448 (0.0667)	

Source: Author's Computation (2021)

Table 4.5 showed the regression results without the control variables and with the control variables. From the results shown for the regression results without the control variables, that is Firm Size and Firm Age, the Return on Assets (ROA) will decrease by an average of 44.03% if the independent variable is held constant, which is governance sustainability disclosure (GOSD).

Furthermore, a unit change in Governance Sustainability Disclosure (GOSD) will cause an increase of 0.57% in Return on Assets (ROA). This direct effect of Governance Sustainability Disclosure (GOSD) is statistically insignificant given t-statistic value of 1.1625 and the probability value of 0.2474. This effect relationship between GOSD and ROA is statistically insignificant since the computed t-statistic value of 1.1625 is less than the critical t-statistical value of 1.812 at 5% level of significance ($t_{0.05,10}$). Also, the probability value obtained was also found to be less than 0.05. Also, the coefficient of determination (R^2) value of 0.1723 indicates that 17.23% of the variations in ROA has been explained by GOSD. The remaining 82.77% of the variations can be attributed to other variables. This is given by the error term. This shows that the Governance Sustainability Disclosure (GOSD) has a low predictive power to explain the variations in the dependent variable, Return on Assets (ROA).

Similarly, the results for the model with the control variables: Firm Size (SIZE) and Firm Age (FAGE), indicates that ROA will decrease by an average of -36.15% if all the independent variables (GOSD, SIZE, FAGE) are held constant. Similarly, a unit increase in the governance sustainability disclosure (GOSD) score will lead to a 0.56% increase in ROA; a unit increase in the SIZE of the firms, will cause a 0.243% increase in ROA, while an additional year to the Firm Age (FAGE) will lead to a decline of 0.456% in ROA. The direct effect relationship between GOSD and Return on Assets (ROA) was found to be statistically significant given that the computed t-statistic values of 1.9378 was found to be greater than the critical t-statistic value of 1.860 ($t_{0.05, 8}$). Also, the probability value of 0.0549 was found to be within the 5% acceptable region. However, Firm Size (SIZE) was found to have a positive statistically isignificant effect on ROA with a computed t-statistic value of 0.1317 and probability values of 0.8954. Firm Age (FAGE) showed an inverse effect on ROA, but the inverse effect is also statistically significant given that the computed t-statistic is less than 1.860, the critical t-statistic value at 5% level of significance.

The coefficient of determination (R^2) value of 0.055 indicates that 5.5% of the variations in ROA has been explained by GOSD, SIZE and FAGE. The remaining 94.50% of the variations are accounted for by other variables not included in this study. This is captured in the study by the error term. As shown, the control variables exert some influence on the governance sustainability disclosure since without; it had no significant effect on ROA. Similarly, the effect of the social

sustainability disclosure on ROA became significant when it was combined with the control variables of firm size and firm age in the model.

Finally with the computed F-statistic value of 2.44 less than the critical F-statistical value of 3.909 ($F_{3, 140}$, the null hypothesis of an insignificant effect of social sustainability disclosure on the Return on Assets (ROA) will hold, and the alternative hypothesis is rejected. This shows that social sustainability disclosure as a stand-alone disclosure requirement, does not have any significant effect on the corporate performance of oil and gas firms in Nigeria under the period covered in this study.

4.4 Discussion of the Findings

Without control by firm age and size, governance sustainability disclosure has direct effect on the Return on Assets (ROA) of oil and gas firms in Nigeria. However, when controlled by firm age and size, governance sustainability disclosure the positive effect was found to be significant. This in in consonance with the findings in Muhammad *et al* (2020), Buallay *et al*. (2017), who all agreed that governance sustainability disclosure has a positive and significant effect on financial or market performance of a firm. In this case, the increased disclosure of governance issues such as the statement of governance structure, conflicts of interests, highest governance body's role in sustainability reporting, and the periodic consultation of stakeholders on economic, environmental, and social topics, there is the tendency that it could lead to increased level of performance as indicated by increase in Return on Assets (ROA).

Thus, it is important to note that by this, the positive effect that governance sustainability theory has on corporate performance of firms, accentuates the propositions in Stakeholders and legitimacy theories. This is because, through governance disclosure, several stakeholders are assured that that best practices are adopted in the management of the firm, and this could lead to further commitments towards the firm. At the same time, proper disclosure of governance issues is predicated on proper functioning of the firm, within the boundaries of the laws establishing it (legitimacy), and that in continuation of this, the firm is free from circumspection, which allows it to pursue its legitimately-derived objectives.

5.0 Summary, Conclusion and Recommendations

5.1 Summary and Conclusion

This study focused on the examination of the effect of governance sustainability disclosures on corporate performance of quoted oil and gas companies in Nigeria. The research

objectives developed for this study include to examine the effect of governance sustainability disclosure on Return on Assets (ROA) of quoted oil and gas companies in Nigeria. The research design adopted was *ex-post facto* research design. Simple random sampling was used in selecting twelve (12) oil and gas companies that are quoted on the Nigerian Stock Exchange (NSE). Data on governance sustainability disclosures and Return on Assets (ROA) were gathered from the yearly annual reports and financial statements of the of the sampled oil and gas firms.

Furthermore, the independent variables were controlled in the model with firm age and firm size. The data covered twelve (12) years (2009-2020). Data were analyzed using panel linear regression technique. From the results, it was found that when controlled by firm size and firm age, governance sustainability disclosure has an inverse and significant effect on return on assets of firms in the oil and gas industry, and when not controlled by firm size and age, governance sustainability disclosure (GOSD) has a direct and insignificant effect on the Return on Assets (ROA) of quoted oil and gas firms in Nigeria respectively, in the absence of firm size and age.

The effect of governance sustainability disclosures on the performance of firms individually and jointly produced mixed results without the confines of firm size and age. The mix of results indicates strength of governance disclosure to influence the performance of oil and gas firms. When not controlled by age and size of the firm, governance has direct effect on ROA, and when controlled, it shows an inverse significant effect on ROA. Based on this, it can be stated that governance sustainability disclosure shows mixed results on the corporate performance of firms in the oil and gas industry in Nigeria.

Recommendations

The following recommendations are therefor made:

i. Firms in the oil and gas sector should endeavour to disclose fully their governance measures. This has the capacity to enhance their performances over time.
ii. Governance sustainability disclosures should be adhered to as the firm increases in age and size in line with best practices.

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