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## SUSTAINABILITY REPORTING AND AUDIT OPINION OF QUOTED OIL AND GAS COMPANIES IN NIGERIA

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### **Abstract**

*Sustainability reporting of oil and gas companies in Nigeria has been faced with a lot of criticism by its stakeholders. The study sought to investigate the relationship between sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria. Secondary data were obtained from annual audited reports of studied oil and gas companies and Global Reporting Index (GRI) handbook. The population of the study consists of ten oil and gas companies quoted in the Nigerian stock exchange. Purposive sampling technique was adopted to select six listed oil and gas companies in Nigeria from 2006 to 2021. The study adopts the use of descriptive statistics for univariate analysis, Pearson Product Moment Correlation Coefficient for bivariate analysis and while the hypothesis formulated were tested using panel least square regression with the aid of E-view 10 econometric statistical software. The findings showed that environmental sustainability and social sustainability reporting had a negative and insignificant relationship with audit opinion while economic sustainability reporting has a negative and significant relationship with audit opinion of quoted oil and gas companies in Nigeria. The study thus recommend that conflict prevention budget such as environmental safety, health and security will have to constitute a high percentage of the oil and gas companies' total budget to give them weight to promptly attend to the demands and expectations of the stakeholders as regards sustainability reporting in order to upheld the going concern status of the business and avoid issuance of audit opinion.*

**Keywords:** Sustainability Reporting, Audit Opinion, Nigeria

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## **Introduction**

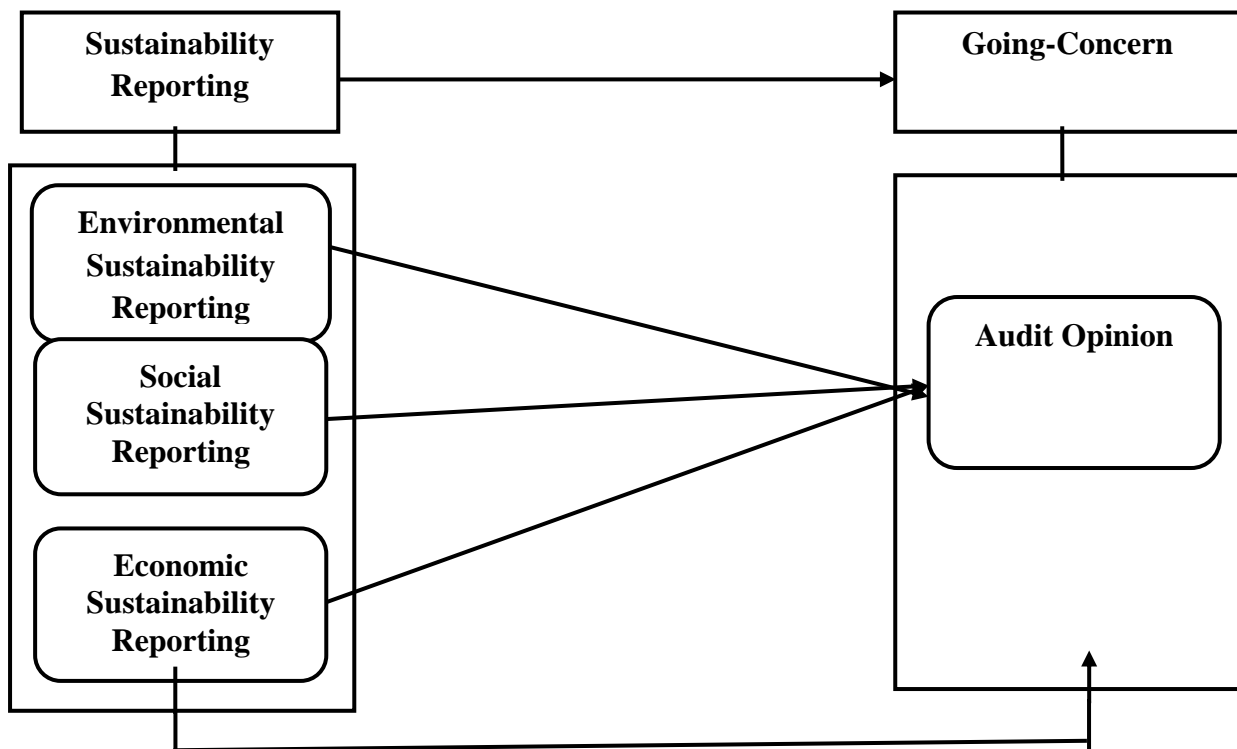
The fundamental objective of any organization is to consistently grow and ensure its survival. To achieve this objective, organizations involve in a lot of activities that have unintended consequences on the host community and the society at large. Often times, these activities impact negatively on the environment in which they operate (Sahay, 2004). Users of financial information consistently indicate a desire to have more information to allow them assess the risk of a business and the possibility of having a clean audit opinion. Friedman (2009) links both financial sustainability in the recent financial crisis and environmental sustainability as being part of the same phenomenon of inadequate accounting that does not adequately consider risk: If the true risks involved in these subprime mortgages or default companies had been priced into these products, they would never have been rated the way they were. Investors would have been much more wary and demanded much higher yields before buying them. Consequently, this practice has therefore aroused curiosity and growing contemplations among stakeholders about the likely effect of sustainability reporting on audit opinion of quoted oil and gas companies. Sustainability reporting has come to be viewed as an essential tool in determent of audit opinion. Pressures from a variety of sources have come to bear on the business community on their responsibility towards all of its stakeholders, environment and the society in which it operates (Sihotang & Effendi, 2010; Dilling, 2010). Hence the need for an interdisciplinary reporting that reflects a simultaneous integration of economic, environmental and social factors into corporate behavior with the aim of sustaining resources for future generation (Quick, 2008). The concept of sustainability reporting arises because of the demands and expectations of the host community regarding the roles of the organization in the society. Furthermore, the increasing need for non-financial reports 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 ecologically sensitive. Sustainability reporting is a blend of two concepts: sustainability and reporting. Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. Reporting means disclosing an organization's information fully or partially to stakeholders (Aifuwa, 2020). Therefore, sustainability reporting is disclosing organizational information about its daily economic, social and environmental activities as it affects the society and stakeholders where it operates. Goldin and winters (1995) claimed that it is necessary to narrow the definition of sustainable development to refer to an economy in which future growth is not compromised by that of the present. In the same manner, Bartelmus (2012) highlighted the equality between nature and the economy and defined economic sustainability as the preservation and conservation of both human made and natural capital.

## **Statement of the Problem**

Sustainability reporting has become one of the major issues of oil and gas companies in recent years. This issue arises because of the demands and expectations of the host communities regarding the role of oil and gas companies in society. The demands continue around the negative environmental and social impacts of lop-sided and unwise use of resources by business organizations (Dilling, 2010; Kolk, 2003). Companies often put aside the social and environmental impacts arising from the company's business activities and focus only on maximizing profits. This is evidenced by the increasing number of cases between the host community and the organization where the companies are meant to pay huge penalties to their host communities, Shell PLC and Ogoni oil spillage and similar issues are cases in point. The existence of such cases precipitates the investors to start looking at companies that have reported additional information in the form of sustainability report in its annual audited report (Wibowo, 2014). They assume that companies that have included

sustainability report in their annual audited report will have added value not just to the community and society at large but also enhance the assurance averting qualified audit opinion compared to companies that have not yet included sustainability reports in their audited annual reports. Aifuwa et al. (2019) stated that despite the adoption of the GRI framework by the Nigerian stock exchange in 2018 and also the recognition of sustainability disclosure in the Nigerian code of corporate governance of 2018, there still exists a low compliance rate in disclosing environmental and social issues in financial reporting. However, some countries like Brazil, China, Denmark, Hong Kong, India and Malaysia have made great strides in making the report mandatory (Loannis & Serafeim, 2014).

### Conceptual Framework



A conceptual framework is a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp, 2001). Conceptual framework is a system of concepts, assumptions, expectations, beliefs and theories that support and informs your research. It is the researcher's explanation of how the research problem would be explored. The explanatory variable of the study is sustainability reporting, and its proxies are environmental reporting, social reporting and economic reporting as indicated in the conceptual framework while the explained variable of the study is going concern and its measure is audit opinion. The researcher in this study aims to ascertain the extent and degree to which the dimensions of the predictor variable enhance the measure of the criterion variable.

### Purpose of the Study

1. Determine the relationship between environmental sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria.
2. Investigate the relationship between social sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria.
3. Ascertain the relationship between economic sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria.

### Research Questions

1. What is the relationship between environmental sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria?
2. What is the relationship between social sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria?
3. What is the relationship between economic sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria?

### Research Hypotheses

- H<sub>01</sub>:** There is no significant relationship between environmental sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria
- H<sub>02</sub>:** There is no significant relationship between social sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria
- H<sub>03</sub>:** There is no significant relationship between economic sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria

### Literature Review

#### Theoretical Framework

##### Theory of Inspired Confidence

The theory of inspired confidence was developed by Dutch Professor, Theodore Limperg in 1985. The theory of inspired confidence stated that the auditor as a confidential agent derives his function in society from the need for expert and independent examination as well as the need for an expert and independent judgment supported by the examinations. Thus, auditors are expected to know and realize that the public continues to expect a low rate of audit failures. This requires that the auditors must plan and perform their audit in a manner that will minimize the risk of bankruptcy. The auditor is under a duty to conduct his work in a manner that does not betray the confidence which he commands. The importance of the theory of inspired confidence is that the duties and responsibilities of the auditors are a derivation from the confidence that are bestowed by the public on the success of the audit process and the assurance which the opinion of the auditor conveys. Since this confidence influences the investors' decision, a betrayal of the confidence logically means a termination of the process or function. Carmichael (2004) in discussing the social significance of the audit stated that when the confidence that society has in the effectiveness of the audit process and the audit report is misplaced, the value relevance of that audit is destroyed. Therefore, auditors are mandated to issue a qualified opinion at the end of the audit assignment when the going concern of the business is in doubt that is when the multiple discriminate analysis of Atman' model gives a z score of less than 1.8 Estitemi and Omwenga (2016) added that auditors' theory of inspired confidence provide a link between the users of information requirement for credible and reliable financial report and the capability and capacity of the audit processes to meet those needs. The importance of the theory of inspired confidence is that the duties and responsibilities of the auditors are derived from the confidence that is contributed by the public on the success of the audit process and assurance which the opinion of the accountant communicates. Since the confidence of the general public determines the existence of the process, a betrayal of the confidence logically means a termination of the whole audit process or function. Therefore, auditors are expected to maintain high audit quality given that an audit failure is effectively end of audit profession activity. The main importance of this theory is that, the duties and responsibilities of the auditors are derived from the confidence and trust that the public bestowed on the success of the audit and the assurance given by the auditor. Audit inspires confidence to all stakeholders and boasts the

level of trust in companies' activities. The demand for audit services is the direct consequence of the participation of third parties in the company in which they demand accountability from the management, in return for their investments in the company (Sarens & Beelde, 2006). Audit opinion can considerably enhance going concern in the oil and gas companies in Nigeria. Furthermore, information provided by the management may be biased and most investors whose ownership concentration is not up to 5 % controlling interest may only rely on audit opinion as a means to monitoring their interest in the company. The tenets of this theory is that the duties and responsibilities of the auditors are derived from the confidence and trust that the public bestowed on the success of the audit and the assurance given by the auditor in the expression of his opinion.

### **Conceptual Review**

#### **Sustainability Reporting**

Sustainability is defined as meeting the resource and services needs of current and future generations without compromising the health of the ecosystems that provide them (Morelli, 2011). Sustainability is a result of society that allows for future generations that will at least retain the same natural wealth as the current generation (Whitehead, 2006). Sustainability is a conscious and planned effort that combines environmental, social and economic aspects into a development strategy to ensure the integrity of the environment and the safety, abilities, welfare, and quality of life of present and future generations (Environmental Protection and Maintenance Board, 2009). In Europe, more and more individual countries make sustainability reporting mandatory, at least for certain types or sizes of corporations. Just recently, Denmark introduced requirements on sustainability reports for public corporations (Anonymous, 2009). Some sort of sustainability reporting legislation exists also in Finland, Sweden, Belgium, the Netherlands and Germany for certain company categories, depending on size or sector of activity (Delbard, 2008). Sustainability reporting is an accountability framework in which firms communicate their social and environmental impact to stakeholders in addition to their financial performance, rather than solely focusing on generating profit, otherwise referred to as the standard single bottom line.

#### **Environmental Sustainability Reporting**

Environmental sustainability reporting is the subjection of self to accountability on the extent to which the reporting entity's business activities impact the equilibrium of the ecosystem. This includes information on legal provisions, regulation and environmental management practices within the regulatory framework, organisations who engage in environmental sustainability have also been observed to frequently showcase their consideration for the regenerative capacity of the environment by keeping harvest rates of renewable resource inputs within regenerative capacities of the natural system that generates them; keeping depletion rates of nonrenewable resource inputs below the rate at which renewable substitutes are developed (Goodland, 1995).

#### **Social Sustainability Reporting**

This is the process of communicating the social effects of organizations' economic actions to particular interest groups within society and to society at large. It is the subjection of self to accountability by firms in their endeavor to appraise how responsibly, fairly and equitably their engagement of workers is, within a specified period of time. Social sustainability report is a periodical (usually annual) report published by companies with the goal of sharing their environmental, social and economic actions and results. The report synthesizes and makes public the information organizations decide to communicate regarding their commitments and actions in social and environmental areas. By doing so, organizations let stakeholders

(i.e., all parties interested in their activities) aware of how they are integrating the principles of sustainable development into their everyday operations. Hence, social sustainability is the voluntary subjection of self to accountability on the extent to which the reporting entity's activities impact the equilibrium of the socio-economic system; social justice and ethics; The main intention of a social sustainability report is to improve transparency in how the reporting entity's activities impact social equilibrium.

### **Economic Sustainability Reporting**

This is the subjection of self to practices that support long term economic growth without negatively impacting social, environmental and cultural aspects of the community. Long-term economic sustainability concerns the present and future value of natural resources, like drinking water, as well as products, investments, consumption, markets and the global economy (Bromley, 2008). Sustainability concerns the specification of a set of actions to be taken by present persons that will not diminish the prospects of future persons to enjoy levels of consumption, wealth, utility, or welfare comparable to those enjoyed by present persons Economic sustainability plays a crucial role in facilitating sustainable development by identifying options and alternatives for more effective natural resource management (Munasinghe, 1993)

### **Going-Concern**

Going concern concept is an accounting notion that states that a business entity will continue to function in the foreseeable future without being liquidated or otherwise forced to discontinue operations due to distressful circumstances. IAS 1 explains going concern by stating that financial statements are prepared on a going concern basis "unless management either intends to liquidate the entity or to cease trading, or has no realistic alternative but to do so. Going concern is one of the very fundamental principles of accounting. It assumes that the entity will continue to remain in business for the foreseeable future. All assets are depreciated and amortized as appropriate, with the same idea that the business will continue to operate without any significant information to the contrary, it is always assumed that the entity will be able to meet its entire obligation without significant debt restructuring and continue to be a going concern entity. The valuation of a company is important from the shareholders' and investors' perspective. In general, all companies are run with a going concern assumption and, hence, projections and, more importantly, business plans are made considering what should be the next action plan. Liquidation value, on the other hand, is relevant to a situation where the company becomes insolvent and is unable to pay its bills. An insolvent company may choose to sell its assets one by one or all of its assets together. The value received from the sale is usually the asset's market value, less sale expenses. Liquidation value is very important for creditors and stakeholders, who would be paid out of this money.

### **Audit Opinion**

Audit opinion is a going concern audit opinion issued by the auditor to evaluate whether there is doubt about the ability of the entity to maintain its survival. The going concern audit opinion is an opinion issued by the auditor to ascertain whether the company can maintain its viability..Once an auditor examines a company's financial statements to see if the operating conditions of the entity are suitable for the long-term continuity of the business, they will issue a certificate accordingly in the form of an opinion known as going-concern opinion. Some of the conditions that create substantial doubts for the principle of going concern are defaults on loans, lawsuits, company plans to declare bankruptcy, continued losses year over year, etc. Analysis of determinants of going concern and audit report of manufacturing company was conducted by Oni and Desi (2006) in Indonesia. He tested its relationship with

financial ratios and two new variables, audit committee and size of an audit firm. Each of these measures represents a different aspect of financial health, from liquidity to profitability to solvency and cash flow. The financial ratios used in this study are: current ratio, net income before taxes/net sales ratio, total debt to total equity, cash flow to total debt. Based on their findings and discussions, they came to the conclusion that a company's liquidity, profitability, operational cash flow, and the existence of an audit committee had no bearing on the auditor's decision to issue a going concern audit opinion.

### **Empirical Review**

Endiramurti, Rosadi, and Probohudono (2019) studied Going Concern Company and its Relation to Sustainability Report Disclosure of the studied companies. Findings of the study showed that going concern audit opinion and firm characteristics assessed through firm size and age had significant influence on sustainability report disclosure. This indicates that the larger and longer the company stands, the company will present the sustainability reporting more fully. Further findings showed that complete presentation of sustainability reporting is one of the important factors used by the auditor in determining going concern opinion in its report.

Al-Dhaimesh and Al Zobi (2019) in a related study, examine the influence of sustainability reporting on financial performance of Jordanian banks from 2013- 2017. Findings from data analysis indicate that economic reporting, environmental reporting and social reporting have a significant influence over financial performance of banks in Jordan. Further breakdown of the result reveals that economic and social reporting positively influence financial performance while environmental reporting affects financial performance negatively.

In another study in Nigeria, Erhinyoja and Marcella (2019) investigate how social sustainability reporting affects financial performance of listed oil and gas companies. The result of regression analysis reveals that financial performance of oil and gas firms is negatively and insignificantly influenced by social sustainability reporting of oil and gas companies from Nigeria.

Javed, Shah and Rahman (2020) investigated the effect of sustainability reporting in prevention of bankruptcy while considering role of board independence in manufacturing sector of Pakistan and Australia, data of 50 publicly listed manufacturing companies from Australia and Pakistan was collected for 2005 to 2018 on factors of corporate social responsibility, bankruptcy and board independence. The findings of the study revealed that bankruptcy is not significantly affected by the CSR contribution of manufacturing companies from developing and developed country. i.e. Pakistan and Australia.

Paskah and Irine (2014) examined the effect of sustainability reporting disclosure on the company's financial performance. The study sample was taken from quoted Indonesian manufacturing firms that publish sustainability reports. Data were sourced from annual reports and sustainability reports of the firms. Linear regression was used in analysing the study data. Findings showed that sustainability reporting positively influences financial performance of the sample firms.

### **Research Methodology**

This study adopts ex post facto as well as descriptive research design using panel data for 16 years (2006-2021) period of study. This type of research design is used where the phenomenon under investigation has already taken place. The study investigates the relationship between sustainability reporting and going concern of quoted oil and gas

companies in Nigeria. The Ex-post facto research design was adopted for this study, this is because the required data cannot be easily manipulated because they have already existed. According to Kerlinger (1986), two strategies are utilized in social science research: observing a current condition or state of things and searching back in time for plausible contributing variables. Archival data are consulted in ex-post facto research. Given that the primary objective of this study was to ascertain the association between two or more variables, this design was chosen. The secondary data was obtained from audited annual financial report of quoted oil and gas companies in Nigeria from 2006 -2021. The study population includes all oil and gas companies quoted on the Nigerian Stock Exchange (NSE) as of December 2021. There are ten (10) companies under the category of oil and gas sector. The method of data analysis was done in three phases with the help of E-view 10 econometrics statistical software. Phase one of the analysis entails univariate analysis, in which data are analyzed totally descriptively to determine the specific details of the data set, utilizing measures of central tendency, the mean, median mode, standard deviation, skewness, kurtosis, jarque-bera probability value and the to the extent possible, the dynamic properties of each variable, particularly the dependent variables. The second phase of the analysis is bivariate. Multivariate analysis is the final of the three phases of analysis. Regression methods were used for this analysis. Panel least square regression method was used for the analysis and these methods are considered must appropriate and sufficient to improve the relationship predictive accuracy as well as to determine the cause-effect relationship between variables than any other statistical techniques.

### Model Specification

The purpose of this research is to estimate the relationship between sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria.

#### Functional Relationship

$$\text{AUDO} = f(\text{ENV}, \text{SOC}, \text{ECO}) \quad \text{Equation 1(a)}$$

$$\text{AUDO} = f(\text{ENV}, \text{SOC}, \text{ECO}) \quad \text{Equation 1(d)}$$

#### Model Specification

$$\text{GOC} = \alpha_0 + \alpha_1 \text{SUR} + \varepsilon_{it} \quad \text{Model 2}$$

$$\text{AUDO}_{it} = \beta_0 + \beta_1 \text{ENVS}_{it} + \beta_2 \text{SOC}_{it} + \beta_3 \text{ECO}_{it} + \varepsilon_{it} \quad \text{Model 2(a)}$$

To evaluate the moderating impact of the contextual factor, interaction terms were formulated by multiplying the moderator variable to each of the original independent variables as follows

$$\text{AUDO}_{it} = \beta_0 + \beta_1 \text{ENVS}_{it} + \beta_2 \text{SOC}_{it} + \beta_3 \text{ECO}_{it} + \varepsilon_{it} \quad \text{Model 3(a)}$$

Where

AUDO=	Audit Opinion
ENV =	Environmental Sustainability
SOC =	Social Sustainability
ECO =	Economic Sustainability
SUR =	Sustainability Reporting
$it_1 - it_4 =$	Slope
$\beta_1 - \beta_4 =$	Regression Coefficient
$\beta_0 =$	Regression Constant
$\varepsilon_{it} =$	Error Term



## Data Analysis and Presentation

**Table 4.1: Descriptive Statistics**

	ENV	SOC	ECO	AUDO
Mean	0.022368	0.552083	0.004375	0.020833
Median	0.000000	0.500000	0.010000	0.000000
Maximum	0.250000	1.000000	1.710000	1.000000
Minimum	0.000000	0.250000	-0.780000	0.000000
Std. Dev.	0.051503	0.181067	0.240704	0.143576
Skewness	2.123546	0.333837	3.339584	6.709790
Kurtosis	6.675859	3.048254	29.92726	46.02128
Jarque-Bera	124.8843	1.792464	3078.754	8123.661
Probability	0.000000	0.408104	0.000000	0.000000
Sum	2.125000	53.00000	0.420000	2.000000
Sum Sq. Dev.	0.249342	3.114583	5.504162	1.958333
Observations	95	96	96	96

**Source: E-view Extract 2022**

Table 4.1 explained the descriptive statistics such as mean, median, maximum, standard deviation, skewness, kurtosis, Jarque bera and probability of all variables adopted for the study such environmental sustainability reporting, social sustainability reporting, economic sustainability reporting leverage and audit opinion. Regression Output of the Joint Impact of environmental sustainability reporting, social sustainability reporting, economic sustainability reporting on audit opinion.

### Panel Regression Model Determination

The panel pooled ordinary least square, the panel fixed effect, and the panel random effect models were the three models used for this study. It is crucial to choose the model that fits the data the best. To choose or assess which of the three models is best, the study used the Redundant Fixed Effect Test (also known as the likelihood ratio test) and the Hausman specification test.

### Test of multivariate Analysis on Audit Opinion Model One

- H<sub>01</sub>:** There is no significant relationship between environmental sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria
- H<sub>02</sub>:** There is no significant relationship between social sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria
- H<sub>03</sub>:** There is no significant relationship between economic sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria.

In chapter three, section 3.8 of this thesis, the background of the equation for AUDO has been developed and presented, where the multivariate equation of AUDO is as expressed by equation as the model to be subjected to test and it is presented as follows:

$$AUDO_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 ECO_{it} + \varepsilon_{it} \text{ Model 1(a)}$$

The result from regression based on panel Least Squares (OLS) is as presented below

**Table 4.2: Pooled Effect Ordinary Least Square for Audit Opinion Model One**

Dependent Variable: AUDO  
 Method: Panel Least Squares  
 Sample (adjusted): 2007 2021  
 Periods included: 15  
 Cross-sections included: 6  
 Total panel (balanced) observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.029803	0.035237	0.845798	0.4000
ENV	-0.029896	0.210318	-0.142147	0.8873
SOC	-0.040810	0.063701	-0.640650	0.5235
ECO	-0.358174	0.047591	-7.526151	0.0000
AUDO(-1)	0.723415	0.079367	9.114779	0.0000
R-squared	0.552513	Mean dependent var		0.022222
Adjusted R-squared	0.531454	S.D. dependent var		0.148231
S.E. of regression	0.101465	Akaike info criterion		-1.684254
Sum squared resid	0.875086	Schwarz criterion		-1.545376
Log likelihood	80.79144	Hannan-Quinn criter.		-1.628250
F-statistic	26.23738	Durbin-Watson stat		2.241744
Prob(F-statistic)	0.000000			

**Table 4.3: Fixed Effect Ordinary Least Square for Audit Opinion Model One**

Dependent Variable: AUDO  
 Method: Panel Least Squares  
 Sample (adjusted): 2007 2021  
 Periods included: 15  
 Cross-sections included: 6  
 Total panel (balanced) observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.017106	0.038332	0.446244	0.6566
ENV	0.049072	0.308953	0.158834	0.8742
SOC	-0.019992	0.068159	-0.293315	0.7700
ECO	-0.354913	0.049363	-7.189927	0.0000
AUDO(-1)	0.692165	0.086873	7.967515	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.561930	Mean dependent var		0.022222
Adjusted R-squared	0.512647	S.D. dependent var		0.148231
S.E. of regression	0.103481	Akaike info criterion		-1.594413
Sum squared resid	0.856670	Schwarz criterion		-1.316656
Log likelihood	81.74858	Hannan-Quinn criter.		-1.482405
F-statistic	11.40214	Durbin-Watson stat		2.234570
Prob(F-statistic)	0.000000			

Panel data analyses for describing the pool effect and fixed tests to find the best fit for model are shown in Tables 4.1 and 4.2. In order to accomplish this goal, we used the redundant fixed effect or the likelihood effect test to compare the pooled effect test and the unpooled effect test (fixed effect and random effect). The redundant fixed effect test states that the pool effect is most appropriate for the model if the cross section random probability value is greater than 0.05 significant level, but the fixed effect model is appropriate if the cross section probability value is less than 0.05 significant level. We therefore go on to choose the Redundant Fixed effect test between the pool effect and the fixed effect that best fits and is appropriate for the model.

**Table 4.4: Redundant Fixed Effect Test for Audit Opinion Model Two(a)**

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.343959	(5,80)	0.8847
Cross-section Chi-square	1.914266	5	0.8609

Cross-section fixed effects test equation:

Dependent Variable: AUDO

Method: Panel Least Squares

Date: 08/21/22 Time: 04:47

Sample (adjusted): 2007 2021

Periods included: 15

Cross-sections included: 6

Total panel (balanced) observations: 90

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	0.029803	0.035237	0.845798	0.4000
ENV	-0.029896	0.210318	-0.142147	0.8873
SOC	-0.040810	0.063701	-0.640650	0.5235
ECO	-0.358174	0.047591	-7.526151	0.0000
AUDO(-1)	0.723415	0.079367	9.114779	0.0000
R-squared	0.552513	Mean dependent var	0.022222	
Adjusted R-squared	0.531454	S.D. dependent var	0.148231	
S.E. of regression	0.101465	Akaike info criterion	1.684254	
Sum squared resid	0.875086	Schwarz criterion	1.545376	
Log likelihood	80.79144	Hannan-Quinn	-	
F-statistic	26.23738	critier.	1.628250	
Prob(F-statistic)	0.000000	Durbin-Watson stat	2.241744	

The cross section F and chi-square statistics show 0.343959 and 1.914266 with probability values of 0.8847 and 0.8609, respectively, which are greater than 0.05 significant level, based on the results of our Redundant Fixed Effect Test (Likelihood Test). The results imply that the cross-sectional heterogeneity (differences in organisational culture, philosophy, and product line) can be managed as they are under same regulatory agencies with same standardization therefore the pool effect test should be used instead of the fixed effect test because the differences between the sampled companies are likely to be related to the fact that they are all part of the same industry and are subject to the same laws and regulations. The results also strongly reject the fixed effect test and accept the pooled effect test. We therefore conclude that pool effect test is most appropriate for our model Therefore, every conceivable metric of reliability and validity that is applicable to the analytical instrument used has so far indicated reasonable degree of assurance that the estimated coefficients are valid, at least at 5% level of significance. We can therefore draw conclusions on the basis of the foregoing analysis as follows: and proceed to estimate equation and decide as follows:

$$AUDO_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 ECO_{it} + \varepsilon_{it}$$

$$AUDO = 0.0298 - 0.0299ENV - 0.0408 SOC - 0.3582ECO$$

**Table 4.6: Synopsis of Hypothesis Result**

Null Hypothesis	Bivariate	Coefficient	Multivariate	Decision
<b>H<sub>01</sub>:</b> There is no significant relationship between environmental sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria	0.54 *	-0.029896	0.89 *	Accepted
<b>H<sub>02</sub>:</b> There is no significant relationship between social sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria	0.16 *	-0.040810	0.52 *	Accepted
<b>H<sub>03</sub>:</b> There is no significant relationship between economic sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria	0.00***	-0.358174	0.00***	Rejected

The essence of the formulated hypothesis one was to test the relationship between environmental sustainability reporting and audit opinion of quoted oil and gas companies in Nigeria, the result of the ordinary least square regression through panel data showed that environmental sustainability reporting had a negative and insignificant relationship with audit opinion which was established by our result that showed a negative coefficient of 0.029896 with a probability value of 0.89 which is greater than 0.05 significant level. This study is in line with our apriori expectation of negative relation, in that as companies comply with environmental sustainability reporting requirements, it will attract proportionate patronage to cushion the effect of whatever cost they might have incurred in the course of their compliance with sustainability reporting, this proportionate patronage comes from investors who believed that companies who have reported additional information in form of environmental sustainability must have added value and an assurance of its going concern thereby meriting unqualified audit opinion. This can be interpreted that environmental sustainability reporting is negatively associated with audit opinion. In other words, increasing report of environmental sustainability reporting is associated with reduction in the issuance of

audit opinion. Therefore in general, environmental sustainability reporting can be said to associate negatively with audit opinion as predicted by the inspired confidence theory.

### **Conclusion**

The study produced empirical evidence on the potency of sustainability reporting in predicting audit opinion of quoted oil and gas companies in Nigeria. The study outcome revealed that of the three components of sustainability reporting, environmental and social sustainability reporting have negative and insignificant relationships with audit opinion while economic sustainability reporting has negative but significant relationship with audit of quoted oil and gas companies in Nigeria.

### **Recommendation**

Oil and gas companies should embrace ethical and responsible way of tapping and utilizing human resources in the course of its business activities as this will improve the growth and survival of their businesses. This study serves as a wakeup call for auditors to their social responsibility knowing that by withholding qualified audit opinion, companies are misled into thinking that their impact on the environment are sustainable and investors are misled into investing their funds in companies that have going concern issues. Nigeria's regulatory agencies, such as the Corporate Affairs Commission and other legislative agencies should enact legislation that encourages compulsory sustainability reporting. Furthermore, it is the recommendation of this study that conflict prevention budget will have to constitute a high percentage of the oil and gas companies' total budget to give them weight to promptly attend to the demands and expectations of the stakeholders as regards sustainability reporting in order to uphold the going concern status of the business and avoid issuance of audit opinion.

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