Environmental Disclosure, Audit and Financial Performance of Listed Oil and Gas Companies in Nigeria.

Erinoso, O. Mary¹, Oyedokun, E. Godwin¹

1. Lead City University, Ibadan, Nigeria.

Corresponding Author: godwin.oyedokun@lcu.edu.ng

Abstract

This study investigated the effect of environmental disclosure and audit on the financial performance of listed oil and gas companies on the Nigerian Stock Exchange as of 31st December 2020, spanning from 2011-2020. The study adopted ex-post facto research design a sample of 11 companies were selected out of the 13 listed oil and gas companies on the Nigeria Stock Exchange. Panel data regression was used to analyze the effect of environmental disclosure and environmental audit on financial performance and the result of the analysis showed that environmental disclosure has a significant effect on returns on assets (ROA), Profits After Tax (PAT) and returns on equity (ROE) of listed oil and gas companies in Nigeria and environmental Audit has no significant effect on returns on assets (ROA) and Profits After Tax (PAT), but it significantly affects the returns on equity (ROE of listed oil and gas companies in Nigeria). It was then concluded that environmental disclosure and audit improves the financial performance of the selected oil and gas companies. The study implored the oil and gas companies to develop and implement environmentally friendly policies to increase their profitability.

Cite as: Erinoso, M. O., Oyedokun, G. E. (2022). Environmental disclosure, audit and financial performance of listed oil and gas companies in Nigeria. African Economic and Management Review (AEMR), 2(3), 1-10

1. Introduction

In recent years, growing numbers of researchers and practitioners have shown interest in the study of environmental disclosure and its significance is rising in light of how the evolution of the economy is changing the type of information disclosed by organizations and required by their stakeholders. Ismail and Rahman (2016) opined that corporate leaders should emphasize the quality of the environmental information disclosed and not just disclose environmental information, which can be seen as a key value and benefit to businesses. Many businesses accept responsibility for their environmental effects. Companies play many important roles in the economic growth of any country, and frequently, their economic activities cause great
discomfort to the areas in which they are located. Their actions impose significant health risks that regularly result in social conflicts, disruptions of business operations, and performance issues (Okegbe & Ofurum, 2019).

Environmental accounting is a broad field of accounting that provides reports for internal and external use. For internal use, environmental accounting provides environmental information to management to assist with pricing decisions, overhead controlling, and capital budgeting. For external use, environmental accounting discloses environmental information to the financial sector and the general public (Beredugo & Mefor, 2012). According to Emeakponuoz and Udih (2015), environmental disclosure is an evolving issue in developing countries such as Nigeria, with companies revealing various aspects of environmental issues and varying in their method of reporting, resulting in a lack of comparison. Companies have begun to verify this information to upsurge the reliability of environmental reporting and to strengthen the integrity of environmental information dispersed to all stakeholders (Gillet-Monjarret & Riviere-Giordano, 2017).

The most common form of environmental auditing involves examining the reliability of the reporting scheme and the accurateness of the information about specific evidence or the significance and completeness of the information considering the company’s or the stakeholders’ objectives (Braam & Peeters, 2018).

According to Farrukh and Faizan (2016), the term performance comes from the old French word "parfournir," which means "to carry out, bring forth, or bring through." The concept of "performance" has been viewed from a variety of perspectives. Nwaimo (2020) stated that performance is equivalent to the famous 3E’s (economy, effectiveness, and efficiency) of a certain program. An economy involves the evaluation, comparison, and assessment of managerial practices, procedures, and policies. Effectiveness warrants that the output from any given activity is yielding the desired results while efficiency ensures that the maximum useful output is derived from the resources dedicated to each activity.

The operations of the corporate sector in Nigeria are to blame for the severe environmental pollution that exists there. Nigeria has been named as one of these nations, with a high level of environmental pollution that significantly contributes to the global environmental issues that lead to pollution, oil spills, gas flare-ups, and deforestation. Nigeria has experienced numerous oil spills, and the resulting environmental degradation has led to intense conflict between the local population and the multinational oil companies that operate in those regions. According to the Federal Environmental Protection Agency (FEPA) Act, pollution is defined as an alteration of the physical, biological, or chemical quality of the environment that is caused by or assisted by humans and is harmful to the environment. To control environmental problems in Nigeria, various laws and regulations were enacted, including the National Environment Standards and Regulations Enforcement Agency (NESREA) Act in 2007, National Oil Spill, Detection and Response Agency Act 2006, Harmful Waste (Special Criminal Provisions, etc.) Act (Cap H1 LFN 2004, Environmental Impact Assessment Act (Cap E12 LFN 2004) and other regulations that could protect the environment and its national resources. With the help of these laws and regulations, companies are expected to act responsibly and with diligence by reducing the harm that their operations cause to the environment and society at large.

The pollution's impact on the environment due to the operations of oil and gas companies brought about global debates on climate change, global warming, renewable energy, mitigation, and how the environmental performance of oil and gas companies directly or indirectly affects their financial performance (Bassey, Effiok & Eton, 2013). Oil leakage, air pollution, water pollution, and land degradation occur in Nigeria as a result of crude oil refining and pipeline vandalism, which are exploration and exploitation operations. These are detrimental to agricultural production and agro-related goods. This has been viewed as a significant concern for the oil and gas industry as well as the communities where they are located. The costs of avoiding multiple threats have become extremely expensive, which will have an impact on the financial performance of the oil and gas companies in Nigeria in the future. Additionally, Nigeria’s ineffective environmental laws have raised concerns due to the nation’s dissatisfactory environmental performance, which has a negative financial impact on the oil and gas industry. Therefore, the study examined the environmental accounting disclosure and financial performance of listed oil and gas companies in Nigeria with specific objectives:

i. investigate the effect of environmental disclosure on the financial performance of listed oil and gas companies in Nigeria

ii. Determine the impact of environmental audits on the financial performance of listed oil and gas companies in Nigeria.

2. Review of Related Literature
2.1 Environmental Disclosure

Environmental Disclosure is a type of environmental information owned by a corporation that is disclosed in the firm's annual financial report, with the existence or absence of annual report disclosures depending on company policy. The Association of Chartered and Certified Accountants (ACCA) defined environmental disclosures as a combination of narratives, objectives, explanations, and numerical data, including the level of pollution, resources ingested for a particular accounting period, and the impact of a company on the environment. Environmental disclosure is a practical statement that defines companies' environmental actions and responsibility, which also includes the company's goals, environmental policies, and impacts that are regularly published to the public (Ong, Tho, Goh, Thai, & Theh, 2016). Companies that make environmental disclosures are government parties that can know and foresee environmental damage by reading a company's environmental disclosure and have the benefit of assisting the community in having environmental awareness in choosing a product from an organisation that cares for the environment (Ida & Gerianta, 2017).

Environmental disclosure includes disclosing the effects of a company's operations on the environment, including waste management, recycling, carbon management, emission control, pollution control, and wildlife conservation (Gatimbu & Wabwire, 2016). Norhasimah, (2016) maintained that Environmental disclosure places a strong emphasis on disclosing the involvement of organizations in environmental activities to draw investors and satisfy stakeholder demands. Ong, Tho, Goh, Thai, and Theh, (2016) identified two main types of environmental disclosures. Which are: Mandatory and voluntary disclosure. In many countries, including Nigeria, environmental disclosure is still voluntarily reported without any legal or regulatory requirements.

Environmental disclosure is the process through which businesses often disclose environmental information to their stakeholders in order to demonstrate accountability for their operations and the environmental damage they cause (Lodhia, 2005). Olayinka and Oluwamayuwua, (2014) posited that environmental disclosure is the term used to describe the various ways in which organizations disclose information about their environmental activities to different users of financial statements. Environmental disclosure of an organization is not yet required for each company, but the manager in an agency or the organization management will always try to disclose information about the company's environmental management which will be disclosed by the company. As a result, when an organization's environmental disclosure occurs, it will provide value to the organization in the future (Pahuja, 2019).

2.2 Environmental Audit

An environmental audit is a process that quantifies a company's environmental performance and position. It is an independent third-party assessment of an organization's current compliance with local environmental laws and regulations (Irwansyah, 2017). An environmental audit is defined under the Environmental Protection Act (EPA) as a systematic, recorded, periodic, and objective evaluation of a regulated entity's facility operations and procedures related to meeting environmental standards. Additionally, the International Chamber of Commerce (ICC) provides the following more thorough definition of environmental audits as follows: it is a management tool that includes a systematic, documented, regular, and unbiased assessment of the effectiveness of the environmental organization, management, and equipment with the goals of facilitating organization control of environmental practices, shaping compliance with company policies, which includes matching regulatory requirements and protecting the environment. Relevant to the significance and role of the environmental audit, many organizations are already trying to find a way to turn this threat into an opportunity by incorporating improved environmental performance into their operations and their products (Miltö, 2017). They aim to convert liability "fear factors" into business opportunities by disclosing publicly their work.

To make sure that the organization doesn't engage in actions that have an adverse impact on the environment, the audit task is carried out by a neutral party who collects the necessary evidence and evaluates it. It is also known as evaluating the environmental impact of an organization's operations in accordance with approved standards, indicating the cost if possible, and assessing the results of incorporating national and local policies, plans, and programmes in the field of environmental protection and improvement (Izat, 2019). According to Yusoff, (2013), an Environmental audit is also seen as a management tool in the environmental management system (EMS) to inform stakeholders and users about how well an organization complies with environmental laws and regulations.

2.3 Financial Performance

Financial performance is a subjective assessment of an organization's capacity to create revenue by utilizing assets from its principal mode of operations. It demonstrates a company's overall health as well as its true financial position. An organization's financial performance can be viewed as its current level of performance. It can be quantified using Asset utilization
or overall profits and losses. Solomon (2020) defined financial performance as the extent to which financial goals have been met. It assesses a company's financial performance and overall financial health over a given period. Financial performance is evaluated to provide the shareholders with an account of the stewardship of management teams. Measuring organization profitability, market value, and growth prospects is crucial in this regard. Accounting-based measures look at the nature of the connection between a social performance indicator (such as reputation, the disclosure of social information, environmental behavior, etc.) and the financial performance of the company as determined by accounting data such as the historical audited financial statements of the relevant companies (Zeng, Xu, Yin & Tam, 2012).

The metrics used to assess an organization's financial performance are as diverse as the goals behind them. The management team's stewardship is reported to the shareholders through the organization's financial performance (Iliemena & Okolocha, 2019). The investigation of the nature of the relationship between some indicators of environmental reporting or performance and the company's financial performance obtained from accounting information such as the respective companies' historical audited financial statements is the measurement of the effect of environmental accounting on performance. According to Magara, Aming, and Momanyi (2015), financial performance can be assessed in a many of ways, including profitability, market share expansion, return on investment, liquidity, and return on equity.

2.4 Theoretical Framework

The study is premised on the legitimacy theory which was developed by Dowling and Pf effer in 1975. It evolved from the definition of organizational legitimacy, which is described as a theory that postulates that organizations consistently strive to make sure that they function within the constraints and standards of their respective societies. Legitimacy theory is ideal for assuming that business operations fit within some socially constructed system of values and norms. In other words, if a business wants to be taken seriously by the community, it must abide by a few social norms (Bassey, Effiok & Eton, 2013).

According to the legitimacy theory, the strength of societal and political constraints on a company's environmental performance influences environmental disclosure (Cho & Patten 2007). This is so that legitimacy can ensure the long-term viability of the business. Legitimacy theory believes that companies with worse environmental performance ought to be required to make more thorough compensating or beneficial environmental disclosures in their financial reports (Van de Burgwal, & Vieira, 2014). The four levels of legitimacy identified by Bassey, Effiok and Eton (2013) are creating legitimacy, preserving legitimacy, extending legitimacy, and protecting legitimacy. The legitimacy theory is required to explain social actions and the disclosure of the company's surroundings in order to satisfy their social contract. Environmental disclosure information is also a way for businesses to be transparent about their environmental activities. It also demonstrates their concern for their stakeholders and their responsibility for protecting the environment, which will help the company build good legitimacy.

This theory is relevant to the study because it motivates and maintains oil and gas companies to follow environmental laws to maintain environmental standards by preventing pollution and cleaning up waste, creating a favorable business environment, and preserving good relations between the government, environmental activists, and neighbourhood organizations.

2.5 Empirical Review

Uniamikogbo and Ifeanyichukwu (2021) investigated the correlation between environmental accounting disclosure and the financial performance of Nigerian manufacturing firms. Specifically, the study investigated the impact of environmental accounting disclosures on the share price, return on asset, and return on equity of selected Nigerian manufacturing firms. This study employed the ex-post-facto research design, with a sample of 40 manufacturing firms. The convenience sampling technique was used to collect data from a secondary source. Data were acquired from the content analysis disclosure index and corporate annual reports of the sampled manufacturing enterprises listed on the Nigerian Stock Exchange for the fiscal years 2010-2019. The study’s statistical techniques included descriptive statistics, a correlation matrix, and regression analysis. The panel data regression technique was used to analyse the data. Environmental accounting disclosures had a significant effect on the share price, return on asset, and return on equity of Nigerian manufacturing enterprises, according to the research.

Nkwoji (2021) analyzes the influence of environmental accounting on the profitability of oil and gas companies in Nigeria was conducted spanning from 2012-2017. The correlational, historical and explanatory design was adopted using secondary data collected from annual reports and accounts of the selected companies. The regression analysis indicated an insignificant relationship between the environmental cost and net
profit of Nigerian Stock Exchange-listed oil and gas companies.

**Marwa, Salhi, and Jabou (2020)** investigated the relationship between environmental auditing and the quality of environmental disclosure as evaluated by voluntary and timely disclosure. Using a multiple theory framework, the study examined 81 French non-financial companies listed on the SBF 120 index from 2012 to 2017. It discovered a positive and significant relationship between the level of voluntary disclosure of environmental information and the environmental audit committee, debt levels, firm size, the environmental auditor's BIG 4, earnings management, and the industry. Furthermore, findings indicate that the environmental audit committee, the environmental auditor's BIG 4, CSR committee, earnings management, business size, and industry all influence environmental information disclosure. The regression study, on the other hand, found that there is no link between the CSR committee and the level of voluntary environmental disclosure.

**Omaliko, Nweze, and Nwadiolor (2020)** examined the effect of social and environmental disclosures on the performance of non-financial firms in Nigeria. An ex-post facto research design was employed for the study by utilizing data collected from the Nigeria Stock Exchange (NSE) Factbook and published annual financial reports of the entire 112 non-financial companies listed on the Nigeria Stock Exchange (NSE) with data covering from 2011 to 2018. According to the findings of the study, social and environmental disclosures have a significant positive impact on net asset per share (firm performance) over time. The study opined that companies should have a good mindset toward social and environmentally friendly practices.

**Ogoun and Ekpulu (2020)** conducted a study on how the environmental reporting of manufacturing companies in Nigeria affects their operational performance. The study utilized the panel research design to determine how environmental reporting improves firm operational performance in Nigeria (proxied by return on total assets). It also utilizes the Hausman test to choose the suitable model (the fixed-effect model), for the ten (10) years of study, which ran from 2009 to 2018 for manufacturing sector firm operational performance and environmental disclosure. The findings discovered that environmental reporting has a positive impact on a company's operational or financial performance.

**Alhassan and Anwarul-Islam (2019)** investigated the impact of environmental and social disclosures on the financial performance of oil and gas companies in Nigeria. Return on asset (ROA) is used as an indicator for financial performance and environmental and social disclosures as independent variables. The study employs a panel regression model to examine the estimates of the statistical parameter and develops two hypotheses to carry out the study. Data were gathered from the Nigeria Stock Exchange (NSE) Factbook as well as published financial statements of the oil and gas companies listed on the Nigeria Stock Exchange (NSE) spanning from 2010 to 2019 and Ex -Post facto design was utilized. According to the study's findings, corporate environmental and social disclosures have a 5% impact on company performance.

**Polycarp (2019)** studied Nigerian Oil and Gas Companies' Environmental Accounting and Financial Performance. The study relied on secondary data from 2015, 2016, and 2017, with a total of eleven (11) organisations sampled based on environmental information accessible in annual reports. Multiple regression analysis with an econometric model was utilized to evaluate the data. The overall amount spent by each oil company on environmental costs (water pollution, air pollution) employee welfare (medical expenses), community welfare, and externalities served as environmental accounting reporting indicators, while ROCE, NPM, DPS, and EPS represented as corporate performance indicators. The results show that the explanatory factors, ROCE, NPM, EPS, and DPS, have a negligible connection with ENVC.

**Erhinyoja and Marcella (2019)** conducted research on corporate social sustainability reporting and the financial performance of Nigeria's oil and gas industry. The study examines the impact of corporate social sustainability reporting on the returns on equity, assets, and capital employed of oil and gas businesses listed on the Nigeria Stock Exchange. The study sampled ten oil and gas companies and it make use of secondary information gathered through content analysis, individual company accounts, and financial ratios. The results demonstrated that social sustainability reporting has a detrimental impact on all three performance indicators, but only the impact on return on equity was significant statistically.

**Nwaiwu and Oluka (2018)** examines the environmental cost disclosure and financial performance of Nigerian oil and gas. This study empirically investigates the impact of environmental cost disclosure and financial performance measures on Nigerian listed oil and gas firms. Time series data were acquired from the Central Bank of Nigeria's annual financial reporting and economic review; Pearson product-moment coefficient of correlation and multiple linear regression analysis were performed using the special package for social sciences (SPSS) version 22.
The econometric findings show adequate environmental cost disclosure and compliance with corporate environmental rules have a positive significant effect on financial performance metrics. As a result, the study advised regulatory enforcement to ensure adequate environmental cost disclosure and reporting. The management of Nigerian oil and gas businesses should create a well-articulated environmental costing system to ensure a conflict-free corporate environment for increased corporate performance.

### 3. Methodology

The population of this study consists of all the thirteen (13) listed oil and gas companies on the Nigerian Stock Exchange as of the end of December 2020. The Census sampling technique was used to sample eleven (11) oil and gas companies out of thirteen (13) companies due to the unavailability of data for two (2) of the companies and the study span from 2011-2020 and the study adopted the ex-post facto research design. The study made use of secondary data from the annual report of the sampled companies, and it adopted content analysis as its research instrument and data was analyzed using panel regression. The study adopted and modified the model of [Uniamikogbo and Ifeanyichukwu (2021)](https://doi.org/10.53790/aemr.v2i3.66). The models were expressed in functional and econometric forms.

The regression model is represented as:

\[
\text{finPerf} = f(\text{EAD}) \quad \text{equation (1)}
\]

To write it in a more explicit functional equation, it becomes:

\[
\text{ROA}_i = \beta_0 + \beta_1 \text{Env. dis} + \beta_2 \text{audit} + \mu \quad \text{equation (2)}
\]

\[
\text{ROE}_i = \beta_0 + \beta_1 \text{Env. dis} + \beta_2 \text{audit} + \mu \quad \text{equation (3)}
\]

\[
\text{PAT}_i = \beta_0 + \beta_1 \text{Env. dis} + \beta_2 \text{audit} + \mu \quad \text{equation (4)}
\]

Where:

- ROA = Returns on Asset (Proxy for Financial performance)
- ROE = Returns on Equity (Proxy for Financial performance)
- PAT = Profit after Tax (Proxy for Financial performance)
- Env.dis = Environmental Disclosure
- Audit = Environmental Audit
- \(\mu\) = error term
- \(\beta\) = Constant

### 3.1 Data Analysis and Results

The data for the study comprises environmental accounting disclosure variables (Environmental Disclosure and Environmental Audit) and Financial Performance which is measured by (Return on Asset, Return on Equity, and Profit after tax).

| Table 1: Summary of Descriptive Statistics |
|------------------------------------------|
| ROA          | ROE          | PAT          | Environmental Disclosure | Environmental Audit |
| Mean         | 0.016063     | 1.6740       | 458042                   | 2.778947            |
| Median       | 0.0267       | 2.5711       | 145304                   | 0.0000              |
| Maximum      | 1.7626       | 176.2669     | 964160                   | 50.0000             |
| Minimum      | -0.7349      | -73.4942     | -1.8408                  | 0.0000              |
| Std. Dev.    | 0.2211       | 21.0771      | 265329                   | 10.0540             |
| Skewness     | 4.6064       | 4.6278       | -2.1473                  | 4.4166              |
| Kurtosis     | 43.73880     | 45.6787      | 27.5595                  | 20.93157            |
| Jarque-Bera  | 6905.426     | 8741.082     | 2849.071                 | 1581.624            |
| Probability  | 0.0000       | 0.000000     | 0.0000                   | 0.0000              |
| Sum          | 1.5259       | 184.1508     | 5.0408                   | 264.0000            |
| Sum Sq. Dev. | 4.5952       | 4842.86      | 7.6716                   | 9501.858            |
| Observations | 110          | 110          | 110                      | 110                 |

Source: Authors’ Computation from E-views (2022)

The descriptive statistics of every variable used in the study are shown in Table 1, and it is clear from the findings that every variable's reported mean value was positive. This suggests that for the majority of the studied years, all of the variables used have shown an increasing trend.
The maximum value for Return on Assets (ROA) during the period under study was 1.7626 while the minimum, which is the lowest -0.7349, indicating that the returns on assets were decreasing at some point for some of the firms in the gas sector. The mean for PAT and ROE are 45804 and 1.6740 respectively, with kurtosis values higher than 3, to 27.559 and 45.678. The standard deviation for the Environmental disclosure is at 10.0540, with a mean at 2.778947 and kurtosis values of 20.93157, ROA (43.7388), Environmental Audit standard deviation at 357.8324, kurtosis value at 2.039962 and at 2.5 the normal distribution point, indicating that they are primarily grouped around their mean Furthermore, the Jarque-Bera probability of all variables with values less than the 5% level of significance (P 0.05) demonstrates a statistically significant deviation from normalcy, and the total observation is at 110.

Table 2: Regression Table between environmental disclosure, audit, and ROA

| Variable            | Coefficient | Standard Error | T-statistic | Prob.  |
|---------------------|-------------|----------------|-------------|--------|
| C                   | 17.06454    | 2.189673       | 7.793192    | 0.0000 |
| Environmental Audit| 0.211854    | 0.291038       | 0.727924    | 0.4796 |
| Environmental disclosure | 1.586902    | 0.851394       | 1.863868    | 0.0851 |
| R-squared           | 0.8767      | Durbin-Watson  | 2.3965      |        |
| Adjusted R²         | 0.7863      | F-statistic    | 9.4421      |        |
| Prob. (F-statistic) | 0.00182     |                |             |        |

Source: Authors’ Computation from E-views (2022)

The coefficient of Environmental Audit is positive, but insignificant with a coefficient of 0.2118, which implies that the financial performance increases by about 21% with a 1% increase in environmental auditing, same can be said of environmental disclosure having a coefficient of 1.586902.

Table 3: Regression Table between environmental disclosure, audit, and ROE

| Variable            | Coefficient | Standard Error | T-statistic | Prob.  |
|---------------------|-------------|----------------|-------------|--------|
| C                   | 7.0663      | 2.1896         | 3.2272      | 0.0000 |
| Environmental Audit| 0.0492      | 0.019732       | 3.24683     | 0.0204*|
| Environmental disclosure | 0.05132     | 0.023342       | 2.1986      | 0.0223*|
| R-squared           | 0.7496      |                |             |        |
| Adjusted R²         | 0.7268      |                |             |        |
| F-statistic         | 11.9822     |                |             |        |
| Prob. (F-statistic) | 0.0182      |                |             |        |
| Durbin-Watson stat  | 2.0184      |                |             |        |

Source: Authors’ Computation from E-views (2022)

It could be observed that the coefficient of Environmental Audit and Environmental disclosure are both significant with a coefficient of 0.04929 and 0.05132 respectively which implies that the ROE increases by about 4.9% and 5.1% respectively with a 1% increase in environmental auditing and disclosure.
Table 4: Regression Table between environmental disclosure, audit, and PAT

| Variable                  | Coefficient | Standard Error | T-statistic | Prob.  |
|---------------------------|-------------|----------------|-------------|--------|
| C                         | -0.038038   | 0.043308       | 2.185608    | 0.0478 |
| Environmental Audit       | 0.4305      | 0.266572       | 1.615280    | 0.1236 |
| Environmental disclosure  | 0.0125      | 0.0044         | 2.8409      | 0.0316*|
| R-squared                 | 0.8465      |                |             |        |
| Adjusted R²               | 0.8294      |                |             |        |
| F-statistic               | 3.0457      | Prob. (F-statistic) | 0.0272 |
| Durbin-Watson             | 2.0711      |                |             |        |

Source: Authors’ Computation from E-views (2022)

The coefficient of Environmental Audit is positive but insignificant with a coefficient of 0.04305 which implies that the Profit after Tax (PAT) increases by about 4.3% with a 1% increase in environmental auditing, while environmental disclosure significantly increases by 1.2%.

Table 5: Hausman Test

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. |
|--------------|-------------------|--------------|
| Cross-section random | 0.011590 | 3 |

The probability value here is 0.011590 which is less than 5% thereby we reject the null hypothesis and conclude that the fixed effects model is appropriate. Hence there is no need to run the random effect.

Discussion of Findings

The study examined the environmental disclosure, audit, and financial performance of oil and gas companies in Nigeria with the following results.

**Ho₁**: Environmental Audit has no significant effect on the financial performance of listed oil and gas companies in Nigeria

Decision rule: reject Ho₁, if prob. Value < 5%, otherwise accept

Environmental Audit has a positive relationship with financial performance, and its probability value is greater than 5% (prob. Value > 5%) at 0.4768, we hereby fail to reject the null hypothesis and conclude that Environmental Audit has no significant effect on returns on assets and Profits After Tax (PAT), but it significantly affects the returns on equity, this is because investors demand and appreciate the audit of environmental accounting, which improves the ethical investments and value of the firms, hence an improved financial performance of listed oil and gas companies in Nigeria. This finding is consistent with the findings of Izat (2019).

**Ho₂**: Environmental disclosure does not have any significant effect on the financial performance of listed oil and gas companies in Nigeria.

Decision rule: reject Ho₁, if prob. Value < 5%, otherwise accept

Environmental disclosure has a positive relationship with financial performance, and its probability value is greater than 5% (prob. Value < 5%) at 0.0085, the study hereby rejects the null hypothesis and conclude that Environmental disclosure has a significant effect on the financial performance of listed oil and gas companies in Nigeria. The findings are consistent with the finding of Nkwoji (2021), Uniamikogbo and Ifeanyichukwu (2021), and Polycarp (2019).

Conclusion and Recommendations

The purpose of this study is to investigate the environmental disclosure, audit, and financial performance of Nigerian oil and gas companies. Panel regression analysis was used to determine the effect of environmental disclosure and environmental audit on financial performance as measured by Return on Asset, Return on Equity, and profit after tax. From the findings, the study concludes that environmental disclosure has a significant effect on returns on assets (ROA), Profits After Tax (PAT) and returns on equity (ROE) of listed...
oil and gas companies in Nigeria and environmental Audit has no significant effect on returns on assets (ROA) and Profits After Tax (PAT), but it significantly affects the returns on equity (ROE) of listed oil and gas companies in Nigeria.

Based on the findings, the study recommends the following:
1. Oil and gas companies should develop and implement environmentally friendly policies to increase their profitability, which will lead to high corporate performance.
2. Uniform reporting and disclosure standards of environmental issues should be implemented for control and measurement of performance.
3. Companies should offer suitable environmental auditing tools that inform auditors of environmental factors that essentially impact financial statements to familiarize them with the environmental law and regulations.
4. The disclosure of environmental information in the annual reports should be given priority by the management of oil and gas companies.

Reference

Alhassan, I. & Anwarul-Islam, K. M. (2019). The Impact of Environmental and Social Disclosures on the Financial Performance of Oil and Gas Companies in Nigeria. The Millennium University Journal, 4(1), 33-44.

Bassey, B.E., Effiok, S.O. and & Efion, O.E. (2013). The Impact of Environmental Accounting and Reporting on Organizational Performance of Selected Oil and Gas Companies in Niger-Delta of Nigeria, Research Journal of Finance and Accounting, 4(3), 57-73.

Beredugo, S. B. & Mefer, I. P. (2012). The impact of environmental accounting and reporting on sustainability development in Nigeria. Research Journal of Finance and Accounting, 3 (7), 55-63.

Braam, G. and Peeters, R., (2018). Corporate sustainability performance and assurance on sustainability reports: Diffusion of accounting practices in the realm of sustainable development. Corporate Social Responsibility and Environmental Management, 25(2), 164-181.

Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. Accounting, Organizations and Society, 32(7–8), 639–647.

Emekponuzo, D. E., & Udih, M. (2015). Environmental accounting practices by corporate firms in emerging economies: Empirical evidence from Nigeria. Advances in Research, 3(2), 209-220.

Erhinyoja, E. F. & Marcella, E. C. (2019), corporate social sustainability reporting and financial performance of oil and gas industry in Nigeria. International Journal of Accounting, Finance and Risk Management, 4(2), 2019, 44–60.

Farrukh, I. & Faizan, N. (2016). Financial performance of firms: Evidence from Pakistan cement industry. Journal of Teaching and Education, 5(1), 81-94.

Gatimbu, K. K., & Wabwire, J. M. (2016). Effect of corporate environmental disclosure on financial performance of firms listed at Nairobi Securities Exchange, Kenya. International Journal of Sustainability Management and Information Technologies, 2(1), 1 - 6.

Gillet-Monjarret, C., and Riviere-Giordano, G. (2017). Sustainability assurance: A literature review. Comptabilité-Contrôle-Audit, 23(2), 11-62.

Ida, A.P. & Gerianta, W. Y. (2017). Effect of Company Size, Profitability, Industrial Type and Circle Performance on Environmental Disclosure, E- Journal Akuntansi Universitas Udayana, 20(3), 2362-2391.

Iliemena, R. O. C. & Okolocha, C. B. (2019). Effect of audit quality on financial performance: evidence from a developing capital market. International Journal of Recent Research in Commerce Economics and Management (IJRRCEM), 6(3), 191-198.

Irwansyah, I. (2017). Research-based environmental law: The debate between ecology versus development. Scimango Journal and Country Rank, 1 (1), 44-66.

Ismail, M. & Rahman, T. (2016). Environmental management accounting: an empirical investigation of manufacturing companies in Malaysia, The Academy of Management Journal, 27(1), 42-56.

Izat, R. (2019). Reflection of the Application of Environmental Auditing to Support the Process of Sustainable Development -Study in a Sample of Industrial Companies in the Kurdistan Region of Iraq. Journal of Al Anbar, 26(11),368-398.

Lodhia, S. (2005). Legitimacy motives for world wide web (www) environmental reporting: An exploratory study into present practices in the Australian minerals industry. Journal of Accounting and Finance, 4, 1 - 15.

Magara, R., Aming, N.N., & Momanyi, E. (2015). Effect of environmental accounting on company financial
performance. British Journal of Economics, Management, and Trade, 10(1), 1-11.

Marwa, M., Salhi, B., & Jaboui, A. (2020). Environmental audit and environmental disclosure quality, scientific annals of economics and business. 67(1), 1-23.

Milto, Y. (2017). “Efficiency of Law in Innovation Environment”. Interdisciplinary Approach to Law in Modern Social Context. 4th International Conference of Ph.D. Students and Young Researchers. 21-22 April 2017, Vilnius University Faculty of Law Vilnius, Lithuania.

Nkwoji, N. (2021). Environmental accounting and profitability of selected quoted oil and gas companies in Nigeria (2012-2017). Journal of Accounting and Financial Management, 7(3), 22-39.

Norhasimah, R. E. (2016). The effects of environmental disclosure on financial performance in Malaysia. Procedia Economics and Finance, 117 – 126

Nwaimo, S. C. (2020). Effect of environmental cost on performances of quoted firms in Sub – Saharan Africa. European Journal of Accounting, Auditing and Finance Research, 8(7), 97 120.

Nwaiwu, N. J. & Oluka, N. O. (2018). Environmental cost disclosure and financial performance of oil and gas in Nigeria. International Journal of Advanced Academic Research, 4(2), 1 – 23.

Ogoun, I. S. & Ekpulu, G. A. (2020). Environmental Reporting and Operational Performance: A Study of Listed Manufacturing Firms in Nigeria. International Journal of Intellectual Discourse, 3(1), 381-396

Okegbe A., I., & Ofurum, G., (2019). Health Challenges of Nigerian Urbanisation Paper Presented at 9th Beninian Olukayode Osuntokun memorial, Lecture Presented at University College Hospital (UCH) Ibadan.

Olayinka, A. O. & Oluwamayowo, I. O. (2014). Corporate Environmental Disclosures and Market Value of Quoted Companies in Nigeria, The Business and Management Review, 5(3), 171-184.

Omaliko, E. L., Nweze, A. U. & Nwadialor, E. O,(2020). Effect of social and environmental disclosures on the performance of non-financial firms in Nigeria, Journal of Accounting and Financial Management, 6(1), 67-84.

Ong, T.S., Tho, H.S., Goh, H.H., Thai, S.B. & Teh, B.H. (2016). The relationship between environmental disclosure and financial performance of public listed companies in Malaysia. International Business Management, 10(4); 461-467.

Pahuja, S. (2019). Relationship between environmental disclosures and corporate characteristics: a study of large manufacturing companies in India, Social Responsibility Journal, 5 (2), 227-244.

Polycarp, S. U. (2019). Environmental Accounting and Financial Performance of Oil and Gas Companies in Nigeria, Research Journal of Finance and Accounting, 10(10), 192-200.

Solomon, P. J. (2020). Environmental Disclosure and Financial Performance of Listed Oil and Gas Companies in Nigeria: A Review on Literature, Journal of Business and Management, 22(9), 58-66.

Uniamikogbo, E. & Ifeanyichukwu, A. (2021). Environmental accounting disclosure and financial performance of manufacturing firms in Nigeria. Journal of Economics and International Business Management, 9(2), 71-81.

Van de Burgwal, D., & Vieira, R. J. O. (2014). Environmental disclosure determinants in Dutch listed companies. Revista Contabilidade & Finanças - USP, 25(64), 60–78.

Yusoff, H. N. (2013). Understanding environmental audit in the public sector: Malaysian perspective. JurnalTeknologi, 62(1), 25-30.

Zeng, S.X., Xu, X.D., Yin, H.T., & Tam, C.M. (2012). Factors that drive Chinese listed companies in voluntary disclosure of environmental information. Journal of Business Ethics, 109(3), 309-321.