Green Accounting Disclosure and Performance of Listed Oil and Gas Companies in Nigeria

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Abstract

This research explored the effect of green accounting disclosure on performance of listed oil and gas companies in Nigeria. Data were gathered from the financial reports of selected oil and gas firms in Nigeria over the years 2013 to 2021. To analyze this, both panel regression analysis and a generalized linear model were applied. The findings revealed that the disclosure of environmental information did not significantly affect the financial success of these companies, while the level of debt had a negative but significant influence on their economic success. Additionally, the size of the company was found to have a positive and significant effect on the financial outcomes of these listed firms in Nigeria. The research suggests that the Nigerian government should introduce regulations for the disclosure of environmental information within the oil and gas industry.

Keywords: Environmental information disclosure, Leverage, Firm size and Net Profit Margin

JEL classification: M41, Q5

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1.0 Introduction

The examination on green accounting disclosures is being carried out in response to the increased interest in sustainability and environmental preservation. Firms can determine how they affect the environment, so examining their compliance with sustainable practices is essential. Sustainable practices came about as ecological degradation and resource depletion became worldwide issues. Sustainable practices emerged from the global levels of environmental degradation and resource depletion. All this has led to the realization that economic growth should not be at the cost of the natural environment and that businesses have to operate differently.

It is reasoned that it is helpful to disclose the environmental impacts of economic activities to consider a company's responsibility to stakeholders and the environment. There are occasions when scholars have attempted to define the extent to which green accounting disclosure does sort out the performance of the oil and gas corporation, but the results are inconclusive. This has led to controversy among the researchers about issues like geographic coverage disparities, disparity in reporting standards, long-term performance data, measuring of impacts, combined financial and environmental performance, sectorial peculiarities and solutions, and influence of regulatory frameworks. Sometimes, influences from various stakeholders concerning green accounting disclosure enhance companies' worth and the companies' images of oil and gas companies, as well as lift the companies' performances and future profitability. Recently, for performing environmental activities, businesses have been given significant responsibilities that they can not exert a negative impact on the environment, and they also have to disclose their information about environmental activities (Iwata & Okada, 2011). Thus, there are opportunities for the oil and gas industry to earn extra revenues in the area of treatment and conversion of environmental wastes and pollutants.

There is a vague and ambiguous portrayal of the situation concerning environmental disclosure in Nigeria's oil and gas firms' annual reports. These companies' environmental disclosures do not correspond to the worldwide disclosure framework on environmental accounting that has been established by the Global Reporting Initiative (GRI), based on the preliminary assessment of the annual report. For a long time, the oil and gas industries have been accused of being the worst polluting industry, hence being blamed for most environmental problems. Thus, the extent to which the results of highly polluting firms indicate their performance on the environment deserves some scrutiny. The problem that arises concerning green accounting disclosures is the absence of clear frameworks and guidelines for the formulation of these disclosures. Currently, there are no generally accepted metrics or reporting requirements for green accounting disclosures. This inconsistency gives way to variations in the type and quantum of information provided that could make accurate comparisons difficult for the stakeholders among the corporations.

The objective of this study is to examine environmental information disclosure practices in the annual reports of listed oil and gas companies in Nigeria. Firm size and leverage were used as the study’s control variable.

2.0 Literature review

Herbert, Nwaorgu, Onyilo, and Iormbagah (2020) defined green accounting disclosure as the practice of including environmental information in financial statements, annual reports, and

other communication channels to improve transparency and accountability regarding an organization's environmental performance and sustainability efforts. Companies nowadays are better aware of the significance of environmental policies and repercussions. According to Herbert, Nwaorgu, Onyilo, and Iormbagah (2020), green accounting disclosure provides stakeholders with the knowledge they need to make educated decisions and evaluate the organization's operations' consequences on the environment. Green accounting disclosure comes with lots of advantages. It allows organizations to show their interest in environmental matters, improving their public image, attracting investors and customers. Also, it would give stakeholders the ability to assess the risk and opportunity embedded in a company's environmental performance, leading to improved decision-making regarding business involvement. Many countries are acknowledging the significance of green accounting disclosure from a regulatory point of view. Governments and regulatory agencies are taking steps to incentivize or require companies to reveal their environmental data (Omaliko & Okpala, 2022). The move towards obligatory reporting was triggered by the acknowledgment of environmental issues that are crucial for the long-term viability of business and should be considered in decision-making.
Various types of disclosures exist within green accounting, which differ based on the organization's nature and its environmental footprint. These disclosures can either be quantitative, like emission data, or qualitative, explaining sustainability approaches and actions. In order to guarantee meaningful and precise disclosure, companies must adopt dependable framework and standards. Nonetheless, it is important to recognize that environmental disclosure should be seen as more than simply a regulatory requirement.

This study presents a variety of theories related to green accounting disclosure. These theories include legitimacy theory, shareholder theory, theory of altruistic responsibility, accountability theory and triple bottom line theory. These are some of the theories that helped shape the current study and demonstrate the connections between the many components of green accounting disclosure.

Legitimacy theory states that an organizations should carry out their activities and operations in such a way that they are seen as socially responsible. Stakeholder Theory holds that organization should consider the interests and requirements of shareholders, as well as other persons and groups that may be affected by or may influence the business's activities and decisions (Omaliko, Nweze, and Nwadialor 2020). Altruism theory implies that individuals have some moral obligation to serve others at personal cost. Accountability theory simply talks about being held responsible for ones actions and decisions while also accepting the consequences of said actions. Triple bottom line theory defined it as a way of measuring the performance of a company through filters and not just financial indicators. The theory has three dimensions the social, environmental, and economic, popularly referred to as "people, planet, and profit."

Empirically, Ashibogwu (2023) examined the issue of growth in Environmental Reporting in Nigeria’s Oil and Gas Industry. The information used for this work was sourced from Nigerian banks’ annual releases and the selected companies’ financial statements for the period 2009–2020. The analysis method used in this paper is ordinary least squares. Concerning the findings, the measure of human poverty shows a negative association with the rise or fall in the expenses related to oil contamination, oil leaks, exploration, and the handling of waste, to a greater extent than with the decline in oil quality. The writer pointed out that to address this

matter more accurately, there needs to be better laws put in place to exert more influence on oil firms to enhance the ecological condition.

Ayuba and Yunusa (2023) examined environmental and social disclosure on the return on assets of the Nigeria listed oil and gas firms. This research utilizes a method called ex post facto analysis, which falls into the category of analytical studies. The group of interest for this research consists of all the thirteen oil and gas companies, from which eight companies were chosen for this sample. Before starting the study, the team planned to use existing information from the financial reports and accounts of these selected companies from 2010 to 2019. The findings from the examination of different perspectives' data were then summarized using statistical tools such as frequency tables, correlation matrices, and analysis of variance (ANOVA) tests. As a result, the study discovered that social and environmental information negatively impacts the asset return ratios of Nigerian oil and gas companies featured in the research.

Onyebuenyi and Ofoegbu (2022) looked at the financial performance and environmental sustainability disclosure practices among listed oil and gas companies in sub-Saharan African countries. They employed panel data from two types (ex post facto and descriptive) over a nine-year span (2011–2019), compiling data from fifteen companies in each of three countries chosen for the study. The use of a robust least square regression, followed by a reliable least square regression, indicated that energy and emission disclosures significantly influence financial metrics such as net profit margin and return on equity, with both outcomes being significant.

Endiana, Dicriyani, Adiyadnya, and Putra (2020) explored the role of green accounting in the financial health and sustainability of businesses. They employed purposive sampling to select 38 firms from the IDX that followed the guidelines and were publicly listed. The study utilized the partial least square (PLS) technique for structural equation modeling (SEM) to process the data. Their research found that environmental accounting transparency positively affects financial performance.

3.0 Methodology

This study employed a quantitative research method to gather data and verify the facts in the evidence, either confirming or discrediting the prevailing hypothesis. The target group for this study included the nine (9) oil and gas corporations featured on the Nigeria Exchange Group (NGX) as of August 23, 2023. A selection of seven oil and gas firms was made, based on their active operations. The research utilized existing secondary data, which were sourced from the annual reports of the seven selected firms (Conoil plc, Eterna plc, Japaul Gold and Ventures Plc, Mrs. Oil Nig. Plc, Oando Plc, Seplat Energy Plc, Totalenergies Plc) spanning a nine-year period (2013-2021).

The mathematical function for this study is stated as

$NPM_{it} = a + \beta_1 EID_{it} + \beta_2 LEV_{it} + \beta_3 FS_{it} + \mu_{it}$

Where: a = Constant

NPM = Net Profit Margin

EID = Environmental Information Disclosure

LEV = Leverage (Used as a control variable)

FS = Firm Size (Used as a control variable)

β1, β2, β3 and β4= The Slope coefficient

μ = The Error term

Table 1: Variable Descriptions

VARIABLES	DEFINITIONS	MEASUREMENTS
Net Profit Margin (NPM)	Profit margin is a key financial metric that gauges a company's profitability by determining the proportion of profit made from its income. (Nkwoji, 2021)	(Net Income /Revenue) * 100
Environmental information disclosure (EID)	Environmental information disclosure refers to the act of publicly sharing data and information related to the environmental impact and performance of the company.	Quantified based on the volume of environmental information disclosed (Nguyen & Tran, 2019)
Leverage (LEV)	Leverage is the act of companies using debt to finance their business activities and also the percentage of a company's performance; leverage may have various meanings for companies' capital structure that is financed by debt (Berent, 2020).	Total Debt / Total Assets
Firm Size (FSZ)	Firm size deals with the determination and classification of a company's scale or magnitude. (Widyasari, 2019).	Log of Sales

Source: Authors' compilation (2024)

4.0 Result and Discussion

Table 2: Descriptive Statistics Result

	NPM	EID	LEV	FS
Mean	-1.556086	1.888889	0.279195	7.820294
Median	0.013152	3.000000	0.227099	8.046460
Maximum	0.929117	4.000000	1.516717	8.853975
Minimum	-33.52199	0.000000	0.000000	5.500166
Std. Dev.	5.719962	1.695450	0.260032	0.797164

Skewness	-4.370067	-0.125121	2.808385	-1.634305
Kurtosis	22.33436	1.224013	12.80886	4.936329
Jarque-Bera	1163.036	8.443972	335.3746	37.28571
Probability	0.000000	0.014669	0.000000	0.000000

Source: Author's computation (2024)

Table depicts the summary results of the descriptive statistics of four variables: NPM, EID, LEV, and FS. In detail:

The mean represents the average of the data by summing all the figures and then dividing by how many figures there are. It uses the average to describe the sample by a single value that represents a center. For the family size, the mean of NPM is -1.556086, EID is 1.888889, LEV is 0.279195, and FS is 7.820294.
The median is the middle value or the midpoint in a set of data. In this dataset the median for NPM is 0.013152, EID is 3.000000, LEV is 0.227099 and FS is 8.046480. It outlines the central section of the data for every variable following the data have been sorted in either increasing or decreasing order.
Maximum: The maximum would be the maximum value seen in each variable. This would be 0.929117 for NPM, 4.000000 for EID, 1.518717 for LEV, and 8.853975 for FS. This compares all the variables to check for the highest values.
The minimum shows the lowest values of each of the variables. The minimum for NPM is -33.52199, for EID is 0.000000, for LEV is 0.000000, and FS is 5.500166. This means the least value for each variable after comparison with the data in the respective variables.
A low standard deviation suggests that the data is dispersed over a wide range of values.
Standard deviation: This provides a measure of the variance that exists from the mean. The spread of the sample series is 5.719962 for NPM, 1.695450 for EID, 0.260032 for LEV, and 0.797164 for FS. it can also be used to measure the risk and uncertainty. This shows how the data are dispersed throughout a large range of values.
Skewness helps in figuring out the spread of random number sets are carried out. It either go up or down. When the skewness is positive, it means there's a longer tail on the right side. This is shown when skewness is above zero. On the flip side, if skewness is negative, it means there's a longer tail on the left side, which is shown when skewness is below zero. Skewness for NPM is -4.370067, EID is -0.125121, LEV is 2.808385, and FS is -1.634305. The table indicates that the LEV is positively skewed, meaning it has a right long tail, while NPM, EID, and FS are negatively skewed, implying they have a left long tail.
Kurtosis: It measures the peakness or flatness of the distribution. If the values are large, it indicates that there are more outliers or extreme values. The kurtosis for NPM is 22.33436, for EID is 1.224013, for LEV 12.80886, and for FS 4.936329, which is above three and is thus showing the high peak respectively.
Jarque-Bera is employed to evaluate the extent of fit to determine if the skewness and kurtosis align with a standard normal distribution. It is employed for hypothesis testing of the variable to confirm whether the distribution is indeed normal. When utilizing Jarque-Bera, the null hypothesis assumes that skewness and kurtosis are both zero. If the probability be lower than the significance level (critical level), the null hypothesis is rejected; conversely, if not, the null hypothesis is accepted. The NPM test statistic is 1163.036 with a probability of 0.0000. The

EID test statistic is 8.443972, with a probability of 0.014669. In LEV, the statistic is 335.3746; the probability is 0.0000. In FS, the statistic is 37.28571; the probability is 0.0000.

Table 3: Correlation Matrix

	NPM	EID	LEV	FS
NPM	1.000000			
EID	0.263749	1.000000		
LEV	-0.663944	-0.223208	1.000000	
FS	0.693332	0.449021	-0.468694	1.000000

Source: Authors' computation (2024)

The degree of linear relationship between NPM and EID is measured at 0.263749, indicating a mildly direct link between the two variables. For the connection between NPM and LEV (Leverage), the degree is -0.663944, showing a mildly negative linear association. Similarly, the connection between NPM and FS (Finance) is at 0.693332, indicating a mildly negative linear relationship. The link between EID and LEV is -0.223208, showing a mildly adverse linear association. On the other hand, the connection between EID and FS is 0.449021, signifying a mildly positive linear relationship. Lastly, the connection between LEV and FS is -0.468694, indicating a mildly adverse linear relationship.

Table 4: Fixed Effect Result

Dependent Variable: NPM

Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EID	-0.0992	0.3723	-0.2665	0.7909
LEV	-10.6036	2.1777	-4.8692	0.0000
FS	4.3565	1.0841	4.0185	0.0002
C	-32.5147	8.5861	-3.7869	0.0004
R-squared	0.6551			
Adjusted R-squared	0.5954			
F-statistic	10.9733			
Prob(F-statistic)	0.0000			
Durbin-Watson stat	2.226112			

Source: Authors' computation (2024)

According to the chart above, seven oil and gas businesses were utilized from 2013 to 2021 and analyzed with the help of EViews 12. From table 4.3 above, the model was linearly stated using the equation. $NPMit= \alpha+ \beta1EIDit+\beta2LEVit+\beta3FSit+\mu it$

Evaluating the given equation model employing the cross-sectional fixed approach, the regression model's outcome is linearly represented as follows:

NPM= -32.5147 - 0.0992EID -10.6036LEV +4.3565FS

Standard error (0.3723) (2.1777) (1.0841) (8.5861)

From the regression results, LEV and FS variables are statistically significant, with the exception of EID (p-value at 5% threshold of significance).

The constant, in the model for the value of α is -32.5147, which implies holding all the variables (EID, LEV, and FS) constant, NPM change at the rate of -32.5147. The equation indicates a positive association (β1 = -0.0992), a negative relationship (β2 = -10.6036), and a positive relationship (β3 = 4.3565).

To determine if a variable is statistically significant for each variable using the T-stat, we must calculate t (a/2, n-k), and we typically reject the hypothesis.

If only the t-stat > t (0.05/2, n-k)

Where:

α= Level of significance

n=no of observation

K= Parameter

Using 5% level of significance t (0.05/2, 63-4)

$$t\ (0.025, 59) = 2.0015$$

If β is zero for all slopes, the t-tab of 2.0015 will be considered to arrive at judgments regarding every variable.

The F-stat is used to test joint hypotheses. If F-stat > Fcal (Fa (k-1, n-k), we reject H0; otherwise, we do not reject the null hypothesis. Our regression yielded an F-statistic of 10.9733 and an F-cal of F0.05(4-1, 63-4) with α= 5% (0.05), k=4 (parameters), and n=63 (observations).

Using the f distribution table (F0.05(3, 59)) the result derived is =2.18. From Table 4, the f-statistic is less than the f-tabulated (10.9733<2.18), we reject the null hypothesis and conclude that NPM is affected by EID, LEV, and FS for the cited oil and gas company's consumer and supplied sample. The regression model explains a large amount in the model.

To validate the combined hypothesis, employ the probability measure of the F-stat (P-value) and affirm the alternative hypothesis if the P-value (F-stat) is less than the significance level. The regression findings have a P-value of 0.0000, which is above the 5% significance level (0.0000 < 0.05), leading to the rejection of the null hypothesis. This indicates a mutual affect the dependent variable.

The R-squared statistic offers insights into how well the model fits the data. A value of 1 in R-squared suggests an ideal fit, 0.6551 in ours indicates that the explanatory variable covers nearly 65.51% of the variation in the dependent variable, suggesting a good fit. This is because the residual term makes up 34.49% (100% - 65.51%) of the variables, and an R-squared closer to one signifies a superior model.

The Adjusted R-squared is an adjusted version of R-squared that considers how well the explanatory variable enhances the model, increasing it only if the variables provide more impact on the model than anticipated. The adjusted R-squared is 0.5954 (59.54%), as noted.

The Durbin-Watson test is conducted to identify if the data shows autocorrelation. It examines the upper and lower bounds of the data observations. Referring to the table, the calculated Durbin-Watson is 2.226112. The DW table shows the maximum and minimum values are 1.724 and 1.414, respectively. This suggests no autocorrelation is present because the calculated DW doesn't match the DW values in the table.

Table 5: Random Effect Regression Result

Dependent Variable: NPM

Method: Panel EGLS (Cross-section random effects)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EID	-0.2235	0.3061	-0.7299	0.4684
LEV	-9.5533	2.0227	-4.7229	0.0000
FS	3.7247	0.7218	5.1603	0.0000
C	-27.6314	5.7275	-4.8244	0.0000
R-squared	0.631502			
Adjusted R-squared	0.612442			
F-statistic	33.13191			
Prob(F-statistic)	0.00000			
Durbin-Watson stat	2.002263			

Source: Authors' computation (2024)

$NPM_{it} = \alpha + \beta_1 EID_{it} + \beta_2 LEV_{it} + \beta_3 FS_{it} + \mu_{it}$

aligning the results within the structure produces the following results:

Analyzing the provided equation framework with the cross-sectional static strategy, the result of the regression model is shown to be in a linear format:

NPM= -27.6314 -0.2235EID -9.5533LEV+3.7247FS

Standard error (0.3061) (2.0227) (0.7218) (5.7275)

The regression findings show that LEV and FS variables are statistically significant (P-value is less that level of significant), with the exception of EID, which has a p-value greater than the level of significant of 5% 0.05 and is considered significant.

Based on the regression coefficient, (EID, LEV, and FS) are held constant, the value of α in the model is -27.6314, this indicates that NPM fluctuates negatively up to this point. The equation also shows that β1 co-efficient is -0.2235, β2 co-efficient is -9.5533, and β3 co-efficient is 3.7247, indicating a negative and positive association, respectively

To determine if the factors are statistically important for all factors, we used the T-stat and calculate t (a/2, n-k), which means we would disregard the hypothesis. If only the t-stat > t (0.05/2, n-k)Where:

α= Level of significance

n=no of observation

K= Parameter

Using 5% level of significance t (0.05/2, 63-4)

$$t\ (0.025, 59) = 2.009$$

Assuming β is zero for all slopes, the t-tab of 2.009 is used to make decisions for each variable.

The F-stat is used to test joint hypotheses. If F-stat > Fcal (Fa (k-1, n-k), we reject H0; otherwise, we do not reject the null hypothesis. Our regression yielded an F-statistic of 33.13191 and an F-Cal of F0.05(4-1, 63-4) with α= 5% (0.05), k=4 (parameters), and n=63 (observations).

Using the f distribution table the result derived is =2.18 Thus, because the f-statistic is greater than F0.05(3, 59), (33.13191>2.18), we agreed that that null hypothesis and infer that NPM is dependent on EID, LEV, and FS for the cited oil and gas company's consumer and given sample, as the regression describes a large percentage of the model.

To evaluate the combined hypothesis, we utilize the likelihood ratio p-value (P-value) and nullify the null hypothesis if the P-value (likelihood ratio p-value) is smaller than the predetermined significance level. Our regression outcome exhibits a likelihood ratio p-value of 0.0000, which falls below the 5% significance threshold (0.001544 < 0.05). Hence, we dismiss the null hypothesis. This suggests a mutual impact on the variables that depend on each other.

The R-squared value signifies the statistical quality of how well the model fits the data. In our regression outcomes, an R-squared of 1 indicates a perfect fit; an R-squared of 0.631502 suggests that the explanatory variable covers roughly 63.15% of the variance in the dependent variable. Given that 36.85% (100% - 63.15%) of the variance is attributed to the error term, this indicates a satisfactory fit.

The Adjusted R-squared is an adjustment to the R-squared value that considers the explanatory variables in terms of the model, increasing only if the explanatory variables

improve the model more than anticipated. The adjusted R-squared stands at 0.612442 (61.24%), as previously mentioned.

The Durbin-Watson test is employed to ascertain the presence of autocorrelation by examining the upper and lower bounds of the data points. The Durbin-Watson index is 2.002263, as detailed above. The Durbin-Watson table records high and low values of 1.724 and 1.414, respectively. This indicates that there is no autocorrelation present, as the Durbin-Watson index does not falls within the range specified.

Table 6: Hausman Test Result

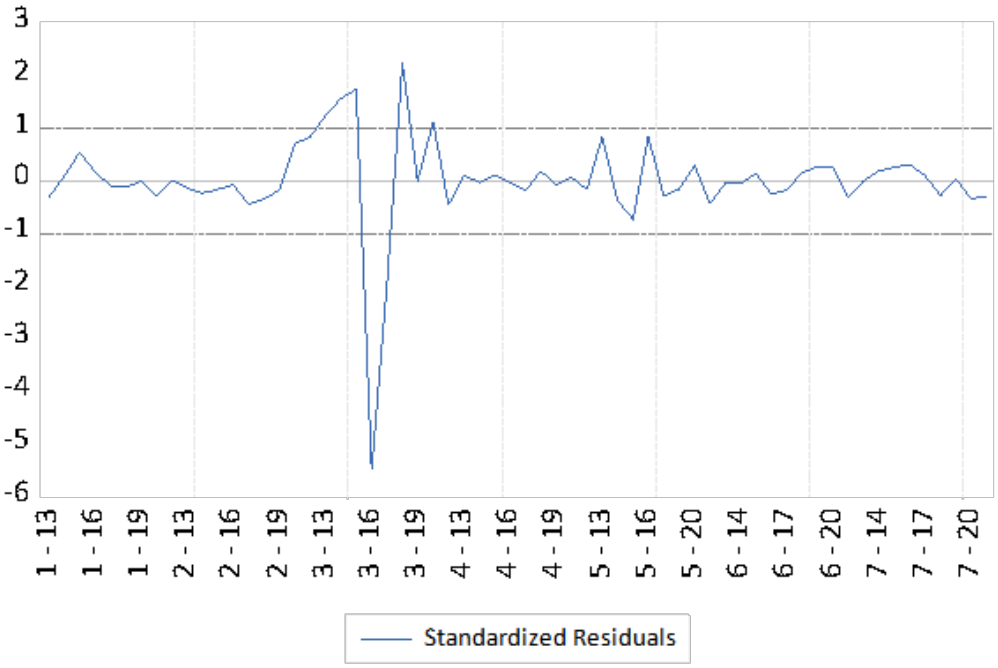
Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.936471	3	0.5857

Source: Author's computation (2024)

The Hausman test determines if the random effect is connected with the explanatory factors by comparing it to the null or fixed effect results. Table 6- indicates that the chi-squared statistic is 1.936471, and the significance level for the Hausman test is 5%, surpassing the threshold. To decide whether to accept random effects or fixed effects, the rule is to choose fixed effects if the Hausman test P-value is below the 5% level; otherwise, fixed effects are not preferred. Based on the chart provided, the Hausman test P-value exceeds the 5% mark (0.5857 > 0.05), suggesting that randomness in the model specification is appropriate.

Fig. 1 : Heteroskedasticity Test Result



A test for heteroskedasticity was conducted to determine the optimal regression model for the study. The standardized residual plot of the chosen regression model featuring the cross-section random effect is illustrated through a visual approach. Figure 1 above illustrates that there is an anomaly in the data. An outlier is an observation point that is significantly different from the rest of the sample's values. This demonstrates the presence of heteroskedasticity in the variables, which contradicts the assumptions of conventional least squares. Heteroskedasticity was adjusted via the generalized linear model (GLM).

Table 7: Generalized Linear Model Test Result

Dependent Variable: NPM

Method: Generalized Linear Model (Newton-Raphson /Marquardt steps)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
EID	-0.2235	0.2996	-0.7458	0.4558
LEV	-9.5533	1.9796	-4.8258	0.0000
FS	3.7247	0.7064	5.2726	0.0000
C	-27.6314	5.6055	-4.9294	0.0000

Source: Author's computation (2024)

From table 7 above, the model was linearly stated using the equation. $NPM_{it} = \alpha + \beta_1 EID_{it} + \beta_2 LEV_{it} + \beta_3 FS_{it} + \mu_{it}$

Matching the outcomes into the framework yields the following:

Examining the given equation model using the cross-sectional fixed approach, the correlation model's outcome is linearly represented as follows:

NPM= -27.6314 – 0.2235EID – 9.5533LEV + 3.7247FS

Standard error (0.2996) (1.9796) (0.7064) (5.6055)

In the mathematical framework, the fixed parameter for α is -27.6314, indicating that when all other factors (EID, LEV, FS) remain constant, the value of NPM will remain fixed at -27.6314. When EID, LEV and FS variables are maintained unchanged, the value of NPM will increase, in a manner directly proportional to -27.6314. The equation provides insights into the nature of the relationships between the variables, with β1 showing a negative correlation, β2 showing another negative correlation, and β3 displaying a positive correlation. Regarding the probability of achieving a certain level of statistical significance (P-values, denoted by Z-statistics) to validate whether a relationship is statistically significant, the null hypothesis is tossed if the P-value (Z statistic) falls below a specific threshold. The analysis of the regression equation's results shows that the P-value for EID is 0.4558, exceeding the threshold of significance (0.4558 > 0.05), thereby indicating that the null hypothesis should not be rejected.

The P-values for LEV and FS are 0.0000 and 0.0000, respectively, which is lower than the specified level of significance (0.0000<0.05) and (0.0000<0.05), which means they are

significant, so we reject the null hypothesis.
The findings of this study matches with previous research (Burgwal and Vieira, 2014; Raucci and Tarquinno, 2015; Ong, Trireksami, and Djajadikerta, 2016), it was found that companies reported low disclosure of environmental information as compared to other reporting guidelines such as the one established by the Global Reporting Initiative (GRI). This study doesn't match prior research (Arumona, Lamba, and Ogunmakinde, 2021), which revealed that Environmental Disclosure can aid polluting companies in Nigerian oil and gas sector to improve financial performance.

Discussion of Findings

Upon reviewing the impact of disclosing environmental data through green accounting on the financial outcomes of selected petroleum and natural gas firms in Nigeria over the years 2013 to 2021. This research used the findings from generalized linear models (GLM) because they were found to be more reliable than the outcomes of conventional and randomized linear regression models. As a result, it was discovered that the disclosure of environmental information does not have a significant or detrimental effect on the financial success of these Nigerian companies, suggesting that greater environmental disclosure might not necessarily improve financial outcomes, aligning with existing hypotheses.

The company's debt to equity (LEV) was found to negatively and significantly affect the financial success of these publicly listed companies, meaning these firms ought to lower their leverage to enhance their financial health, which is consistent with previous research. The size of the firm, as measured by its firm size (FS), was found to positively and significantly influence the financial success of these companies, indicating that larger firms tend to perform better, which contradicts some past research findings.

The outcomes of this study coincide with previous research (Burgwal and Vieira, 2014; Raucci and Tarquinno, 2015; etc) indicating that environmental disclosure is generally less common among companies compared to global reporting standards such as the GRI. This contrasts with a prior study (Arumona, Lamba, and Ogunmakinde, 2021) which suggested that greater environmental disclosure could significantly benefit the Nigerian petroleum and gas industry.

5.0 Conclusion and Recommendation

The present study has established that environmental information disclosure (EID) has an unfavorable and negligible effect on the financial performance of oil and gas companies in Nigeria. It indicates that higher EID might lead to better financial results by indicting method of preserving the environment. (LEV) is negatively and notably linked to the financial success of oil and gas companies listed in Nigeria. The size of the company (FS) positively affects the financial outcomes of oil and gas companies in Nigeria.

Based on the results of this investigation, the following suggestions are made:

The findings recommend that there should be a push for companies to adhere more strictly to environmental financial reporting standards, as there is a lack of uniformity in their disclosures by corporations. Investors in the oil and gas sector should pay closer attention to the environmental concerns of the companies they invest in or plan to invest in, urging them to disclose more data about their environmental impact. Companies need to prioritize

understanding and minimizing their environmental footprint through their operations. Oil and gas companies should aim to reduce their debt to enhance their financial standing.

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