

Environmental Reporting Quality and Financial Performance of Listed Nigerian Oil and Gas Firms: The Moderating Role of Financial Leverage

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ABSTRACT

This study explored how financial leverage moderates environmental reporting quality and the financial performance of oil and gas companies in Nigeria. Using panel data drawn from seven publicly listed oil and gas companies over seven years, environmental reporting quality was proxied by completeness, accuracy and adherence to frameworks. The results revealed that companies with higher debt levels showed stronger positive effects when their environmental reports were both complete and accurate. Specifically, completeness and accuracy had statistically significant positive effects on financial performance ($\beta = 0.3948$ and $\beta = 0.4152$ respectively, $p < 0.05$), while adherence to standardized frameworks, although showing a positive effect, did not reach statistical significance ($\beta = 1.8788$, $p > 0.05$). The overall model was statistically significant ($F = 4.6871$, $p < 0.01$) with an R^2 value of 0.3758, indicating a moderate explanatory power. These findings suggest that oil and gas firms with higher financial leverage may gain more from producing high-quality environmental reports. The study concluded that financial leverage significantly influences the effectiveness of environmental reporting on company performance. Based on this, it is recommended that oil and gas companies, especially those operating with substantial debt, should prioritize complete and accurate environmental disclosures.

Keywords: Adherence to framework, Environmental reporting quality, Financial Leverage, Financial Performance.

Introduction

Nigeria's economic landscape is heavily shaped by its vast natural resources, particularly crude oil. While the industry brings substantial revenue to the country, it also comes with high environmental costs. In recent years, there has been growing concern over the environmental implications of oil and gas operations. The oil and gas sector has come under intense scrutiny for its role in environmental degradation. From oil spills to gas flaring and deforestation, the industry's environmental impact is hard to ignore. Triyani, *et al.* (2023) point out that many companies within the sector prioritize profit above environmental responsibility. This mindset leads to excessive resource extraction and wasteful practices that harm ecosystems and local communities.

As a result, stakeholders are increasingly demanding that companies disclose how their activities affect the environment. Environmental reporting in Nigeria has become a critical tool for promoting accountability and transparency.

Oil and gas companies in Nigeria are finding it increasingly challenging to include information about environmental issues in their annual reports as knowledge of environmentally friendly activities grows (Etale & Otuya, 2018). Despite these efforts, concerns persist regarding the adequacy, transparency, and effectiveness of their environmental practices. In addition, high-quality corporate environmental disclosure enhances transparency about a company's adherence to legal and ethical requirements (El Khoury *et al.*, 2023).

Almarah, *et al.* (2019) emphasized that many companies lack transparency and disclosure in their environmental reports, failing to present accurate data that reflect their financial performance. This lack of transparency in environmental reporting can lead to profound financial implications. According to Amosun, *et al.* (2022), the financial condition of companies is shaped by various micro factors such as leverage. Consequences of inadequate environmental reporting include diminished investor trust, lower chances of obtaining ethical investment capital, and possible regulatory fines. A critical review of extant empirical studies reveals several substantive gaps in the literature concerning environmental reporting and financial performance, particularly within the Nigerian oil and gas sector. Although previous studies (Dhar & Ashraful, 2021; Olabisi *et al.*, 2022; Ibrahim *et al.*, 2023) have investigated the nexus between environmental reporting and financial performance, the majority have concentrated on just the disclosures and singular financial indicators such as Return on Assets (ROA) or profit margin. There remains a notable gap regarding the documentation and analysis of firms' environmental reporting qualities, as well as the underlying mechanisms that drive these practices. Addressing the gaps, as outlined in Okafor *et al.* (2022), concern the mediating or moderating effect offered by environmental reporting and financial performance, due to factors like the financial leverage. These moderating factors are important to understand in contexts where the relationship between environmental and financial reporting is complicated

and industry specific. Hence, this study examined the moderating role of financial leverage on the effect of environmental reporting quality on the financial performance of listed oil and gas firms in Nigeria.

Objectives

To examine the interactive effect between financial leverage and environmental reporting quality on the financial performance of listed oil and gas companies in Nigeria. The specific objectives include to:

- i. examine how financial leverage moderate the relationship between environmental reporting quality and Earnings per share of listed oil and gas firms;
- ii. assess the effect of financial leverage on the relationship between environmental reporting quality and Return on Capital Employed
- iii. determine the moderating role of financial leverage on the relationship between environmental reporting quality and market share of listed oil and gas companies in Nigeria

LITERATURE REVIEW

Environmental reporting quality

High-quality financial reporting, as outlined in the FASB and IASB's Conceptual Framework, is characterized by several key qualitative elements. These characteristics are broadly grouped into two: fundamental qualitative characteristics and enhancing qualitative characteristics (IASB, 2018). Fundamental qualitative characteristics include relevance and faithful representation. While relevance emphasizes financial information that influences user decisions, faithful representation underscores accurate reflection of economic phenomena. On the other hand, enhancing qualitative characteristics include understandability implying clear and concise environmental information; comparability (entails environmental information that allows for meaningful comparisons), verifiability, signifying environmental information that can be corroborated and timeliness implying provision of environmental information in a timely manner (Herath & Albearqi, 2017).

These elements work together to ensure that financial reporting is useful, reliable, and informative for users. Reliability refers to how thorough environmental disclosures are; relevance gauges how close they are to reality; and compliance deals with making disclosures following legal requirements. Relevance and dependability are two qualities of quality accounting information that are required by regulatory organizations to improve the usefulness of decision-making (Worimegbe & Afrogha, 2024). According to Salameh et al, (2022), environmental accounting can also represent the quality of information. The dimensions of environmental reporting quality include accuracy, completeness and adherence to the framework.

Accuracy

This guarantees that the reported data is free from material faults and prejudices by means of its accuracy and checkability. One important sign of a report's accuracy is the existence of a third-party assurance statement (Worimegbe & Afrogha, 2024). Like financial audits, this independent checking by an outside auditing company offers a crucial degree of objectivity and greatly boosts stakeholder trust in the information presented.

Completeness

A good report has to be comprehensive, therefore it addresses all of the environmental concerns of financial and operational relevance to the company. The materiality principle demands a company to concentrate on the problems most important to its business and stakeholders—say, greenhouse gas emissions for an energy provider or water consumption for a drink maker (Calabrese, *et al.*, 2017). Often connected with green washing, an incomplete report selectively reveals positive data while ignoring unpleasant or difficult elements of the company's environmental impact. This guarantees that the report offers a balanced and comprehensive view of the environmental performance of the company as well as the risks and opportunities related with environmental concerns throughout the value chain.

Adherence to Frameworks

This suggests that quality is greatly determined by how well a business conforms its reporting to accepted worldwide and national standards. To help companies in their environmental reporting, standardized sustainability frameworks have been created: the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD, 2025). These structures enable reporting style and indicators to be consistent so that performance over time and across companies may be more easily contrasted. Such consistency not only helps information to be clearer but also promotes better understanding among stakeholders by providing a common language for evaluating environmental reporting initiatives. The benefits of the adoption of an effective environmental reporting frameworks stand, however, undisputed. Compliance and adoption of such good frameworks is likely to bring about numerous benefits, such as enhanced transparency, and thus the improvement of corporate image and financial performance, stakeholder relations, and so forth (Tettamanzi *et al.*, 2022).

Financial Performance

Financial performance (FP) is a broad term that generally describes how well a corporation manages its assets from the operation of its core business and turns its assets into revenues (Kenton, 2019). Deriving an oil and gas policy and operations side by side presents financial performance in accumulating amounts. It spans over a period of time, and is used for comparing firms in other industries at any point in time.

Financial performance measures

Several financial indicators can be used to help address a financial performance. Some of these essential ones are Earnings per Share (EPS), Return on Capital Employed (ROCE), and market share (Bagh et al., 2017).

Earnings per Share (EPS) is universally recognised as a valuable measure in identifying the attractiveness of investments, especially in terms of profitability. It can greatly sway shareholder attitude toward the stock. The continued improvement with respect to EPS often shows steady growth in every industry in terms of financial health and operational efficiency, thereby appealing to investors-something that would drive up the stock price (Berk & Demarzo, 2020).

Return on Capital Employed (ROCE) is a metric used by investors or analysts alongside others to compare companies within a single industry, to identify securities that are out of balance or overvalued, and to make intelligent investment decisions (Palepu et al., 2015). Effective utilisation of capital employed improves profitability, enhances cash flows, and provides resources for farther investments and scale expansion (Berk & DeMarzo, 2020). To calculate ROCE, EBIT is divided by employed capital while employed capital is usually defined as total assets, less any current liabilities.

Market share is a term used for designating the percentage of a market category controlled by a company, a product, etc. (Anderson, Kumar & Narus, 2018). Market share is generally expressed as a percentage and is equal to the firm's sales revenue relative to total market sales over a specified period (Kotler & Keller, 2018). Market share is a hallmark measure of competitive performance, reflecting a company's relative strength and success against its competition.

Financial leverage

In Nigeria's oil and gas industry, certain structural and operational features of businesses (like their openness about environmental effects, company size, development path, and degree of financial leverage) can greatly influence financial results. Poor environmental reporting might undermine financial results by lowering a company's access to sustainable financing possibilities and therefore investor confidence. Poor environmental reporting could discourage responsible investors, call attention to regulations, or limit funding possibilities from environmentally friendly capital sources. Pham et al. (2021) say that financial trouble can result from imbalances in company operations, especially those brought on by bad environmental reporting.

Amosun *et al.* (2022) emphasised how a company's financial stability is directly influenced by microeconomic elements including financial leverage, ownership structure, and liquidity. Companies that fall short could face not only reputational hazards but also financial instability as more parties demand more environmental responsibility. Particularly in a society where environmental responsibility is more and more connected to strategic planning, Makhdoom *et*

al. (2023) contend companies are under ongoing performance evaluation. Timely, open environmental data helps managers to make better-informed decisions that enable organizational growth and operational improvements.

Theoretical Framework: Legitimacy Theory

This study adopted the legitimacy theory, which evolved from the concept of organisational legitimacy first introduced by Dowling and Pfeffer in 1975. This theory has a wide view on social and environmental reporting. The motive of companies is to secure their activities being considered legitimate by the outside world within the boundaries of survival. Indeed, a legitimate company's adherence to certain norms is socially controlled; in other words, it can disclose what is called legitimacy by participating in essentially accepted activities (Deegan & Jeffrey, 2006; Guthrie & Parker, 1989). According to the perspectives of Gray et al. (1996) and Hooghiemstra (2000), companies often disclose environmental information as a means of securing societal approval, which is crucial for their ongoing operations. Described by Qian et al. (2021), legitimacy theory emphasizes the inherent societal contract between companies and the people they help. Companies hope to validate their acts, highlight their social worth, and influence how the public and stakeholders view them by honest communication. Building on this, Utile (2016) argues that companies are expected to fit their operations with social expectations and standards—especially in environmental stewardship. Often this alignment calls for sharing quality crucial information on their interaction with and influence on the environment. Cormier and Magnan (2015) further argue that companies intentionally structure their environmental disclosures not only to satisfy regulatory and market requirements but also to maintain or enhance their legitimacy in the eyes of the public.

The theory's debt implicitly stresses the social contract and societal expectations of why organisations are deemed to environmental reportage extra mere compliance. The theory is excellent for understanding how environmental reporting gains traction, as by keeping social license, corporations take it as a coded manner for achieving their legitimacy. The incentives for disclosure in the annual report have been investigated using the legitimacy theory (O'Dwyer, 2002).

Therefore, legitimacy theory imparts valuable insights to develop on how organisations engage with environmental accounting and reporting in an increasingly socially conscious business environment and how that weakens their legitimacy.

Empirical Review

Previous studies provide varied insights into the determinants of environmental reporting in Nigeria's oil and gas sector. Dibia and Onwuchekwa (2015) explored the link between firm characteristics and corporate social responsibility disclosures. Their findings showed that company size significantly influenced disclosure, whereas profitability, leverage, and audit firm type did not. The study emphasized that when reporting is voluntary, companies often choose not to disclose, especially when no legal requirements are pushing them toward transparency.

Using pooled logistic regression, Baba (2020) looked at information from ten publicly traded oil and gas companies between 2012 and 2018. According to the study, environmental accounting disclosures are positively influenced by firm size and audit firm kind. Profitability was, on the other hand, negatively connected and leverage seemed to have no major effect. Carandang and Ferrer (2020) looked at 24 publicly traded mining and oil companies in the Philippines in a larger regional setting to see if environmental disclosures affected profitability or company value. Using panel data, they discovered no independent major impact. When location was taken as a moderating element, the impact of the disclosure on return on equity became clear.

Six Nigerian oil and gas companies from 2009 to 2019 were examined in an ex-post facto investigation by Idamoyibo (2021). The results pointed to a weak correlation between environmental reporting and return on assets (ROA), an indicator of profitability. But while leverage showed no major correlation, there was a clear link between liquidity and Tobin's Q. Handoyo and Angela (2021) looked at how features specific to a company, including size, age, debt, and ownership concentration, impact the quality of environmental disclosures among companies listed on the Indonesia Stock Exchange. Their study of sustainability reports revealed that leverage was the only feature among all those investigated that was noticeably connected with environmental reporting quality.

Salawu et al. (2021) looked at how among oil and gas companies in Nigeria firm age, board structure, financial success, presence of foreign directors, and leverage affected environmental disclosure. Over seven years of data, they discovered using Generalized Least Squares (GLS) regression that financial leverage, foreign director presence, and board composition greatly affected disclosure practices; age and financial performance did not. Okafor et al. (2022) investigated environmental disclosure determinants in quoted Nigerian Oil and Gas firms from 2008 to 2020. Analysing eleven firms using Panel Least Squares regression, their results revealed significant positive relationships between leverage and effluent disposal, a significant negative relationship between firm size and effluent disposal, and a significant positive relationship between audit committee size and effluent disposal.

Emeke *et al.* (2023) presented a very thorough examination of the impacts of environmental firm characteristics on the financial performance of the oil and gas companies that are listed on the Nigerian stock exchange from 2012 to 2021. On the basis of an *ex-post facto* examination, using multiple regression analyses, they found that the exogenous variables firm size and growth had a significant impact on financial performance, while environmental disclosure and firm leverage had an insignificant relationship with financial performance.

Empirical research on the specific components of environmental reporting quality and their financial implications in the Nigerian context remains limited. While some studies have examined aspects such as waste management, pollution control, emission disclosure, and community development costs (Okulenu et al., 2024; Aniesodo & Onuora, 2024; Aniebiet et al., 2024; Emmanuel et al., 2024), there is little agreement beyond the identification of some environmental factors that may have a direct bearing on performance. Whereas others show negative or negligible correlations, some studies point to a good influence (Arumona et al.,

2021; Oraka, 2021). Nkwoji, 2021; Idamoyibo, 2021). Obiora et al. (2024), for example, said that revelations about waste management had no discernible effect on financial performance, therefore implying that simple disclosures could not always translate into change. Emmanuel et al. (2023) also found a positive but negligible relationship between financial performance (ROA) and environmental measures (carbon emissions, garbage management, and water consumption). These disparate results support the demand for a sophisticated study of environmental firm-specific elements and their financial consequences.

Still unsolved is how financial leverage interacts with environmental reporting and financial performance in Nigeria's oil and gas sector (Okafor et al., 2022). Knowing and spotting these moderating factors could offer priceless information on the conditions under which environmental reporting is most likely to influence financial results. For instance, Emmanuel et al. (2024) found that leverage significantly affects financial performance, whereas firm size and carbon emission disclosure do not demonstrate a statistically significant relationship. These findings suggest that while certain firm-specific characteristics may influence financial outcomes, their effects are neither uniform nor fully understood. This gap underscores the importance of examining the interactive effects between financial leverage and environmental reporting on the financial performance of listed oil and gas companies in Nigeria.

Conceptual Framework

This section outlines the conceptual framework that visually distinguishes between the various sub-variables and the interaction among them, highlighting their distinct characteristics and potential relationships

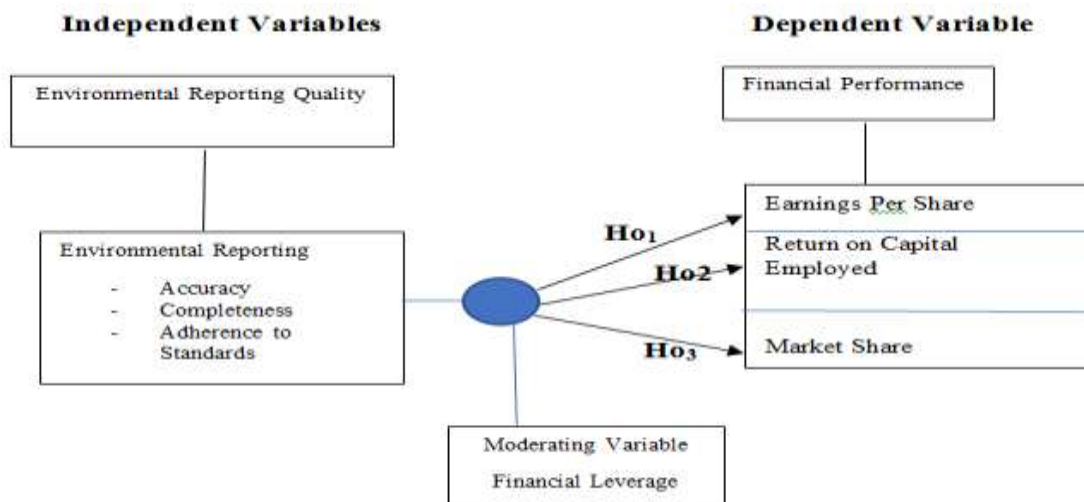


Figure 1: Conceptual Framework

METHODOLOGY

The *ex post facto* research design was adopted for this study. *Ex post facto* research design is appropriate for studies focusing on events that have already occurred and whose outcome cannot be controlled by the researchers. The population of this study comprises all eight (8) oil and gas companies listed on the Nigerian Exchange Group (NXG) database as of April, 2025. The sample size for this study consists of 7 oil and gas companies listed on the NXG.

Table 1 Population and Sample of listed Oil and Gas companies and sample companies

S/N	Population	Sample
1	Total Energies Marketing Nigeria Plc	Total Energies Marketing Nigeria Plc
2	Conoil Plc	Conoil Plc
3	Eterna Plc.	Eterna Plc.
4	Japaul Gold & Ventures Plc	Japaul Gold & Ventures Plc
5	Mrs Oil Nigeria Plc.	Mrs Oil Nigeria Plc.
6	Oando Plc	Oando Plc
7	Seplat Energy Plc	Seplat Energy Plc
8	Aradel Holdings	

Source: Authors' Compilation (2025)

The purposive sampling which considered specific factors was employed. The sampling criteria for this study encompass companies that have consistently published annual and sustainability reports from 2017 to 2023 while also clearly reporting environmental practices following the Petroleum Industry Act (2021). Aradel holdings was not included in the sample because it was listed in 2024 (NGX, 2026). Data for this study were obtained from secondary sources, specifically the annual reports and sustainability reports of the selected oil and gas companies in Nigeria. These reports were accessed through the NXG group database for 2017-2023. The study adopted the panel regression analysis given the nature of the data, which spanned over a period of time and across companies.

Table 1 Measurement of Variables

Variable Name	Proxy	Measurement
Financial Performance	Earnings Per Share	Net Income/Total outstanding shares
	Return on Capital Employed	Profit Before Interest and Taxes/Capital Employed
	Market Share	Company Total Revenue/Industry Total Revenue
Environmental	Completeness	Index of greenhouse gas emission, energy

Variable Name	Proxy	Measurement
Reporting Quality		consumption, water management, waste management, Biodiversity impact, pollutant.
	Accuracy	Index of data collection method, clear & unambiguous language, consistency, third-party verification
	Adherence Frameworks	to Index of GRI, SASB, TCFD, ISO14001.
	Financial Leverage	Total long-term debt divided by total assets

Source: Authors' Compilation (2025)

Model Specification

The functional and econometric models for this study are specified as follows:

$$(EPS, ROCE, MS) = f(COM*FL, ACC*FL, ATF*FL) \dots\dots\dots (i)$$

$$EPS_{it} = \alpha_0 + \beta_1 COMFL_{it} + \beta_2 ACCFL_{it} + \beta_3 ATFFL_{it} + \mu_{it} \dots\dots\dots (ii)$$

$$ROCE_{it} = \alpha_0 + \beta_1 COMFL_{it} + \beta_2 ACCFL_{it} + \beta_3 ATFFL_{it} + \mu_{it} \dots\dots\dots (iii)$$

$$MS_{it} = \alpha_0 + \beta_1 COMFL_{it} + \beta_2 ACCFL_{it} + \beta_3 ATFFL_{it} + \mu_{it} \dots\dots\dots (iv)$$

Where;

EPS = Earnings Per Share

ROCE = Return on Capital Employed

MS = Market Share

ACC = Accuracy

ATF = Adherence to Framework

COM = Completeness

FL = Financial Leverage

α_0 = constant

β_1 -3 = coefficients of the independent variables

μ = Error Term

i = Cross-sectional unit

t = Time Period

ANALYSIS OF RESULTS AND DISCUSSION OF FINDINGS

Descriptive Statistics

Table 2 descriptive statistics offer a baseline analysis of the 49 observations in the data set. The variable Completeness (COM) has a mean of 2.3061 and a maximum of 6.0000; Accuracy (ACC) and Adherence to Framework (ATF) have reduced means of 1.4286 and 1.2653, respectively. Notably, all three environmental reporting dimensions show a median of 0.0000, therefore suggesting that most of the sampled businesses have little to no disclosures. Financial Leverage (FL) meanwhile offers a mean of 0.2981 compared with a maximum of 5.4816, therefore suggesting that whereas most surveyed companies run low debt levels, a handful are very leveraged.

Table 2: *Descriptive Statistics of Variables*

	COM	ACC	ATF	FL	EPS	ROCE	MS
Mean	2.3061	1.4286	1.2653	0.2981	-0.6949	0.3838	0.1428
Median	0.0000	0.0000	0.0000	0.0178	0.0003	0.1454	0.1318
Maximum	6.0000	4.0000	4.0000	5.4816	11.8070	4.4740	0.5573
Minimum	0.0000	0.0000	0.0000	0.0000	-17.3912	-0.4677	0.0000
Std. Dev.	2.8226	1.8371	1.6805	1.0456	3.7413	0.8893	0.1303
Skewness	0.4085	0.5325	0.6662	4.5461	-1.3129	3.2087	1.1710
Kurtosis	1.2093	1.3628	1.6164	22.0433	11.7476	13.0706	4.1143
Jarque-Bera	7.9093	7.7882	7.5331	909.1935	170.3105	291.1462	13.7346
Probability	0.0192	0.0204	0.0231	0.0000	0.0000	0.0000	0.0010
Sum	113.0000	70.0000	62.0000	14.6110	-34.0511	18.8107	7.0000
Sum Sq. Dev.	382.4082	162.0000	135.5510	52.4792	671.8745	37.9625	0.8158
Observations	49	49	49	49	49	49	49

Source: Authors' Compilation (2025)

Performance-wise, Earnings Per Share (EPS) shows significant fluctuation as seen by a negative mean of -0.6949 and a broad range from a minimum of -17.3912 to a maximum of 11.8070—that is backed by a high standard deviation of 3.7413. Return on Capital Employed (ROCE) tracks a somewhat constant capacity to generate profits on capital investment with a mean of 0.3838 and a standard deviation of 0.8893, so marking a positive trend. Finally, Market Share (MS) shows a highly connected distribution with a mean of 0.1428 and a maximum limit of 0.5573, therefore no one player entirely controls the market.

Skewness and kurtosis help us to understand the patterns in the data by their distributional shapes. All have positive skewness, which suggests that little groups of high-achieving or very talkative companies are driving the data tails to stretch toward the right. Conversely, EPS stands out with negative skewness of -1.3129, which indicates a fundamental tail of catastrophic financial losses. With great kurtosis values of 22.0433, 11.7476, and 13.0706 respectively, FL, EPS, and ROCE also show very leptokurtic behavior—which implies a lot of extreme outliers.

The Jarque-Bera diagnostic tests assist us in formally confirming whether the variables fit a regular normal distribution pattern. Every single variable under investigation has a Jarque-Bera probability value far below the conventional 0.05 cutoff; FL, EPS, and ROCE are flatlining at 0.0000. This statistical fact means we have to courageously disregard the null hypothesis of normal distribution throughout the whole dataset. Often included in panel-based corporate finance datasets, this deviation from normality gives scientific support for the use of complex panel regression models to produce reliable correlations.

Table 3 presents the regression results for the interactive effects on Earnings Per Share (EPS). The Hausman test p-value of 0.0000 validates that the most suitable interpretive framework is the Fixed Effects (FE) model. Inside the FE model, the interaction between Completeness and Financial Leverage (COM X FL) shows a negative and statistically significant association with EPS (beta = -483.213, $p < 0.10$), therefore suggesting that greater debt levels worsen the financial load of reporting completeness expenses on profits. Accuracy and Leverage (ACC X FL) show a favorable but statistically unimportant relationship (beta = 18.561, $p > 0.10$).

Table 3: *Financial Leverage and Environmental Reporting Quality on Earnings Per Share*

		Pooled	FE	RE
COM*FL	Coeff	-338.262	-483.213	-338.262
	Std Error	265.8040	250.146	234.251
	T-Stat	-1.273	-1.932	-1.444
	Prob	0.210	0.061	0.156
ACC*FL	Coeff	-9.652	18.561	-9.652
	Std Error	21.515	21.297	18.961
	T-Stat	-0.449	0.872	-0.509
	Prob	0.656	0.389	0.613
ATF*FL	Coeff	340.716	483.219	340.716
	Std Error	266.134	250.893	234.542
	T-Stat	1.280	1.926	1.453
	Prob	0.207	0.061	0.153

		Pooled	FE	RE
Constant	Coeff	-0.453	-0.948	-0.453
	Std Error	0.572	0.520	0.504
	T-Stat	-0.792	-1.822	-0.899
	Prob	0.433	0.076	0.374
	R-squared	0.053	0.363	0.053
	Adjusted R2	-0.010	0.216	-0.010
	F-stat	0.843	2.466	0.843
	Prob(F- stat)	0.478	0.025	0.478
	Durbin Watson	1.018	1.722	1.018
Hausman	Prob	—	—	0.000

Source: Authors' Compilation (2025)

On the other hand, the interaction of Adherence to Framework and Leverage (ATF X FL) reveals a positive and statistically significant association with performance ($\beta = 483.219$, $p < 0.10$), which implies that strict framework compliance together with leverage signifies financial quality to the equity markets. With an R-squared value of 0.363, the overall model shows great explanatory power; this suggests that 36.3% of the variation in EPS is explained by these interactions; the F-statistic (2.466, $p < 0.05$) and Durbin-Watson score (1.722) further validate the model's statistical validity and lack of extreme autocorrelation.

Table 4: Financial Leverage and Environmental Reporting Quality on Return on Capital Employed

		Pooled	FE	RE
COM*FL	Coeff	-30.373	-10.272	-26.931
	Std Error	61.789	65.046	61.573
	T-Stat	-0.492	-0.158	-0.437
	Prob	0.625	0.875	0.664
ACC*FL	Coeff	5.645	6.008	5.581
	Std Error	5.001	5.538	5.010
	T-Stat	1.129	1.085	1.114
	Prob	0.265	0.285	0.271
ATF*FL	Coeff	28.145	9.497	24.954
	Std Error	61.865	65.240	61.667
	T-Stat	0.455	0.146	0.405
	Prob	0.651	0.885	0.688

		Pooled	FE	RE
Constant (C)	Coeff	0.329	0.279	0.323
	Std Error	0.133	0.135	0.143
	T-Stat	2.474	2.062	2.255
	Prob	0.017	0.046	0.029
R-squared		0.094	0.237	0.095
Adjusted R2		0.034	0.061	0.035
F-statistic		1.565	1.348	1.583
Prob(F-stat)		0.211	0.245	0.207
Durbin Watson		2.456	2.896	2.514
Hausman Prob		—	—	0.369

Source: Authors' Compilation (2025)

The regression findings looking at the interactive effects on Return on Capital Employed (ROCE) are shown in Table 4. With a probability of 0.369, the Hausman test suggests that the statistically most preferred estimator for this relationship is the Random Effects (RE) model. Under the RE framework, the interaction between Completeness and Financial Leverage (COM X FL) shows a negative and statistically insignificant relationship with capital returns (beta = -26.931, $p > 0.10$). Likewise, the interactions of Adherence to Framework (ATF X FL: beta = 24.954, $p > 0.10$) and Accuracy (ACC X FL: beta = 5.581, $p > 0.10$) with financial leverage both show positive but statistically insignificant correlations with ROCE. These findings suggest that the interaction of debt and environmental disclosure components does not significantly affect general operational capital efficiency. The Durbin-Watson value of 2.514 confirms the lack of significant residual autocorrelation; yet, with an R-squared of 0.095 and an insignificant F-statistic (1.583, $p > 0.10$), the model exhibits weak overall explanatory power.

Table 5 Financial Leverage and Environmental Reporting Quality on Market Share

		Pooled	FE	RE
COM*FL	Coeff	-6.328	-0.928	-1.34
	Std Error	9.361	4.062	4.048
	T-Stat	-0.676	-0.228	-0.331
	Prob	0.503	0.821	0.742
ACC*FL	Coeff	0.208	-0.883	-0.767
	Std Error	0.758	0.346	0.343
	T-Stat	0.274	-2.552	-2.236
	Prob	0.785	0.015	0.030
ATF*FL	Coeff	6.379	0.797	1.212
	Std Error	9.372	4.075	4.060

		Pooled	FE	RE
	T-Stat	0.681	0.196	0.299
	Prob	0.500	0.846	0.767
Constant (C)	Coeff	0.139	0.165	0.163
	Std Error	0.020	0.008	0.034
	T-Stat	6.906	19.550	4.730
	Prob	0.000	0.000	0.000
R-squared		0.033	0.862	0.411
Adjusted R2		-0.031	0.83	0.372
F-statistic		0.512	26.971	10.458
Prob(F-stat)		0.676	0.000	0.000
Durbin Watson		0.359	1.755	1.164
Hausman Prob		—	—	0.001

Source: Authors' Compilation (2025)

Table 5 shows the interactive regression results modeling changes in firm Market Share (MS). A Hausman test p-value of 0.001 obviously shows that random errors are not present; This backs the Fixed Effects (FE) model as the right analytical foundation. In this model, the interaction of Accuracy and Financial Leverage (ACC X FL) has a negative and very significant connection with market share (beta = -0.883, $p < 0.05$), therefore indicating that strong reporting accuracy and debt pressure reduce competitive market posture. The interactive terms for Completeness (COM X FL: beta = -0.928, $p > 0.10$) and Adherence to Framework (ATF X FL: beta = 0.797, $p > 0.10$), on the other hand, stay statistically insignificant, showing they have no direct impact on market share changes. With a 0.862 R-squared value, the model exhibits remarkably high explanatory power; this implies that these factors drive 86.2% of market share variation. Finally, the extremely significant F-statistic (26.971, $p < 0.01$) and a consistent Durbin-Watson value of 1.755 offer strong evidence against the null hypothesis of no significant synergistic effect.

Discussion of Findings

The results demonstrate that financial leverage affects how environmental reporting quality relates to Earnings Per Share (EPS). The findings agree with studies (e.g., Benson *et al.*, 2021; Erinoso & Oyedokun, 2022) showing how structured environmental accounting and audit systems significantly maximize corporate profit indicators like EPS. Conversely, the results run against those of Dhar and Ashraful (2021), who found no significant relationship between reporting indices and ultimate EPS, or those of Ayuba and Yunusa (2023) and Madukwe et al. (2022), who claimed that environmental disclosures have direct negative impacts on performance.

In addition, under the preferred Random Effects model, interaction analysis shows that financial leverage does not materially moderate the link between environmental reporting quality and Return on Capital Employed (ROCE). These results match those of Erhinyoja and

Marcella (2019), who noted little influence of sustainability disclosures on ROCE, and of Olabisi et al. (2022), who found that rival environmental costs typically dilute and cancel out consistent effects on capital returns. On the other hand, the results do not support earlier research (such as Iliemena, 2020; Emmanuel & Mary, 2022) showing strong, significant direct correlations between environmental accounting techniques and enhanced ROCE.

Furthermore, the empirical findings show that financial leverage serves as a very important moderator in the link between environmental reporting quality and competitive market share. This suggests that high reporting accuracy combined with high debt pressure drives down market share by taking financial attention away from market growth. Interactive terms for completeness and framework adherence, however, have no direct importance. These results agree with those of Shaikh (2022) and Onyebuenyi and Ofoegbu (2022), who found that strong environmental disclosures might be a bureaucratic burden that negatively affects accounting performance. Conversely, the results run counter to studies—such as Alhassan and Islam, 2019; Emeka et al., 2020; Zarefar et al., 2022—all of whom found that environmental reporting generally enhances performance regardless of the moderating effects of debt.

Policy Implication and recommendation

The findings point to the sophisticated but crucial relationship financial leverage, environmental reporting quality, and performance outcomes in the Nigerian oil and gas industry. Financial leverage's substantial moderating effect helps us to better grasp how capital structure affects the environmental reporting-financial performance connection. The stronger model fit of the interaction models over conventional direct effects models suggests that financial leverage greatly affects how environmental reporting influences financial results across several performance metrics.

The study advises highly leveraged oil and gas firms to deliberately run their capital allocations between commercial activities and disclosure quality aspects. Particularly, oil and gas firms under heavy debt loads should especially concentrate in structured compliance to worldwide reporting standards rather than unorganized completeness improvements since regulated reporting maximizes investor trust and guards profits.

CONCLUSION

Based on the findings of this study, the results of this study show that financial leverage helps to explain how environmental reporting quality affects the financial performance of Nigerian oil and gas businesses. The several interacting impacts on EPS, ROCE, and Market Share demonstrate how financial leverage affects financial results by way of disclosure aspects. Increasing reporting thoroughness (COM) costs money that lowers short-term profits, especially for highly leveraged businesses; therefore, strict adherence to structures (ATF) serves as a good quality indicator for the capital markets. On the other hand, over-allocating money to ensure reporting accuracy (ACC) under high debt pressure reduces competitive market share by taking significant funds away from market development. This study concludes at last that the fundamental capital structure of a business directly affects whether corporate

transparency acts as a strategic financial asset or an operational weight, therefore excluding environmental sustainability reporting in isolation.

REFERENCES

- Alhassan, I., & Anwarul Islam, K. (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. <https://Pdfs.Semanticscholar.Org/76a0/2aa417c85e294a182bc545cc60b7440e89c5.Pdf>
- Almarah, A. A., Khalid, A., & Aljajawy, T. (2019). The Relationship between Transparency and Financial Performance in Iraqi Corporations. *Transylvanian Review of Administrative Sciences*, 58(1), 1–12. <https://Www.Researchgate.Net/Publication/333943057>
- Amosun, O. O., Owolabi, S. A., & Odunlade, O. A. (2022). Social and Environmental Accounting and Performance of Banking Companies Quoted in Nigeria. *Journal of Finance and Accounting*, 10(3), 160–167. <https://Doi.Org/10.11648/J.Jfa.20221003.12>
- Anderson, J. C., Kumar, N., & Narus, J. A. (2018). *Value merchants: Demonstrating and documenting superior value in business markets*. Harvard Business Review Press.
- Aniebiet, J. E., & Emenyi, E. O. (2024). Environmental Waste Management Disclosure And Financial Performance Of Listed Consumer Goods Firms In Nigeria. *Advance Journal of Management, Accounting and Finance*, 9(5), 33-53. <https://aspjournals.org/ajmaf/index.php/ajmaf/article/view/93>
- Aniesodo, E. A., & Onuora, J. K. (2024). Environmental Disclosures and Firms Value: An Empirical Evidence on Nigerian Firms. *Journal of Accounting and Financial Management*, 10(2), 79–101. <https://Doi.Org/10.56201/Jafm.V10.No2.2024.Pg79.101>
- Arumona, J., Lambe, I., & Ogunmakinde, I. (2021). Effect of Environmental Disclosure on Financial Performance of Quoted Oil and Gas Companies in Nigeria . *Bingham University Journal of Accounting and Business*, 6(1), 1–16. <https://Www.Binghamadmission.Com/Library/Images/Pdf/Bujab6i.Pdf>
- Ayuba, T., & Yunusa, G. (2023). Impact of environmental and social disclosure on return on asset of listed oil and gas companies in Nigeria. *International Journal of Finance and Accounting*, 8(1), 23-35. <https://www.iprjb.org/journals/index.php/IJFA/article/view/1778>
- Baba, S. (2020). Determinants of Environmental Accounting Disclosure of Listed Oil and Gas Firms in Nigeria. *International Journal of Academic Accounting, Finance & Management Research (IJAAMR)*, 4(11), 104-115. <https://www.academia.edu/download/105282212/SR201124103455.pdf>
- Bagh, T., Khan, M. A., Azad, T., Saddique, S., & Khan, M. A. (2017). The Corporate social responsibility and firms' financial performance: Evidence from financial sector of

- Pakistan. *International Journal of Economics and Financial Issues*, 7(2), 301-308.
<https://dergipark.org.tr/en/pub/ijefi/issue/32035/354484>
- Benson, N. C., Asuquo, A. I., Inyang, E. O., & Adesola, F. A. (2021). Effect of green accounting on financial performance of oil and gas companies in nigeria. *Journal of University of Shanghai for Science and Technology*, 23(12), 166-190.
<https://doi.org/10.51201/jusst/21/11974>
- Berk, J., & DeMarzo, P. (2020). *Corporate finance* (5th ed.). Pearson Education.
- Calabrese, A., Costa, R., Ghiron, N. L., & Menichini, T. (2017). Materiality analysis in sustainability reporting: a method for making it work in practice. *European Journal of Sustainable Development*, 6(3), 439-439.
- Carandang, J. C., & Ferrer, R. C. (2020). Effect of environmental accounting on financial performance and firm value of listed mining and oil companies in the Philippines. *Asia-Pacific Social Science Review*, 20(1), 11.
<https://animorepository.dlsu.edu.ph/apssr/vol20/iss1/11/>
- Cormier, D., & Magnan, M. (2015). The economic relevance of environmental disclosure and its impact on corporate legitimacy: An empirical investigation. *Business Strategy and the Environment*, 24(6), 431-450.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/bse.1829>
- Deegan, C. & Jeffry, U. (2006). *Financial accounting theory*. Berkshire SL6 2QL, McGraw-Hill Education.
[https://books.google.com/books?hl=en&lr=&id=tsovEAAAQBAJ&oi=fnd&pg=PR1&dq=Deegan,+C.+%26+Jeffry,+U.+\(2006\).+Financial+accounting+theory.+Berkshire+SL6+2QL,+McGraw-Hill+Education.+&ots=3Ki7MwSK4N&sig=F1SQqYDPjtVCEiWdHGDIjr2QJ5w](https://books.google.com/books?hl=en&lr=&id=tsovEAAAQBAJ&oi=fnd&pg=PR1&dq=Deegan,+C.+%26+Jeffry,+U.+(2006).+Financial+accounting+theory.+Berkshire+SL6+2QL,+McGraw-Hill+Education.+&ots=3Ki7MwSK4N&sig=F1SQqYDPjtVCEiWdHGDIjr2QJ5w)
- Dhar, S., & Asharaf, M., (2021). Impact Environmental Accounting Practices on Financial Performance: Evidence from Banking Sector of Bangladesh, *International Journal of Asian Business and Information Management*, 12(1),24-42. <https://www.igi-global.com/article/impact-of-environmental-accounting-reporting-practices-on-financial-performance/268871>
- Dibia, N. O., & Onwuchekwa, J. C. (2015). Determinants of Environmental Disclosures in Nigeria: A Case Study of Oil and Gas Companies. *International Journal of Finance and Accounting*, 4(3), 145–152. <https://doi.org/10.5923/J.Ijfa.20150403.01>
- Dowling, J., Pfeffer, J. (1975), Organizational legitimacy: Social Values and organizational behavior. *Pacific Sociological Review*, 18, 122-136.
<https://journals.sagepub.com/doi/abs/10.2307/1388226>

- El Khoury, I., Nasrallah, N., & Alareeni, B. (2023). Esg And Financial Performance of Banks in the Menat Region: Concavity–Convexity Patterns. *Journal of Sustainable Finance & Investment*, 13(1), 406–430. <https://doi.org/10.1080/20430795.2021.1929807>
- Emeka. O. L., Nweze, A.U, & Nwadiolor, E.O (2020) Effect of social and environmental disclosures on performance of non-financial firms in Nigeria, *journal of accounting and financial management*, 6(1): 40-58. https://www.researchgate.net/profile/Omaliko-Emeka-Leonard/publication/348558730_Effect_of_Social_and_Environmental_Disclosures_on_Performance_of_Non-Financial_Firms_in_Nigeria/links/60046b1d92851c13fe1bc8ea/Effect-of-Social-and-Environmental-Disclosures-on-Performance-of-Non-Financial-Firms-in-Nigeria.pdf
- Emmanuel, O. and Mary, E. (2022). Environmental conservation, sustainability and financial performance of listed oil and gas companies in nigeria. *International Journal of Research and Innovation in Social Science*, 06(08), 582-590. <https://doi.org/10.47772/ijriss.2022.6829>
- Emmanuel, Y. L., Doorasamy, M., Kwarbai, J., Otekunrin, A. O., & Osakede, U. A. (2024). Relationship of environmental disclosure of renewable energy, carbon emissions, waste management, water consumption, and banks' financial performance. *Waste Management, Water Consumption, and Banks' Financial Performance (August 30, 2024)*. *International Journal of Energy Economics and Policy*, 14(2), 10-32479. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4941213
- Erinoso, M. and Oyedokun, G. (2022). Environmental disclosure, audit and financial performance of listed oil and gas companies in nigeria.. *African Economic and Management Review*, 2(3), 1-10. <https://doi.org/10.53790/aemr.v2i3.66>
- Etale, L. M., & Otuya, S. (2018). Environmental Responsibility Reporting and Financial Performance of Quoted Oil and Gas Companies in Nigeria. *European Journal of Business and Innovation Research*, 6(6), 23–34. <https://doi.org/10.37745/Ejbir.2013>
- Global Reporting Initiative (GRI). (2021). *GRI 1: Foundation 2021*. Amsterdam: Global Reporting Initiative.
- Global Reporting Initiative. (2023). *GRI standards*. Retrieved from <https://www.globalreporting.org/standards>
- Global Reporting Initiative. (2025). *About GRI*. Retrieved from <https://www.globalreporting.org/about-gri/>
- Gray, R., Owen, D. & Adams, C. (1996). *Accounting & Accountability: Changes and Challenges in Corporate Social Environmental Reporting*, Prentice Hall, Hemel Hempstead, ISBN 9780131758605. <https://durham-repository.worktribe.com/output/1123410>

- Guthrie, J. & Parker, L. D. (1989). Corporate Social Reporting: A Rebuttal of Legitimacy Theory. *Accounting and Business Research*, 9, 343-352. <https://www.tandfonline.com/doi/abs/10.1080/00014788.1989.9728863>
- Handoyo, S., & Angela, P. (2021). The Determinants of Environmental Disclosure Quality: Empirical Evidence from Indonesia. *Journal of Accounting Auditing and Business*, 4(1), 1-13. <https://www.academia.edu/download/69037524/pdf.pdf>
- Herath, S. K. & Albearqi, N. (2017). Financial reporting Quality: a literature review. *International Journal of Business Management and Commerce*, 2 (2); 1-14
- Herghiligiu, I. V. Istrate, C., Robu, I. B., & Pavaloaia, L., (2017). Analysis of companies' sustainability under the influence of environmental information disclosure. *Environmental Engineering and Management Journal*, 16(4), 957-967. <https://doi:10.30638/eemj.2017.097>
- Hooghiemstra, R. (2000). Corporate communication and impression management—new perspectives why companies engage in corporate social reporting. *Journal of Business ethics*, 27, 55-68. <https://link.springer.com/article/10.1023/A:1006400707757>
- Ibrahim, R., Ibrahim, Y. K., & Hussain, M. S. (2023). Environmental reporting and financial performance of listed industrial and consumer goods firms in Nigeria. *FUDMA Journal of Accounting and Finance Research [FUJAFR]*, 1(2), 123-140. <https://link.springer.com/article/10.1023/A:1006400707757>
- Idamoyibo, H. R. (2021). Evaluation of Environmental Accounting, Financial Reporting and Profitability of Oil and Gas Firms In Nigeria. *Journal of Accounting and Management*, 11(1), 154–162. <https://Www.Dj.Univ-Danubius.Ro/Index.Php/Jam/Article/View/424>
- IFRS Foundation. (2025). *About the IFRS Foundation and the IASB*. Retrieved from <https://www.ifrs.org/about-us/>
- Iliemena, R. O. (2020). Environmental accounting practices and corporate performance: Study of listed oil and gas companies in Nigeria. *European Journal of Business and Management*, 12(22), 58-70. https://www.researchgate.net/profile/Rachael-Iliemena-Ifeanyi/publication/344154766_Environmental_Accounting_Practices_and_Corporate_Performance_Study_of_Listed_Oil_and_Gas_Companies_in_Nigeria/links/5f563464458515e96d361a43/Environmental-Accounting-Practices-and-Corporate-Performance-Study-of-Listed-Oil-and-Gas-Companies-in-Nigeria.pdf
- International Accounting Standards Board (IASB, 2018). Conceptual Framework for Financial Reporting. IFRS Foundation. <https://www.ifrs.org/content/dam/ifrs/publications/pdfstandards/english/2021/issued/part-a/conceptual-framework-for-financial-reporting.pdf>

- Kenton, W. (2019). What is financial performance? Available at <https://www.investopedia.com/terms/f/financialperformance.asp>, retrieved on December 3, 2024.
- Kotler, P., & Keller (2018). *Principles of marketing* (17th ed.). Pearson Education.
- Kumar, K., & Prakash, A. (2019). Examination of sustainability reporting practices in Indian banking sector. *Asian Journal of Sustainability and Social Responsibility*, 4, 1-16. <https://doi:10.1186/s41180-018-0022-2>
- Madukwe, C., James, Inyama, O., Ikechukwu, Maduabuchi, A.T., Madukwe, & Ani, T.M. (2022). Environmental Accounting Practices and Corporate Performance: A Study of Listed Oil and Gas Companies in Nigeria. <https://iessociety.org/index.php/IJBM/article/view/36>
- Makhdoom, Z. H., Gao, Y., Song, X., Khoso, W. M., & Baloch, Z. A. (2023). Linking Environmental Corporate Social Responsibility to Firm Performance: The Role of Partnership Restructure. *Environmental Science and Pollution Research*, 30(16), 48323–48338. <https://doi.org/10.1007/S11356-023-25776-1>
- 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. <https://www.iiardjournals.org/get/JAFM/VOL.%207%20NO.%203%202021/ENVIRONMENTAL%20ACCOUNTING.pdf>
- Obiora, O. O., Nworie, G. O., & Onyebuchi, M. H. (2024). Assessing Financial Returns Through Environmental Responsibility Disclosure Among Listed Oil and Gas Firms in Nigeria. *International Journal of Research Publication and Reviews*, 5(4), 545–557. <https://doi.org/10.55248/Gengpi.5.0424.0906>
- Okafor, O. O., Egbunike, P. A., & Amahalu, N. N. (2022). Determinants of Environmental Disclosure of Quoted Oil and Gas Firms in Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 77–88. <https://www.ijmssr.org/Paper/Ijmssr00612.Pdf>
- Okulenu, S. A., Olusanya, J. O., & Ogunbanjo, F. O. (2024). Environmental Accounting and Performing of Listed Manufacturing Sector in Nigeria Environmental Accounting and Performance of Listed Manufacturing Sector in Nigeria. *Jabu International Journal of Social and Management Sciences*, 9(1), 25–34. <https://jabu.edu.ng/wp-content/uploads/2024/02/Environmental-Accounting-And-Performance-Of-Listed-Manufacturing-Sector-In-Nigeria.Pdf>
- Olabisi, J., Oladiran, R. W., Aransiola, S. Y., & Adenekan, D. G. (2022). Environmental Reporting and Performance of Nigerian Listed Oil and Gas Firms. *Economic Studies & Analyses/Acta VSFS*, 16(2). <https://www.ceeol.com/search/article-detail?id=1094777>
- Onyebuanyi, F. E., & Ofoegbu, G. N. (2022). Environmental sustainability disclosure and firm performance of quoted oil and gas companies in sub-Saharan Africa

- countries. *Academy of Accounting and Financial Studies Journal*, 26(1).
<https://www.researchgate.net/publication/358186591>
- Oraka, A.O (2021). Environmental Costs and Financial Performance of Oil and Gas Companies in Nigeria. *Research Journal of Management Practice*, 1(5), 1 – 18.
<https://www.ijaar.org/articles/rjmp/v1n5/rjmp-v1n5-may21-p1514.pdf>
- Palepu, K. G., Healy, P. M., Wright, S. C., & Bradbury, M. (2015). *Business analysis & valuation: IFRS edition* (4th ed.). Cengage Learning.
- Pham, D. C., Do, T. N. A., Doan, T. N., Nguyen, T. X. H., & Pham, T. K. Y. (2021). The Impact of Sustainability Practices on Financial Performance: Empirical Evidence from Sweden. *Cogent Business & Management*, 8(1), 1–19.
<https://doi.org/10.1080/23311975.2021.1912526>
- Qian, W., Tilt, C., Belal, A. (2021). Social and environmental accounting in developing countries: Contextual challenges and insights. *Accounting, Auditing and Accountability Journal*, 34(5), 1021-1050.
<https://www.emerald.com/insight/content/doi/10.1108/AAAJ-03-2021-5172/full/html>
- Salameh, R. S., Kalbouneh, A. Y., Alnabulsi, Z. H., Al-Sohaimat, M., & Lutfi, K. M. (2022). The effectiveness of disclosing sustainability accounting-related information in small and medium-sized enterprises (SMEs) in raising the reliability of financial reports. *Academy of Strategic Management Journal*, 21(1), 1-14.
- Salawu, M. A., Mamman, S., Dahiru, M. T., Ado, G., & Yunusa, N. (2021). Firm-specific Attributes and Environmental Disclosure of Listed Oil and Gas Firms in Nigeria. *Global Journal of Accounting*, 7(1), 1-14.
<http://ljes.unilag.edu.ng/index.php/gja/article/view/1202>
- SASB. (2018). *Conceptual Framework*. Sustainability Accounting Standards Board. <https://www.sasb.org/standards/conceptual-framework/>
- SASB. (2025). *About SASB*. Retrieved from <https://www.sasb.org/about/>
- Shaikh, I. (2022). Environmental, social, and governance (ESG) practice and firm performance: an international evidence. *Journal of Business Economics and Management*, 23(1), 218–237. <https://doi.org/10.3846/jbem.2022.16202>
- Task Force on Climate-related Financial Disclosures. (2025). *About*. Retrieved from <https://www.fsb-tcfd.org/about/>
- TCFD. (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Task Force on Climate-related Financial Disclosures. <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf>

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- Tettamanzi, P., Venturini, G., & Murgolo, M. (2022). Sustainability and financial accounting: A critical review on the ESG dynamics. *Environmental Science and Pollution Research*, 29(11), 16758-16761. <https://doi.org/10.1007/s11356-022-18596-2>
- Triyani, A., Astuti, W. B., Setyahuni, S. W., & Putri, S. (2023). The Effect of Sustainable Performance on Capital Structure: Case of High-Tech Companies in Indonesia. *Jak (Jurnal Akuntansi) Kajian Ilmiah Akuntansi*, 10(1), 1–12. <https://doi.org/10.30656/Jak.V10i1.5109>
- Utile, B. J. (2016). Effect of sustainability reporting on firm's performance: A review of Literature. *The International Journal of Business and Management*, 4(7), 203-208. https://www.academia.edu/download/54037717/06_IJMBC.pdf
- Worimegbe, T. M., & Afrogha, O. O. (2024). Environmental accounting for a quality regulatory framework. In *Environmental Pollution and Public Health* (pp. 327-336). Elsevier.
- Zarefar, A.; Agustia, D.; Soewarno, N. (2022) Bridging the Gap between Sustainability Disclosure and Firm Performance in Indonesian Firms: The Moderating Effect of the Family Firm. *Sustainability*, 14, 12022. <https://doi.org/10.3390/su141912022>