Issues in Contemporary Accounting and Business (ICAB)
Volume 2, Issue 1 · April 2026 | ISSN 3092-8710 (Print) · ISSN 3141-4168 (Online)
www.unicalaccjournals.org.ng

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING AND CORPORATE PERFORMANCE OF LISTED OIL AND GAS COMPANIES IN NIGERIA

KUBUA, HILARY NKAD
Email: kubuahilary@gmail.com (K. H. N.).
Department of Accounting, Faculty of Administration and Management Sciences,
University of Calabar, Cross River State, Nigeria

Abstract: This study examined the effect of environmental, social and governance reporting on corporate performance of listed oil and gas companies in Nigeria. The study adopted an ex post facto and correlational research design, using balanced panel data from six listed oil and gas companies: MRS Oil Nigeria Plc, Seplat Energy Plc, Oando Plc, TotalEnergies Marketing Nigeria Plc, Conoil Plc and Eterna Plc. The study period consisted of 60 firm-years (2015-2024). Data were extracted from annual reports, financial statements, sustainability disclosures and corporate governance reports. The components of the ESG reporting were measured using an unweighted disclosure checklist, and corporate performance using the return on assets. Data were analysed using descriptive statistics, correlation analysis, diagnostic tests and fixed-effects panel regression. The findings showed that environmental reporting had a positive and significant effect on corporate performance, while social and governance reporting had no significant effect. The study concludes that the influence of ESG reporting on performance is not uniform, with the impression that the amount of information disclosed in the environmental section seems more performance-relevant than the social and governance section. It calls for higher reporting quality for the environment, quantifiable reporting results for social initiatives, and meaningful reporting for governance compliance.

Keywords: *Environmental reporting; social reporting; governance reporting; ESG disclosure; corporate performance; oil and gas companies*.

1.0 Introduction

The shift in the focus of corporate reporting from financial statements to a wider scope of corporate responsibility has introduced a new model of corporate responsibility in which companies are required to communicate on the way they deal with environmental, social and governance (ESG) issues. Khamisu and Paluri (2024) demonstrate that the research on ESG disclosure has grown as the mandatory disclosure has affected the information that stakeholders are expecting from companies. While traditional accounting numbers are still vital, they are not enough to measure long-term risk as they do not provide a complete picture of environmental liabilities, employee welfare, community exposure, board accountability, or ethical behaviour. Similarly, Khan (2022) supports the literature growth in ESG performance as investors now consider ESG information as a signal for risk management, compliance, and long-term value potential. Hence, ESG reporting is a way that offers investors, regulators, host communities, employees and creditors non-financial data to evaluate whether corporate value is being created responsibly and sustainably.

There is a crucial link between ESG reporting and corporate performance, but it is far from being a settled theoretical issue. However, Buallay (2019) provides evidence of how

sustainability reporting can be analysed from an operational, financial and market performance perspective based on 11,705 observations from manufacturing and banking companies in 80 countries, suggesting that information on sustainability may impact a firm's usage of resources, access to capital and maintenance of market confidence. A study by Chen et al. (2025) also revealed that the disclosure of ESG can have beneficial impacts on the financial performance of the company, especially when its disclosure is economically valuable due to the importance of transparency for public perception, investor attention, and agency costs. There is the counter-argument that implementing ESG reporting could have short-term costs relating to environmental compliance and remediation, employee welfare, community investment, governance revisions and reporting assurance. This is not to suggest that disclosure is always profitable, but rather that disclosure's financial impact will be contingent on the extent to which disclosure is a representation of substantive business practice or symbolic reporting.

ESG reporting is gaining relevance in Nigeria due to the convergence of the three elements of stakeholder pressure, regulatory changes, investor expectations and disclosure inconsistencies. KPMG's 2024 Sustainability reporting survey analysed the sustainability reports of 5,800 companies across 58 countries, revealing that nearly all (98%) of the world's G250 companies and four-fifths (78%) of the N100 companies report ESG or sustainability data. The global movement is significant to Nigeria as the Financial Reporting Council of Nigeria (FRC) announced a roadmap for IFRS Sustainability Reporting Standards, such as IFRS S1 and IFRS S2, marking a shift from the current largely voluntary sustainability reporting to more structured reporting requirements. However, Nigeria's ESG reporting landscape is not uniform: some companies report extensive sustainability data, while others report little or none, or provide non-comparable or narrative-driven disclosures. Hence, the importance of ESG reporting in Nigeria is growing, but its implications for performance remain insufficiently tested and are only assumed.

The oil and gas sector is a good empirical basis for the study of ESG reporting because of the tangible environmental, social and governance implications of its activities. The Global Methane Tracker 2024 by the International Energy Agency (IEA) estimates that fossil fuel production and use accounted for nearly 120 million tonnes of methane emissions in 2023, underscoring the importance of oil, gas and related energy activities in the global environmental-risk debate. The reason is that environmental reporting is not just a reputational thing; it has a relationship with pollution control, emissions management, remediation, regulatory compliance and stakeholder legitimacy, which is the reason why this is important to the Nigerian oil and gas companies. Afolabi et al. (2024) conducted a study on environmental sustainability disclosure of listed Nigerian oil and gas firms and claimed that environmental reporting is crucial particularly as petroleum operations bring about environmental and regulatory threats to firms. Likewise, Ukoh, Nduokafor and Nworie (2024) highlighted that sustainability reporting can positively influence the value of a firm among Nigerian oil and gas companies. But the pressure of energy transition, the expectations of host communities, employee safety concerns, price volatility, and the governance spotlight are also emerging as challenges for the sector, underscoring the importance of ESG reporting for operational continuity and corporate performance.

Given the extent of the literature, there is a particular research problem of how ESG is modelled in Nigerian oil and gas studies. Abuaja and Ukpong (2022) examined the value-relevance of sustainability reporting of listed oil and gas companies and focused on market values instead of accounting values. Afolabi et al. (2024) placed emphasis on environmental

sustainability reporting and financial performance, while Onwubiko et al. (2025) found that corporate governance disclosure significantly positively influenced ROE and financial disclosure slightly positively influenced financial performance, but environmental disclosure did not significantly influence financial performance. While these studies are helpful, they may include multiple ESG dimensions, or look at indicators based on the market, or discuss sustainability without the term ESG, or analyse governance based on corporate governance attributes instead of governance reporting as a disclosure dimension. This leaves room for a study which distinguishes between environmental reporting, social reporting and governance reporting and examines the impact of each on return on assets. This study also relies on the annual-report disclosure scoring method because it facilitates a content analysis that uses a checklist to transform the qualitative disclosures into firm-year information, which helps limit the use of general CSR spending and narrative statements.

The general purpose of this study is to appraise the impact of Environmental, Social and Governance reporting on the performance of listed oil and gas companies in Nigeria. Specifically, the study investigates the impact of environmental reporting, social reporting, and governance reporting on the return on assets. The study is guided by three research questions: what is the effect of environmental reporting on corporate performance; what is the effect of social reporting on corporate performance; and what is the effect of governance reporting on corporate performance? The hypotheses are stated in null form: environmental reporting has no significant effect on corporate performance; social reporting has no significant effect on corporate performance; and governance reporting has no significant effect on the corporate performance of listed oil and gas companies in Nigeria.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Concept of ESG Reporting

Environmental, social and governance reporting is the practice of disclosing information about how companies are addressing environmental, social and governance issues. ESG disclosure is a significant corporate reporting challenge as regulators, investors and stakeholders demand standardised data on sustainability risks and corporate responsibility, Khamisu and Paluri (2024) note. This means that ESG reporting is not just about profit, assets, and liabilities but about non-financial matters that could impact long-term value creation. In addition, Khan (2022) demonstrates that ESG disclosure research has matured based on the characteristics of the firm, financial materiality of ESG disclosure, and corporate governance, thus making ESG disclosure not just a reputation management exercise but a disclosure mechanism that may be value-relevant. In other words, the concept of ESG reporting is significant because it allows stakeholders to assess whether a company's financial performance reflects sustainable environmental actions, valid social interaction and good governance.

2.1.2 Environmental Reporting

Environmental reporting is the sharing of information regarding the impact of the firm's activities on the environment and the management's response to environmental issues. For oil & gas companies, these include environmental policy reporting, energy usage, emissions, waste management, pollution control, spill prevention & response, environmental compliance, and climate risk-related reporting. The Nigeria Oil and Gas Industry has been identified as a sector of interest for environmental sustainability disclosure, as it is perceived

to be environmentally sensitive and subject to regulatory scrutiny (Afolabi et al., 2024). But environmental reporting cannot simply be useful because it is there; it has to offer something meaningful, in this instance, in terms of environmental management rather than general statements of responsibility.

2.1.3 Social Reporting

Social reporting refers to the disclosure of how a firm manages its relationships with employees, customers, suppliers, host communities and wider society. Typically, employee welfare, occupational health and safety, training, human rights, community development, customer responsibility, local content and stakeholder engagement and corporate social investment. Based on the findings of Ukoh, Nduokafor and Nworie (2024), social sustainability disclosure could affect firm value in Nigerian oil and gas companies as host-community relations and stakeholder perceptions matter in this industry. Nevertheless, social reporting must be interpreted cautiously because a firm may disclose community projects or welfare activities without demonstrating whether those activities improved employee productivity, community trust or operational stability.

2.1.4 Governance Reporting

Governance reporting concerns disclosure on the structures and processes through which a company is directed, controlled and monitored. Covering Board composition, Board independence, Audit committee structure, Internal control, Risk Management, Ethics, Anti-corruption mechanisms, Whistleblowing and Shareholder rights. Del Gesso (2024) highlights agency theory, stakeholder theory and legitimacy theory as the key theories for ESG disclosure, which highlight that governance reporting plays a central role in minimizing information asymmetry and increasing accountability. But not all governance reporting is necessarily good governance; board structures, disclosures and policy statements can be put in place without having any impact on monitoring, ethical control or management discipline.

2.2 Corporate Performance

Corporate performance is how well a company meets its financial, operational and strategic goals over a specific timeframe. Performance is typically assessed using accounting-based metrics in accounting and finance literature, such as return on assets, return on equity, earnings per share and net profit margin, or market-based metrics, such as Tobin's Q and share price performance. This distinction is shown in Buallay (2019) by considering sustainability reporting with respect to operational performance, financial performance and market performance, respectively represented by ROA, ROE and Tobin's Q. This demonstrates that the measurement of performance is not objective; it is dependent on the type of researcher, ranging from asset efficiency, shareholder return, to market valuation.

The study uses ROA as a proxy for corporate performance as it shows the efficiency of the use of total assets by management in earning profits. It's appropriate for the oil and gas industry because it's an asset-heavy business with high levels of investment in depots, plants, equipment, pipelines, service stations, exploration assets and working capital. Different from other measures, ROA reflects the internal efficiency of corporate resources, as demonstrated by Chen et al. (2025), who have shown that accounting-based financial performance reflects the internal efficiency of corporate resources, whereas market-based financial performance is also affected by investor sentiment and valuation expectations. Therefore, this study is suitable for the study of ROA, which aims to answer the question of whether the dimensions of ESG disclosure

explain accounting-based performance or not. The study thus resolves corporate performance as:

ROA = Profit Before Tax/Total Assets

This formulation is appropriate as it links ESG reporting with the profit that firms can make from their assets.

2.3 Environmental Reporting and Corporate Performance

Environmental reporting can benefit companies' performance in cases where it helps to mitigate legitimacy risk, enhance compliance, boost investor confidence, and reduce the likelihood of environmental conflicts. In the oil and gas industry, this argument is especially strong owing to the possibility of fines, cleanup expenses, social unrest and damage to its reputation arising from environmental accidents. In the oil and gas sector, Afolabi et al. (2024) found that environmental sustainability accounting had significant effects on ROA, EPS and liquidity ratio of eight listed oil and gas companies in Nigeria, which provides evidence that environmental disclosure might be performance-relevant in this sector. Similarly, Wang et al. (2025) in their meta-analysis of ESG disclosure studies demonstrate that disclosure of ESG can have an impact on corporate outcomes, albeit with varying degrees of impact depending on context and mechanism.

However, the positive argument should be qualified because environmental reporting can also reflect costly compliance rather than immediate profitability. Financial resources are needed for environmental remediation, pollution control, waste treatment, spill management, emissions reduction and environmental monitoring, and these costs can affect short-term ROA if they do not result in efficiency gains or increase value. Studies by Chen et al. (2025) suggest that the association between ESG disclosure and financial outcomes can be non-linear, meaning disclosure might enhance performance up until a certain level, and beyond which it may not result in infinite financial gains. As a result, environmental reporting can have a positive impact on corporate performance when it is grounded in credible risk management, though there can be a negative impact when it is primarily about compliance and is costly. Based on this, the following hypothesis is put forward:

H01: Environmental reporting has no significant effect on corporate performance of listed oil and gas companies in Nigeria.

2.4 Social Reporting and Corporate Performance

Social reporting can help enhance corporate performance by fostering employee engagement, customer trust, community acceptance and social licence to operate. In the oil and gas industry, social reporting is of particular importance, as operational continuity can be dependent on the relationship with the host community, employee safety, the implementation of local content policies and stakeholder confidence. Based on the findings of Ukoh et al. (2024), sustainability reporting of listed Nigerian oil and gas companies has the potential to improve the value of their firm, implying that social and sustainability disclosure can impact the perceptions of corporate responsibility among stakeholders. From this angle, social reporting may be economically significant if it minimises disruption, enhances company image and helps maintain community and employee relationships.

However, social reporting may not have a direct impact on ROA right away as many social activities have costs that don't yield a direct cash benefit, but rather a benefit over time or in the indirect future. Reducing administrative and operating costs in the short run could be problematic, but community development projects, employee welfare programmes, safety initiatives, training, local content programmes and customer responsibility systems might contribute to enhancing the legitimacy of the operations. This is why the results of studies can sometimes be contradictory with regard to the social side of sustainability or ESG disclosure. Further, Buallay (2019) finds that the ESG-performance relationships can differ across different performance measures, and Wang et al. (2025) highlight ESG disclosure heterogeneity as well. Social reporting must be evaluated rather than taken for granted, therefore, as an empirical activity. The study hypothesises that,

H02: Social reporting has no significant effect on corporate performance of listed oil and gas companies in Nigeria.

2.5 Governance Reporting and Corporate Performance

Governance reporting may improve corporate performance by reducing agency conflict, improving board monitoring, strengthening internal control and increasing investor confidence. This argument is grounded in the assumption that transparent disclosure on board composition, independence, audit committees, risk management and ethical control reduces information asymmetry between managers and shareholders. Del Gesso (2024) confirms that agency theory remains one of the dominant theoretical explanations for ESG disclosure, especially where governance information is used to assess managerial accountability. In oil and gas firms, governance reporting is even more important because the sector involves high capital expenditure, regulatory obligations, environmental liabilities and complex stakeholder risks.

But the governance disclosures could be hollow if they do not lead to better governance outcomes in terms of decision-making. Onmonya et al. (2024) analyzed listed Nigerian oil and gas companies between 2012 and 2022 and identified the lack of a significant relationship between board composition and ROA and ROE, and the negative impact of board independence and audit committee size on some performance measures. This evidence indicates that the notion that increased governance disclosure or better formal governance structures are always associated with better financial performance is at best simplistic. Instead, governance reporting is effective in improving performance only when the governance's oversight is substantive, and the discipline of audit and risk control is effective. This is used to form the hypothesis for the study:

H03: Governance reporting has no significant effect on corporate performance of listed oil and gas companies in Nigeria.

2.6 Theoretical Framework

2.6.1 Stakeholder Theory

Stakeholder theory supports ESG reporting because firms are accountable not only to shareholders but also to employees, host communities, customers, creditors, regulators, suppliers and investors. Del Gesso (2024) found that stakeholder theory is the most dominant theory in ESG and CSR disclosure accounting studies, which confirms its suitability for explaining why firms disclose non-financial responsibilities. In this study, stakeholder theory explains why listed oil and gas companies disclose environmental, social and governance

information to groups whose trust and cooperation may affect corporate performance. The theory is especially relevant because oil and gas operations can create direct consequences for host communities, employees, regulators and investors. Therefore, ESG reporting may support performance where disclosure improves stakeholder confidence and reduces conflict.

2.6.2 Legitimacy Theory

Legitimacy theory assumes that firms seek social acceptance by aligning their activities and disclosures with the expectations of society. García-Meca, Ruiz-Barbadillo and Martínez-Ferrero (2024) show that firms respond to ESG legitimacy threats by using sustainability assurance to repair credibility and protect reputation. This is highly relevant to oil and gas companies because environmental incidents, community disputes and safety failures can threaten their social licence to operate. Environmental and social reporting therefore serve as legitimacy tools through which firms explain how they manage pollution, safety, host-community obligations and environmental responsibility. However, legitimacy theory also warns that disclosure may become symbolic if firms use ESG reporting to manage perception without changing underlying practices.

2.6.3 Agency Theory

Agency theory explains governance reporting by focusing on information asymmetry between managers and shareholders. Managers control corporate resources and may possess more information than owners, creating the possibility of opportunistic behaviour, weak monitoring or inefficient investment decisions. Agency theory is one of the prevailing theories in the field of ESG disclosure, particularly in the context of governance disclosure aimed at mitigating information asymmetry and enhancing accountability, as stated by Del Gesso (2024). In the case of this research, agency theory provides support to the governance category, as disclosure on board independence, audit committee, risk management, internal control and ethics can be used by shareholders to evaluate whether there is proper monitoring of the managers. However, the theory also suggests that disclosure on its own does not have much impact unless it is a reflection of effective governance.

2.7 Empirical Review and Gap

The empirical cross-country, cross-sector and cross-performance evidence on ESG reporting and firm performance is inconclusive. Research that has demonstrated a positive impact tends to focus on the benefits of disclosure, including increased transparency, decreased information asymmetry, increased investor confidence, and enhanced long-term value creation. For instance, according to Buallay (2019), sustainability disclosures could be associated with operational, financial and market performance, and the impact varies depending on the performance indicator used: ROA, ROE or Tobin's Q. Also, based on bibliometric and meta-analytic evidence, Khan (2022) concluded that financial materiality is a significant stream within the field of ESG disclosure research, and that ESG information could be relevant when investors and stakeholders perceive it as a signal of risk management and accountability.

But the good news is not consistent. Chen et al. (2025) identified that ESG disclosure can have a non-linear relation to financial performance, as disclosure can boost performance up to a certain threshold, but can't create an unlimited financial benefit. Why? Because costs associated with ESG reporting can include compliance costs, environmental monitoring costs, social investment costs, and governance reform costs. Heterogeneous disclosure effects have also been reported by Wang et al. (2025), suggesting that the effect of disclosure varies

in institutional contexts, industry and ESG disclosure dimensions. Hence, the correlation between ESG and performance should not be assumed or taken for granted as one-to-one.

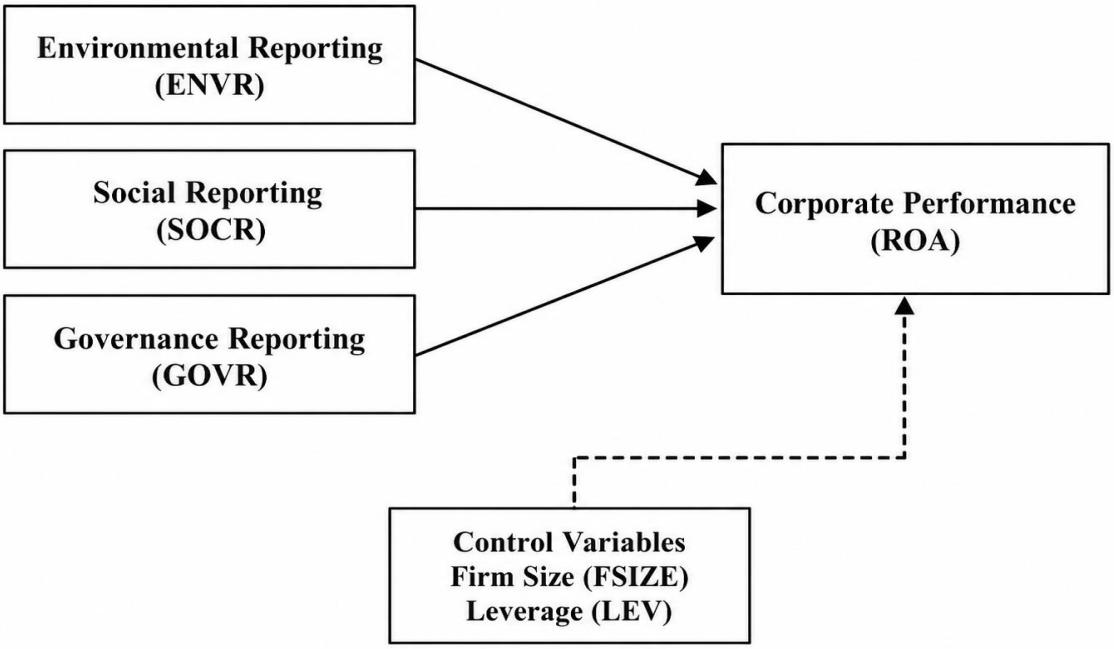
The situation in the Nigerian oil and gas industry is also far from resolved. Grigorova (2016) revealed that, for the listed oil and gas companies in Nigeria, environmental sustainability disclosures had a positive influence on financial performance indicators. According to Afolabi et al. (2024), environmental disclosure significantly influenced the financial performance indicators of the listed oil and gas companies in Nigeria. Similarly, Ukoh, Nduokafor and Nworie (2024) discovered that sustainability reporting positively affected the market value of the firms in the sector. However, Onmonya, Ebire and Lawal (2024) concluded that some of the governance attributes did not significantly or negatively affect the accounting performance of the Nigerian oil and gas companies. These conflicting findings suggest that environmental, social and governance variables may not influence performance in the same way.

The gap is thus a specific one. The majority of existing studies in Nigeria have either integrated the components of the ESG or broadly examined CSR or sustainability reporting, as well as relying on firm value instead of ROA, and/or considering governance as a dimension of the Board instead of a dimension of governance reporting. This study fills the gap by separating environmental reporting, social reporting and governance reporting and testing their individual effects on ROA using 2015–2024 panel data from six listed oil and gas companies in Nigeria.

2.8 Conceptual Framework

According to the conceptual framework, environmental reporting, social reporting and governance reporting are independent variables while corporate performance as measured by return on assets (ROA) is a dependent variable. Firm size and leverage are added as control variables as this may affect corporate performance as a result of differences in asset size and debt structure. This framework accordingly accounts for the study's argument that the dimensions of ESG reporting could have different impacts on performance, once financial characteristics of the firm are controlled for.

Figure 1: Conceptual Framework



3.0 Methodology

3.1 Research Design

This study adopted an ex post facto and correlational research design because it examined historical annual-report and financial-statement data that had already been published by listed oil and gas companies. According to Afolabi et al. (2024), secondary panel-data designs are suitable for oil and gas disclosure studies because ESG-related disclosures and financial-performance indicators can be extracted from firms' published reports across time. The ex post facto design is appropriate because the researcher did not manipulate environmental reporting, social reporting, governance reporting or corporate performance; rather, the study examined how variations in these already-existing disclosures related to return on assets. The correlational element is also justified because the study tested the direction and significance of relationships among ESG reporting dimensions and corporate performance.

3.2 Population and Sample

The population involved in this study included listed oil and gas companies on the Nigerian Exchange Group (NGX) during the study period. Purposive sampling was used to ensure that full and usable annual reports, financial statements, sustainability disclosures and corporate governance information were available for the 2015-2024 period. The six companies that were selected include MRS Oil Nigeria Plc, Seplat Energy Plc, Oando Plc, TotalEnergies Marketing Nigeria Plc, Conoil Plc and Eterna Plc. Reports from companies were used only if they contained enough information to calculate the percentage of profit after tax, total assets, total debt and ESG disclosure items over the 10-year period. Firms with missing, incomplete or insufficient annual reports were not included. To address this possibility, the study employed a balanced panel of six firms for 10 years, yielding 60 firm-years of observations.

The balanced structure was used for simpler comparability between companies and to minimise distortions due to the lack of data.

3.3 Sources of Data

The study used secondary data extracted from annual reports, audited financial statements, sustainability disclosures, corporate governance reports and official company publications. Financial data were obtained from the statement of profit or loss and statement of financial position, while ESG reporting data were extracted through content analysis of environmental, social responsibility, corporate governance and risk-management disclosures. Annual reports were used because they provide audited and publicly available firm-year information and are widely applied in disclosure-performance studies. Where a current-year report contained prior-year audited comparative figures, such comparative figures were used only where they improved consistency and completeness of the panel dataset.

3.4 Measurement of Variables

Corporate performance was measured using return on assets because ROA captures how efficiently firms use their total assets to generate profit. This measure is appropriate for oil and gas companies because the sector is asset-intensive and depends on major investments in plant, equipment, depots, stations, energy infrastructure and working capital. The dependent variable was computed as:

ROA = Profit Before Tax / Total Assets

The independent variables were environmental reporting, social reporting and governance reporting. Environmental reporting was measured as the environmental disclosure score divided by eight checklist items. Social reporting was evaluated as the social disclosure score divided by the number of checklist items. Governance reporting was calculated as the governance disclosure score over eight checklist items. Firm size and leverage were added as control variables, as larger firms may have more visibility and resources to provide more information, and leverage may affect reporting incentives and profitability. The definition of firm size was used as the natural log of total assets, and the definition of leverage was total debt/total assets. This choice of variable follows the ESG and sustainability reporting research, which relies on the ROA, size and level of leverage of the firm to remove firm-level financial differences.

Table 1: Variable Measurement

Variable	Symbol	Measurement
Corporate performance	ROA	Profit before tax / Total assets
Environmental reporting	ENVR	Environmental disclosure score / 8
Social reporting	SOCR	Social disclosure score / 8
Governance reporting	GOVR	Governance disclosure score / 8

Firm size	FSIZE	Natural logarithm of total assets
Leverage	LEV	Total debt / Total assets

3.5 ESG Disclosure Checklist

The study used a 24-item unweighted ESG disclosure checklist. The checklist contained eight environmental items, eight social items and eight governance items. Environmental items included environmental policy, energy use, emissions, waste management, pollution control, remediation, environmental compliance and climate or environmental risk disclosure. Social items included employee welfare, health and safety, training, human rights, community development, customer responsibility, local content and stakeholder engagement. Governance items included board composition, board independence, audit committee, internal control, risk management, ethics, anti-corruption and shareholder rights. Each disclosed item was scored **1**, while each undisclosed item was scored **0**. The unweighted scoring approach is appropriate because it provides a consistent basis for converting qualitative disclosures into comparable firm-year disclosure indices.

Table 2: ESG Disclosure Checklist

ESG dimension	**Number of items**	**Scoring method**
Environmental reporting	8	1 = disclosed; 0 = not disclosed
Social reporting	8	1 = disclosed; 0 = not disclosed
Governance reporting	8	1 = disclosed; 0 = not disclosed
Total ESG checklist	24	Unweighted content analysis

3.6 Model Specification and Analysis Method

The study estimated the following panel regression model:

$$ROA_{it} = \beta_0 + \beta_1 ENVR_{it} + \beta_2 SOCR_{it} + \beta_3 GOVR_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \varepsilon_{it}$$

Where **i** represents each firm and **t** represents each year from 2015 to 2024. Data were analysed using descriptive statistics, a correlation matrix, variance inflation factor, diagnostic tests and firm fixed-effects panel regression. Fixed effects were used because the sampled

firms differ in size, operating structure, ownership, reporting culture and ESG exposure; therefore, firm-specific differences needed to be controlled in the estimation.

4.0 Results and Discussion

4.1 Descriptive Statistics

The descriptive statistics show that the sampled listed oil and gas companies recorded an average ROA of **0.0269**, meaning that the firms generated an average profit before tax of approximately **2.70%** of total assets during the period. However, the standard deviation of **0.0822**, minimum value of **-0.3940** and maximum value of **0.1486** indicate substantial differences in asset-based profitability across the sampled firms and years. This spread is expected because oil and gas firms operate under different cost structures, financing conditions, operational risks and market exposures. The negative minimum ROA also suggests that some firm-year observations recorded losses relative to total assets, which is important because it prevents the study from assuming that ESG reporting operates in a uniformly profitable sector.

There's also key variation in the ESG disclosure variables. The mean score of environmental reporting was 0.5708; that is, on average, 57.08% of the environmental checklist items were reported. The mean of social reporting and governance reporting were higher at 0.8583 and 0.9542, respectively. The pattern indicates the listed oil and gas companies were more consistent in reporting governance and social issues, while environmental issues were less consistent. One possible explanation is that governance disclosures are more strongly associated with the listing requirements, board and audit committee reports, whereas social disclosures tend to be included in corporate responsibility stories. Environmental disclosures, on the other hand, may demand more detailed data regarding emissions, pollution, remediation and climate risk, the disclosure of which could be less consistent. The result corroborates Khamisu and Paluri's (2024) claim that the quality of ESG disclosure differs in various dimensions of disclosure and that it is influenced by regulation and governance characteristics and stakeholder pressure.

The mean of the size of the firms was 19.0935, the minimum size was 17.1666, and the maximum size was 23.0078, indicating that there is variation in sizes in the sample of firms. The mean for Leverage is 0.2306, indicating that debt accounted for approximately 23.06% of the total assets during the average period. The maximum leverage value of 0.7916, however, indicates that there were some observations with very high leverage by both firms and years. This is significant as it can have a negative impact on profitability, particularly when there are finance costs or liquidity restrictions that impact operational performance.

Table 3: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
ROA	60	0.0270	0.0822	-0.3940	0.1486
ENVR	60	0.5708	0.2707	0.1250	1.0000
SOCR	60	0.8583	0.1161	0.6250	1.0000

GOVR	60	0.9542	0.1127	0.3750	1.0000
FSIZE	60	19.0935	1.5514	17.1666	23.0078
LEV	60	0.2306	0.1524	0.0000	0.7916

4.2 Correlation Matrix

The correlation matrix gives initial indications of the direction of association between variables. Environmental reporting was weakly correlated with ROA with a negative correlation of -0.0275, social reporting was weakly correlated with ROA with a positive correlation of 0.0205 and governance reporting was moderately correlated with ROA with a positive correlation of 0.1004. These coefficients are small, indicating that there is not a strong linear relationship between the ESG dimensions and corporate performance based on the correlation. This is not an issue because the regression analysis cannot remove firm-specific effects, size, leverage or simultaneous variation of the ESG variables.

It is also noted that leverage was inversely related to ROA in the matrix as well (-0.3389). This implies that companies with more debt tended to report worse performance on assets. This is an economically viable strategy because, in environments in which the costs of borrowing are not offset by operating returns on the investment, the level of debt may be increased and lead to higher finance costs and lower profitability. The highest correlation between independent variables was between environmental reporting and firm size (0.6978), social reporting and firm size (0.6886), and environmental reporting and social reporting (0.5857). These moderate to strong relationships are not high enough to suggest substantial multicollinearity. Correlation evidence is thus informative, but the regression model is still needed as regression analysis is required after controlling for other variables to test the effects of ESG performance.

Table 4: Correlation Matrix

Variable	ROA	ENVR	SOCR	GOVR	FSIZE	LEV
ROA	1.000					
ENVR	-0.027	1.000				
SOCR	0.020	0.586	1.000			
GOVR	0.100	0.212	0.568	1.000		
FSIZE	-0.128	0.698	0.689	0.346	1.000	

LEV	-0.339	0.232	0.010	-0.302	0.190	1.000

4.3 Diagnostic Tests

The diagnostic tests indicate that the model is suitable for panel estimation. The variance inflation factor result shows that the highest VIF was **2.66**, while the mean VIF was **2.08**. Since both values are below the common threshold of 10, the study concludes that multicollinearity is not a serious problem in the model. This is important because the ESG dimensions are conceptually related, but the VIF result shows that they are not statistically redundant in the regression model.

The Breusch-Pagan heteroskedasticity test produced a statistic of **7.9092** with a p-value of **0.1613**, suggesting that heteroskedasticity was not strongly indicated at the 5% level. The Durbin-Watson statistic was **1.8909**, which is close to 2 and therefore does not suggest serious autocorrelation in the fixed-effects model. The use of firm fixed effects is justified because the sampled companies differ in business model, scale, reporting maturity, ownership structure and ESG exposure. For example, Seplat is an upstream energy company, while TotalEnergies Marketing Nigeria, MRS, Conoil and Eterna are mainly downstream marketers. If such firm-specific differences are ignored, the estimated ESG-performance relationship may be biased. Fixed effects therefore strengthen the analysis by controlling unobserved company-specific characteristics.

Table 5: Diagnostic Test Results

Test	**Statistic**	**p-value**	**Interpretation**
Maximum VIF	2.6605	—	No serious multicollinearity
Mean VIF	2.0760	—	Acceptable average VIF
Breusch-Pagan test	7.9092	0.1613	Heteroskedasticity not strongly indicated
Durbin-Watson statistic	1.8909	—	Close to 2; no serious autocorrelation concern
Model choice	—	—	Firm fixed-effects regression used

4.4 Regression Results

The fixed-effects regression result shows that the overall model is statistically significant, with an F-statistic of **3.5252** and a p-value of **0.0015**. This indicates that the explanatory variables jointly explain significant variation in corporate performance. The R-squared value of **0.4184** suggests that approximately **41.84%** of the variation in ROA is explained by environmental reporting, social reporting, governance reporting, firm size, leverage and firm fixed effects. The adjusted R-squared of **0.2997** is lower but still meaningful, especially considering the relatively small balanced panel of 60 firm-year observations.

Environmental reporting had a coefficient of **0.1778** and a p-value of **0.0370**, indicating a positive and statistically significant effect on ROA at the 5% level. Thus, better environmental disclosures in the sample of listed oil and gas companies are correlated with improved corporate performance. The findings, in turn, contribute to the conclusion that environmental reporting could enhance the sense of legitimacy, mitigate the concerns of environmental risk and communicate improved environmental management to stakeholders. This corresponds to the study result of Afolabi et al. (2024) which reported that the environmental sustainability disclosures had significant impacts on the financial performance indicators of the listed Nigerian oil and gas companies.

Social reporting showed a negative coefficient (-0.1800) with a p-value of 0.2747 which is not statistically significant for ROA. The negative sign indicates the reporting of social reporting may include costs associated with community development, employee well-being, stakeholder engagement, and corporate social investment; however, the insignificant implies that the impact of social reporting has not been great enough to account for the variance in performance. This reinforces the opinion that the practice of social reporting can help to enhance legitimacy and stakeholder relations without an immediate accounting bottom line. It also validates the general ESG literature, which indicates that the social and sustainability impact can vary from company to company, industry to industry and outcome to outcome.

The coefficient of governance reporting was 0.0772 with a p-value of 0.5315, which is not significant and positive. This means that while this governance disclosure is reported, it did not account for much of the variation in corporate performance in the sample companies. The outcome may be a result of governance reporting being more of a compliance activity than performance-driven. This finding is consistent with Onmonya et al. (2024), who observed that some of the oil and gas companies in Nigeria had an insignificant and negative impact on accounting performance given the corporate governance attributes.

The coefficient value for firm size was 0.0227 with a p-value of 0.2615, indicating that it had a positive but not significant relationship with ROA. The coefficient of leverage was negative and statistically significant at -0.2405 (p-value 0.0059); suggesting that higher debt intensity led to poorer corporate performance. This is not only logical financially, but also because when costs of debt are higher than the returns from financed assets, it is not prudent to borrow.

Table 6: Fixed-Effects Regression Result

Variable	Coefficient	Std. Error	t-statistic	p-value	Decision
Constant	-0.2706	0.3678	-0.7359	0.4653	Not significant

ENVR	0.1778	0.0829	2.1442	0.0370	Significant
SOCR	-0.1800	0.1629	-1.1047	0.2747	Not significant
GOVR	0.0772	0.1224	0.6302	0.5315	Not significant
FSIZE	0.0227	0.0200	1.1359	0.2615	Not significant
LEV	-0.2405	0.0836	-2.8787	0.0059	Significant
R-squared	0.4184				
Adjusted R-squared	0.2997				
F-statistic	3.5252			0.0015	Overall model significant

4.5 Discussion of Hypotheses

The first hypothesis posited that there is no significant relationship between environmental reporting and corporate performance of listed oil and gas companies in Nigeria. The p-value for environmental reporting was 0.0370, which is less than 0.05, so there is rejection of the null hypothesis. This indicates that environmental reporting provides a positive and significant impact on ROA. The results of the discovery are consistent with the stakeholder theory and legitimacy theory, as the disclosure of environmental information seems to be relevant in a sector vulnerable to pollution and remediation, regulatory and community worries.

The second hypothesis assumed that social reporting does not seem to have any significant impact on corporate performance. The p-value for the social reporting was 0.2747 which doesn't reject the null hypothesis. The coefficient was negative, but not statistically significant. This implies that there is still low association between social reporting and profitability of assets among the sampled firms. It is assumed that social reporting might still continue to be based on a generic corporate responsibility story instead of actual metrics that relate to productivity, community stability or operational efficiency.

The third hypothesis was that governance reporting cannot have a significant impact on the corporate performance. Since the p-value for governance reporting was 0.5315, the null hypothesis is not rejected. Governance reporting was also found to be positively correlated but the impact was not statistically significant. This indicates that governance transparency is not enough to enhance performance if it is not indicative of good governance practice in the monitoring of their boards, risk management and internal accountability.

Table 7: Hypotheses Decision

Hypothesis	Variable	Decision
H01	ENVR	Rejected: environmental reporting has a positive significant effect on ROA
H02	SOCR	Not rejected: social reporting has no significant effect on ROA
H03	GOVR	Not rejected: governance reporting has no significant effect on ROA

Overall, the findings show that environmental reporting is the only ESG dimension with significant performance relevance among the sampled listed oil and gas companies. This result supports the argument that environmental disclosure carries stronger financial meaning in environmentally sensitive sectors where pollution, remediation, compliance and community legitimacy can directly affect operational continuity. The result agrees with Afolabi et al. (2024), who found environmental sustainability disclosure to be performance-relevant in Nigerian oil and gas firms, but it also refines broader international evidence by showing that ESG effects are dimension-specific rather than uniform. The insignificant effects of social and governance reporting do not mean that these dimensions are irrelevant. Rather, they suggest that social and governance disclosures may still be too narrative-based, compliance-driven or weakly connected to measurable accounting performance. Therefore, the study contributes to the ESG-performance debate by showing that environmental, social and governance reporting should be analysed separately rather than treated as a single disclosure construct.

5.0 Conclusion and Recommendations

5.1 Conclusion

This study examined the effect of environmental, social and governance reporting on the corporate performance of listed oil and gas companies in Nigeria. The study was motivated by the need to determine whether ESG disclosure dimensions are merely accountability narratives or whether they have measurable relevance for firm performance in an environmentally sensitive sector. An ex post facto and correlational research design was adopted, using secondary panel data extracted from annual reports, financial statements, sustainability disclosures and corporate governance reports. The sample comprised six listed oil and gas companies: MRS Oil Nigeria Plc, Seplat Energy Plc, Oando Plc, TotalEnergies Marketing Nigeria Plc, Conoil Plc and Eterna Plc, covering 2015–2024 and producing 60 firm-year observations.

Environmental, social and governance reporting was assessed through an unweighted disclosure checklist, and corporate performance was assessed through return on assets. The regression result using the fixed effects model indicated that the impact of environmental reporting on corporate performance was positive and significant. But, return on assets was not much different between social reporting and Governance reporting. The implication is that ESG reporting does not have a consistent impact on the performance of companies. In

the oil and gas sector of Nigeria, the relevance of environmental disclosure seems more performance-relevant, perhaps because environmental issues in their context are more directly related to regulatory exposure, operational risk, legitimacy and stakeholder confidence. Social and governance reporting, on the other hand, can be too general, limited in visibility and difficult to relate to a measurable financial outcome.

5.2 Recommendations

Oil and Gas companies listed at stock exchanges should enhance the quality, specificity and consistency of environmental disclosure due to the high relevance of environmental reporting in terms of performance. That implies that companies need to go beyond general environmental statements and disclose more information about their energy use, emissions, waste management, pollution control, spill remediation, environmental compliance and environmental risks related to climate change.

Beyond corporate social responsibility narratives, social reporting should go beyond the general one. Oil and gas companies should publish measurable social outcomes such as training hours of employees, health and safety performance, the outcomes of community investment, local content participation, the measures taken by customers and outcomes of stakeholders' engagement. It is important because social disclosure is only as performance-relevant as it is perceived as benefiting not only business operations, but also employees, host communities, and customers, and as promoting business stability.

Governance reporting shall not be based on formal compliance with disclosure requirements, but on actual board effectiveness, risk control and internal accountability. Companies should thus report on board independence, the effectiveness of the audit committee, the quality of internal control, risk management practices, anti-corruption policies, whistleblowing policies and procedures, and enforcement of ethics.

The Nigerian Exchange Group, the Securities and Exchange Commission and the Financial Reporting Council of Nigeria should enhance the ESG disclosure template for listed oil and gas companies. There should be a common reporting mechanism for better comparability between firms and less selective disclosure.

Lastly, investors should look at the quality of the disclosure of the ESGs when evaluating oil and gas corporate performance, but should focus on what the ESGs say as opposed to general ESG narratives.

References

Abuaja, H., & Ukpong, E. G. (2022). Value relevance of sustainability reporting: Evidence from listed oil and gas firms in Nigeria. AKSU Journal of Administration and Corporate Governance, 2(1).

Afolabi, A. R., Amosun, O. O., Agbor, M. A. N., & Okunade, S. O. (2024). Environmental sustainability disclosures and financial performance of listed oil and gas companies in Nigeria: An application of Driscoll-Kraay standard errors approach. NIU Journal of Social Sciences, 10(2), 91–104. doi:10.58709/niujss.v10i2.1874.

Buallay, A. (2019). Sustainability reporting and firm's performance. International Journal of Productivity and Performance Management, 69(3), 431–445. doi:10.1108/IJPPM-10-2018-0371.

Chen, Y., Xie, Z., Wang, L., & Zhu, L. (2025). ESG disclosure, public perception and corporate financial performance: An empirical study based on textual analysis. Journal of Environmental Management, 383, 125320. doi:10.1016/j.jenvman.2025.125320.

Del Gesso, C. (2024). Theories underlying environmental, social and governance disclosure: A systematic review of accounting studies. Journal of Accounting Literature. doi:10.1108/JAL-08-2023-0143.

Financial Reporting Council of Nigeria. (2024). Roadmap report for the adoption of IFRS sustainability disclosure standards in Nigeria. FRC Nigeria.

García-Meca, E., Ruiz-Barbadillo, E., & Martínez-Ferrero, J. (2024). High-quality assurance, ESG legitimacy threats and board effectiveness. The British Accounting Review. doi:10.1016/j.bar.2024.101385.

International Energy Agency. (2024). Global Methane Tracker 2024. IEA.

Khamisu, M. S. (2024). Environmental, social and governance disclosure motives for environmentally sensitive industry: An emerging economy perspective. Cogent Business & Management, 11(1), 2322027. doi:10.1080/23311975.2024.2322027.

Khamisu, M. S., & Paluri, R. A. (2024). Emerging trends of environmental social and governance disclosure research. Cleaner Production Letters, 7, 100079. doi:10.1016/j.clpl.2024.100079.

Khan, M. A. (2022). ESG disclosure and firm performance: A bibliometric and meta-analysis. Research in International Business and Finance, 61, 101668. doi:10.1016/j.ribaf.2022.101668.

KPMG. (2024). The move to mandatory reporting: Survey of sustainability reporting 2024. KPMG International.

Onmonya, L., Ebire, K., & Lawal, K. (2024). Corporate governance and financial performance of oil and gas firms: The Nigerian experience. Asian Business Research Journal, 9, 1–6. doi:10.55220/25766759.148.

Onwubiko, C. O., Nwankwo, H. A., Ogbu, U. O., & Eyinnaya, K. (2025). Effect of sustainability reporting on the financial performance of selected oil and gas firms in Nigeria. European Journal of Accounting, Auditing and Finance Research, 13(7), 65–95. doi:10.37745/ejaafr.2013/vol13n76595.

Ukoh, U. M., Nduokafor, C. O., & Nworie, G. O. (2024). Sustainability reporting among oil and gas firms: A strategic tool for enhanced firm value. International Journal of Economics and Financial Management, 9(2), 144–166. doi:10.56201/ijefm.v9.no2.2024.pg144.166.

Wang, K., Bai, Y., Dong, Z., & Zhu, J. (2025). Heterogeneous impact of ESG disclosure: A meta-analysis. Journal of Cleaner Production, 516, 145804. doi:10.1016/j.jclepro.2025.145804.