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Sequence of Manuscript

I. Title page
II. Abstract (150-250 words)
III. Keywords (3-5)
IV. Introduction
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IX. References (APA 7th Edition)
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IMPACT OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) DISCLOSURES ON THE FINANCIAL PERFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA

OGBU GODWIN OTSEME
Dept of Auditing and Forensic Accounting
ANAN University Kwall, Plateau State, Email: godwin.anuk@gmail.com
08065370991

JOSEPH FEMI ADEBISI
Professor of Accounting, NAN University Kwall, Plateau State

SALISU ABUBAKAR
Professor of Accounting, Faculty of Mgt Sciences,
Ahmadu Bello University

ABSTRACT

The rising global demand for Environmental, Social, and Governance (ESG) reporting has sparked significant debate about its financial relevance, especially in emerging economies like Nigeria. Despite global trends suggesting a positive ESG and performance relationship, the extent to which ESG disclosure influences firm performance within the Nigerian manufacturing sector remains underexplored. This study investigates the impact of disaggregated ESG components which are environmental, social, and governance disclosures on firm performance, using Economic Value Added (EVAA) as the performance proxy. The study adopts an ex post facto research design, relying on secondary data from 43 listed manufacturing firms in Nigeria over the 2014 to 2023 period. Panel data regression techniques including Fixed Effects, Random Effects, and Least Squares Dummy Variable models were used for analysis, with firm size and market capitalization as control variables. The findings reveal that environmental disclosure has a statistically significant but negative effect on firm performance, indicating that compliance costs may outweigh short term financial benefits. However, both social and governance disclosures were found to have no significant effect on firm performance. These results suggest that ESG reporting, particularly in developing institutional environments, may not yet align with financial value creation. It is recommended that Nigerian firms adopt a more strategic and long-term view of ESG integration, while policymakers provide incentives to ease the financial burden of compliance.

Keywords: ***ESG reporting, firm performance, Nigeria, manufacturing sector, environmental disclosure***

1.0 Introduction

Financial performance is a critical measure of a firm's ability to generate sustainable economic value for its stakeholders. It reflects the effectiveness of managerial decisions and operational efficiency in driving profitability, competitiveness, and long-term growth. For the purpose of this study, financial performance is proxied by Economic Value Added (EVAA), a performance metric that captures the net value created after accounting for the cost of capital. EVAA is widely regarded as a more accurate indicator of economic profit than traditional accounting measures, particularly in capital-intensive sectors like manufacturing. EVAA stands well out from the crowd as the single best measure of value creation on a continuous basis and is almost 50 % better than accounting-based measures in explaining changes in shareholders' wealth" Given increasing stakeholder demand for transparency and accountability. (Subedi, & Farazmand, 2020). it is essential to understand how emerging factors such as sustainability disclosures influence this financial outcome.

Environmental, Social, and Governance (ESG) practices have gained significant global traction as tools for fostering sustainable corporate behaviour and enhancing firm performance. While developed markets have extensively explored the link between ESG reporting and financial outcomes, emerging economies like Nigeria have received comparatively limited scholarly attention. ESG reporting, once considered corporate philanthropy, is now framed within governance frameworks and viewed as a driver of strategic corporate value (Kim & Li, 2021; Ruan & Liu, 2021). However, the extent to which ESG disclosures translate into firm value remains an open empirical question, particularly in under-researched markets with unique regulatory, economic, and socio-political environments.

In Nigeria's manufacturing sector, ESG reporting is still at a nascent stage, and firms face substantial regulatory and operational challenges. The extant literature often emphasizes the three dimensions of ESG, Environmental Reporting (ENVD), Social Reporting (SOCD), and Governance Reporting (GOVD)—as independent variables influencing firm outcomes. The dependent variable in this study is firm performance, proxied by Economic Value Added (EVAA). Prior studies (e.g., Fu et al., 2023; Zhao et al., 2023) have shown mixed results regarding the impact of these dimensions, suggesting that the ESG-performance nexus may be context-specific. While some studies report that strong ESG disclosures enhance firm profitability, others highlight neutral or even negative outcomes, particularly where the cost of compliance outweighs perceived benefits. (Singh et al., 2023; Whelan et al., 2021). These divergent findings indicate the influence of local market characteristics, regulatory enforcement, stakeholder expectations, and sectoral differences on the ESG-firm performance relationship. As such, there is a pressing need to investigate how these variables behave in the Nigerian context, where institutional frameworks, socio-economic realities, and corporate governance structures differ significantly from those in more developed economies. Despite increasing global advocacy for ESG compliance, there is a significant gap in evidence from Nigeria, particularly in the manufacturing sector. Several literature gaps have been identified. First, an evidence gap exists as few empirical studies provide statistically rigorous analysis of ESG reporting's impact on performance in the Nigerian context. Second, a methodological gap is evident: while many studies rely on cross-sectional or perception-based data, this study uses panel data across a decade (2014–2023) to account for time dynamics and firm-specific effects. Third, there is a variable gap, where prior Nigerian studies often treat ESG as a composite index, without disaggregating the specific effects of ENVD, SOCD, and GOVD. Lastly, a geographical gap is noted, most ESG literature focuses on developed or rapidly industrializing nations, with Nigeria and West African economies broadly underrepresented.

To guide this investigation, the following null hypotheses are stated:

H_{01}: Environmental reporting has no significant impact on the financial performance of listed manufacturing firms in Nigeria.

H_{02}: Social reporting has no significant impact on the financial performance of listed manufacturing firms in Nigeria.

H_{03}: Governance reporting has no significant impact on the financial performance of listed manufacturing firms in Nigeria.

.2.0 LITERATURE REVIEW

2.1 Conceptual Review

The section reviews the following concepts of Dependent and Independent Variables of the Study.

Dependent Variable: Firm Performance (Economic Value Added - EVAA)

Firm performance is a multifaceted concept that captures the financial health and efficiency of a business. In this study, performance is proxied by Economic Value Added (EVAA), which reflects a firm's ability to generate returns above its cost of capital. According to Mohn (2025), Economic Value Added (EVA) is a performance metric that measures a company's profitability by calculating the value generated from its operations after fully accounting for the cost of capital, thereby focusing on the residual income left after deducting capital charges from net operating profit after taxes (NOPAT). Zenzerović (2023) defines EVA as a contemporary measure of financial performance that captures the economic profit available to a firm's owners by quantifying the residual income that remains after covering the full cost of all sources of financing.EVAA offers a robust measure by incorporating both operational efficiency and capital structure considerations, making it a reliable metric for evaluating long-term value creation.

Independent Variables: Environmental, Social, and Governance (ESG) Reporting

Environmental Reporting (ENVD): This refers to the disclosure of a firm's environmental activities, including emissions, energy use, waste management, and compliance with environmental regulations. It is often employed to demonstrate a company's commitment to environmental sustainability and risk mitigation (Kim & Li, 2021; Ramirez et al., 2022).

Social Reporting (SOCD): Social disclosures cover information about employee welfare, community

engagement, labor practices, diversity, and health and safety. Social reporting strengthens relationships with stakeholders and enhances a firm's social license to operate (Zhu & Huang, 2023; Fu, 2023).

Governance Reporting (GOVD)**:** Governance disclosures consist of information on board composition, executive compensation, audit practices, and shareholder rights. Effective governance reporting promotes transparency and accountability, thereby enhancing investor confidence (Korinth & Lueg, 2022).

2.2 Empirical Review

This section reviews prior studies in this area as follows;

Aboud and Diab (2019) investigated the financial and market consequences of ESG ratings using a sample of UK firms. Their study employed a panel data approach with regression analysis to test the relationship between ESG ratings and firm value. The findings revealed a positive relationship between overall ESG performance and firm value, particularly when ESG scores were disaggregated. However, environmental ratings showed weaker associations, suggesting that investors may value social and governance practices more heavily than environmental actions in the UK market. They recommended further disclosure standardization for comparability across industries.

Dkhili (2023) explored whether ESG practices influence market performance and how competitive advantage moderates this relationship. Using firms from the Gulf Cooperation Council (GCC), the study employed structural equation modeling (SEM) to assess the impact of ESG dimensions on return on equity and market value. The results indicated that governance factors had the most substantial influence on market performance, while environmental factors had an indirect effect. This highlights the importance of sectoral and regional dynamics in ESG analysis. The study called for stronger institutional frameworks to embed ESG into strategic operations.

Fu (2023) expanded the discussion globally by analyzing data from 118 countries to assess whether ESG performance promotes green innovation. Using panel regression and global innovation indices, Fu found that social and governance dimensions significantly boosted green innovation, while environmental performance showed a non-linear effect. The author suggested that firms may initially incur high costs when investing in environmental practices before realizing long-term innovation benefits. The study emphasizes that the benefits of ESG practices are context- and time-dependent, especially for developing countries. Garcia and Orsato (2020) tested the institutional difference hypothesis by examining ESG-financial performance links in firms across different regions. Using multi-country regression analysis, the study showed that ESG practices positively affect financial performance in high-institutional environments (e.g., Europe) but have limited or neutral effects in weak-institutional settings like Latin America. This confirms that institutional quality moderates the ESG-performance relationship. They recommend ESG frameworks be tailored to institutional maturity rather than adopting one-size-fits-all approaches.

Also, Kim and Li (2021) assessed ESG's influence on corporate finance decisions among Chinese listed firms using panel regression. Their findings revealed a positive and significant impact of ESG on access to capital and firm valuation, especially where governance quality was high. The study also found that firms with better ESG performance enjoy lower capital costs, reflecting investor confidence. They advised Chinese firms to improve ESG reporting transparency and integrate ESG into core financial planning processes. Korinth and Lueg (2022) studied the U-shaped relationship between disaggregated ESG scores and firm risk in the German capital market. Their quantitative analysis indicated that both very low and very high ESG scores are associated with reduced financial risk, while mid-level ESG engagement did not confer significant risk mitigation. Specifically, governance practices were consistently linked with lower volatility, while environmental factors required a threshold level of investment before yielding risk-reducing benefits. The authors recommended firms commit fully to ESG or risk receiving limited benefits from token compliance.

Nie, et al., (2023) focused on the effect of capital market liberalization on ESG disclosure using firms from the Mainland-HK Stock Connect. Employing a difference-in-differences (DiD) approach, they discovered that firms exposed to international investor scrutiny significantly improved ESG disclosure. However, governance reporting improved more than environmental and social disclosures, suggesting prioritization based on investor expectations. The study concluded that market forces and capital mobility can serve as informal regulators for ESG practices.

Qureshi et al. (2019) examined the joint impact of ESG disclosure and board diversity on firm value in a cross-country panel dataset, with a focus on industry sensitivity. They found that the positive relationship between ESG and firm value is more pronounced in sensitive industries like energy and manufacturing. The methodology used fixed-effect regressions, and the study highlighted that diverse boards amplify the effects of ESG disclosure. The authors recommend integrating ESG strategies with board diversity policies for maximum impact.

Furthermore, Ruan and Liu (2021) provided evidence from Chinese manufacturing firms, showing that ESG activities are positively associated with profitability and market valuation, especially for large firms. Using fixed-effects panel regression, they discovered that environmental and social practices had stronger impacts than governance measures. This contrasts with studies from Western countries where governance typically dominates. The authors attributed this to the rising importance of pollution control and labor practices in China's policy environment.

Finally, Velte (2019) analyzed the bidirectional relationship between ESG performance and earnings management among German firms. The study employed a two-stage least squares (2SLS) model and found that higher ESG scores reduce earnings manipulation, and conversely, firms with transparent earnings also tend to improve ESG disclosure. Interestingly, social and governance factors had stronger integrity signals, while environmental scores were more volatile. Velte recommends regulatory incentives for honest ESG disclosures to combat greenwashing.

In reviewing these empirical studies, it is evident that the relationship between ESG dimensions and firm performance varies depending on the context and specific variables involved. Governance and social factors often emerge as stronger predictors in developed markets, while environmental reporting tends to show mixed or delayed effects, particularly in emerging economies. The diversity of methodologies employed, ranging from fixed effects models to structural equation modeling, highlights the complexity of measuring ESG impact across different institutional settings. Despite this, there remains a significant gap in country-specific research that separates ESG variables within Nigeria's manufacturing sector. This study contributes to the literature by applying a localized perspective to analyze how each ESG component influences financial performance using panel data, thus addressing both the evidence and geographic gaps identified in earlier research. It also enhances the empirical discussion by questioning the assumption that ESG practices always lead to increased value, especially in economies where regulatory and stakeholder frameworks are still developing.

2.3 Theoretical Review

This study is grounded in two key theoretical perspectives: Stakeholder Theory and Legitimacy Theory. These theories provide valuable insights into the rationale behind ESG disclosures, especially in emerging economies where regulatory frameworks and stakeholder pressures are still developing. Each theory offers distinct yet complementary explanations for how and why firms engage in environmental, social, and governance reporting. However, Legitimacy Theory is ultimately adopted as the primary theoretical lens for this study.

Stakeholder Theory

Stakeholder Theory was advanced by R. Edward Freeman in 1984. It proposes that the purpose of a business extends beyond maximizing shareholder value to considering the interests of all stakeholders. These include employees, customers, suppliers, regulators, investors, and the broader community. The theory asserts that long-term organizational success is tied to a firm's ability to meet the expectations and needs of these diverse groups. The theory assumes that companies practicing transparency and accountability through mechanisms such as ESG reporting can enhance their relationships with stakeholders and, by extension, improve financial performance. Environmental reporting addresses the concerns of regulators and the public; social reporting connects with employees and the community; and governance disclosures help meet the expectations of investors and oversight bodies.

Despite its relevance, the theory faces certain limitations. It offers limited guidance on how to prioritize stakeholder interests when they conflict and is often considered more normative than empirically grounded. In practice, firms may focus more on stakeholders with economic or political leverage, which can dilute the theory's ethical appeal. Nevertheless, Stakeholder Theory offers a broad conceptual justification for disaggregating ESG elements and analyzing their individual impacts on firm performance. It informs the rationale for exploring how firms in the Nigerian manufacturing sector respond to evolving stakeholder demands through ESG disclosures.

Legitimacy Theory

Legitimacy Theory was introduced by Dowling and Pfeffer in 1975. It argues that firms operate in a social context and must align their activities with societal values and expectations in order to secure legitimacy. This perceived legitimacy is essential for the continued existence of a firm, as it ensures ongoing support from stakeholders and access to vital resources. The theory assumes that organizations actively manage their legitimacy through strategic disclosures and behavior that reflect societal norms. ESG reporting, in this context, is seen as a symbolic and substantive tool for maintaining or repairing legitimacy. For instance, environmental and social disclosures may be adopted to demonstrate responsible corporate citizenship, while governance disclosures may reassure stakeholders of ethical oversight and accountability.

A key limitation of Legitimacy Theory is its retrospective orientation—it is often used to explain

actions after they occur rather than predict them. In addition, in institutional contexts where public awareness or enforcement is weak, firms may not feel sufficient pressure to seek legitimacy through formal disclosures. Despite these constraints, Legitimacy Theory is well suited for understanding ESG behavior in emerging markets like Nigeria, where firms may pursue ESG reporting as a way to project compliance with global norms or to respond to increasing scrutiny from international investors and civil society. In the Nigerian manufacturing sector, where ESG frameworks are not yet deeply embedded, firms may use such reporting to strengthen public perception and align with international expectations rather than for immediate financial gains.

While both theories offer valuable explanations, Legitimacy Theory is adopted as the guiding theoretical framework for this study. It aligns with the study's objective of understanding how Nigerian manufacturing firms use ESG reporting to respond to societal expectations in a context of weak regulatory enforcement and evolving market norms. The choice of Legitimacy Theory is particularly appropriate given the study's findings that environmental disclosures have a significant but negative impact on firm performance, and that social and governance disclosures do not yet yield measurable financial benefits. These outcomes suggest that firms may be engaging in ESG practices primarily to secure legitimacy and social acceptance, rather than to directly enhance financial value. This perspective reinforces the importance of understanding ESG reporting not merely as a financial strategy, but as a mechanism through which firms seek to maintain alignment with societal values and ensure their continued viability in a dynamic and often uncertain institutional environment.

3.0 Methodology

Research Design

This study adopts an ex post facto research design, which is appropriate for assessing the impact of independent variables on a dependent variable using historical data. The design is suitable because it does not involve any manipulation of variables but seeks to examine the existing relationship between ESG reporting and firm performance. It allows the researcher to explore causality using observed data over a specific time frame.

Population

The population of the study comprises the 59 manufacturing firms listed on the Nigerian Exchange Group as at December 2023. These firms, cutting across consumer goods, agriculture, industrial goods and healthcare secors were selected due to their relevance in ESG disclosure and financial reporting practices, making them appropriate for evaluating the relationship between ESG dimensions and firm performance.

Sample Size and Its Determination Technique

A sample size of 43 listed manufacturing firms was selected from the population using a filtering technique based on data availability and consistency. Firms were included in the sample only if they were listed in the referenced period and had consistent ESG reporting and financial performance data for the period under review (2014 to 2023). This sampling method ensures the reliability and completeness of the panel data used in the analysis.

Method of Data Collection

The study relies entirely on secondary data obtained from publicly available sources, including annual reports, sustainability reports, and financial databases maintained by the Nigerian Exchange Group. These data sources provided the necessary information on the environmental, social, and governance disclosures, as well as financial performance indicators of the sampled firms.

Technique of Data Analysis

The study employs panel data regression techniques, specifically the Fixed Effects (FE) and Random Effects (RE) models, to analyse the impact of ESG disclosures on firm performance. These models are chosen for their ability to control for time-invariant and firm-specific characteristics. The Hausman specification test was used to determine the more appropriate model between FE and RE, with the test results favoring the Fixed Effects model. Additional tests such as heteroscedasticity tests (Breusch-Pagan) and multicollinearity diagnostics (Variance Inflation Factor, VIF) were also conducted to ensure the robustness of the regression estimates. The Least Squares Dummy Variable (LSDV) model was also employed to capture time effects by including year dummies.

Model Specifications

The study models the relationship between ESG dimensions and firm performance using the following general form:

The general model specification for the dependent variable (EVAA) can be written as:

Variables Identification and Measurement .

Variable Name	Variable Type	Symbol	Measurement Description
Economic Value Added	Dependent Variable	EVAA	Proxy for firm performance, calculated from financial statements as net operating profit after tax minus cost of capital.
Environmental Disclosure	Independent Variable	ENVD	Measured as a score based on the extent of environmental information disclosed in annual/sustainability reports (scaled between 0 and 1).
Social Disclosure	Independent Variable	SOCD	Measured using a disclosure index reflecting employee welfare, community relations, and labor practices (scaled between 0 and 1).
Governance Disclosure	Independent Variable	GOVD	Based on a governance disclosure index including board composition, audit practices, and shareholder rights (scaled between 0 and 1).
Firm Size	Control Variable	FSIZ	Measured as the natural logarithm of total assets.
Market Capitalization	Control Variable	MCAP	Measured as the natural logarithm of the firm's market capitalization.

The dependent variable in this study is Economic Value Added (EVAA), a performance measure that captures the financial value created by a firm after accounting for the cost of capital. EVAA is chosen as it provides a comprehensive measure of firm performance, considering both operational efficiency and capital costs.

The independent variables are Environmental Reporting (ENVD), Social Reporting (SOCD), and Governance Reporting (GOVD), which represent the three pillars of ESG disclosure. These variables are operationalized by quantifying the extent and quality of the firms' ESG disclosures, as reflected in their annual and sustainability reports.

Control variables include Firm Size (FSIZ) and Market Capitalization (MCAP). Firm size is measured by the natural logarithm of total assets, which controls for the influence of firm scale on performance outcomes. Market capitalization, another critical control variable, is included to account for the market's valuation of the firm, which may influence the relationship between ESG reporting and financial performance. These control variables help isolate the effect of ESG reporting from other firm characteristics that may affect performance.

4.0 Results and Discussion

The results for this study will be presented and discussed in this section

4.1 Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Evaa	430	-0.047	0.606	-9.390	1.090
Envd	430	0.144	0.260	0.000	1.000
Socd	430	0.337	0.181	0.000	0.860
Govd	430	0.388	0.208	0.000	0.830
Fsiz	430	7.316	0.893	5.120	9.520
Mcap	430	7.026	1.132	4.930	11.990

Source: Authors (2025)

Table 1 shows that the descriptive statistics for the variables. The economic value added (EVAA) variable show a mean of -0.047, indicating that, on average, the manufacturing firms in the sample are not generating value in excess of their cost of capital. This negative mean suggests that these firms may be struggling to create value, which could be due to inefficiencies or broader economic challenges in Nigeria. The standard deviation of 0.606 points to a high level of variability in firm performance, as some firms are significantly underperforming (with a minimum EVAA of -9.390) while others are doing relatively well (with a maximum of 1.090). This wide range highlights the disparity in financial outcomes across firms, which could be influenced by factors such as firm-specific strategies or external market conditions.

The environmental reporting (ENVD) variable has a mean of 0.144 and a standard deviation of 0.260. This relatively low mean indicates that environmental reporting is not widely practiced among the sampled firms, with many firms showing little to no engagement in environmental disclosures (as seen in the minimum value of 0). However, some firms report extensively on their environmental impact, reflected by the maximum value of 1. The low overall mean may suggest that environmental concerns are not yet a priority for the majority of these firms, potentially due to the absence of strong regulatory frameworks or market pressures in Nigeria.

For social reporting (SOCD), the mean is 0.337, with a standard deviation of 0.181. This suggests that social reporting is somewhat more prevalent than environmental reporting, but still far from universal. The range of values, from 0 to 0.860, implies that while some firms engage in moderate to high levels of social disclosure, others are not reporting on social issues at all. The moderate mean may reflect increasing but uneven attention to social factors such as labor practices and community involvement in the Nigerian manufacturing sector. The governance reporting (GOVD) variable has a mean of 0.388 and a standard deviation of 0.208, indicating that governance disclosures are more common than both environmental and social reporting among the sampled firms. The minimum value of 0 shows that some firms still provide no governance disclosures, while the maximum value of 0.830 indicates that other firms have relatively comprehensive governance reporting practices. The higher mean compared to the other ESG dimensions suggests that governance reporting may be more integrated into firms' operations, likely due to greater regulatory and stakeholder demands for transparency in corporate governance. Firm size (FSIZ), measured by the logarithm of total assets, has a mean of 7.316 and a standard deviation of 0.893. The values range from 5.120 to 9.520, indicating that there is a considerable variation in the size of the firms in the sample. Larger firms may have more resources to invest in ESG reporting, which could influence their level of engagement in environmental, social, and governance disclosures. Finally, market capitalization (MCAP) has a mean of 7.026 with a standard deviation of 1.132, and values ranging from 4.930 to 11.990. This variation in market capitalization suggests that the firms included in the sample differ significantly in terms of their market value. Larger firms, with higher market capitalization, may have more significant external pressures to engage in ESG reporting, whereas smaller firms may face fewer pressures, leading to differences in their reporting practices.

4.2 Correlation Analysis

Table 2: Correlation Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) evaa	1.000					
(2) envd	0.091	1.000				
(3) socd	0.188	0.507	1.000			
(4) govd	0.145	0.375	0.717	1.000		
(5) fsiz	0.196	0.472	0.524	0.542	1.000	
(6) mcap	0.342	0.477	0.558	0.584	0.883	1.000

Source: Authors (2024)

The correlation analysis is presented in Table 2. The results indicate that environmental reporting (0.091) has a weak positive association with economic value added during the period under study. This suggests that firms with higher levels of environmental disclosures tend to have slightly higher economic value added, though the association is relatively small. Similarly, the results show a weak positive association between social reporting (0.188) and economic value added, indicating that firms with greater social disclosures tend to exhibit higher economic value added. The correlation results also demonstrate that governance reporting (0.145) has a weak positive association with economic value added, suggesting that firms with better governance practices, as reflected in their disclosures, tend to perform slightly better in terms of economic value added. This positive association aligns with expectations that stronger governance structures might lead to better financial outcomes for firms. For the control variables, firm size (0.196) shows a weak positive association with economic value added, suggesting that larger firms tend to have higher economic value added compared to smaller firms. This association could reflect the ability of larger firms to generate more economic value due to their scale and resources. Additionally, the results show a weak positive association between market capitalization (0.342) and economic value added. This stronger association compared to other variables suggests that firms with higher market capitalization are more likely to generate positive economic value, highlighting the role of market perception and valuation in firm performance.

The correlations among the independent variables also show some significant associations. For instance, there is a moderate positive correlation between

environmental reporting and social reporting (0.507), indicating that firms that engage in environmental reporting also tend to report more on social issues. Similarly, governance reporting is strongly correlated with social reporting (0.717), implying that firms with strong governance practices are also likely to emphasize social reporting. Governance reporting is also moderately correlated with environmental reporting (0.375), showing a link between these dimensions of ESG. The control variables of firm size and market capitalization are highly correlated (0.883), which suggests that larger firms tend to have higher market capitalization. This high correlation indicates the close relationship between the size of a firm and its market valuation. However, the absence of extremely high correlations among most other variables suggests that multicollinearity may not be a significant concern in this dataset. Nonetheless, further checks using Variance Inflation Factor (VIF) will be conducted to confirm the absence of multicollinearity, the results of which will be presented in the next sections.

4.3 Summary of Regression Results and Test of Hypothesis

Table 3 presents the regression results from two different model estimations: Fixed Effects (FE) and Random Effects (RE These models were used to examine the effect of Environmental (Envd), Social (Socd), and Governance (Govd) disclosures on Economic Value Added (Evaa), while controlling for firm size (Fsiz) and market capitalization (Mcap).

Table 3: Regression Results

Variables	(1) OLS	(2) FE	(3) RE	(4) LSDV
Envd	-0.164	-0.404**	-0.206	-0.404**
	(0.238)	(0.030)	(0.185)	(0.030)
Socd	0.187	0.324	0.207	0.324
	(0.449)	(0.300)	(0.449)	(0.300)
Govd	-0.085	0.033	-0.133	0.033
	(0.669)	(0.903)	(0.542)	(0.903)
Fsiz	0.002	0.519***	0.116	0.519***
	(0.982)	(0.000)	(0.183)	(0.000)
Mcap	0.119**	0.027	0.056	0.027
	(0.027)	(0.748)	(0.380)	(0.748)
Intercept	-0.901***	-4.097***	-1.275***	-3.580***
	(0.001)	(0.000)	(0.001)	(0.000)
Observations	430	430	430	430
R^2	0.446	0.441		0.679
F-stat	4.133	3.294		3.137
Year Dummy	No	No	No	Yes
Hettest	566.76{0.000}			
FE/RE		2.93{0.000}	33.24{0.000}	
VIF	3.01			
Hausman		12.37{0.030}		

*Notes: p-values are in parentheses. *** p<.01, ** p<.05*

The regression result of the study is presented in Table 3. The result shows that the dependent variable of economic value added (EVAA) has an R-Square value of 0.446 in the OLS model. This implies that the independent variables of environmental reporting (ENVD), social reporting (SOCD), governance reporting (GOVD), and the control variables of firm size (FSIZ) and market capitalization (MCAP) can explain approximately 44.6% of the systematic variation in the dependent variable, economic value added. The remaining 55.4% of the variation in EVAA is unexplained and is captured by the error term. However, to further validate the estimates of the OLS results, this study also tests for multicollinearity and heteroscedasticity. Multicollinearity can primarily be identified using tolerance and its inverse, known as the Variance Inflation Factor (VIF). The mean Variance Inflation Factor (VIF) of the regression model is 3.01. The analysis reveals that the average VIF is below the threshold of 10, which aligns with Gujurati's (2004) findings. This suggests that there is no multicollinearity present, indicating that none of the independent variables should be excluded from the models. Therefore, the results obtained from the OLS regression model are considered reliable in terms of multicollinearity. The assumption of homoscedasticity specifically indicates that if the errors exhibit heteroscedasticity, it becomes challenging to rely on the standard errors of the least square estimates. Therefore, the confidence intervals will either be very narrow or excessively large. The results indicate that the assumption of homoscedasticity in the OLS regression model has been broken, as evidenced by the Breusch-Pagan test

statistic of 566.76 with a p-value of 0.000. Given the significant p-value, the study concludes that heteroscedasticity is present in the model, suggesting that the error terms do not have constant variance.

To address this violation, the study employs panel regression models, including the fixed effects (FE) and random effects (RE) models. The Hausman specification test was conducted to determine whether the fixed or random effects model is more appropriate. The Hausman test produced a chi-square statistic of 12.37 with a p-value of 0.030, indicating that the fixed effects model is preferred over the random effects model. This preference for the fixed effects model suggests that firm-specific characteristics that do not change over time are relevant to the analysis of economic value added. Given the findings from the Hausman test, the study also utilizes the Least Squares Dummy Variable (LSDV) model, which includes year dummy variables to account for potential time effects. The LSDV model has an R-Square value of 0.679, indicating that approximately 67.9% of the variation in economic value added is explained by the independent variables when accounting for year-specific effects. The F-statistic of 3.137 confirms the overall significance of the model. However, the lower R-Square value compared to the OLS and fixed effects models suggests that the inclusion of time dummies reduces the explanatory power of the model slightly but provides a more nuanced understanding of the variation over time.

Furthermore, Table 3 ENVD has a regression coefficient of -0.404 with a p-value of 0.030, which is statistically significant at the 5% level. This result indicates a significant but negative effect of environmental reporting on firm performance, measured by Economic Value Added (EVAA). The finding suggests that increased environmental disclosure is associated with reduced economic value added in the short term. This negative relationship may be attributed to the high cost of compliance, technological investment, and lack of immediate market returns associated with environmental sustainability efforts in Nigeria's manufacturing sector. This result contrasts with prior studies such as Ruan and Liu (2021) and Fu (2023), which reported positive associations between environmental disclosures and firm profitability in China and globally, respectively. Fu (2023), however, also noted that environmental performance often has a non-linear and delayed impact, especially in developing countries, which may explain the Nigerian context where firms may incur upfront costs without realizing short-term benefits. Similarly, Aboud and Diab (2019) observed that environmental ratings in the UK had a weaker link to firm value compared to social and governance dimensions, reinforcing the idea that environmental factors may not be immediately appreciated by investors. Korinth and Lueg (2022) also found that environmental investments must reach a certain threshold before yielding risk-reduction or value-enhancing outcomes, suggesting that Nigerian firms may still be below that threshold.

Table 3 also shows that social disclosure (SOCD) has a coefficient of 0.324 with a p-value of 0.300, indicating that it is not statistically significant. This suggests that social disclosure does not have a significant impact on economic value added in this study. The insignificance of social reporting might reflect the relatively low emphasis placed on social factors within the corporate strategies of Nigerian manufacturing firms, or the limited market response to social initiatives in this context. This finding diverges from studies by Zhu and Huang (2023) and Qureshi et al. (2019), who found that social disclosures enhance firm value by improving stakeholder relations. However, the lack of significance in the Nigerian context suggests that social reporting might not yet be a key driver of financial performance for manufacturing firms.

Finally, governance disclosure (GOVD) has a coefficient of 0.033 with a p-value of 0.903, indicating that it is not statistically significant. This result suggests that governance disclosure has no meaningful effect on economic value added in this context. This finding is in contrast to prior studies by Kim and Li (2021) and Velte (2019), which typically highlight the importance of strong governance practices in improving firm performance. The lack of significance in this study might reflect the relatively weak enforcement of governance standards in Nigeria, where governance disclosures may not yet translate into improved market perception or financial outcomes for firms. As such, governance reporting may not yet be fully integrated into the performance-enhancing mechanisms of Nigerian manufacturing companies.

5.0 Conclusion and Recommendation:

Despite the growing global emphasis on ESG practices, the extent to which these disclosures impact firm performance in emerging markets like Nigeria has remained unclear. The study aimed to fill this gap by assessing how ESG reporting, specifically environmental, social, and governance disclosures, influence firm performance within the Nigerian manufacturing sector. The key findings of the study revealed a mixed relationship between ESG reporting and firm performance. Environmental reporting (ENVD) was found to have a significant but negative impact on EVAA, suggesting that environmental initiatives, while important, may impose financial burdens that outweigh short-term gains for Nigerian firms. Social reporting (SOCD) and governance reporting (GOVD), however, did not show statistically significant impacts on firm performance, implying that these aspects of ESG disclosures are not

yet major drivers of value creation in this context. These findings highlight the challenges that Nigerian manufacturing firms face in integrating ESG practices into their operations in ways that translate into measurable financial outcomes. The key takeaways from the study are that while ESG reporting is increasingly relevant in global business practices, its direct impact on firm performance may vary significantly depending on the local economic and regulatory context. In Nigeria, environmental reporting, though crucial for long-term sustainability, appears to negatively affect short-term financial performance, while social and governance reporting remain underdeveloped as performance enhancers. These results suggest that ESG practices in emerging markets may not yet be fully aligned with the financial goals of firms, indicating potential areas for improvement in corporate strategies and regulatory frameworks.

Given these findings, this study recommends a broader and more strategic approach to ESG integration among Nigerian manufacturing firms. Corporate managers and directors should re-examine their approach to environmental reporting, ensuring that the costs of compliance and sustainability initiatives are balanced with potential long-term gains. This could involve investing in technologies or processes that reduce environmental impact while improving operational efficiency, thus mitigating the negative effects of environmental reporting on financial performance. Policy makers and regulators should work toward developing incentives or support systems that help firms manage the financial implications of environmental compliance, ensuring that environmental initiatives do not disproportionately harm the profitability of local industries. For social reporting, corporate managers and directors are encouraged to enhance their focus on social initiatives that contribute directly to operational efficiency and workforce productivity. This could include improving labor practices, promoting diversity, and engaging with local communities in ways that create both social and financial value. Policy makers and regulators should promote clearer guidelines on social reporting to help firms align their social disclosures with measurable business outcomes. Analysts and investors should also consider evaluating the social aspects of ESG reporting when assessing the long-term sustainability and value creation potential of Nigerian firms. In terms of governance reporting, corporate managers and directors should place a greater emphasis on transparency, accountability, and board effectiveness, as these factors are increasingly being scrutinized by investors and other stakeholders. Although governance reporting did not show a significant impact in this study, global trends suggest that strong governance practices will likely become more important in the future. Policy makers and regulators should strengthen governance frameworks to ensure that firms adhere to best practices, while analysts and investors should continue to evaluate governance factors as part of their broader investment assessments.

The contribution to knowledge of this study is substantial, particularly in the context of Nigeria, where empirical research on ESG reporting and firm performance remains limited. In terms of variables, the study adds to the literature by examining the distinct roles of environmental, social, and governance disclosures in a developing market setting. Methodologically, the study employs robust panel regression techniques to control for firm-specific effects, offering a nuanced understanding of how ESG factors influence performance. Theoretically, the study contributes to stakeholder and legitimacy theories by providing evidence of the challenges firms face in aligning ESG disclosures with financial performance in emerging markets. Empirically, it provides a foundation for future research on ESG practices in similar contexts.

Finally, this study suggests that future research should focus on understanding the long-term impacts of ESG reporting on firm performance, particularly in emerging markets like Nigeria. Researchers should explore how firms can better align their ESG strategies with their financial goals, perhaps by examining the role of innovation and technology in mitigating the costs of environmental compliance. Additionally, future studies could investigate the evolving role of governance reporting as regulatory frameworks in emerging markets become more robust. A more detailed examination of the industry-specific effects of ESG reporting would also be beneficial, given the varying degrees of environmental and social impacts across different sectors.

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