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EFFECT OF ESG REPORTING ON CORPORATE PERFORMANCE OF BREWERY FIRMS IN NIGERIA

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Abstract
This study assessed the effect of ESG reporting on the corporate performance of brewery firms in Nigeria. The specific objectives are to; examine the effect of environmental reporting on net profit margin of Brewery firms in Nigeria, determine the effect of social reporting on net profit margin of Brewery firms in Nigeria and ascertain the effect of governance reporting on net profit margin of Brewery firms in Nigeria. Content analysis and Ex Post Facto research design was adopted. Data for the study were extracted from annual reports and accounts of the Brewery firms in Nigerian Exchange Group from 2013 to 2024. Multiply regressions were applied to test the hypotheses. The study revealed that environmental practice disclosure has significantly affected net profit margin of Brewery firms in Nigeria; thus, P-value of 0.0430 is less than the critical value of 5% (0.05). The study upheld that corporate social practice disclosure has a significantly affect net profit margin of Brewery firms in Nigeria, thus, the P-value of 0.6211 is higher than the critical value of 5% (0.05), while corporate governance practice disclosure has a significantly affect net profit margin of Brewery firms in Nigeria, thus, the P-value of 0.0438 is less than the critical value of 5% (0.05). Based on the findings, the study recommended among others that though environmental disclosure has significant effect on financial performance, there is need for regular report on environmental performance using standardized frameworks like GRI or TCFD, as well communicate with investors, customers and employees about environmental initiatives and progress.

Keywords: ESG, Net profit, Nigeria Brewery

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Introduction

Environmental, Social, and Governance (ESG) credentials have emerged as a worldwide trend today and are growing in significance for businesses due to the rising awareness of their duty towards sustainable development and their various effects on society (Kaakeh & Gokmenoglu, 2022). The global demand for sustainable development across various sectors is becoming a necessary mandate (Chien, 2023), and businesses are increasingly adopting sustainability strategies, resulting in significant changes in business models and management practices (Chang & Lee, 2022). Companies are adopting ideal strategies aimed at enhancing stakeholder value while simultaneously meeting the organization's financial objectives (Al Amosh et al., 2022). The real-world application of this novel paradigm is evident in the growing initiatives companies are undertaking to adequately evaluate their dedication to sustainability and long-term global development objectives (Chang & Lee, 2022).

ESG reporting is the method through which companies reveal their effects and achievements regarding environmental matters (including carbon emissions and waste management), social issues (like labor rights and community development), and governance standards (such as board structure and anti-corruption strategies). According to Eccles and Klimenko (2019), ESG acts as a connection between corporate management and shareholders, providing essential insights into the sustainability of business practices in addition to financial statements.

Worldwide, there has been an increase in regulatory and investor-driven efforts requiring strong ESG disclosures. Frameworks like Global Reporting Initiatives (GRI), the Sustainability Accounting Standards Board (SASB), the United Nations Sustainable Development Goals (UN SDGs), and the Task Force on Climate-related Financial Disclosures (TCFD) offer comprehensive guidelines to harmonize ESG reporting across industries. A comparable momentum is gaining strength in Nigeria. In 2021, the Nigerian Exchange Group (NGX) launched sustainability disclosure guidelines requiring listed firms to include organized ESG details in their yearly reports. Moreover, the Financial Reporting Council of Nigeria (FRCN) and the Securities and Exchange Commission (SEC) have integrated ESG principles into the corporate governance codes.

According to Anyanwu and Oduro (2022), Nigerian brewery companies face growing pressure to adopt sustainable practices, driven by regulatory demands and as a means for brand positioning and risk management. The brewery sector is a vital part of Nigeria’s manufacturing industry, making substantial contributions to job creation, tax revenue, and economic performance. Nevertheless, it is also an industry with significant environmental and social impacts. Ogbonna and Ejiofor (2021) state that brewery activities in Nigeria utilize more than 1.5 billion liters of water each year and produce significant quantities of both solid and liquid waste. Additionally, energy usage in breweries contributes to greenhouse gas emissions, while the procurement of agricultural inputs raises issues regarding sustainable farming and supply chain ethics. Moreover, breweries possess significant social presence due to the characteristics of their products and market accessibility. Consequently, the ESG performance of brewing companies can greatly impact public opinion, adherence to regulations, and investors' trust (Adewale & Falade, 2022).

Despite increasing worldwide support for sustainability reporting, ESG disclosures in Nigeria continue to be mostly inconsistent and fragmented. Numerous companies, particularly in the manufacturing industry, have not yet made ESG a fundamental part of their corporate strategy. Nigerian brewery companies have started implementing various ESG-related

practices, but the degree to which these initiatives impact measurable financial results is still uncertain.

Jaba et al. (2025) and Rasha and Mohamed (2025) examined how ESG factors influence the financial performance of publicly traded firms on the Egyptian Stock Exchange (EGX) between 2018 and 2022. Mona (2025) examined how financial performance and corporate governance structures influence environmental, social, and governance (ESG) disclosures in Saudi Arabia's listed firms from 2009 to 2023. Amina (2025) examined how environmental, social, and governance (ESG) performance affects financial performance of firms in Saudi Arabia, concentrating on publicly traded companies in high-pollution sectors from 2010 to 2023.

In Nigeria, Apete (2025) evaluated the impact of environmental, social, and governance disclosures on the financial performance of publicly traded industrial goods firms in Nigeria. Igbinovia and Agbadua (2022) examined the impact of ESG reporting on firm value in Nigerian manufacturing: The moderating effect of competitive advantage from 2017-2021. Ekpose and Enidiok (2021) investigated the impact of environmental expenses on the financial results of publicly listed Nigerian oil and gas companies over a span of eleven (11) years from 2009 to 2019.

Most of the research on ESG has been conducted in international locations like the UK, Malaysia, Saudi Arabia, Egypt, and others. Furthermore, there is substantial research regarding the impact of ESG on the corporate performance of brewery companies in Nigeria until the 2024 fiscal year. The current study aims to determine the impact of ESG on the corporate performance of brewery companies in Nigeria during the years 2013 to 2014. Furthermore, there is a limited body of empirical research in Nigeria that links ESG reporting with corporate performance, particularly within a single firm context such as Brewery firms in Nigeria. The study thereby sought to ascertain the effect of ESG reporting on the corporate performance of brewery firms in Nigeria. The specific objectives are:

1. To determine the effect of environmental reporting on net profit margin of Brewery firms in Nigeria.
2. To examine the effect of social reporting on net profit margin of Brewery firms in Nigeria.
3. To ascertain the effect of governance reporting on net profit margin of Brewery firms in Nigeria.

Review of Related Literature

ESG Reporting

The ESG framework, stemming from an all-encompassing assessment model that includes environmental, social, and governance factors, symbolizes a sustainable investment model that incorporates non-financial performance into investment decision-making (Li et al 2025). In contrast to conventional Socially Responsible Investment (SRI), ESG encompasses environmental preservation, stakeholder engagement, and corporate governance processes, offering a structured evaluation of long-term value generation. Emphasizing the significance of environmental, social, and governance factors in investment value, ESG advocates for companies to integrate these metrics into fundamental performance systems to reduce risks and promote sustainable growth.

ESG reporting, initially a voluntary effort driven by investors, is rapidly evolving into a regulatory obligation in numerous nations. The World Economic Forum (2020) states that more than 80% of institutional investors view ESG information as crucial for their investment choices. This change in investor behavior has forced companies to reevaluate their corporate strategies and transparency practices. Currently, researchers from different nations have carried out many investigations on the economic impacts of disclosing ESG information. The findings of Chytis et al. (2024) show that the trends in publication and citation of ESG have increased over time (Chytis et al., 2024).

This research primarily focuses on aspects like company worth, business performance, and corporate innovation. Several studies indicate that better ESG performance will increase the enterprise value of companies. Miralles-Quiros et al. (2018) primarily examine the ESG performance of publicly traded companies in Brazil, enhancing the ESG governance standards of company's aids in lowering capital acquisition costs and boosting enterprise value. Among them, the aspects of meeting environmental responsibility (E) and enhancing governance structure (G) have a more significant impact on promotion. Aydo˘gmu, s et al. (2022) discovered that a greater comprehensive ESG score correlates with a higher enterprise value. Fatemi discovered that firms with superior ESG score, the higher the enterprise value. Fatemi discovered that firms demonstrating superior ESG performance often possess greater enterprise value compared to those with inferior ESG performance (Fatemi et al., 2018). According to research by Das Gupta, companies with weak financial performance often have a greater incentive to improve their ESG performance. (Duque-Grisales & Aguilera-Caracuel, 2021). Following the enhancement in ESG performance, both the book and market values of companies have risen, financing costs have lowered, and market interest has grown (Wang & Yang, 2022).

Environmental, Social, and Governance (ESG) reporting consists of organized disclosures of non-financial indicators that demonstrate a company's sustainability efforts, social effects, and governance standards. It has transitioned from voluntary Corporate Social Responsibility (CSR) reporting to obligatory regulatory structures like GRI, SASB, TCFD, and NGX Sustainability Disclosure Guidelines 2021. The implementation of IFRS-compliant climate disclosures in Nigeria signifies a crucial regulatory change towards unified ESG integration. These reports are becoming more essential to stakeholders who require transparency, accountability, and sustainable business practices. ESG metrics allow investors to evaluate non-financial risks and prospects within a company's operations and its long-term strategy.

Environmental disclosure emphasizes energy use, greenhouse gas (GHG) emissions, waste disposal, water consumption, and climate risk change. Social reporting encompasses labor relations, workplace health and safety, diversity and inclusion, and community engagement. Governance reports emphasize matters like board composition, shareholder entitlements, executive pay, and strategies against corruption.

The regulatory landscape in Nigeria is evolving. The 2018 Corporate Governance Code (FRCN) requires sustainability reporting and promotes environmental transparency, stakeholder engagement, and ethical governance. In 2021, NGX established official ESG sustainability disclosure guidelines that mandate listed companies to report on significant environmental, social, and governance matters, with IFRS-compliant climate reporting becoming compulsory by 2024-2027. Nonetheless, enforcement continues to be uneven, and ESG is frequently approached in a procedural manner instead of a strategic one. ESG reporting is frequently influenced by global frameworks such as Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), United Nations Principles for

Responsible Investment (UN PRI), and International Sustainability Standards Board (ISSB). In Nigeria, ESG reporting is optional yet increasingly important, particularly among publicly traded companies such as Nigerian Breweries Plc, Guinness Brewery Plc, and International Brewery Plc, which are overseen by the Nigerian Exchange Group (NGX) and the Financial Reporting Council of Nigeria (FRCN).

Firm's Performance

The performance of a firm is a multi-faceted idea that indicates how successfully an organization meets its goals, encompassing profitability, productivity, market presence, expansion, and overall competitiveness. It functions as an essential measure of a company's operational efficiency and strategic achievement. Company performance may be assessed using both financial and non-financial indicators, based on the specific context, sector, and objectives of the organization. In financial metrics, it is often evaluated through indicators like return on assets (ROA), return on equity (ROE), net profit margin, and earnings per share (EPS), which signify the company's capability to produce revenue and effectively use resources (Kaplan & Norton, 2022).

Profit Margin

Profitability refers to the condition of producing a financial profit or return. Profitability refers to a company's capacity to generate earnings. A profit is the remainder of the income a company earns after settling all costs associated with generating that income, such as manufacturing a product, along with other expenses tied to the execution of business operations (Horton, 2018). The main objective of every business endeavor is profitability. The business cannot endure in the long term without being profitable. Thus, assessing present and historical profitability and forecasting future profitability is crucial. Profitability is assessed through revenue and costs. Revenue is the money produced from the operations of the business. Expenses refer to the costs associated with resources utilized or depleted by the business's activities (Amahalu et al., 2019).

Net Profit Margin Net profit margin represents the proportion of net profits to the revenues of a business or company division. Usually represented as a percentage, net profit margins indicate the proportion of each naira earned by a company in revenue that converts into profit (Amahalu et al., 2016). The formula for determining net profit margin is: net profit divided by revenue.

Net profit margin is one of the most closely followed numbers in finance. Shareholders look at net profit margin closely because it shows how good a company is at converting revenue into profits available for shareholders.

Empirical Review

Ezejiofor and Mfreke-Obong (2025) investigated the impact of ESG disclosure on the value of publicly traded consumer goods companies. This research utilized an ex-post facto design. A sample of eighteen (18) from the total of twenty one (21) consumer goods manufacturing companies was selected because some firms' data were unavailable. The information was gathered from the yearly reports and records of the selected companies in Nigeria between 2012 and 2023. Data were examined using descriptive statistics, while the hypotheses will be evaluated with Pearson correlation and multiple regression analysis to reach a final conclusion. The analysis revealed that those environmental practices negatively impacted the firm value of consumer goods in Nigeria, and this finding was statistically significant. The findings showed that social practices had a positive and statistically significant impact on the value of consumer goods firms in Nigeria, while governance practices disclosure negatively

affected firm value but remained statistically significant in the context of consumer goods in Nigeria. Rasha and Mohamed (2025) examined how ESG factors influence the financial performance of publicly traded firms on the Egyptian Stock Exchange (EGX) between 2018 and 2022. Data was collected from the leading 100 Egyptian companies evaluated by liquidity and activity through a quantitative research approach encompassing 14 distinct industrial sectors. The study employed financial statements, yearly reports, sustainability documents, and corporate governance records. The environmental aspect was discovered to have little impact on financial performance, whereas the social aspect has a notable negative effect. Moreover, the results indicate a favorable impact of the governance aspect on financial performance.

Apete (2025) evaluated the impact of environmental, social, and governance disclosures on the financial performance of publicly traded industrial goods firms in Nigeria. An ex-post facto research design was utilized, and a sample of ten (10) publicly listed industrial goods firms was selected. Information was obtained from the annual audited and released financial reports of the selected companies from 2012 to 2023. The collected data were examined using descriptive, diagnostic, and inferential statistical methods. The panel regression findings indicated that disclosures related to environmental, social, and governance factors have a statistically significant impact on the financial performance of publicly traded industrial goods firms in Nigeria.

Mona (2025) explored how financial performance and corporate governance mechanisms influence environmental, social, and governance (ESG) disclosure in Saudi Arabia, which is experiencing major institutional changes due to Saudi Vision 2030 and Tadawul's 2021 ESG reporting reforms from 2009 to 2023. Through multiple regression analysis, which incorporates ordinary least squares (OLS), fixed effects (FE), and generalized method of moments (GMM), the study addresses endogeneity and guarantees reliable results. Results show that board size had an adverse and statistically significant correlation with ESG disclosure. The robustness tests validate the negative correlation between board size and ESG. ROA did not demonstrate a relationship with ESG disclosure in the primary results; nonetheless, robustness analyses indicated a significant negative correlation.

Jaba and colleagues (2025) analyzed how ESG dimensions influence the financial performance of publicly traded firms on the Egyptian Stock Exchange (EGX) from 2018 to 2022. Information was collected from the leading 100 Egyptian companies ranked by liquidity and activity utilizing a quantitative research approach encompassing 14 distinct industrial sectors. The assessment involved financial statements, yearly reports, sustainability reports, and corporate governance materials. The study revealed that the environmental aspect does not greatly impact financial outcomes, whereas the social aspect has a significant negative influence. Moreover, the results indicate a beneficial effect of the governance aspect on financial performance.

Li, Ma, He, and Tan (2025) examined how information asymmetry and conflicts of interest between owners and managers can impact corporate investment choices. We analyze all non-financial A-share companies in Shanghai and Shenzhen from 2009 to 2023 to evaluate these hypotheses. Employing panel fixed-effects and two-stage least squares with an industry province year instrument, the research discovers that improved ESG performance notably decreases investment inefficiency; this impact occurs via reduced financing constraints and increased analyst coverage. Heterogeneity analyses reveal that the improvement is pronounced in small non-state-owned, non-high-carbon firms but absent in large state-owned

high-carbon emitters. These findings enrich the literature on ESG and corporate performance and offer actionable insights for regulators and investors seeking high-quality development.

Moussa et al. (2024) examined non-financial companies included in the UK FTSE All-Share Index from 2010 to 2021. Their results validate a robust positive correlation between ESG performance and market capitalization, with each ESG component—environmental, social, and governance—independently enhancing firm value. Applying descriptive statistics, the research emphasizes the moderating influence of governance in enhancing this relationship, offering additional understanding of how internal frameworks can impact ESG results.

Noja, Baditoiu, Buglea, Munteanu, and Gligor Cimpoieru (2024) analyzed the influence of ESG reporting on corporate performance. The research consisted of examining financial and non-financial information from 2,400 firms sourced from the Refinitiv Eikon database. Two quantitative analysis methods were utilized: multiple linear regression models analyzed using the robust regression approach and structural equation modeling. Key results indicate that ESG indicators significantly influenced company performance, though the impacts varied across various dimensions, necessitating a customized strategy for incorporating ESG factors to improve overall performance. The research offers an innovative viewpoint on the existing and potential influence of ESG reporting, founded on systematic theoretical and empirical evaluations, with various implications for business administration and management. Cao, Duan, and Ibrahim (2024) investigated corporate underinvestment and its impact on environmental, social, and governance performance. The dataset included Chinese A-listed firms from 2011 to 2020. The analysis of the data was conducted using OLS and two-stage least squares techniques. The findings showed a negative relationship between underinvestment and ESG ratings, especially in the environmental and social aspects. Kim and Lee (2023) carried out research named ‘Relationship between Earnings Announcement Actions and ESG Outcomes’. The research duration occurred from 2012 to 2018 in Korea. The analysis of the data was conducted using OLS technique. The findings indicated a negative correlation between earnings announcements and ESG scores (i.e., earnings announcements on Friday and companies that skip preliminary earnings announcements).

Nur, Suganthi, and Yuen (2023) examined the influence of ESG on corporate performance regarding the valuation of publicly listed companies in Malaysia. A total of 45 firms listed on Bursa Malaysia with comprehensive ESG data from 2011–2021 were chosen from Bloomberg’s ESG database. Corporate value was assessed through three metrics – return on assets (ROA), return on equity (ROE), and Tobin’s Q. The findings indicate that the ESG scores have a minimal positive effect on ROE and Tobin’s Q. Conversely, ESG scores show a negative yet insignificant effect on ROA. The personal Environmental score adversely affects ROA but positively influences ROE and Tobin’s Q. At the same time, Social independently shows a negligible negative effect on all variables, while Governance demonstrates a positive yet insignificant effect on all variables.

Rahcmatulloh and Suranta (2023) clarified the impact of Environmental, Social, and Corporate Governance (ESG) performance on a company's overall performance during the timeframe from 2018 to 2022. The study utilizes the ESG level as the independent variable for assessment, marking the innovation of the research. The corporation's performance is assessed through different indicators, such as financial performance (ROA), profitability (ROE), and Tobin's Q, which are viewed as dependent variables. Moreover, the research presents the Modified by Jones Model of earnings management as a moderating variable. The analytical method includes the use of various linear regression techniques. The results of this study indicate that the ESG index has a positive and statistically significant effect on ROA,

ROE, and Tobin's Q. Additionally, it is significant that earnings management cannot act as a moderating factor in the relationship between ESG and corporate performance.

Enekwe, Ugwudioha, and Uyagu (2023) investigated how environmental costs impact the financial performance of publicly traded oil and gas firms in Nigeria. The ex-post facto research framework was utilized to gather financial statements from four publicly traded oil and gas firms in Nigeria over a ten-year span from 2010 to 2019. The study utilized the purposive sampling method. The multiple regression model's Panel Ordinary Least Square analysis was carried out using the E-views version 9.0 statistical software. The results indicated that employee development expenses have a negative yet insignificant impact on the return on assets of publicly listed oil and gas firms in Nigeria, whereas community development expenses and health and safety expenditures for employees exhibit a positive but insignificant impact.

Okoye and Erinugha (2023) examined the impact of environmental disclosure on the financial performance of publicly traded Oil and Gas firms in Nigeria over an eleven (11) year period from 2011 to 2021. This research utilized Panel data derived from the audited annual reports and accounts of eleven (11) publicly listed Oil and Gas companies covering the years 2011-2021. An Ex-Post Facto research design was utilized. Descriptive statistics analyzed the data, while inferential statistics were applied using Pearson correlation coefficient and Panel least squares regression analysis to evaluate the study's hypotheses. The findings indicated a notable and positive correlation between employee health and safety reporting, waste management reporting, environmental protection reporting, and cash value added.

Ezechukwu (2023) examined the impact of environmental disclosures on the performance of chosen consumer goods companies in Nigeria during the period from 2011 to 2020. The study population consisted of all consumer goods production companies listed on the Nigerian Exchange Group (NXG) (NSE) as of 31st December 2021, with a sample size of sixteen (16) consumer goods manufacturing firms chosen from this sector. The Fixed effect panel least squares regression analysis was utilized to confirm the hypotheses. The research revealed a notable influence of local content disclosures on the asset returns of consumer goods manufacturing firms in Nigeria; however, it also determined that emission disclosure does not significantly affect the asset returns of these companies.

Fizzah, Fangjun, Jiyuan, and Muhammad (2023) examined how environmental disclosure affects financial performance. Additionally, the present research seeks to investigate the mediating role of green innovation and offer new evidence concerning this association through stakeholder and signaling theory. This research utilized a sample dataset that includes Chinese companies listed on the Shanghai and Shenzhen stock exchanges during the timeframe of 2005–2016. In the measurement model, green innovation is the partial mediator between the positive relationship of environmental disclosure and firm performance. Empirical results show that environmental disclosure affects firm financial performance directly and positively influences it through green innovation in Chinese firms.

Yin et al. (2023) shift the focus toward environmental outcomes by examining the influence of ESG disclosure on carbon performance among heavily polluting Chinese firms. Utilizing a two-way fixed-effects model, their findings reveal that ESG disclosure significantly enhances corporate carbon performance, with a 1.2% improvement observed for each incremental increase in ESG disclosure level. However, not all perspectives are aligned with the benefits

of ESG practices. Some studies suggest that the costs associated with ESG implementation may outweigh the potential advantages.

Igbinovia & Agbadua (2022), the impact of ESG reporting on firm value in Nigeria's manufacturing sector: The moderating effect of firm advantages. The research employed a regression analysis with interaction terms on 20 manufacturing companies (2017-2021) and discovered that ESG reports did not directly influence firm value; however, a significant positive impact was noted when firm advantage is elevated.

Giannopoulos et al. (2022) add to this discussion by analyzing Norwegian public companies from 2010 to 2019. Employing the Thomson Reuters Eikon ESG disclosure score along with financial performance metrics like ROA and Tobin's Q, their regression analysis of panel data produces varied outcomes. Although ESG initiatives seem to have a detrimental impact on accounting-based performance (ROA), they positively affect market-based valuation (Tobin's Q). This variation emphasizes how the effects of ESG practices can vary based on the performance metric employed and indicates that market views and internal profitability might react differently to ESG initiatives.

Adeneye and Kammoun (2022) conducted research titled 'Real earnings management and capital structure: Is environmental, social and governance (ESG) performance significant? The sample included 116 publicly traded companies from ASEAN nations during the years 2014-2019. The analysis of the data utilized a fixed effects panel data estimator. The findings indicated that REM exerts a meaningful positive influence on leverage. Additionally, REM from unusual production costs and atypical discretionary expenses positively and significantly influences leverage. Conversely, irregular cash flows from operating activities adversely affect leverage. Moreover, REM has a notable and positive impact on leverage in companies with poor ESG performance and throughout ESG pillar evaluations. Nevertheless, REM does not influence leverage in firms with high ESG performance, aside from the governance pillar score

Fazle, Ruzlin, and Jeaneth (2021) examined the influence of sustainability (environmental, social and governance or ESG) initiatives on the financial outcomes of the Nordic financial sector. This study employs quantitative methods, utilizing regression and a generalized method of moments. Employing static and dynamic estimators, the authors discovered both beneficial and detrimental effects of sustainability practices on financial performance. The authors found a negative correlation between ESG practices and financial performance (return on invested capital, return on equity, and earnings per share). The authors found a favorable connection between governance and return on assets.

Helmi (2020) assessed how firm size, leverage, type of manufacturing, family ownership, and government ownership influence voluntary corporate social and environmental disclosures in publicly listed companies in Saudi Arabia. The analysis was conducted using a regression model. The findings indicate that Saudi companies have enhanced their corporate social and environmental voluntary disclosure over time, reaching around 68% disclosure compared to earlier studies, attributed to new corporate governance principles and the implementation of IFRS.

Chiamogu and Okoye (2020) utilized an ex-post facto research design to examine the effect of environmental costs on the financial performance of Nigerian oil and gas firms over an eleven (11) year span from 2008 to 2018, covering both years. The environmental expense is an independent variable assessed by community development expenses (CDE) and environmental cleanup expenses (ECE), along with two control variables: firm size (FSZ)

and leverage (LEV), whereas financial performance is a dependent variable quantified by Tobin's Q (TQ). The results of the regression analysis indicated that community development costs (CDC) and environmental remediation costs (ERC) significantly and positively influence Tobin's Q of publicly listed oil and gas firms in Nigeria.

Osazefua (2019) investigated the impact of operational efficiency on the financial sustainability of listed manufacturing companies in Nigeria. A secondary panel dataset ranging from 2009 to 2016 for 16 listed manufacturing companies was obtained from the Bloomberg portal and analyzed using Ordinary Least Square method. The finding revealed that in relation to ROA, operating expenses and asset turnover had negative and positive significant relationship respectively. Employees' growth, account receivables, turnover, and inventory turnover was found to be insignificant.

Methodology

The research utilized a longitudinal design as it assesses the behavior of the same variables over a prolonged timeframe. The study's population included brewery companies in the Nigeria Exchange Group as of the end of December 2025. Four Brewery companies are listed on the Nigeria Exchange Group (NGX): Nigerian Breweries Plc, International Breweries Plc, Guinness Nigeria Plc, and Champion Breweries Plc. Given the small number of Brewery companies, the research employed a consensus sampling approach to utilize the entire population as the sample size.

The research utilized secondary data obtained from multiple annual reports of the selected manufacturing companies available in the libraries and on the website of the NGX (www.ngxgroup.com). The study spanned duration of thirteen (13) fiscal years (2012-2024). The thirteen-year timeframe was utilized for the estimates to incorporate data from the same accounting reporting framework (namely, IFRS) – particularly as Nigeria adopted IFRS in 2012.

Model Specification

This study modified the model proposed by Yasin and Evren (2021). The model specified by, Yasin and Evren (2021) are as follows:

$FRQit = \alpha + \beta_1 ESG_{it} + \beta_2 SIZE_{it} + \beta_3 ROA_{it} + \beta_4 LEV_{it} + \beta_5 FIRM_AGE_{it} + \Sigma YEAR + \Sigma INDUSTRY + \Sigma COUNTRY + \varepsilon_{it}$

Where:

FRQ_{it} = separately represents the models FRQ1, FRQ, FRQ 3 and FRQ 4
ESG_{it} = separately represents ESG, ENV, SOC, and GOV
$SIZE_{it}$ = the natural logarithm of the market value of equity
ROA_{it} = Return on assets
LEV_{it} = Total liabilities/total assets
$FIRM_AGE_{it}$ = The natural logarithm of 1 + age of firm

The model was modified as follows:

$NPM_{it} = \beta_0 + \beta_1 EVR_{it} + \beta_2 SPR_{it} + \beta_3 GVR_{it} + \beta_4 FSZ_{i,t} + e_{it}$ …….....….i

Where:

NPM_{it} = net profit margin of firm *i* at period *t.*
EVRit= environmental-related reporting of firm *i* at period *t.*
SORit= social-related reporting of firm *i* at period *t.*
GVRit= governance-related reporting of firm *i* at period *t.*
FSZ_{it} = Natural logarithm of total assets of firm *i* at period *t.*
B_0 = Intercept
$\beta_1 - \beta_3$ = are the parameters to be estimated in the equation

e = Stochastic error term.

Variable Description and Measurements

Table 3.1: Summary of the variables, definitions and means of measurement

Variable	Expression	Measurement	Author/Year
Net profit margin	NPM	Net profit over revenue	Horton, (2018); Amahalu et al., (2016).
Environmental Disclosure	EVR	Dummy variable (1 or 0) Environmental Disclosure Index: generate E_DSCO = ((E1 + E2 + E3 + E4 + E5…… EN)/n)*100	Nina & Cyrielle (2014);
Social Practices Disclosure	SOR	Dummy variable (1 or 0) Social Disclosure Index: generate S_DSCO = ((S1 + S2 + S3 + S4 + S5……SN)/n)*100	Nina & Cyrielle (2014)
Governance Disclosure	GVR	Dummy variable (1 or 0) Governance Disclosure Index: generate G_DSCO = ((G1 + G2 + G3 + G4 + G5 + G6 ……. GN)/n)*100	Nina & Cyrielle (2014))
Firm Size	FSZ	Natural logarithm of total assets at the end of fiscal year	Nisan, (2014)

Source: Field Study, (2026)

Method of Data Analysis

Data were analyzed with descriptive statistics, and the hypotheses were tested inferential statistics (Pearson correlation, and multiple regression analysis). Since the focus of the study is to determine the significant effect, regression analysis becomes appropriate tool for it.

Descriptive statistics employed to summarily describe the mean, median, standard deviation, kurtosis and skewness of the study variables. Inferential statistics (Coefficient of correlation and Regression analysis) were also be utilized with the aid of E-Views 9.

Decision Rule

The decision for the hypotheses is to accept the alternative hypotheses if the p-value of the test statistic is less or equal than the alpha and to reject the alternative hypotheses if the p-value of the test statistic is greater than alpha at 5% significance level.

Data Analysis and Results

Data Analysis

Table 4.1: Descriptive Statistics

	NPM	EVD	CSRD	GVD	LFZS
Mean	-1.452830	0.416667	68.33333	33.33333	7.037754
Median	0.128838	0.000000	70.00000	30.00000	7.055264
Maximum	0.297239	1.000000	80.00000	60.00000	7.134731
Minimum	-18.57606	0.000000	50.00000	20.00000	6.887695
Std. Dev.	5.209397	0.497167	8.060506	15.03292	0.089689
Skewness	-3.008963	0.338062	-0.670872	0.626099	-0.433828
Kurtosis	10.06840	1.114286	3.260870	2.040000	1.630829
Jarque-Bera	215.4441	10.03265	4.670831	6.224000	6.568641
Probability	0.000000	0.006629	0.096770	0.044512	0.037466
Sum	-87.16978	25.00000	4100.000	2000.000	422.2652
Sum Sq. Dev.	1601.131	14.58333	3833.333	13333.33	0.474606
Observations	60	60	60	60	60

Source: E-views 9.0 Analytical Result (2026)

Interpretation

Table 4.1 shows the descriptive statistics for the various variables of the research based on 60 observations (5 firms x 12 years). The mean is the most frequently utilized measure of central tendency. The standard deviations indicate the variation/difference/dispersion from the average. It quantifies risk; a greater standard deviation indicates increased risk. The standard deviation quantifies how much each value in a dataset differs from the average. It is the strongest and most commonly utilized measure of dispersion. Skewness quantifies the extent to which the probability distribution of a random variable differs from the normal distribution. Table 4.1 indicates that the probability distribution for EVD (0.338062) and GVD (0.626099) displays a positive skew, whereas the probability distribution for NPM (-3.008963), CSRD (-0.670872), and LFSZ (-0.433828) shows a negative skew.

The probability values of the Jarque-Bera Statistics indicate that EVD = 0.006629; GVD = 0.044512; and LFSZ = 0.037466 are statistically significant at 5%, while CSRD at 0.096770 is not, as shown by the corresponding p-values of 0.096770.

Multicollinearity Test

Table 4.2: Pearson Correlation Matrix

	NPM	EVD	CSRD	GVD	LFZS
NPM	1				
EVD	0.26608	1			
CSRD	-0.06203	0.17623	1		
GVD	0.27889	0.60474	0.18650	1	
LFZS	0.32225	0.40734	-0.19257	0.45056	1

Source: E-Views 9 Correlation Output, 2026

From the findings on the correlation analysis in table 4.2, the study revealed that there is a positive relationship between EVD, GVD, LFSZ and NPM by correlation factors of 0.266, 0.279 and 0.322 respectively, while a negative association exists between CSRD (-0.062) and PFM. Multicollinearity is the occurrence of high intercorrelations among two or more independent variables in a multiple regression model. Multicollinearity can lead to wider confidence intervals that produce less reliable probabilities in terms of the effect of independent variables in a model (Frost, 2021).

Test of Hypotheses

Table 4.3: Panel Least Square Regression Analysis testing the effect of EVD, CSRD, GVD, and LFSZ on NPM

Dependent Variable: NPM
Method: Panel Least Squares
Date: 03/29/26 Time: 22:37
Sample (adjusted): 2013 2024
Periods included: 12
Cross-sections included: 5
Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-83.61586	63.56066	-1.315528	0.1938
EVD	1.226935	1.698150	2.722513	0.0430
CSRD	-0.043667	0.087849	-0.497063	0.6211
GVD	0.044717	0.057977	2.771295	0.0438
LFZS	11.81415	8.819976	3.339477	0.0059

R-squared	0.536884	Mean dependent var	-1.452830
Adjusted R-squared	0.474112	S.D. dependent var	5.209397
S.E. of regression	5.012642	Akaike info criterion	6.141459
Sum squared resid	1381.962	Schwarz criterion	6.315987
Log likelihood	-179.2438	Hannan-Quinn criter.	6.209727
F-statistic	9.180651	Durbin-Watson stat	2.570546
Prob(F-statistic)	0.000158		

Source: E-View 9.0

Table 4.3 presents the regression analysis performed to examine the connection between environmental, social, and governance (ESGs) factors and profit margin. Adjusted R squared is a coefficient of determination that indicates the variation in the dependent variable resulting from changes in the independent variable. The results presented in table 4.3 indicate that the adjusted R squared value was 0.47, reflecting a 47% variation in profit margin as a result of changes in ESGs. This indicates that merely 47% of the variations in profit margin for the firms can be attributed to independent variables; EVD, CSRD, GVD, and LFSZ, whereas 53% was accounted for by unidentified variables excluded from the model.

The Durbin-Watson Statistic of 2.571 indicates that the model has serial correlation. The F-statistic for the regression is 9.180651, and the corresponding F-statistical probability is 0.000158, indicating that ESGs have a statistically significant impact on the profit margin of industrial goods; thus, the alternative hypothesis was accepted, and the null hypothesis was rejected.

Hypothesis One

H_{01}: Environmental reporting has no significant effect on net profit margin of Brewery firms in Nigeria.

The probability of the slope coefficients indicate that; P-value =0.0430<0.05). The co-efficient value of; β_1= 1.226935; t = 2.722513, implies that environmental practice disclosure is positively related to corporate performance, and also statistically significant at 5%.

Decision

Since the P-value of 0.0430 is less than the critical value of 5% (0.05), then, it would be upheld that environmental reporting has significant effect on net profit margin of Brewery firms in Nigeria at 5% level of significance, thus, H_I is preferred over H_o

Hypothesis Two

H_{02}: Social reporting has no significant effect on net profit margin of Brewery firms in Nigeria.

The probability of the slope coefficients indicate that; P-value =0.6211>0.05). The co-efficient value of; β_1= -0.043667; t = -0.497063, implies that environmental practice disclosure is negatively related to corporate performance, and also statistically significant at 5%.

Decision

Since the P-value of 0.6211 is higher than the critical value of 5% (0.05), then, it would be upheld that social reporting has no significant effect on net profit margin of Brewery firms in Nigeria at 5% level of significance, thus, H_o is preferred over H_I

Hypothesis Three

H_{03}: Governance reporting has no significant effect on net profit margin of Brewery firms in Nigeria.

The probability of the slope coefficients indicate that; P-value =0.0438<0.05). The co-efficient value of; β_1= 0.044717; t = 2.771295, implies that environmental practice disclosure is negatively related to corporate performance, and also statistically significant at 5%.

Decision

Since the P-value of 0.0438 is less than the critical value of 5% (0.05), then, it would be upheld that governance reporting has significant effect on net profit margin of Brewery firms in Nigeria at 5% level of significance, thus, H_o is preferred over H_I

Discussion of Findings

Hypothesis one indicated that the disclosure of environmental practices has notably influenced the net profit margin of brewery companies in Nigeria; therefore, the P-value of 0.0430 is below the critical value of 5% (0.05). The results of the study aligned with Apete (2025), which indicated that environmental disclosures have a statistically significant impact on the financial performance of the listed industrial goods firms in Nigeria.

This finding contradicts Rasha and Mohamed (2025), who discovered that the environmental factor does not have a significant impact on financial performance. Nur, Suganthi, and Yuen (2023) stated that the environmental score adversely affects ROA while positively influencing ROE and Tobin's Q.

Hypothesis two maintained that the disclosure of corporate social practices significantly impacts the net profit margin of Brewery companies in Nigeria, with a P-value of 0.6211 exceeding the critical value of 5% (0.05). This finding confirmed the results of Rasha and Mohamed (2025), which indicated that the social dimension has a significant negative impact. Suganthi and Yuen (2023) indicated that Social exerts a negligible negative effect on all variables.

The research contradicted Apete's (2025) panel regression findings, indicating that social disclosures significantly affect the financial performance of industrial goods companies listed in Nigeria. Jaba and colleagues (2025) discovered that the social dimension exerts a significant negative impact.

Hypothesis three indicated that the disclosure of corporate governance practices significantly influences the net profit margin of Brewery companies in Nigeria, with a P-value of 0.0438 being lower than the critical value of 5% (0.05). This finding aligns with what Rasha and Mohamed (2025) discovered regarding the positive impact of the governance dimension on financial outcomes. Apete (2025) found that governance disclosures significantly impact the financial performance of Nigeria's listed industrial goods firms. Jaba, et al (2025) found a positive influence of the governance dimension on financial performance. Suganthi and Yuen (2023) reported that governance has a positive but insignificant impact on all variables.

Conclusion

The study ascertained the effect of environmental, social and governance practices on corporate performance of Brewery firms in Nigeria, using environmental practice disclosure, social practice disclosure and governance practice disclosure as the independent variables while net profit margin represents the corporate performance. The data were extracted and analyzed with descriptive statistics and tested with multiple regressions analysis via e-view 9.0. The result indicates that environmental and corporate governance practices disclosures have statistically significant effect corporate performance of Brewery firms in Nigeria, while social practice disclosure has no statistically significant effect corporate performance of Brewery firms in Nigeria.

Recommendations

Based on the outcome from the study, the following recommendations:

1. Though environmental disclosure has significant effect on financial performance, there is need for regular report on environmental performance using standardized frameworks like GRI or TCFD, as well communicate with investors, customers and employees about environmental initiatives and progress.
2. There is need for the firm's management to set a measurable goals such as establish target for improving social impact, like increasing diversity in leadership. Therefore, government agencies should make corresponding penalties for enterprises with poor social practice performance and put forward corresponding rectification suggestions, and for enterprises with good social practice.
3. In as much governance has significant effect of financial performance, firm management need to explain risk oversight processes and internal control, and clearly report executive pay and link it to performance metrics.

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