e-ISSN 3027-0537
p-ISSN 3027-0375

10.5281/ZENODO.18032489 VOLUME 08 ISSUE 11 NOV - 2025 ARTICLE ID: #02198

SUSTAINABILITY DISCLOSURE PRACTICE AND FINANCIAL PERFORMANCE OF QUOTED PHARMACEUTICAL FIRMS IN NIGERIA

By Author(s):

SYDER, INUADUME DANIEL (Ph.D), ACA.
DEPARTMENT OF ACCOUNTING, FACULTY OF MANAGEMENT SCIENCES, UNIVERSITY OF PORT HARCOURT.
Inuadume.syder@uniport.edu.ng
&
ANDY-WABALI, CHIWENWO SYBEL, ACA.
UNIVERSITY OF PORT HARCOURT BUSINESS SCHOOL, SCHOOL OF GRADUATE STUDIES, UNIVERSITY OF PORT HARCOURT.

Abstract

Triggered by the persistent high inflationary trend among other fierce dynamic business environments that characterize the Nigerian business landscape, the study examines the effects of sustainability disclosures on the financial performance of quoted pharmaceutical companies in Nigeria. Community development cost disclosure, employee welfare cost disclosure and environmental protection cost disclosure are the dimensions of the predictor variable while return on assets and profit after tax measure financial performance. Panel regression analysis techniques with the aid E-views were employed to estimate the residuals of the econometric models for multi-year period on audited annual reports of the pharmaceutical firms. The results show that disclosing Community Development Costs, Employee Welfare Costs, and Environmental Protection Costs has a positive and statistically significant effect on Return on Assets and profit after tax, implying that sustainable investments improve asset utilization efficiency in the pharmaceutical sector. Similarly, Community Development Cost Disclosure and Employee Welfare Cost Disclosure have a positive and substantial impact on profit after tax, although Environmental Protection Cost Disclosure, related positively but insignificantly. The study concludes that investing in sustainability disclosures has a significant effect on the financial performance of Nigerian publicly traded pharmaceutical companies. It is recommended that pharmaceutical firms' management teams incorporate sustainability disclosure practices into their business models because they significantly increase profit after tax and return on assets, whereas environmental investment disclosures ensure long-term competitive advantage, regulatory compliance, and public trust. Furthermore, regulatory authorities should strengthen sustainability disclosure required indices for the pharmaceutical industry to adopt for consistent reporting, as well as providing incentives such as tax credits or green finance to encourage acceptable practice. The pharmaceutical business in a developing market revealed that sustainability disclosures serve not only as ethical imperatives but also as strategic financial performance levers, which is why comprehensive reporting is sought.

Keywords

Sustainability, *Disclosures*, *Return on Assets*, *Performance*, *Pharmaceutical*.

How to cite: INUADUME DANIEL, S., & CHIWENWO SYBEL, A.-W. (2025). SUSTAINABILITY DISCLOSURE PRACTICE AND FINANCIAL PERFORMANCE OF QUOTED PHARMACEUTICAL FIRMS IN NIGERIA. *GPH-International Journal of Business Management*, 8(11), 30-44. https://doi.org/10.5281/zenodo.18032489

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Over the past decades, sustainability disclosures have shifted from being largely voluntary corporate social responsibility initiatives to becoming integral aspects of corporate governance, strategic decision-making and stakeholder engagement (Hussain *et al*., 2018; Khan *et al*., 2022). Kaushalya, Mendis and Dissanayake (2025) affirm that these disclosures, which typically encompass environmental, social and governance dimensions, have gained prominence due to increasing global concerns about climate change, ethical business conduct and social justice. Stakeholders of business are persistently requiring corporate firms to demonstrate not only their financial viability but also their commitment to responsible and sustainable practices (Ismail, 2023; Friede *et al*., 2015). Given the pharmaceutical industry's vital role in protecting public health, its high level of research and development, and the importance of its effects on the environment and society, sustainability disclosures have become especially important. Pharmaceutical companies, in contrast to many other businesses, have to strike a balance between making money and moral obligations including fair drug prices, open clinical trials, and ecologically friendly production (Akinsulore *et al*, 2021; Costa *et al*. 2020).

According to Dzugwahi and Ola (2024), Sustainability disclosures are positioned by this dual responsibility as a strategic instrument for establishing credibility, reputation, and trust in addition to being a legal or moral obligation. Pharmaceutical companies now have structured ways to communicate their environmental, social, and governance commitments thanks to the adoption of sustainability reporting frameworks like the International Integrated Reporting Framework, the Sustainability Accounting Standards Board and the Global Reporting Initiative (GRI, 2020). Environmental disclosures often focus on waste reduction, emissions management, and eco-friendly production procedures. Agbo and Joel (2024), opine that social disclosures target employee wellbeing, ethical supply chains, and increased access to medications in underprivileged regions. Board diversity, anti-corruption measures, and adherence to moral Research and Development procedures are all covered in governance disclosures. Several theoretical views underpin the relevance of sustainability disclosures. Stakeholder theory suggests that enterprises must balance the interests of numerous groups whose support is vital for long-term success (Freeman, 1984). According to legitimacy theory, businesses reveal sustainability data in order to conform to social norms and preserve their "social license to operate" (Suchman, 1995). Signaling theory suggests that firms use sustainability disclosures to signal good governance, strong management, and proactive risk management to investors and other stakeholders (Spence, 1973). Empirical study on the link between sustainability disclosures and financial performance provide various evidence. Studies such as: Ugwu, Hassan and Riku (2024) demonstrate beneficial benefits, highlighting reputational improvements, enhanced investor relations, and operational efficiency. A meta-analysis by Peters and Ogaluzor (2023) suggests a positive sustainability disclosure and financial performance connect. However, other studies provide scenarios of no significant relationship or even negative effects, attributing the results to high compliance costs or poorly executed sustainability strategies (Platonova *et al*., 2018; Nguyen *et al*., 2021, Agbo & Joel, 2023). The unique operational problems of the Nigerian pharmaceutical business justify the empirical disputes on sustainability disclosure and financial performance. The research and development process that underlying pharmaceutical procedure is costly, extensive and

uncertain. Consequently, corporations incur reputational risks from drug recalls, price issues and ethical lapses in clinical trials. Although sustainability activities may benefit businesses in the long run, it places short-term financial strain on companies, particularly in highly competitive markets (Costa *et al.,* 2020). For example, environmentally friendly production may reduce emissions but require significant upfront capital investment. Expanding access to essential drugs in low-income regions may boost social goodwill but reduce profit margins. A distinctive investors' perspective on Environmental, Social and Governance performance indicates that it is becoming a major determinant in portfolio selection. It is also recognized that socially responsible investment funds and institutional investors commonly employ sustainability measures as screening techniques, for potentially offering enterprises with excellent disclosures preferred (Kaushalya *et al*., 2025). Conversely, firms with weak indicators of sustainability reporting risk exclusion from Environmental, Social and Governance indices and diminished investor interest. Despite the observed dynamics, empirical studies on sustainability disclosures in the pharmaceutical industry remain limited, especially in emerging markets like Nigeria. Extant literature prevalently evaluated across other industries overlooking the circumstances of the pharmaceutical on integrated influence of environmental, social, and governance concerns. Furthermore, there is limited empirical work evaluating whether sustainability disclosures translate into measurable financial performance gains for pharmaceutical companies.

This study addresses these gaps by evaluating whether sustainability disclosures significantly affect the financial performance of pharmaceutical corporations. It takes into account accounting-based metrics including return on equity, profit after tax, and return on assets. It examines the relationship between sustainability disclosures and the financial performance of pharmaceutical companies in Nigerian. The specifically objectives are to: (i) assess the effects of employee welfare cost disclosures on return on assets and profit after tax; (ii) determine the effects of community development cost disclosures on return on assets and profit after tax. (iii) examine the effects of environmental protection cost disclosure on return on assets and profit after tax. Null hypotheses were formulated and tested to validate the direction of empirical conclusion. It includes:

H_{01}: Employee welfare costs disclosure has no significant effects on profit after tax of pharmaceutical firms in Nigeria.

H_{02}: Community Development Costs disclosure has no significant effects on profit after tax of pharmaceutical firms in Nigeria.

H_{03}: Environmental protection costs disclosure has no significant effects on profit after tax of pharmaceutical firms in Nigeria.

H_{04}: Employee welfare costs disclosure has no significant effects on Return on Assets of pharmaceutical firms in Nigeria.

H_{05}: Community Development Costs disclosure has no significant effects on Return on Assets of pharmaceutical firms in Nigeria.

H_{06}: Environmental protection costs disclosure has no significant effects on Return on Assets of pharmaceutical firms in Nigeria.

2: Literature Review

2.1 Conceptual Framework

2.1.1Concept of Sustainability Disclosures

Sustainability disclosures refer to the voluntary or mandatory reporting of a firm's social, environmental, and governance activities and expenditures that extend beyond traditional financial statements. These disclosures generally involve community engagement, employee welfare, environmental protection, product safety, governance procedures, and indicators of social impact (Global Reporting Initiative, 2020). Reporting has various purposes: informing stakeholders, minimizing information asymmetry, legitimizing business actions, and communicating commitments to long term value development (Ismail, 2024). Third-party frameworks like the Global Reporting Initiative Standards have attempted to standardize metrics for comparability and accountability. In practice, disclosure formats range from narrative discussions in annual reports to quantified indicators (e.g., community development cost, employees' welfare cost, environmental protection cost; Global Reporting Initiative, 2020). Sustainability disclosure is increasingly considered as strategic rather than solely philanthropic. Scholars say reporting can yield tangible firm-level benefits improved stakeholder relations, cheaper cost of capital, and greater operational efficiencies that finally transfer into financial performance (Peters and Ogaluzor, 2023). Empirical studies across industries find mixed but generally positive associations between ESG disclosure and financial outcomes, highlighting the need to disaggregate disclosure types and contexts when assessing impact (Friede, Busch, & Bassen, 2015; Qiu, Shaukat, & Tharyan, 2016).

In the pharmaceutical sector, sustainability disclosures often encompass a broad variety of themes including access to medications, Research and Development for neglected diseases, eco-friendly manufacturing practices, waste management, and employee welfare. These reports are not only symbolic but can directly influence investor confidence, attract socially responsible investment capital, and boost brand reputation in a more Environmental Social Governance cognizant market (Kaushalya, 2025). Pharmaceutical firms have specific sustainability concerns, including medicine pricing, ethical marketing, intellectual property rights, clinical trial transparency, and environmental implications from manufacturing. The Access to Medicine Index (2022) assesses pharmaceutical businesses based on their pledges to equitable access, Research and Development for neglected diseases, and environmental responsibility. The triple bottom line paradigm, which balances profit, people, and the environment, is frequently incorporated into the sector's sustainability reports. Notable areas include reducing water pollution from drug manufacturing, reducing plastic packaging, switching to renewable energy, increasing access to essential medicines, ensuring ethical labor practices, promoting gender diversity in leadership, and strengthening compliance systems to prevent bribery, corruption, and unethical drug promotion. These disclosures are crucial in building public trust, which is an intangible but potent predictor of long-term company success in the pharmaceutical industry. Scholars have discovered that sustainability

disclosures fulfill two functions: Regulatory compliance and strategic communication to enhance competitiveness through reputational capital (Ugwu *et al.,* 2024). In heavily regulated businesses like pharmaceuticals, these disclosures also cover public health duties, medication safety, and ethical marketing, all of which are directly related to society trust and long-term profitability.

2.1.2 Concept of Financial performance

Financial performance refers to the extent to which a firm utilizes its assets, operational capabilities, and strategic initiatives to generate revenue, profit, and shareholder value over a given period. It is a key indicator of organizational performance, indicating the efficiency and effectiveness of managerial actions. Financial success in the pharmaceutical sector serves as a proxy for operational resilience, innovative capability, and long-term viability, in addition to profitability. Financial success is often measured using a combination of accounting measurements and market indicators. Common accounting-based measures include Return on Assets, Return on Equity, Earnings per Share, Profit After Tax, and Net Profit Margin, which evaluate a company's capacity to create returns from its asset base, equity capital, and overall operations. Market-based measures, such as Tobin's Q and share price appreciation, provide insights into investors' perceptions of future profitability and growth potential (Gentry & Shen, 2013; Widyawati, 2020). Financial performance has becoming increasingly important in sustainability reports. Pharmaceutical firms face strict regulatory constraints, high stakeholder expectations, and worldwide rivalry. Social performance disclosures, such as those on employee welfare, community health initiatives, and ethical sourcing, can boost brand loyalty and patient trust, thus driving revenue growth (Friede *et al*. 2015).

2.2 Theoretical Framework

Five relevant theories Legitimacy Theory, Stakeholder Theory, Agency Theory, Resource-Based View (RBV) and Social Contract Theory offer complementary lenses through which to understand this relationship.

2.2.1 Stakeholder Theory

Stakeholder Theory proposed by Freeman (1984), Stakeholder theory asserts that corporations exist within a network of relationships with various stakeholder groups, including shareholders, employees, customers, suppliers, regulators, and communities. Under this approach, sustainability disclosures serve as a strategic tool for communicating company responsibility and responsiveness to stakeholder requirements. Firms may build confidence and legitimacy by reporting environmental and social activities, which improves financial performance through higher consumer loyalty, better talent retention, and decreased regulatory friction.

2.2.2 Legitimacy theory: According to Dowling and Pfeffer (1975) and Suchman (1995) affirm that organizations strive to function within the boundaries and standards of their own societies. Sustainability disclosures serve as tools for establishing legitimacy in the pharmaceutical business, where public confidence is crucial. Transparent reporting on topics

such as clinical trial ethics, cheap medication initiatives, and carbon footprint reductions helps businesses fit with social norms and regulatory expectations. This legitimacy can lead to less scrutiny, an enhanced brand image, and possibly increased profitability.

2.2.3 Signaling theory: Spence, (1973) suggests that companies convey quality and commitment through observable signals. Sustainability disclosures suggest to investors and other stakeholders that the business is well-managed, forward-thinking, and socially responsible. In capital markets, such positive signals can minimize information asymmetry, cut capital costs, and attract socially responsible investment portfolios, eventually improving financial performance measures like Return on Assets and Profit after tax.

2.2.4 Resource-Based View: Barney (1991) posited that sustainable competitive advantage stems from valuable, rare, inimitable, and non-substitutable resources. Effective sustainability practices and open disclosures can be viewed as intangible assets that improve firm reputation, innovative capability, and stakeholder confidence, which can be used to generate higher financial returns. In the pharmaceutical industry, sustainability-related Research and Development (for example, green chemistry and equitable access initiatives) may offer competitive difference while aligning with long-term profit goals.

2.2.5 Social contract theory: Social contract theory asserts that businesses operate under an implicit contract with society. In exchange for social resources and legitimacy, companies are expected to perform in ways that benefit society as a whole, such as reducing environmental harm and contributing to sustainability (Gray *et al*., 1996). Failure to achieve these cultural standards may result in public reaction, regulatory consequences, or a loss of market share. Sustainability disclosures are therefore a means for businesses to meet their social commitments by demonstrating openness, ethical responsibility, and a commitment to common values. In a developing nation like Nigeria, where environmental restrictions are frequently ignored, companies that voluntarily reveal their environmental performance may be viewed as socially responsible and trustworthy, boosting public goodwill and long-term profits.

2.3 Empirical Review

Empirical research shows that sustainability disclosures have diverse but typically favourable links with financial performance. Frias-Aceituno *et al*. (2014) observed that enterprises with complete sustainability disclosures had considerably significant Return on Assets. This was attributed to improved stakeholder interactions and reputation. They studied firms in pharmaceutical industry with secondary data on multiple regression. Similarly, Eccles et al. (2014) found that high-sustainability businesses outperformed their low-sustainability rivals in both stock market and accounting metrics after analyzing data from investigated firms for 18 years. Nwobu and Akanbi (2021) demonstrated that Environmental, Social Governance reporting was positively correlated with profitability in Nigerian listed drug manufacturers. Some studies (Cho *et al.*, 2015) observed no statistically significant relationship, suggesting that disclosures alone, without substantive performance improvements, may have limited

financial benefits. The empirical outcomes differ depending on market maturity, regulatory framework, and stakeholder expectations. For example, in established markets with improved Environmental, Social, and Governance integration, sustainability disclosures have a greater positive impact than in emerging markets with lesser Environmental, Social and Governance awareness among investors (Eljayash *et al.*, 2012). Agyemang *et al.* (2023) studied the pharmaceutical sector in Sub-Saharan Africa and discovered that firms with higher disclosure scores on sustainability reporting frameworks such as GRI Standards had higher return on assets and return on equity, implying that transparent sustainability practices improve operational efficiency and investor confidence. Similarly, Okafor and Ijeoma (2022) found that Nigerian pharmaceutical businesses that made comprehensive social responsibility disclosures, notably on employee welfare, community health initiatives, and access to medications, had greater profit margins and better stakeholder relations.

In developed economies, Lozano *et al*. (2021) investigated European pharmaceutical firms and concluded that sustainability disclosures serve as a strategic resource, allowing for differentiation in highly competitive markets. Their regression analysis revealed a statistically significant positive relationship between Environmental, Social and Governance disclosure scores and Tobin's Q, implying that the capital market rewards pharmaceutical companies for being transparent about their sustainability efforts. The conclusion is consistent with Clarkson *et al*.'s (2020) observation that proactive environmental disclosures in the pharmaceutical sector reduce perceived risk and increase corporate valuation. Despite the generally favorable narrative, several empirical investigations have found neutral or even negative relationships between sustainability disclosures and financial performance. Ali and Hassan (2020), who studied Asian pharmaceutical businesses, claimed that the short-term costs of adopting and reporting sustainability measures might outweigh the immediate financial gains, especially in resource-constrained settings. Their findings revealed a modest, statistically negligible association between Environmental Social Governance disclosures and economic indicators like net profit margin. Similarly, Chowdhury *et al*. (2021) discovered that, while sustainability reporting increased corporate reputation in Bangladeshi pharmaceutical enterprises, it did not result in substantial increases in Return on Assets throughout the examined period. Recent cross-country comparative studies have also thrown insight on the moderating influence of institutional and regulatory environments. Haque and Ntim (2022) conducted a comparison of pharmaceutical businesses in emerging and mature economies and discovered that regulatory enforcement, investor activity, and cultural attitudes toward sustainability all had a substantial impact on the strength of the sustainability performance relationship. In nations with mandated Environmental Social Governance reporting, the beneficial impact on financial performance was far larger, confirming the claim that standardization and enforcement improve the credibility and value of disclosures. Mensah *et al*. (2023) investigated sustainability disclosure practices in West African pharmaceutical businesses and highlighted the need of social responsibility activities in response to public health crises like the COVID-19 epidemic. Their research demonstrated that targeted disclosures about drug affordability, vaccine development, and supply chain integrity greatly strengthened brand loyalty, resulting in increased revenue streams. Patel and Sharma (2021), demonstrated that Indian pharmaceutical businesses participating in community health

initiatives observed quantifiable enhancements in market share. Despite increased attention to environmental and social governance challenges, numerous gaps persist. While many studies look at sustainability disclosures broadly, few focus solely on the pharmaceutical business, particularly in emerging economies. There is no agreement on the best acceptable sustainability reporting standards for the pharmaceutical industry, resulting in inconsistencies between businesses. Furthermore, much of the existing research is correlational, making it difficult to determine whether sustainability disclosures improve financial performance or are simply a byproduct of already successful firms, and disparities persist in how financial performance is measured (e.g., market-based vs. accounting-based metrics) when assessing the impact of disclosures.

3. Methodology

This study employs an ex post facto research design. The population comprises all pharmaceutical companies listed on the Nigerian Exchange Group of published annual and sustainability reports for the thirteen-year period 2012–2024. Data for this study were obtained from audited annual reports of the firms made available on the Nigerian Exchange Group and company websites. Sustainability disclosures were extracted by content analysis using a structured checklist aligned with the Global Reporting Initiative framework and the Nigerian Exchange Group Sustainability Disclosure Guidelines. Financial performance indicators such as Return on Assets (ROA) and Profit after tax (PAT) were retrieved from the financial statements.

Model Specification

The model is specified in functional and econometric form as follows:

$$PAT_{it} = \beta_0 + \beta_1 EWC_{it} + \beta_2 CDC_{it} + \beta_3 EPC_{it} + \epsilon_{2t} \quad (1)$$

$$ROA_{it} = \alpha_0 + \alpha_1 EWC_{it} + \alpha_2 CDC_{it} + \alpha_3 EPC_{it} + \epsilon_{1t} \quad (2)$$

where:

PAT = Profit After Tax

ROA = Return on Assets

EWC = Employees' Welfare Cost

CDC= Community Development Cost

EPC = Environmental Protection Cost

$\alpha_{1\text{-}3}$, $\beta_{1\text{-}3}$ = coefficient of the independent variables

t = time period

i= firms

€= Stochastic error

4.0 Results and Discussion

The result generated from the study are shown below.

4.1 Descriptive statistics

The descriptive statistics of the data deployed for the study is as stated in table 1 below

Table 1: Descriptive Statistics

	ROA	PAT	CDC	EWC	EPC
Mean	-3.095028	-1.752172	0.241758	0.834835	0.073626
Median	12.77530	1.835900	0.000000	0.487100	0.070000
Maximum	75.72380	26.62580	1.000000	0.607789	1.000000
Minimum	-450.6670	-47.49181	0.000000	0.989811	0.060000
Std. Dev.	70.70930	13.70602	0.430521	0.938442	0.146693
Skewness	-3.996394	-1.404439	1.206318	0.386054	0.208480
Kurtosis	21.97599	5.157098	2.455204	2.184619	1.894504
Jarque-Bera	1607.563	47.55837	23.19597	4.781279	5.293082
Probability	0.000000	0.000000	0.000009	0.091571	0.070896
Sum	-281.6475	-159.4477	22.00000	621.9700	70.40000
Sum Sq. Dev.	449982.4	16906.95	16.68132	79.26064	1.936703
Observations	91	91	91	91	91

Source: Output from EViews version 10

Table 1 above presents the descriptive statistics for the variables employed in examining the effects of sustainability disclosures on the financial performance of pharmaceutical firms in Nigeria. The Jarque–Bera normality test results indicate that Return on Assets, Profit after tax, and Community Development Cost are not normally distributed ($p < 0.05$), while Employee Welfare Cost and Environmental Protection Cost are normally distributed at the 5% level as ($p \geq 0.05$). The non-normality of financial performance measures underscores the importance of employing stationarity test that are robust to further evaluate normality conditions, as suggested in econometric literature (Wooldridge, 2019).

Table 2: Stationarity test

Data Series	Augmented DF@5%	Philips-Perron@5%	Remarks on ADF
ROA	**0.0010**	0.0046	Integrated @order 1
PAT	**0.00199**	0.0056	Integrated @order 1
CDCD	**0.0349**	0.0455	Integrated @order 1
EWCD	**0.0045**	0.0446	Integrated @order 2
EPCD	**0.0033**	0.0436	Integrated @order 2

Table 2 indicate that Return on Assets, Profit after tax and Community Development Cost Disclosure are all integrated at order one. The Employee Welfare Cost Disclosure and Environmental Protection Cost Disclosure are integrated at order two. The result lent credence to the data as suitable for analytical proceedings.

HYPOTHETICAL TESTS:

Test of Hypothesis (H_{01-3})

H_{01}: Employee welfare costs disclosure has no significant effects on profit after tax of pharmaceutical firms in Nigeria.

H_{02}: Community Development Costs disclosure has no significant effects on profit after tax of pharmaceutical firms in Nigeria.

H_{03}: Environmental protection costs disclosure has no significant effects on profit after tax of pharmaceutical firms in Nigeria.

Table 2a: Panel Least Square Regression Analysis between Sustainability Disclosure Dimensions and PAT

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.35027	11.90393	-3.893694	0.0002
CDC	3.750680	4.285581	0.875186	0.0343
EWC	3.840225	1.565891	2.452421	0.0165
EPC	2.54840	14.35055	1.571257	0.1203
	Effects Specification			
Period fixed (dummy variables)				
R-squared	0.741030	Mean dependent var		-1.752172
Adjusted R-squared	0.609235	S.D. dependent var		13.70602
S.E. of regression	12.18807	Akaike info criterion		7.997070
Sum squared resid	11141.18	Schwarz criterion		8.438539
Log likelihood	-347.8667	Hannan-Quinn criter.		8.175175
F-statistic	2.587594	Durbin-Watson stat		0.623789
Prob(F-statistic)	0.003574			

Source: Output from EViews version 10

The panel regression results in table 2a above indicate that sustainability disclosure variables explain a substantial proportion of variation in profit after tax, with an R^2 of 0.741 and model significance at p = .0036. Disclosure of community development costs has a positive and significant effect on profit after tax (β = 3.751, p =.0343), indicating that firms investing in community-oriented initiatives may benefit from increased stakeholder trust and goodwill, resulting in improved financial outcomes (Carroll & Shabana, 2010). Employee welfare cost disclosure had a positive and statistically significant impact (β = 3.840, p =.0165), indicating the potential profitability advantages of employee-focused initiatives including training, health, occupational safety benefits, and fair compensation. These activities are expected to boost staff productivity, commitment and loyalty, leading to increased bottom-line performance (Flammer & Luo, 2017). Environmental protection cost disclosure shows a positive coefficient (β = 2.548), however the effect is not statistically significant (p =.1203). This might imply that environmental expenditures take longer period to create significant

impacts on profitability, or that the financial advantages are indirect, for as through brand reputation or regulatory compliance (Hart & Ahuja, 1996). Overall, the findings indicate that social and employee-related sustainability disclosures have a greater immediate impact on firm profitability than environmental initiatives, highlighting the importance of strategically balancing Corporate Social Responsibility investments for maximum financial and societal returns.

Test of Hypothesis (H_{04-6})

H_{04}: Employee welfare costs disclosure has no significant effects on Return on Assets of pharmaceutical firms in Nigeria.

H_{05}: Community Development Costs disclosure has no significant effects on Return on Assets of pharmaceutical firms in Nigeria.

H_{06}: Environmental protection costs disclosure has no significant effects on Return on Assets of pharmaceutical firms in Nigeria.

Table 2b: Panel Least Square Regression Analysis between Sustainability Disclosure Dimensions and ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.872346	64.67550	-3.817091	0.0003
CDC	2.636463	23.28408	-0.413865	0.0268
EWC	1.844876	8.507678	1.744879	0.0151
EPC	1.969794	77.96827	2.398024	0.0190
	Effects Specification			
Period fixed (dummy variables)				
R-squared	0.669139	Mean dependent var		-3.095028
Adjusted R-squared	0.622967	S.D. dependent var		70.70930
S.E. of regression	66.21928	Akaike info criterion		11.38210
Sum squared resid	328874.5	Schwarz criterion		11.82357
Log likelihood	-501.8854	Hannan-Quinn criter.		11.56020
F-statistic	1.841249	Durbin-Watson stat		1.727975
Prob(F-statistic)	0.044046			

Source: Output from Eviews version 10

The above panel regression findings reveal that sustainability disclosure variables such as community development cost disclosure, employee welfare cost disclosure, and environmental protection cost disclosure all have a positive and statistically significant effects on return on assets. Community Development Cost Disclosure ($\beta = 2.636$, $p = .0268$) indicates that expenditures in community development led to increased profitability, possibly through improved stakeholder interactions and business reputation (Carroll & Shabana, 2010).

Employee welfare initiatives had a favorable impact on Return on Assets (β = 1.845, p =.0151), suggesting that better working conditions and perks might increase productivity and minimize turnover (Flammer & Luo, 2017). Environmental protection costs (β = 1.970, p =.0190) significantly impact financial performance, potentially by reducing regulatory risks and boosting market perception (Hart & Ahuja, 1996; Clarkson et al., 2011). The model's R^2 of 0.669 explains a significant percentage of the variation in Return on Assets, highlighting the importance of sustainability reporting in driving company performance. These findings lend credence to the notion that transparent and proactive Corporate Social Responsibility measures may generate measurable economic advantages in addition to social and environmental improvements.

5.0: SUMMARY, CONCLUSION AND RECOMMENDATION

This study presents empirical evidence that sustainability disclosures, especially community development, employee welfare, and environmental preservation, have a major impact on the financial success of Nigeria's pharmaceutical business. Community Development Cost disclosure and Employee Welfare Cost disclosure regularly improve both Return on Asset and Profit after Tax, but Environmental Protection Cost disclosure dramatically increases Return on Assets but has no immediate demonstrable effect on Profit after Tax. This shows that social and employee-focused sustainability expenditures provide faster returns, whereas environmental activities are longer-term in nature. The findings highlight the importance for pharmaceutical companies to include sustainability into their fundamental corporate strategy, not just as a compliance requirement, but also as a value-creation instrument. They also emphasize the significance of sector-specific sustainability strategies in maximizing the economic and societal advantages of corporate social responsibility in the pharmaceutical industry. Pharmaceutical companies should strategically allocate sustainability resources to community engagement and employee welfare in order to improve immediate financial performance while maintaining environmental investments for long-term competitive advantage, regulatory compliance, and public trust. To encourage long-term environmental responsibility, regulators should tighten sustainability disclosure requirements for the pharmaceutical industry, implement uniform reporting measures, and offer incentives such as tax credits or green financing. This study, which focuses on the pharmaceutical business in a developing market, provides sector-specific evidence that sustainability disclosures function as both ethical imperatives and strategic levers for financial performance.

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