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Sustainability Disclosure and Sustainable Business Growth in Developing Countries: Evidence from Nigeria Using Panel Corrected Standard Errors, Feasible Generalized Least Squares and Quantile Regression Techniques

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ABSTRACT

The introduction of sustainability practices into sustainable business growth model remains a pressing concern, despite the emergence of sustainability disclosure being a critical tool for communicating firm's commitment to sustainable practices. More so, sustainability disclosures vary significantly across developing economies like Nigeria where economic challenges and regulatory frameworks often lag behind global standards. This study therefore examined the impact of sustainability disclosure on sustainable business growth among listed companies in Nigeria. The study covers 94 sampled listed companies on the Nigerian Exchange Group (NGX) spanning across all sectors.The study relies on secondary data drawn from the audited annual reports and sustainability reports of the sampled companies between 2016 to 2022. Using robust regression techniques, including Panel-Corrected Standard Errors (PCSE), Feasible Generalized Least Squares (FGLS), and Simultaneous Quantile Regression (QR), the findings revealed that sustainability disclosures significantly enhance sustainable business growth. Environmental, social, and economic disclosures contribute positively to sustainable business growth, with the strongest impact observed among firms at higher levels of sustainable growth. The study concluded that sustainability disclosures, and its individual pillars significantly enhance sustainable business growth. Regulatory authorities are advised to encourage comprehensive sustainability disclosures for companies in order to maximize the benefits of sustainability practices.

Keywords: Corporate Growth, ESG, Financial Performance, Sustainability Disclosure.

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INTRODUCTION

In today's modern-day business environment, there are peculiar challenges corporations face in a turbulent economic and political environment like Nigeria, within a context where the economy is unpredictable and relationships with key stakeholders like consumers and suppliers are strained (Adeyemi et al., 2024; Sunday & Godspower, 2022). On this note, businesses must reassess their strategies in remaining sustainable into the future. More importantly, the focus shifts from merely achieving high performance to ensuring survival, and despite these challenges, corporations often prioritize long-term sustainability and growth, balancing immediate needs with the pursuit of stability and development in the face of uncertainty (Bagh et al., 2023).

Furthermore, the global push for sustainable development has grown weighty momentum, especially with the introduction of the United Nations "2030 Sustainable Development Goals" (SDGs). This framework has driven the rise of responsible investment practices that incorporate Environmental, Social, and Economic principles inherent in sustainability initiatives (Wang et al., 2022). Sustainability, as a concept and corporate evaluation standard, focuses on assessing the environmental, social, and economic performance of companies, rather than solely their financial results (Mustapha, 2023). This approach allows investors to evaluate a company's contribution to sustainable economic development and its role in fulfilling social responsibilities. (Issa et al., 2023).

It is essentially pertinent for organizations to integrate the principles of corporate sustainability which entails economic integrity, social justice and value, and environmental integrity, into their modern business practices (Schaltegger et al., 2022). The Environmental (E) aspect addresses the impact of business operations on the environment, such as resource utilization and pollution management. The Social (S) component emphasizes the relationships between companies and their stakeholders, fostering coordination and balance. The Economic (E) factor assesses a company's economic sustainability, focusing on long-term financial health and resilience. These three pillars provide a comprehensive framework for achieving long-term corporate growth. It is held that businesses can enhance sustainable business growth if they are able to balance these elements, which consequently increase productivity, and maximize shareholder value (Dai et al. 2024; Lee & Lee, 2019). This demonstrates that sustainability and financial success are not mutually exclusive but complementary (Alabi, 2022; Duuren et al., 2016; Liu et al., 2022).

However, neglecting these factors can lead to adverse outcomes because poor management of economic, social, and environmental considerations may harm a company's reputation, reduce stakeholder trust, and negatively impact financial performance (Lee & Lee, 2019; Wang et al., 2022). This emphasizes the critical role of sustainability in safeguarding not only a company's market performance but also its long-term viability. To address these challenges, sustainability reporting is increasingly seen as essential. This form of disclosure goes beyond traditional financial metrics to provide a transparent account of how a business defines its societal role and contributes to sustainable development (Mustapha, 2023). Organizations can also demonstrate accountability, enhance their reputation, and foster trust among stakeholders if they adopt sustainable practices. Therefore, sustainability is no longer just an ideal but a necessity for businesses seeking to preserve resources and capital for future generations.

Moreover, the introduction of the International Sustainability Standards Board (ISSB) marks a transformative era in sustainability-related disclosures, ushering in a globally consistent framework that enhances transparency and comparability in capital markets. The ISSB intends to address the growing demand from investors, regulators, and stakeholders for reliable and comparable information on environmental, social, and governance (ESG) factors by setting high-quality standards for sustainability reporting. This global shift towards standardized sustainability disclosures presents a unique opportunity for developing countries like Nigeria to align with international best practices, which will consequently attract sustainable investments and fostering long-term business growth (Alabi, 2022).

More importantly, the sustainability paradigm emphasizes the creation of value not only for shareholders but also for a broader array of stakeholders, including employees, communities, and future generations (Endiana et al., 2020; Garcia & Orsato, 2020). This concept incorporates the principle of intergenerational equity, which advocates for the fair use and distribution of resources between present and future generations. Invariably, the disclosure of sustainability practices serves as a strategic tool for aligning business operations with the broader goals of sustainable growth, ultimately strengthening the success of corporations in a competitive and dynamic market.

Existing literature suggests that sustainability disclosure enhances firm performance by improving access to capital, reducing operational risks, and promoting stakeholder trust (Liu et al., 2022; Khan et al., 2023; Wang & Yi, 2023). Studies by Winit and Kantabutra, (2022) and Citraningtyas et al. (2024) highlight the role of sustainability disclosure in mitigating information asymmetry and strengthening corporate legitimacy. However, the extent to which these benefits translate into sustainable business growth, particularly in the context of developing economies like Nigeria, are left unexplored.

In the context of Nigeria, sustainability investment aligns closely with the recent nation's goals for a green and low-carbon transformation (Sunday & Godspower, 2022; Umeh et al., 2024). This orientation makes sustainability practices a powerful tool for promoting the long-term development of enterprises, while supporting national environmental objectives. More so, with the rising environmental uncertainty and increasing pressure on businesses to adapt to these changes, sustainability disclosure has become a critical aspect of corporate strategy in Nigeria (Emmanuel et al., 2023; Okudo & Ndubuisi, 2021). This study contends that the genuine contribution of sustainability disclosure and its specific contribution to sustainable business growth in developing economies, particularly Nigeria, remains underexplored.

This gap in the existing literature is concerning given the unique challenges businesses face in these regions, such as economic volatility, weak institutional frameworks, and heightened environmental and social vulnerabilities. While evidence from other jurisdictions demonstrates the impact of corporate sustainability on business growth, the dynamics in developing economies differ due to variations in industry structures, regulatory frameworks, and socio-economic challenges. As a result, it would be overly simplistic to assume that findings from developed markets are directly transferable to these contexts.

Based on the foregoing, there exists a knowledge gap in understanding how corporate sustainability disclosure influences the sustainable growth of

businesses in developing economies such as Nigeria, and addressing this gap is critically important because corporate businesses play a pivotal role in driving sustainable development in developing economies. More so, given the increasing relevance of sustainability in Nigeria's economic and environmental policy frameworks, studying the relationship between sustainability disclosure and sustainable growth in Nigerian listed companies holds significant practical importance. Hence, the study explores how sustainability disclosure in consideration of each of the 3 components of sustainability (environmental, social and economic) disclosure impact corporate sustainable growth in Nigeria.

The remainder of this paper is structured as follows: The next section presents the literature review and hypothesis development, followed by the research methodology section which outlines the research design, data sources, and analytical. The empirical results and discussions are presented next, while the conclusion section with the policy implication concludes the study.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The connectedness between sustainability disclosure and corporate sustainable growth is increasingly gaining prominence as a way of ensuring that businesses remain operational into the distant future (Wang et al., 2022). Sustainability disclosure, which involves transparent reporting on environmental, social, and economic practices, provides stakeholders with critical insights into how companies address sustainability challenges and opportunities (Brem & Puente-Díaz, 2020; Lăzăroiu et al., 2020; Winit & Kantabutra, 2022). Corporate sustainable business growth, on the other hand, refers to a company's ability to achieve long-term profitability and value creation while balancing environmental stewardship and social responsibility (Shanglei et al., 2023; Zhang & Wang, 2023). Through these two concepts, businesses can demonstrate accountability, build stakeholders' trusts, and align their operations with global sustainability goals, thereby ensuring their continued existence in an ever-evolving marketplace.

Previous studies show that sustainability disclosure drives sustainable business growth by providing improved performance (Jha & Rangarajan, 2020; Oncioiu et al., 2020; Weston & Nnadi, 2023), enhanced transparency (Gerged et al., 2023; Zakaria et al., 2021), higher creativity (AlQershi et al., 2023; Brem & Puente-Díaz, 2020; Lăzăroiu et al., 2020), and heightened stakeholders' trust (Góes et al., 2023; Winit & Kantabutra, 2022). Specifically, Zhang and Wang (2023) claims that corporate sustainable growth is related to sustainability disclosure. The study further specified that, initially, higher disclosure constrains growth, but after a critical mass, the disclosure of sustainability will enhance corporate sustainable growth, especially through innovation inputs and equity incentives. This implies that businesses have to properly engage in sustainability disclosure in order to optimize development potential as well as to create an atmosphere stimulating innovation to attract investments.

On the same note, Cismaș et al. (2023) affirmed that sustainability disclosure improves corporate sustainable growth which fosters companies to include non-financial aspects into their business strategies, corresponding to green economy worldwide and sustainable development goals. Such orientation is good for organizations that avoid the negative consequences of the non-green activities and for the global environment since it creates incentives for organizations to be innovative and take

responsibility for their environmental impacts.

In the context of the financial industry, Citraningtyas et al. (2024) bring up significant points about long-term sustainability practices and the relationship between corporate growth and green banking transparency. The study demonstrated how these disclosures improve banks' image and pull in environmentally conscientious investors, possibly offsetting short-term disadvantages with long-term benefits, even though it focused on how current resource allocation may hinder growth. Furthermore, and in consideration of sustainable technologies, companies with high financial performance are better equipped to implement green initiatives without sacrificing operational effectiveness, according to Weston and Nnadi (2023). According to this, creating an atmosphere where environmental responsibility and financial stability coexist may make it easier to integrate green banking practices into different industries, which would eventually help the economy and the environment. This implies that although organizational openness is crucial for sustainability, it may also place restrictions on the financial availability for expansion plans.

Additionally, ESG disclosure has a beneficial effect on corporate sustainable growth rate in Chinese enterprises, according to Shanglei et al. (2023), with higher levels of disclosure promoting a more sustainable growth rate. This suggests that businesses that prioritize ESG disclosure procedures in order to achieve sustainable growth rates not only improve their reputations but also boost long-term financial performance, which increases their appeal to stakeholders and investors alike. Therefore, implementing strong ESG disclosure procedures may be a competitive advantage, putting businesses in a better position to handle regulatory environments and satisfy changing customer demands that favour sustainable business models (Wang et al., 2022; Shanglei et al., 2023). Customers' trust and loyalty are increased by this calculated strategy, which also draws in socially conscious investors eager to support companies that share their beliefs. In the end, adopting accountability and transparency in ESG activities can result in a positive feedback loop whereby higher operational performance and more sustainable company growth are correlated with improved corporate reputation.

Consequently, the complex link between corporate sustainable growth and sustainability disclosure creates significant concerns over the long-term sustainability of such policies. A more strategic approach to sustainability may eventually result in financial gains, even while immediate resource allocation may limit development (Bagh et al., 2023; Kosasih, et al., 2021). For example, if operating expenses related to environmental compliance can be lowered, organizations that place a high priority on investments in emission-reducing technology may improve their financial performance in addition to improving their public image (Kosasih et al., 2021; Wang & Yi, 2023). Moreover, companies that successfully convey their sustainable initiatives may gain a competitive edge as consumer preferences shift toward environmentally conscious companies, offsetting short-term growth obstacles through increased market share and customer loyalty (Hermundsdottir & Aspelund, 2021; Khan et al., 2023; Saputra et al., 2023; Yasin et al., 2023).

Theoretically, in order to better understand the link between sustainability disclosure and sustainable business growth, this study is grounded in several key theoretical perspectives. Stakeholder Theory (Freeman, 1984) suggests that businesses must address the interests of multiple stakeholders, which includes

investors, customers, employees, and regulators by transparently disclosing sustainability practices to maintain legitimacy and long-term profitability. Similarly, Legitimacy Theory (Suchman, 1995) posits that organizations seek societal acceptance by aligning their operations with environmental and social expectations, reinforcing the idea that sustainability disclosure enhances corporate legitimacy and growth potential. Additionally, Signaling Theory (Spence, 1978) explains how firms use sustainability disclosure as a tool to signal their commitment to ethical and responsible business practices, thereby attracting investors and improving market performance. These theories provide a robust framework for examining how sustainability disclosure influences business growth in Nigeria's corporate landscape. Therefore, based on the above discussion, the study hypothesizes that;

H_1: Sustainability disclosure has significant impact on sustainable business growth.

In addition, due to the nature of sustainability disclosure having three (3) pillars or dimensions (environmental, social and economic disclosure), thus, the study further derived the following sub-hypothesis from the main hypothesis (H_1):

$H_{1.1}$: Environmental disclosure has significant impact on sustainable business growth.

$H_{1.2}$: Social disclosure has significant impact on sustainable business growth.

$H_{1.3}$**:** Economic disclosure has significant impact on corporate sustainable business growth

RESEARCH METHODOLOGY

Research Design

The study adopts a positivist approach to examine the relationship between sustainability disclosure and sustainable business growth. A positivist approach relies on objective, empirical evidence and quantitative methods to uncover patterns, relationships, or causality in the phenomena under study (Park et al., 2020). The choice of a positivist approach aligns with the objective of the study and it enables the study to provide empirical evidence and generalizable findings that can inform corporate strategies, policymaking, and academic discourse.

Data and Variables

The study relies on secondary data, which were drawn from the audited annual reports and sustainability reports of the sampled companies within the time frame of 2016 to 2022. In consideration of the judgemental sample technique, the study utilized all the listed companies on the NGX amounting to 151 companies. However, based on the availability of data, the study covers 94 sampled listed companies on the NGX spanning across all sectors. The choice of using all listed companies on the NGX as the sample enhances the study's generalizability and relevance, as it includes a wide range of firm sizes, industries, and operational contexts. Table 1 presents the variable description and definition.

Table 1: Definitions and Measurement of Variables

Variables	Proxy	Measurement	Sources
Dependent Variable			
Sustainable Business Growth Rate	SGR	Percentage of Net Sales Margin × Total Asset Turnover × Equity Multiplier × Retained Earnings Ratio	Wang et al. (2022)
Independent Variable			
Sustainability Disclosure	SUST	Content analysis on the annual & sustainability reports of the companies using GRI 4. Each item disclosed is allocated a value of '1', and items not disclosed were rated '0'. Indexit = ∑ Dit/Mit Sub-indices were calculated in the same manner for each of the, Environmental (ENV), Social (SOC) And Economic (ECO) Sustainability Disclosure	Nwaigwe, et al. (2022), Issa et al. (2023)
Control Variables			
Earnings Per Share	EPS	Firm's accounting earnings per share at the fiscal year end	Nwaigwe, et al. (2022)
Firm Size	FSIZ	Natural logarithm of the company's total assets at the fiscal year end.	Alabi (2020)
Profitability	PROF	Net Income Before Extraordinary Items/Total Assets	Bodhanwala & Bodhanwala, (2018)

Research Model

In an attempt to validate the relationship between sustainability disclosure and corporate sustainable business growth, drawing on the study of Nwaigwe et al., (2022), the below model was constructed to test the main hypothesis;

$SGRit = \beta0 + \beta1SUSit + \beta2EPSit + \beta3FSIZit + \beta4PROFit + \varepsilon it$ ---------- (1)

In order to test the sub-hypotheses raised in the study in consideration of how each of the three pillars of sustainability disclosure impact on corporate sustainable business growth, the study further raised the below model;

$SGRit = \beta0 + \beta1ENVit + \beta2SOCit + \beta3ECOit + \beta4EPSit + \beta5FSIZit + \beta6PROFit + \varepsilon it$ ---- (1.1)

Corporate Sustainable Growth is the dependent variable which is proxied by Sustainable Business Growth Rate (SGR), while the independent variables are Sustainability Disclosure (SUST), Environmental Disclosure (ENV), Social

Disclosure (SOC) and Economic Disclosure (ECO). The control variables on the model are Earnings Per Share (EPS), Firm Size (FSIZ), and Profitability (PROF).

EMPIRICAL RESULTS AND DISCUSSIONS

Descriptive statistics

Table 2 below presents the detailed overview of variables and the description of the general statistical results of the sampled companies such as mean, standard deviation, and minimum and maximum respectively. Sustainable business growth rate, has a mean value of 4.145%, which indicates a moderate growth across the firms. However, the wide range between 0.017% to 15.644% and standard deviation of 3.509 suggest that while some listed sampled firms experience strong growth, others are relatively stagnant, reflecting diverse growth dynamics.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
SGR	658	4.145	3.509	0.017	15.644
ENV	658	0.500	0.230	0.103	0.875
SOC	658	0.513	0.235	0.125	0.853
ECO	658	0.511	0.226	0.125	0.875
EPS	658	1.807	6.651	-7.429	57.633
FSIZ	658	10.626	0.950	8.500	13.014
PROF	658	4.663	9.129	-12.816	143.140

The independent variables which are the sub-set of sustainability disclosure (environmental disclosure, social disclosure, and economic disclosure) show similar trends. Their mean values of 0.500, 0.513, and 0.511 indicate that, on average, firms exhibit moderate levels of sustainability disclosure. However, the standard deviations (0.230, 0.235, and 0.226) and the wide range of disclosure levels suggest substantial variability among firms. This implies that while the typical firm discloses a moderate level of sustainability information, there are firms with both significantly higher and lower disclosure levels, which reflects a diverse reporting landscape.

The control variables further highlight differences in firm performance and characteristics, with earnings per share having a wide range, from significant losses of -7.429 to high profitability of 57.633, which validates considerable variation in financial performance. Similarly, profitability ranges from -12.816 to 143.140, reflecting a mix of struggling and highly successful firms. In addition, firm size reveals a mean value of 10.626, which indicates that the sampled firms are predominantly composed of medium to large firms.

Correlation between variables

Table 3 presents the correlation analysis which reveals the relationships between the variables in the study. The sustainability disclosure-pillar variables (environmental disclosure, social disclosure, and economic disclosure) show limited correlation with one another, such as the weak positive correlation between environmental disclosure and economic disclosure and the slight negative correlation between social disclosure and economic disclosure. This indicates that the sampled listed companies may prioritize these aspects of

sustainability reporting differently, reflecting varied strategic focuses. Furthermore, sustainable business growth rate shows a positive correlation with environmental disclosure and economic disclosure, signifying that the disclosure of environmental and economic practices is modestly linked to higher growth rates.

Table 3: Pairwise Correlation Matrix and VIF Output

Variables	SGR	ENV	SOC	ECO	EPS	FSIZ	TQ	Variables	VIF	1/VIF
SGR	1							FSIZ	1.25	0.8028
ENV	0.002	1						ECO	1.18	0.8447
SOC	-0.061	-0.032	1					EPS	1.18	0.8460
ECO	0.204	0.021	-0.06	1				PROF	1.14	0.8803
EPS	0.114	0.02	0.024	0.173	1			SOC	1.02	0.9837
FSIZ	0.249	0.053	0.053	0.378	0.262	1		ENV	1.00	0.9953
PROF	-0.031	0.032	0.076	0.072	0.324	0.18	1	Mean VIF	1.13	

On the other hand, sustainable growth rate is negatively correlated with social disclosure and profitability, indicating that greater emphasis on social reporting or higher profitability may not always lead to sustainable corporate growth. Notably, sustainable growth rate has a moderate positive correlation with firm size and earnings per share, hinting that larger firms and those with better earnings per share tend to achieve improved growth outcomes. Importantly, the correlation analysis demonstrates that all correlation coefficients between the variables are well below the 0.8 (80%) threshold commonly used to indicate problematic multicollinearity (Gujarati & Porter, 2009). More so, the Variance Inflation Factor (VIF) analysis was used to confirm the collinearity status, and the result indicates absence of multicollinearity. All VIF values are well below the critical threshold of 10. This indicates absence of multicollinearity among the independent variables, which strengthens the credibility of the variables on the model (O'brien, 2007).

Heteroskedasticity test

The Breusch–Pagan/Cook–Weisberg test (BP-CW HET) was conducted in the study to test the presence of heteroskedasticity in the models. The result revealed a chi-squared value of 1.25 with p-value of 0.263. This indicates that heteroskedasticity is not present, and that the model satisfies the assumption of homoskedasticity. This is a positive outcome, as it confirms that the regression model does not suffer from heteroskedasticity-related issues, ensuring the validity of the estimated coefficients and associated statistical inferences.

Test of cross-sectional independence

The study tested for the presence of cross-sectional dependence in panels using the Pesaran's test (PCD). The result revealed a test statistic of 15.339 and p-value of 0.000, indicating a strong evidence of cross-sectional dependence in the panel data. The null hypothesis of cross-sectional independence is decisively rejected at all conventional significance levels. Given the presence of cross-sectional dependence, it is critical and essential to adjust the econometric model in order to address this issue.

Autocorrelation test

The Wooldridge test (W-AUT) was engaged to test the existence of

autocorrelation in the study's panels. The Wooldridge test result (f-statistic of 104.078, p-value of 0.000) confirms the presence of first-order autocorrelation in the panel data. This implies that corrective measures should be applied to ensure that the model's results are robust and reliable.

Regression results

The regression analysis explores the relationship between the sustainable business growth rate and sustainability disclosure, including each pillar of sustainability disclosure; environmental disclosure, social disclosure, and economic disclosure. However, given the concurrent presence of cross-sectional dependence and autocorrelation in the study's panels, based on the preliminary tests presented, the study employed the Prais-Winsten regression with Panel Corrected Standard Errors (PCSE). The consideration of the PCSE allows for more accurate and reliable results by correcting for these issues, as it adjusts for potential biases in the coefficients and ensures that the standard errors are robust to these complications (Alabi 2020, Salami, 2024). Further, in line with the studies of Adeleye et al. (2023) and Famanta et al. (2024), the study engaged the use of the Feasible Generalized Least Squares (FGLS) technique alongside PCSE which strengthens the study's methodological rigor. While the PCSE provides robust inference in situations of heteroscedasticity and cross-sectional dependence, the FGLS improves efficiency and explicitly accounts for autocorrelation and heteroscedasticity (Hoechle, 2007). Hence, the results derived from both the PCSE and FGLS methods provide rich insights into the effect of sustainability disclosure on corporate sustainable growth among listed companies in Nigeria.

Table 4: Regression Output, PCSE and FGLS Results (Dep Var: SGR)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Variables	PCSE					FGLS				
SUST	0.939***					0.800***				
	(0.326)					(0.148)				
ENV		0.492**			0.500**		0.415***			0.377***
		(0.240)			(0.239)		(0.115)			(0.115)
SOC			0.521**		6.045**			0.489***		3.161**
			(0.235)		(2.844)			(0.110)		(1.421)
ECO				0.502**	5.759*				0.488***	2.824*
				(0.245)	(2.965)				(0.116)	(1.483)
EPS	0.138***	0.138***	0.138***	0.138***	0.139***	0.156***	0.157***	0.158***	0.158***	0.156***
	(0.00894)	(0.00897)	(0.00896)	(0.00897)	(0.00891)	(0.00935)	(0.00956)	(0.00912)	(0.00915)	(0.00951)
FSIZ	0.630***	0.626***	0.625***	0.624***	0.638***	0.598***	0.598***	0.598***	0.596***	0.611***
	(0.0603)	(0.0604)	(0.0604)	(0.0604)	(0.0602)	(0.0233)	(0.0252)	(0.0225)	(0.0227)	(0.0245)
PROF	0.00196	0.000896	0.00158	0.00155	0.00136	0.00312	0.00182	0.00344	0.00357	0.00184
	(0.00641)	(0.00641)	(0.00642)	(0.00643)	(0.00639)	(0.00410)	(0.00404)	(0.00401)	(0.00400)	(0.00426)
	-	-	-	-	-	-	-	-	-	-
Constant	5.334***	5.518***	5.496***	5.497***	5.488***	5.129***	5.317***	5.284***	5.267***	5.299***
	(0.648)	(0.644)	(0.644)	(0.645)	(0.654)	(0.247)	(0.264)	(0.239)	(0.242)	(0.262)
Observations	658	658	658	658	658	658	658	658	658	658
R-squared	0.432	0.429	0.429	0.429	0.436					
BP-CW HET	1.25									
PCD	15.339***									
W-AUT	104.078***									

*Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1*

From the results on Table 4, sustainability disclosure demonstrates a significant and positive impact on sustainable business growth across both models. Specifically, the PCSE results show a coefficient of 0.939 ($p < 0.01$), while the FGLS confirms this effect with a slightly lower coefficient of 0.800 ($p < 0.01$). This implies that firms with robust sustainability disclosures experience enhanced growth rates,

supporting the studies of (Issa et al., 2023; Lee & Lee, 2019; Wang et al., 2022) that highlights the value of transparent sustainability practices in fostering stakeholder confidence and improving long-term performance.

With respect to the individual dimension or pillar of sustainability disclosure, environmental disclosure exhibits a positive and significant influence on sustainable business growth. The PCSE model records a coefficient of 0.492 ($p < 0.05$), while the FGLS model shows consistent effects ranging from 0.415 to 0.377 ($p < 0.01$). This finding reveals the importance of environmental responsibility in driving sustainable corporate growth, which is in line with the revelations from the studies of Shanglei et al. (2023) and Zhang and Wang (2023). The economic disclosure similarly has a significant positive impact on sustainable business growth. The PCSE analysis reveals a coefficient of 0.502 ($p < 0.05$), while the FGLS model presents a similar relationship with a coefficient of 0.488 ($p < 0.01$). The slight difference in coefficients between PCSE (0.502) and FGLS (0.488) is expected due to the fundamental differences in how these estimation techniques handle error structures. Nonetheless, both methods yielded statistically significant results in the same direction, confirming that the impact of economic disclosure remains positive regardless of the estimation technique used. This suggests that economic transparency indeed enhances corporate credibility and supports sustainable business growth, aligning with the studies of (Endiana et al., 2020; Garcia & Orsato, 2020) that emphasize the role of financial accountability in long-term corporate performance.

Likewise, similar patterns are observed for the social disclosure, with the PCSE model reporting a coefficient of 0.521 ($p < 0.05$) and the FGLS model showing an even stronger and highly significant relationship (coefficient = 0.489, $p < 0.01$). These results affirm the notion that social initiatives, such as employee welfare and community engagement, contribute significantly to sustainable development by building corporate reputation and stakeholder trust (Garcia & Orsato, 2020; Jha & Rangarajan, 2020; Yasin et al., 2023). Among the control variables, earnings per share consistently shows a strong and positive effect on sustainable growth across all models, with coefficients ranging from 0.138 to 0.156 ($p < 0.01$). This highlights the importance of profitability metrics in driving sustainable business growth. Firm size is another significant factor, with positive coefficients ($\approx 0.598–0.630$, $p < 0.01$), suggesting that larger firms, due to their resource advantages, are better positioned to implement and benefit from sustainability initiatives. However, the impact of profitability, while positive, is not statistically significant across the models, indicating a limited direct influence on sustainable growth. Although, profitability and sustainable business growth present a negative association in Table 3, possibly because regression analysis accounts for the influence of multiple variables simultaneously. Likewise, the suppressor effects might have influenced the sign or direction of the coefficient in the regression results. In general, the analysis confirms that sustainability disclosures, particularly all the three pillars, the environmental, social, and economic dimensions, significantly contribute to sustainable business growth among listed companies in emerging countries like Nigeria. Next, the study conducted another confirmatory estimation analysis, using the simultaneous quantile regression (QR) across six (6) quantiles ($Q = 40$, $Q = 50$, $Q = 60$, $Q = 70$, $Q = 80$, $Q = 90$). The quantile regression findings offer deeper insights into the heterogeneity of the relationship between sustainability

disclosures and sustainable business growth. Table 5 presents the findings from the QR estimates.

Table 5: Simultaneous quantile results (Dep Var: SGR)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	$Q = 40$	$Q = 50$	$Q = 60$	$Q = 70$	$Q = 80$	$Q = 90$
SUST	0.938*	1.589***	1.524***	1.274***	0.935*	1.147***
	(0.514)	(0.423)	(0.422)	(0.414)	(0.553)	(0.398)
EPS	0.136***	0.150***	0.167***	0.157***	0.170***	0.148***
	(0.0211)	(0.0288)	(0.0310)	(0.0316)	(0.0293)	(0.0353)
FSIZ	0.698***	0.656***	0.562***	0.587***	0.520***	0.583***
	(0.0623)	(0.0689)	(0.106)	(0.117)	(0.125)	(0.155)
TQ	-0.00411	-0.0103	0.00393	-0.00244	-0.00988	0.0416
	(0.0138)	(0.0157)	(0.0108)	(0.00858)	(0.0185)	(0.0317)
Constant	-6.486***	-5.232***	-3.996***	-3.915***	-2.900**	-3.046**
	(0.672)	(0.756)	(1.086)	(1.294)	(1.143)	(1.535)
Observations	658	658	658	658	658	658

*Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1*

Sustainability disclosure demonstrates a positive and significant impact on sustainable business growth across most quantiles, with coefficients ranging from 0.935 to 1.589. This effect is strongest at the median quantile (Q = 50), where the coefficient is 1.589 ($p < 0.01$). The significance of sustainability disclosure at higher quantiles (Q = 90) with a coefficient of 1.147 ($p < 0.01$) indicates that firms with higher levels of sustainable business growth are more influenced by comprehensive sustainability disclosures. This suggests that sustainability practices are especially critical for firms at the upper end of the sustainable business growth distribution, where stakeholders and investors may demand greater accountability and transparency.

At lower quantiles (Q = 40 and Q = 80), the coefficients (0.938 and 0.935, respectively) are weaker but still significant at the 10% level. This implies that firms in the lower growth quartiles do not benefit as much from sustainability disclosure compared to higher-growth firms. This could mean that firms in the lower growth quartiles may lack the financial capacity to fully integrate sustainability initiatives into their core business strategies. Even if they disclose sustainability efforts, their actual implementation may be weak, limiting any substantial impact on growth. Equally, the stronger impact of sustainability disclosure at the median and upper quantiles highlights its strategic importance for firms aiming to sustain high growth levels. For lower-performing firms, though sustainability disclosure remains beneficial, its marginal impact is relatively weaker, suggesting these firms may need additional strategies or resources to fully leverage sustainability practices.

These findings suggest that while the positive impact of sustainability disclosure is generally robust, its strength varies across the growth spectrum. This aligns with the propositions of stakeholder theory, legitimacy theory, and signalling theory suggesting that the benefits of sustainability disclosures are context-dependent, with firms in higher-performing segments deriving greater growth advantages. These findings emphasize the strategic importance of adopting comprehensive sustainability practices and leveraging firm-specific advantages, such as

earnings and size, to achieve long-term growth objectives. These results offer vital intuitions for policymakers and corporate leaders seeking to promote sustainable corporate practices.

CONCLUSION AND POLICY IMPLICATIONS

This study investigates the role of sustainability disclosure on sustainable business growth among listed companies in Nigeria, with a focus on its environmental, social, and economic dimensions. The study covers all listed companies on the NGX spanning across all sectors.The study relies on secondary data drawn from the audited annual reports and sustainability reports of the sampled companies within the time frame of 2015 to 2022. Using robust regression techniques, including panel-corrected standard errors (PCSE), feasible generalized least squares (FGLS), and simultaneous quantile regression (QR), the findings reveal that sustainability disclosures significantly enhance sustainable business growth. Though, with respect to the QR result, the impact is much stronger for high-growth firms and weaker for lower quantiles. The environmental, social, and economic aspects of disclosure all contribute positively, emphasizing the strategic importance of comprehensive sustainability practices.

Regulatory authorities are advised to mandate more comprehensive sustainability disclosures for listed companies. When disclosure requirements are standardized, firms can enhance transparency, improve investor confidence, and foster sustainable growth across the corporate sector. Lower-growth firms should instead of focusing solely on compliance, rather align sustainability initiatives with their business strategy, ensuring that disclosures reflect genuine, performance-driven sustainability efforts. On this premise, policymakers and businesses should focus on enhancing the strategic integration and financial support for sustainability initiatives among firms in lower growth quartiles. This study contributes to the growing body of literature on corporate sustainability by providing empirical evidence of the positive relationship between sustainability disclosure and sustainable business growth. The use of quantile regression adds depth to the analysis by revealing variations in the impact of disclosure across different levels of firm performance. Focusing on listed Nigerian firms, enables the study to provide insights into the dynamics of sustainability practices in emerging markets, where regulatory frameworks and resource availability differ from developed economies.

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