Innovations

Sustainability Reporting Initiative and the Value of Firms Listed on the Nigerian Exchange Group

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Abstract: *This study examined the effect of sustainability reporting on the value of firms listed on the Nigerian Exchange Group. The objectives of the study are to ascertain the impact of economic, environmental, and social reporting on Tobin Q and to ascertain the long-run relationship between sustainable reporting and the enterprise value of the selected listed firms in the Nigerian Exchange Group. To achieve the objectives stated above, the study employed an ex post facto research design, and data were sourced from the annual reports of the selected firms. The non-probability sampling technique was used to select 31 firms from 2018 to 2023, and the data collected were analysed using the random effects model for hypothesis oneand the panel ARDL model for hypothesis two. The findings revealed that economic reporting has a positive and statistically significant impact on firm value. In contrast, environmental reporting has a non-significant negative effect on the Tobin Q, while social reporting has a significant negative effect on the Tobin Q at a 5% significance level. On the other hand, sustainability reporting has a positive and significant relationship with the enterprise value of the selected listed companies in the Nigerian Exchange Group for the study period. The empirical findings suggest that all dimensions, except the environmental dimension, of sustainability reporting have a significant impact on the firm value of the selected companies. Hence, the recommendations of this study are as follows: the sampled companies should integrate economic sustainability reporting into their reporting systems to harness the associated benefits in economic value added. Environmental reporting should be encouraged, and the Financial Reporting Council of Nigeria (FRCN) should ensure that companies include and disclose environmental sustainability reports in their annual reports at the time of submission. The application of social responsibility is essential for business organisations as they integrate into international markets, as it benefits both the organisation and society, particularly in enhancing the competitiveness of companies. However, firms carrying out their social responsibilities should be conscious of value creation within the organisation, as this is essential to the shareholders.*

1.1. Introduction

Since the late 1960s, environmental disasters have raised awareness of ecological issues, sparking a wave of concern that has led to the development of sustainability reporting (Soderstrom, 2013).Transparently reporting an organisation's approach and performance regarding pertinent environmental, social, and governance (ESG) issues has become a widespread practice globally for both small and large companies, including those listed on the Nigerian Exchange Group. Reports communicating ESG content address real company risks, market and governmental laws, and growing shareholder interest. Investors are interested in learning how businesses manage risks that impact their operations, such as resource shortages, human rights issues, and climate change (David, n.d.). Many governments and stock exchanges now require corporations to either report or explain why they do not report such and demonstrate their recognition of the significance of these disclosures to investors. A growing number of employees, particularly millennials, are seeking companies with a purpose and a dedication to human welfare and environmental preservation. Public reporting is the primary benchmarking tool used by businesses seeking to be recognised as industry leaders in corporate responsibility (David, n.d.).

A company's long-term objective in conducting business is to maximise its value. Every choice the company makes must consider how it will affect the price or value of its shares to optimise its worth. The business's market valuation can reveal investors' beliefs about its future and historical performance. The better the company's value, the more positive the investor's opinion, which results in a higher company share and a higher rate of return on investment for shareholders (Hermuningsih, 2013; Puspaningrum, 2017). In recent years, Stakeholders have become more aware of the company's social and environmental initiatives. Companies are becoming more aware of environmental and social issues due to increased stakeholder demands, global trends, and technological advancements.Environmental reporting and corporate social responsibility have led to the development of sustainability reporting. During the late 1980s, chemical industry companies with significant image problems led the way in environmental reporting. These days, many businesses either publish an annual sustainability report or provide pertinent data in several report formats, such as directors' reports, shareholders' reports, and consolidated annual reports. Environmental disclosure is another trend to be conscious of, as businesses disclose their ecological impact to the public.

Although there is no single accepted definition of sustainability reporting, it is widely understood to include measuring and disclosing sustainability information, in addition to or integrated with an organisation's existing reporting procedures. It is a report published by companies regarding the effects of a company's or organisation's daily operations on the economy, environment, and society. To internalise and strengthen an organisation's commitment to sustainable development in a way that can be demonstrated to internal and external stakeholders, sustainability reporting is seen as more than just compiling and analysing sustainability information. According to Brundtland (1987), sustainability aims to meet the needs and goals of the present without sacrificing the capacity to satisfy future ones. Major corporations now demonstrate their commitment to enhancing corporate responsibility and transparency by disclosing information about sustainable development (Thoradeniya et al., 2015; Adams & Whelan, 2009). Companies respond to societal pressures by using sustainability reporting to validate the socially responsible behaviour required by the external environment in which they conduct their activity (Manes-Rossi et al. 2018). This is part of a social contract promoted by legitimacy theory, as discussed by Branco and Rodrigues (2006), Deegan (2002), and Cho and Patten (2007). The voluntary disclosure theory posits that businesses recognise the importance of disclosing social responsibility information as a means to enhance financial performance. Oh et al. (2017), Dhaliwal et al. (2011), Clarkson et al. (2013), and Clarkson et al. (2008) opined that such information is provided to enhance the company's reputation and lessen the adverse consequences of their operations. Sustainability reporting encompasses a range of information regarding a company's governance, social, economic, and environmental performance, as well as its impact on value. Simultaneously, a growing trend in corporate reporting is the optional inclusion of financial information, as well as information on social responsibility, environmental protection, and sustainability (Bhatia & Tuli, 2017).

One of the contemporary research topics in recent times is the impact of sustainability reporting on financial performance (Okoye & Ndum, 2020). The scholarly literature has seen considerable discussion on this topic, with studies primarily focusing on two research directions. On the one hand, the analysis focuses on the elements that determine sustainable reporting, including debt and liquidity (Kuzey and Uyar, 2017), ownership structure (Oh et al., 2017), profitability, corporate governance, and firm size (Dienes et al.,2016).On the other hand, research has focused on the effect of reporting sustainable actions on economic indicators, specifically company value and performance (Arayssi et al., 2016; Radhouane et al., 2018), which is the primary focus of this study.Around the world, sustainability has become a pressing issue and a significant source of concern. Over the past few years, investors' interest in a company's performance has increased dramatically. It is a reality that sustainability reporting standards are being adopted by the majority of companies globally. The Global Reporting Initiative (2011) states that "sustainability reports are now produced by thousands of organisations worldwide." The puzzle is how companies in the oil and gas, consumer goods, and industrial products sectors accept responsibility for their operations, specifically the various positive and negative effects on the environment and society in which they operate. Do companies sufficiently disclose these impacts in a suitable sustainability report, including their governance framework, stakeholder engagement strategy, and triple-bottom-line performance? The effect of sustainability reporting on organisational strategies, practices, and outcomes remains unclear. The difficulty lies in determining how to creatively utilise the reporting data acquired to meet the distinct needs of various stakeholder groups and add value to the organisations (Okoye & Ndum, 2020).

Due to the high costs, opportunity costs incurred, and investor concerns, there's a potential that sustainability reporting may lower rather than raise business value. The first argument against sustainability reporting is based on the Friedman doctrine. The Friedman philosophy (Oh et al. 2017) states that management's main responsibility is to maximise stockholder wealth to advance the interests of the company's investors. One potential drawback of sustainability reporting is its high cost. A firm may have to pay a significant amount of money to compile and publish a sustainability report (Clarkson et al., 2013). Is it possible that the performance could be negatively impacted by sustainability reporting, which would, therefore, affect the firm's value? The outcome of this study will tell.

Significant progress has been made in sustainability reporting and the financial performance of companies. Studies on the relationship between sustainability reporting and the performance and liquidity of Nigerian enterprises have been conducted over time, including those byYusuf et al.(2020), Lawrence (2022), and Zumratul and Leily (2022). However, researchers and practitioners know little about how sustainability reporting affects corporate value, particularly in Nigeria. Although few works on sustainability reporting and firm value have emerged recently,for example, Emeka-Nwokeji and Osisioma (2019), Atanda et al. (2021) and Olanyinka& Oluwamayowa (2014) carried out studies on sustainability reporting and firm values. Most studies on sustainability reporting and firm values are done in developed countries. Again, most of the studies are sector-based; for instance, Atanda et al. (2021), Amahalu et al. (2017) focused on the baking sector, Umeanozie and Ofoegbu (2022), Okoye and Ndum (2020), Nzekwe et al. (2021), and Ofoegbu and Asogwa (2020) focused on the manufacturing sector, while Samuel et al. (2020), Okafor (2018), Erhirhie and Ekwueme (2019), and Owolabi et al. (2016) focused on the oil and gas sector. Making generalisations based on some sectoral outcomes is unhealthy for the sustainability reporting journey of the firms in the country, as other sectors may be sustainability-inclined. Consequently, there is a need for a holistic study in this field. A holistic study of the non-financial sector will give a robust picture and status of the sustainability reporting practices of these companies.

Therefore, the current research studies these sectors holistically; however, the banking sector was excluded because its reporting method differs from those of other sectors. This study selected sectors involved in industrial and manufacturing activities, as their operations are mainly associated with environmental impacts. In other words, the study focused on specific non-financial sectors. Additionally, in addition to Tobin Q, which is typically used as a firm value indicator, the study introduced another firm value indicator, enterprise value. The enterprise value was used to establish the long-run relationship between sustainability reporting and the value of the selected firms. Using the Tobin Q and enterprise value as suitable proxies for firm value, this study examined the impact of sustainability reporting on the value of the selected entities and investigated any potential long-term relationships between sustainability reporting and the value of firms listed on the Nigerian Exchange Group. In line with the foregoing, the following hypotheses are formulated:

Ho: Economic reporting,environmental reporting and social reporting have no significant effect on Tobin Q of the selected companies in the Nigerian Exchange Group

Ho: There is no long-run relationship between economic reporting, environmental reporting and social reporting and the enterprise value of the selected listed companies in the Nigerian Exchange Group

2. Literature Review

Sustainability Reporting in Nigeria

Nigeria lacks a standardised reporting system for sustainable practices (Oduware, 2020). However, several regulatory bodies have highlighted specific reporting requirements for industries, publicly traded companies, and registered firms (Oduware, 2020). In light of this, it is essential to understand how professional accountants perceive and interpret sustainability reporting in the context of a developing nation like Nigeria (Eneh, 2019).

The Federal Government of Nigeria's plan for sustainable development goals reinforces all of these; if professional accountants and the accounting profession get involved, sustainability reporting can ultimately be used to monitor these goals (Onyema, 2015). Publicly traded firms are required by the NGX Sustainability

Disclosure Guidelines to submit a report that includes a detailed explanation of the management assessment of the company's governance, social, environmental, and economic risks and opportunities (NGX, 2017). The Nigerian Financial Services Regulatory Committee (FSRCC) has spearheaded a regulatory shift in the banking industry, requiring corporations to demonstrate sustainable practices. The Central Bank of Nigeria's Sustainable Banking Principles, which mandate sustainability reporting from Nigerian banks, is another such initiative that has already taken effect.

The SEC mandates the disclosure of any meaningful implications that a company's ability to compete, earnings, and capital expenditures may have from adhering to environmental and governmental requirements. If human capital resources are relevant to the company's operations, the SEC also mandates disclosure (NGX, 2017). The Sustainability Guideline from NGX should be followed, as it urges reporting organisations to consider having their reports independently validated or assured against international standards.The SEC Corporate Governance Code (SCCG revised reporting template) is required to be used for reporting compliance with the mandatory sustainability disclosure specified by the Financial Reporting Council of Nigeria (FRCN) for all publicly listed entities, private companies holding companies of public companies or other regulated entities; concessioned or privatised companies; and all regulated private companies being private companies that file returns to any regulatory authority other than the Federal Inland Revenue Service (FIRS) and the Corporate Affairs Commission (CAC). Businesses are required to provide information about their social (SOC), environment (ENV), climate change and energy (CCE), safety, health, and security (SHS), and governance and business ethics (GOV) policies.

Theoretical Framework

The two most prevalent theories regarding the necessity of sustainability reporting in corporate value are legitimacy theory and stakeholder theory. Stakeholder theory states that a company's activities impact the interests of other stakeholders and companies. Consequently, the needs of all stakeholders should guide a firm's actions and decision-making. According to Martinez-Ferrero and Frias-Aceituno (2013), considering these groups' interests facilitates the development of risk estimation, providing value for investors and other stakeholders. According to established guidelines, a company must disclose information on economic, environmental, social, and governance aspects, as well as the risks associated with them and the steps taken to mitigate these risks (Ballou et al. 2006). As a result, sustainability reporting is crucial for both a company's internal and external stakeholders. Furthermore, when a board of directors implements social responsibility policies, the company can enhance its long-term value to stakeholders and gain their support. This, in return, can positively influence the firm's long-term value.

However, legitimacy theory is crucial for satisfying societal norms and expectations and ensuring the company's long-term existence. According to O'Donovan (2002), organisational legitimacy can be viewed as something that the community bestows onto a corporation, and the company actively seeks out from the community. Legitimacy is therefore a valuable resource or potential advantage for a business to survive (as a going concern). In line with its character, which is closely tied to space and time, legitimacy experiences fluctuations in tandem with changes and developments in the environment and society where the company is located (Dowling & Pfeffer, 1975). In addition to exerting pressure on corporate legitimacy, shifts in societal norms and values brought about by the advancement of human civilisation also serve as a driving force behind changes in corporate legitimacy (Lindblom, 1994). According to Lindblom (1994), legitimacy is dynamic in that the relevant public enjoys assessing business outputs, strategies, and objectives in light of constantly changing expectations. In the absence of any modifications to the corporation's operations, the legitimacy gap will shift. Indeed, as expectations of the relevant public change, the corporation must adapt, or the legitimacy gap will widen as the level of conflict increases and the levels of positive and passive support decline.

Empirical Review

According to numerous studies, the use of GRI for sustainability reporting enhances firm value (Lo and Sheu, 2007; Schadewitz and Niskala, 2010) and performance (Ameer and Othman, 2012) by reducing information asymmetry between managers and investors. Providing stakeholders with access to sustainability-related concerns enhances the firm's accountability and transparency, enabling investors to make informed decisions (Nobanee& Ellili, 2016). Additionally, according to Kılıç & Uyar (2014) and Kiliç et al. (2015), this kind of reporting strengthens community interactions, improves entity image, and legitimises business operations. In this section, theempirical reviews are done in line with the stated objectives of this study. This is necessary for easy comparison with the previous studies. The next section shows the empirical studies reviewed that align with the study. Mulya and Prabowo (2018) investigated the impact of sustainability reporting on the value of Indonesia's stock firms. The regression analysis results indicate that reporting on economic sustainability has a positive effect on firm value. This study supports the findings of Jeriji and Nasfi (2022), who examined the impact of required SR guarantees on firm value from 2007 to 2018. The test revealed a highly significant positive correlation between SR and business value.

In Nigeria, Emeka-Nwokeji and Osisioma (2019) investigated the impact of SR on market value. The individual hypotheses examined indicate that social sustainability disclosure has an insignificant negative effect on a company's market value. Still, environmental sustainability and corporate governance disclosure have a considerable beneficial impact. Three factors (environmental, social, and economic) were considered by Atanda et al. (2021) while analysing the impact of SR on firm value. The outcomes showed that economic sustainability disclosure had an insignificant positive effect on the company's value, social sustainability disclosure had a significant positive impact, and environmental sustainability had a significant negative impact. These studies, however, contradict the findings of Plumlee et al. (2015), who examined the relationship between environmental disclosure quality and firm value. The study aimed to reexamine the relationship between the quality of a firm's voluntary environmental disclosures and firm value by exploring the relationship between the components of firm value and the quality of voluntary environmental disclosures in the US. They document a positive relation between voluntary disclosure quality and firm value through the cash flow and cost of capital components.

To better understand the underlying mechanisms by which corporate social responsibility contributes to increased shareholder value generation, Ioannou and Serafeim (2014) investigate the impact of sustainability disclosure regulations on the disclosure practices and values of businesses in China, Denmark, Malaysia, and South Africa. The findings demonstrate the favourable and significant effects of social disclosure, governance disclosure index, and environmental disclosure on firm value. This outcome aligns with the findings of Gherghina et al. (2015), who investigated the relationship between corporate social responsibility (CSR) ratings and firm value using a sample of US companies listed between 2008 and 2011 on the NASDAQ and New York Stock Exchange. The findings demonstrate that corporate social responsibility has a positive impact on business value. The findings align with the findings of Nguyen et al. (2022), who carried out a study to ascertain the relationship between SR and corporate value for 330 non-financial companies on the Vietnamese stock exchange between 2015 and 2019.The regression study demonstrated a strong and positive relationship between GRI reporting and the company's worth. This result is supported by Mutiha's (2022) study, which investigated whether the quality of SR disclosure in publicly traded Indonesian non-financial enterprises is correlated with company value. The findings indicate that SCR was positively correlated with company value. Almaqtari et al. (2022)

conducted a study to determine the effect of several sustainability indicators on the value of firms, concluding that ESG indicators had a considerable beneficial impact on the company's value.This suggests that sustainability measures correlate not only with stock market value but also with the firm's total market value and long-term market worth.

3. Methodology

This research employed an ex-post facto research design. Adopting an ex-post facto research design is informed by the study relying solely on historical data. The researcher utilises secondary data. The panel least squares regression model data (2018–2023) were extracted from the annual reports and accounts of the selected companies.The study population comprises forty-six (46) existing companies from four different sectors: oil and gas, industrial goods, consumer goods, and natural resources, all of which are listed on the Nigerian Exchange as of 2023. The study selected 30 companies judgmentally out of 46, covering all sectors in the population. The criteria for selection are that companies must have complete financial statements for the period and must have been listed on the Nigerian Exchange Group as of 2018. Refer to Table 3.1, which classifies sample firms by their affiliation with various industrial groups.

Table 3.1: Names of industries and the selected number

Sectors	Population	No. of firms	The proportion of firms (%)
Consumer Goods	20	12	40
Industrial Goods	13	7	23.33
Natural Resources	4	3	10
Oil and Gas	9	8	26.67
Total	46	30	100

Source: Researcher's Computation

Description of Variables

The study's dependent variable is the firm's value (FV). This was measured using Tobin's Q (TOBQ) and enterprise value (ENTV). These measures were computed as follows:Tobin's Q =Market value of equity + book value of debt / total assets.Enterprise Value = Ln (Market Cap + Interest-bearing long-term debt—Cash and cash equivalents). The independent variable is sustainability reporting (SR). The Global Reporting Initiative (GRI), widely used in studies on sustainable reporting, was used to measure SR. SR, according to GRI4 standards, is grouped into these categories: economic sustainability indicators (SR_GRI.2), environmental sustainability indicators (SR_GRI. 3), and social sustainability indicators (SR_GRI.4). According to the standard, four indicators evaluated the Economic category, 12 indicators evaluated the environmental category,and 30 indicators evaluated the social category.

Model Specification

The researcher deemed it fit to state the functional model between sustainable reporting and the value of firms. As a result, the researcher adopted and adjusted the model of Dian et al. (2022). Their model is developed as:

$NP = \beta 0 - \beta 1\ SRI - \beta 2\ PROF + \beta 3\ SRIXPROF + e$

Where

NP = Firm Value

SRI = Sustainability Reporting Index

The above model is adjusted to incorporate the variables of this study. This is stated as follows:

$VF_t = a_{oi} + \beta_{1ti} SR_{ti} + e_{ti}$ 1

Where:

VF = value of the firm

SR = Sustainable Reporting

e_{it} = error terms

The above equation can be rewritten for the specific hypothesis as follows:

$TOBQ_{ti} = a_{oti} + \beta_1 ECOIDC_{ti} + \beta_2 ENVIDC_{ti} + \beta_3\ SOCIDC_{ti} + e_{it}$ 2

Hypothesis Two

Hypothesis two tests the long-run relationship between sustainable reporting and the selected entity's value. Therefore, we adopt the panel ARDL model. The functional relationship is identified as follows:

$$yit = \sum_{J=1}^{P-1} y\ (yi)\ it + \sum_{J=0}^{q-1} y\ (xi)\ it + \varphi(yi)\ it + \mu i + \varepsilon it$$

Where:

yitis the dependentvariable

xi, i–t is the explanatory vector variable for group i, and μirepresents the fixed effect.

Theparameterised ARDL (p,q,p……q) error correction model is specifiedas:

P-1 q-1

$\Delta yit = \theta i\ [Yit -_1 - íixit \underset{J=0}{-_1}] + \ \underset{J=1}{\Sigma}\ y\ it\Delta y\ it\text{-}i + \underset{J=0}{\Sigma}\ \beta it\ \Delta xi,\ it + \mu i\varepsilon it$

Where:

$\kappa_i$isthelong-runparameters

θiis= -(1-δ_i), group-specific speed of adjustmentcoefficient(expectedthatθ_i<0)

Yi, t_{-1}–íiXi, t_{-1}=the error correction terms

γ it and β itare the short-term dynamic coefficients. This equation can be rewritten as:

$$\Delta ENTVit = \theta i\ [ENTVit \underset{J=0}{-_1} - íixit\ -_1] + \ \sum_{J=1}^{P-1} y\ it\Delta ENTV\ it\text{-}i + \underset{\delta}{\sum_{J=0}^{q-1}}\ \beta it\ \Delta xi$$

Where:

ENTV = Enterprise Value, the dependent variable

X is a set of independent variables

δ and β represent the short-run coefficient of the speed of the dependent and independent variables, respectively

κ is the long-run coefficient

θ is the coefficient of the speed of adjustment to the long-run status

iandtrepresentthecountryandtime,respectively.The terms in the square brackets contain the long-run growth regression.

Data Analytical Technique

The panel data estimation technique was used to analyseHypothesis 1, while the panel ARDL model was used for Hypothesis 2. The panel ARDL is used when one is testing the relationship among variables. Hypothesis four in this study tested the relationship between sustainability reporting and the value of the firms used, which is why this technique was employed. The pre-estimation test includes descriptive statistics, the Hausman test, correlation analysis, and the unit root test for hypothesis two.

4. Data Analysis and Results

Data for the study, sourced from the annual reports of the selected companies, were presented, tested, and analysed. The data were used to test the hypotheses, and results were interpreted; logical findings and conclusions were also obtained from the analysis.

Table 4.1: Descriptive statistics of variables for the period 2018-2023

	Descriptive Statistics				
	TOBQ	**ENTV**	**ECONR**	**ENVR**	**SOCR**
Mean	0.946	6.765	0.659	0.788	0.550
Std. Dev.	0.744	0.939	0.123	0.107	0.171
Skewness	1.353	-0.356	-0.438	-0.474	0.2578
Kurtosis	4.490	2.885	1.553	2.158	2.318
Jarque-Bera	71.547	3.891	21.444	12.058	5.479
Observations	180	180	180	180	180

Source: E-views 13 output

The study's descriptive statistics result is shown in Table 4.1. It shows that there are a total of 180 observations from 30 companies in the oil and gas, industrial goods, consumer goods, and natural resources sectors. The financial performance measures, TOBQ and ENTV, have average mean values of 0.946 and 6.765, with standard deviations of 0.744 and 0.939, respectively. As the table illustrates, these numbers are all within their tens. This suggests that, on average, the sampled companies are inclined towards sustainability. The data is also normally distributed, which enables it to produce reliable results. The average mean values of the sustainability reporting indicators ECONR, ENVRV, and SOCR are 0.659, 0.788, and 0.550, respectively, with standard deviations of 0.123, 0.107, and 0.171, as indicated in Table 4.1. This suggests that there is little deviation in the data from the mean, and all companies have embraced sustainability practices. All variables are negatively and positively skewed. This measures the positive/negative degree of departure from the mean. All variables exhibit a positive kurtosis value. These results revealed that the degree of tailedness of all variables used within the period of this study has a heavier tail, characterised by a leptokurtic distribution.

Table 4.2: Correlation Analysis for all variables for the period 2018-2023

	TOBQ	ENTV	ECONR	ENVR	SOCR
TOBQ	1				
ENTV	-0.168	1			
ECONR	0.157	0.030	1		
ENVR	0.088	0.097	0.118	1	
SOCR	0.111	-0.004	0.037	0.746	1

Source: E-views 13 output, 2025

The result of the correlation among the variables is shown in Table 4.2. One can use the correlation coefficients to determine whether there is any collinearity among the regressors. The results showed that the variables did not show a strong association. Therefore, collinearity doesn't seem to pose a risk in our model. The outcome indicates that there is no correlation between any of the variables, as they are, to a great extent, far apart in both positive and negative directions.

Panel Regression Analysis

Hypothesis Testing

Haussmann Test Hypothesis

It is necessary to perform Hausman's test to determine which model, fixed or random effect, is appropriate for the analysis. The hypothesis states:

H_o: The random effect model is not appropriate

H_1: Fixed effect model is appropriate;

If the p-value of Hausman's test result is less than 5%, reject the null hypothesis; otherwise, accept the alternative hypothesis.

Table 4.3 Haussmann Test for all Four Hypotheses

Test summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	Decision
Cross-section random	3.0621	3	0.3822	Random effect model

Source: E-views 13 output, 2025

The best-fit model for the hypothesis test was determined using the Haussmann test. As shown in Table 4.3 above, the cross-section chi-square statistics with three degrees of freedom for the hypothesis is 3.0621. The corresponding p-value is 0.3822. Since the Haussmann chi-square statistic's p-value for the hypothesis is greater than 5%, the null hypothesis is accepted. The random effect model outperforms the fixed effect method for the hypothesis. Therefore, the random effect is adopted for the hypothesis.

Hypothesis One: Economic reporting, environmental reporting and social reporting have no significant effect on Tobin Q of the selected companies in the Nigerian Exchange Group

Table 4.4: Panel Result for Hypothesis One
Dependent Variable: Tobin Q

Variables	Coefficient	Std Error	t-statistics	Pro.
ECOIDC	0.581159	0.240132	2.420167	0.0165
ENVIDC	-0.546294	0.349025	-1.565203	0.1193
SOCIDC	-0.611756	0.277634	-2.203460	0.0289
C	1.871805	0.606623	3.085615	0.0024
R^2	36%			
F- stat	33.42			
P-value	0.000000			
Durbin-Watson stat	2 1.65			

Source: E-view 13 Output, 2025

The result of the test for Hypothesis 1 is shown in Table 4.4. The result indicates that the coefficient value for ECOIDC is positively signed: 0.581159. The p-value is 0.0165 at a 5% significance level. ECOIDC is a significant and positive predictor, meaning it has a substantial impact on the dependent variable. The economic dimension of sustainability reporting has a positive and significant impact on the firm value of the companies for the period. The environmental dimension is insignificant and has a negative impact. The independent variable has no significant impact on the dependent variable. The findings also revealed that social reporting had a negative but significant impact on the firm value proxy, as measured by the Tobin Q, during the study period. The results show that most sampled firms reported on their social responsibility for the period. This is common among Nigerian firms, as most firms in Nigeria disclose their social responsibility, which is evident when reviewing their annual reports. In this study, however, the impact is negative on the firm's value. This could result from the high cost of living in the country, a problem that has existed for several years and remains a concern, as it continues to worsen. The high cost of living in the country affects not only households but also organisations operating in the country. This is reflected in our results, which revealed that the sampled firms are socially inclined, but this has a negative impact on the firm's value. The R^2 of 36% represents the panel regression's goodness of fit. The independent variablesaccount for 36% of the variation in the dependent variable, with an unexplained variation of 64%. This implies that other factors affected our dependent variable, which our model did not account for. Although small, it cannot discredit our results, as our findings further show that the data set is normally distributed and suitable for analysis. This is evidenced by the F-statistic of 33.425, Durbin-Watson stat of 1.65, approximately 2, with a corresponding overall probability value of 0.000000. These parameters all showed a joint significance of the variables used. This implies the result is good enough for a meaningful interpretation.

Hypothesis Two: There is no long-run relationship between sustainable reporting and the enterprise value of the selected listed companies in the Nigerian Exchange Group Hypothesis two used the panel ARDL model to test the short and long-run relationships among the variables. Before the analysis, the unit root test and the bond test were performed as pre-tests to justify the use of the model. These tests are found in the next section.

Unit Root Test

Avoiding spurious results is essential in times and cross-sectional analysis. The unit root test is conducted to check this. This ensures that we don't end up with spurious estimation results, as studies conducted with non-stationary series often produce spurious results. Again, it is also necessary to conduct the unit root test to determine the order of integration of the series. This is essential to ensure none of our variables is in order two. The summary unit root test was adopted. From the result, the Levin, Lin & Chu T* Stat is more negative and statistically significant for all the variables. The study concluded that the Levin, Lin & Chu T* Stat is used for the unit root test. The hypothesis is as follows:

H_0: The null hypothesis states that there is a unit root.
H_1: The alternative hypothesis states that there is no unit root.

The Levin, Lin & Chu T* Stat must be more negative, and the probability of all variables must be at a 5% significance level to reject the H_0 and accept H_1.

Table 4.5: Panel Unit Root Test: Summary

S/N	Variables	Levin, Lin & Chu T* Stat	Breitung t-stat	Im,Peaaran and Shin W-stat	ADF-Fisher Chi-square	Pp-Fisher Chi-square	Order of Integration
1	ENTV	-24.4791 **PV (0.0000)**	0.71635 **PV (0.7631)**	-1.19092 **PV (0.1168)**	84.9159 **PV (0.0188)**	139.940 **PV (0.0000)**	1(0)
2	ECONR	-29.1529 **PV (0.0103)**	-4.98574 **PV (0.0000)**	-2.31442 **PV (0.0103)**	58.4772 **PV (0.0188)**	95.4490 **PV (0.0000)**	1(1)
3	ENVR	-31.2770 **PV (0.0000)**	-3.79155 **PV (0.0001)**	-2.73119 **PV (0.0032)**	83.3533 **PV (0.0103)**	140.135 **PV (0.0000)**	1(1)
4	SOCR	-25.7326 **PV (0.0000)**	0.52530 **PV (0.7003)**	-1.21760 **PV (0.1117)**	91.0956 **PV (0.0059)**	164.263 **PV (0.0000)**	1(0)

Source: Author's Computation via E-views (2025); **Note**: p-values are in parentheses.

The stationary characteristics of the series are presented in Table 4.5, following the application of the panel unit root test summary. The results reported above indicate that the Levin, Lin & Chu T* Stat are more negative and statistically significant. The series are stationary at different orders of integration. The dataset exhibits a combination of 1(0) and 1(1), providing necessary theoretical support for the adoption of the panel ARDL estimation approach proposed by Pesaran, Shin, and Smith (2001) to test for the co-integrating relationship.

Table 4.6: Appropriate Lag Length

Hypothesis	Appropriate Lag
Hypothesis Four	2

Source: Author's Computation via E-views (2025)

Table 4.7: Summary of the ARDL Result for Hypothesis Two
Dependent Variable: **D(ENTV)**

Variable	Coefficient	Std. Error	t-Statistic		Prob.
	Long-run (Pooled) Coefficients				
ECOIDC	0.511020	0.375448	1.361094		0.1756
ENVIDC	0.016570	0.259153	0.063938		0.9491
SOCIDC	2.227239	0.221099	10.07349		0.0000
FSIZE	0.936407	0.039780	23.53993		0.0000
LEV	0.799173	0.048287	16.55062		0.0000
C	-1.994739	0.337368	-5.912645		0.0000
	Short-run (Mean-Group) Coefficients				
COINTEQ	-0.524927	0.081825	-6.415220		0.0000
Log-Likelihood:	0.046677				

Source: Author's Computation via E-views (2025)

To investigate the long-run relationship between ENTV and the ECOIDC, as well as between ENVIDC and SOCIDC, the ARDL estimation method was employed. The regression outcomes for both the long run and the short run are presented in Table 4.7. From the result, the co-integrating equation, also known as the error correction term, has a negative (the proper sign) value of -0.524927 and is statistically significant with a probability value of 0.0000. This implies a long-run equilibrium relationship between the dependent and independent variables, as the error term is statistically significant, negative, and less than 1.The coefficient values of 52% imply that if there is any disequilibrium in the organisations, it will take an average of 52% of the system's time to return from the short run to the long run annually across the sampled companies. By implication, there is a high speed of adjustment from the short run to the long run if any disequilibrium exists in the sample companies.

5. Conclusion and Recommendation

Conclusion

This study assessed sustainability reporting initiatives and the value of firms listed on the Nigerian exchange group from 2018 to 2023. Sustainability reporting has recently become a topic of interest to researchers due to its benefits to both firms and the community. The study's findings suggest that the economic and social aspects of sustainability reporting have a significant impact on the firm's value. Although the economic indicators positively affected the firm's value, the social indicators had a negative impact on the firm's value. This may be due to the high cost of living in the country, which affects both households and businesses. The environmental indicators, however, have a negative and insignificant impact on the Tobin Q. The outcome indicates that the sampled firms have not fully embraced the environmental disclosure aspect of sustainability reporting. Considering our second dependent variable, the analysis showed a long-run relationship between the enterprise value and sustainability reporting. It was recorded that if there is an abnormality in the short term, it can be corrected in the long term at a rate of 52%. The tested hypotheses revealed a high impact of sustainability reporting on firm value, except for the environmental dimension. This can be the outcome of companies that practice sustainability reporting. Companies with more sustainability reporting practices hope to boost their earnings. Therefore, it is essential to encourage companies listed on the Nigerian Exchange Group to disclose all sustainability information in their financial statements in full. In light of the above findings, the study concludes that sustainability reporting can have a significant impact on the listed non-financial firm. The study results also show the statistical significance of the variables under investigation. Therefore, the sampled listed manufacturing companies must ensure adequate and proper sustainability reporting practices are implemented to sustain the firm's value.

Recommendations

Based on the findings and conclusions drawn from the study, the following recommendations are made:

Since economic reporting significantly affects firm value, it is recommended that all business organisations integrate economic sustainability reporting fully into their reporting system to reap the associated benefits in economic value added.

Environmental policies should be enforced to encourage firms to disclose information relating to the environment. Environmental reporting should be encouraged, and the regulatory body established should ensure that companies include and disclose environmental sustainability reports in their annual reports. As the study has shown, there is no significant effect of environmental sustainability reporting on a company's performance.

The application of social responsibility is essential for business organisations in the process of integrating with international markets, as it benefits both the organisation and society, particularly in enhancing the competitiveness of companies. However, firms carrying out their social responsibilities should be conscious of value creation within the organisation, as this is essential to the shareholders. Creating a consistent reporting standard for Nigerian companies is essential. This is paramount as it can create a consistent reporting standard for Nigerian companies and foster an environment that encourages a higher degree of economic value. Sustainability reporting should be encouraged; companies should include sustainability reporting in their annual reports, as the study has shown a significant long-term effect of sustainability reporting on a firm's value.

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