
BOARD STRUCTURE AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE QUALITY OF NIGERIAN LISTED COMPANIES

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Abstract

Research on corporate social responsibility reporting, otherwise known as sustainability reporting, environmental reporting, or triple bottomline reporting, in most developing economies remains a grey area for investigation. Hence, there is a dearth of literature regarding corporate social responsibility disclosure practices in such countries, including Nigeria. This paper examines the effect of board structure, such as board independence, board size, and board meetings, on the Corporate Social Responsibility Disclosure Quality (CSR DQ) of the Top 100 Nigerian listed firms. The study utilizes a longitudinal sample of 498 firm-year observations of financial and non-financial companies listed on the Nigerian Exchange Group (NGX) for the period 2018 to 2022. The results of the panel regression reveal that board independence and board size positively and significantly influence the CSR DQ of the sampled firms. While board meetings have a negative and significant influence. Though the positive association indicates a slight improvement in the quality of CSR disclosure of listed firms, Bbut still left much to be desired, thereby calling for improvement. The improvement could be achieved via effective board and necessary regulatory changes by regulatory bodies like the SEC and NGX. Therefore, the study has policy implications for regulators, the management of firms, academia, and other stakeholders. The study bridged literature gaps by offering new insights and empirical evidence on the role of board independence, board size, and board meetings in the CSR DQ of Nigerian large firms. The study recommends that listed firms should take board independence and board size seriously, as they are key determinants of CSR DQ. Also, the study recommends that the frequency of board meetings should be optimized to see if it could influence CSR DQ positively.

Keywords: Board structure, corporate social responsibility disclosure quality, and Nigeria

1. Introduction

Corporate organisations have historically prioritised profit maximisation and shareholder wealth, often with limited attention to the broader environmental and social consequences of their operations. However, growing stakeholder awareness of environmental degradation, climate change, biodiversity loss, pollution, and persistent social inequalities has intensified demands for greater corporate accountability and transparency. Traditional financial reporting frameworks largely emphasise economic performance while providing insufficient insight into firms' non-financial impacts on host communities and society. Consequently, concerns have emerged regarding the incompleteness of financial reporting and the need for more comprehensive disclosure mechanisms that integrate corporate social responsibility (CSR) performance (Tiamiyu et al., 2021).

The concept of sustainable development—defined as meeting present needs without compromising future generations (World Commission on Environment and Development [WCED], 1987)—has reinforced the importance of CSR reporting as a tool for balancing financial and non-financial performance. Frameworks such as the Global Reporting Initiative (GRI) have further institutionalised CSR disclosure as a mechanism for advancing the United Nations Sustainable Development Goals and strengthening corporate legitimacy (Deegan, 2013; Ong & Djajadikerta, 2018). Empirical evidence suggests that robust CSR reporting can enhance firm reputation, investor confidence, and long-term performance (Adhipradana & Daljono, 2014). High-profile corporate failures linked to unethical reporting practices have also intensified calls for more credible and transparent disclosure systems supported by effective corporate governance structures (Skouloudis et al., 2014). Within this governance architecture, the board of directors plays a pivotal monitoring role in ensuring the quality and credibility of corporate disclosures (Elaiigwu et al., 2024; Katmon et al., 2019).

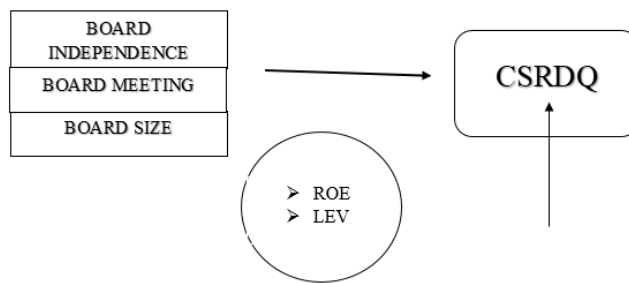
Despite the global momentum toward sustainability reporting, significant practical and theoretical gaps persist in emerging economies such as Nigeria. From a practical standpoint, the world continues to face escalating economic, environmental, and social (EES) threats—including climate change, pollution, desertification, biodiversity loss, poverty, and inequality—which heighten the need for credible CSR performance and disclosure (Sanusi & Sanusi, 2019). Although CSR reporting is recognised as a mechanism for enhancing transparency and accountability (Elaiigwu et al., 2024; Zainal, 2017), it remains largely voluntary in Nigeria, resulting in wide disparities in disclosure content and quality across firms (Anazonwu et al., 2018). Existing evidence indicates that CSR disclosure practices in Nigeria are still at a compliance or nascent stage, with generally low disclosure quality (Osazuwa et al., 2017).

From a theoretical perspective, prior research on CSR disclosure quality (CSR DQ) has been heavily concentrated in developed economies such as the United States, the United Kingdom, and Australia, leaving emerging markets under-examined (Amran et al., 2014; Elaiigwu et al., 2020; Jamil et al., 2021). In Nigeria specifically, CSR DQ remains a relatively under-researched area, with limited empirical evidence on the governance mechanisms that drive high-quality disclosure (Odoemelam & Okafor, 2018). This gap is particularly important, given theoretical arguments that board structure—through attributes such as board independence, board size, and board meeting frequency—can significantly influence the monitoring effectiveness and transparency of firms.

Against this backdrop, the present study investigates the effect of key board attributes—board independence, board size, and board meetings—on Corporate Social Responsibility Disclosure Quality among listed companies in Nigeria. By focusing on board governance mechanisms within an emerging market context, the study responds to calls in the literature for deeper empirical insight into the determinants of high-quality CSR disclosure and contributes to the ongoing discourse on sustainability reporting and corporate governance in developing economies.

2. Theoretical Background And Hypotheses Development

The study is underpinned by the agency and stakeholder theories, which explain the relationship between the variables of interest as shown in the following research framework.



2.1 Theoretical Background

Agency theory provides a foundational lens for understanding how board characteristics influence corporate social responsibility disclosure quality (CSR DQ). The theory, originally advanced by Jensen and Meckling (1976), explains the inherent conflicts of interest between principals (shareholders) and agents (managers), which may result in information asymmetry and opportunistic managerial behaviour. Within this framework, effective corporate governance mechanisms—particularly board independence, board size, and board meeting frequency—serve as monitoring tools that can reduce agency costs and enhance transparency. High-quality CSR disclosure is therefore viewed as an outcome of strong board oversight that constrains managerial opportunism and improves accountability.

Board independence is central to agency monitoring. Independent non-executive directors are expected to provide objective oversight and reduce managerial discretion because they are less entangled in day-to-day management. Agency theory predicts that boards with a higher proportion of independent directors are better positioned to demand transparent and credible CSR reporting (Fama & Jensen, 1983). Empirical studies support this view, indicating that independent directors tend to promote broader and higher-quality sustainability disclosure due to reputational concerns and fiduciary responsibilities (Jizi et al., 2014). Through strengthened monitoring and enhanced credibility, board independence is therefore expected to positively influence CSR disclosure quality. Board size represents another important governance attribute. From an agency perspective, larger boards may enhance monitoring effectiveness through diversity of expertise, experience, and stakeholder representation. Such diversity can improve the breadth and depth of CSR information disclosed (García-Sánchez et al., 2013).

Nevertheless, agency theory also warns that excessively large boards may suffer from coordination problems, slower decision-making, and free-rider issues, which can weaken monitoring effectiveness (Jensen, 1993). Accordingly, the relationship between board size and CSR DQ is generally expected to be positive, provided the board remains within an effective and manageable size that supports active oversight. Board meeting frequency reflects the diligence and intensity of board monitoring. Agency theory posits that boards that meet more frequently are better informed about managerial actions and strategic developments, which enhances their ability to demand transparent reporting (Vafeas, 1999). Frequent meetings provide opportunities to review sustainability performance, address emerging risks, and ensure compliance with stakeholder expectations. Empirical evidence suggests that active boards are associated with more extensive and higher-quality sustainability disclosure (Dicko et al., 2020; Khan et al., 2013). Thus, board meeting frequency is expected to positively influence CSR disclosure quality through improved monitoring intensity.

Complementing agency theory, stakeholder theory provides a broader explanation for why board structures influence CSR disclosure quality. Stakeholder theory argues that firms must satisfy the expectations of multiple stakeholder groups—shareholders, employees, customers, regulators, and communities—to ensure long-term survival (Freeman, 1984). Under this perspective, CSR disclosure quality is not merely a monitoring outcome but also a strategic response to stakeholder pressures. Board independence enhances stakeholder orientation by introducing directors who are more likely to consider the interests of diverse stakeholder groups rather than focusing solely on managerial or controlling shareholder interests (Hillman et al., 2001). Independent directors often advocate greater transparency and accountability, which leads to more comprehensive CSR disclosure (Bozzolan et al., 2015). Similarly, board size contributes to stakeholder responsiveness by bringing heterogeneous expertise and perspectives that improve stakeholder engagement and reporting breadth (Klein, 2017), although excessively large boards may again face coordination challenges (Jensen, 1993). Board meeting frequency also signals board activeness in addressing stakeholder concerns. Boards that meet regularly are better able to monitor environmental and social risks, respond to stakeholder pressures, and ensure timely CSR communication (Vafeas, 1999). High-quality sustainability disclosure—covering environmental, social, and economic impacts—serves as a key mechanism through which firms demonstrate accountability to stakeholders (Eccles et al., 2014).

Therefore, integrating agency and stakeholder theories suggests that board independence, board size, and board meeting frequency are critical governance mechanisms that can improve CSR disclosure quality through enhanced monitoring and stakeholder responsiveness. Stronger boards—characterised by greater independence, appropriate size, and active meeting frequency—are therefore expected to promote more credible, comprehensive, and higher-quality CSR disclosure.

2.2 Hypotheses Development

2.2.1 Board Independence and CSR disclosure Quality

Stakeholder theory emphasizes the importance of an independent board of directors in safeguarding stakeholder interests and enhancing corporate accountability (Ofoegbu et al., 2018). This perspective aligns with agency theory, which posits that effective monitoring by independent directors can reduce information asymmetry between managers and shareholders through improved sustainability disclosure (Martínez-Ferrero et al., 2015). Independent directors are generally viewed as better monitors because they are less likely to be influenced by management and more inclined to demand transparent reporting practices. Empirical evidence largely supports this theoretical expectation. For example, Liao et al. (2015) report a positive association between board independence and greenhouse gas (GHG) disclosure among UK firms. In the Nigerian context, Odoemelam and Okafor (2018) find that board independence is positively and significantly related to environmental disclosure. Similarly, Ofoegbu et al. (2018), in a comparative study of Nigeria and South Africa, argue that independent boards act as an effective bonding mechanism, particularly in weak environmental reporting environments. Evidence from Singapore also indicates that a higher proportion of independent directors enhances both the likelihood and quality of sustainability reporting (Hu & Loh, 2018). Grounded in agency and stakeholder theories and supported by prior empirical findings, the study hypothesizes that:

H₀₁: Board independence has a significant relationship with the CSR disclosure quality of Nigerian listed companies.

2.2.2 Board Size and CSR Disclosure Quality

Agency theory suggests that larger boards may improve monitoring effectiveness and reduce information asymmetry between management and shareholders (Hu & Loh, 2018; Jensen & Meckling, 1976). A larger board is often associated with a broader pool of expertise, experience, and stakeholder representation, which can enhance the board's capacity to demand more comprehensive sustainability disclosure. From a stakeholder perspective, board diversity arising from increased size may also improve responsiveness to stakeholder information needs. Prior empirical studies generally report a positive association between board size and sustainability disclosure. For instance, Talab et al. (2023) document a positive relationship between board size and environmental disclosure among Nigerian firms. Similarly, (Razaq et al., 2023) show that firms with larger boards in Singapore are more likely to engage in sustainability reporting and to produce higher-quality disclosures. Evidence from China also indicates that board size positively influences CSR disclosure (Shahab & Ye, 2018), while Ofoegbu et al. (2018) argue that larger boards with diverse expertise encourage greater sustainability transparency. However, the literature is not unanimous. Some studies report insignificant or negative associations (Odoemelam & Okafor, 2018; Tiamiyu et al., 2021), suggesting that excessively large boards may suffer from coordination and free-rider problems. Despite these mixed findings, the weight of theoretical arguments and dominant empirical evidence supports a significant relationship. Accordingly, the study posits that:

H₀₂: Board size has a significant relationship with the sustainability disclosure practice of Nigerian listed companies.

2.2.3 Board Meetings and CSR Disclosure Quality

The effectiveness of a board of directors is partly reflected in the frequency of its meetings. Regular board meetings signal active oversight and a stronger commitment to addressing firm-level issues (Amran & Che Ahmad, 2014). Agency theory further suggests that directors' meeting attendance and engagement indicate diligence and monitoring intensity, which can enhance transparency and disclosure quality (Talab et al., 2023). Frequent meetings also promote deeper discussion of strategic and operational matters affecting firm performance (Mishra et al., 2024). From the stakeholder theory perspective, more frequent meetings provide boards with greater opportunities to address the concerns of diverse stakeholders and to respond to sustainability-related risks in today's complex business environment. Empirical evidence on this relationship is mixed. In Nigeria, Odoemelam and Okafor (2018) report a positive and significant association between board meetings and environmental disclosure. Elaigwu et al. (2023) also find a positive relationship in Chinese firms. In contrast, Ahmad et al. (2017) and Prado-Lorenzo and Garcia-Sanchez (2010) document insignificant relationships between board meeting frequency and CSR-related disclosure. Notwithstanding these inconsistencies, theoretical predictions generally suggest that more active boards should enhance disclosure quality. Therefore, the study proposes that:

H3: Board meeting has a significant relationship with the sustainability disclosure practice of Nigerian listed companies.

3. Methodology

This study employs an *ex post facto* research design because it relies on historical data extracted from firms' published annual reports, a method suitable when variables cannot be experimentally manipulated. The population comprises all 161 companies listed on the Nigerian Exchange Group between 2019 and 2023, from which the top 100 firms by market capitalisation were purposively selected. This focus aligns with sustainability reporting literature that emphasises large firms due to their greater visibility, legitimacy pressures, and stakeholder scrutiny (Kühn et al., 2018; Loza Adai, 2020). The 2019–2023 period allows assessment of the effects of the 2018 revision of the Nigerian Code of Corporate Governance and the increased national attention to CSR linked to the United Nations Sustainable Development Goals. After adjusting for missing data, a balanced panel of 498 firm-year observations across 15 sectors was obtained, as shown in Tables 1 and 3 below.

The study relies exclusively on secondary data sourced primarily from the Nigerian Exchange Group database and corporate websites. Content analysis was adopted as the main data collection technique because annual reports are widely regarded as credible statutory communication tools and the dominant medium for sustainability disclosure (Vergoossen, 1993). Prior research also highlights their accessibility and regular publication, which makes them a key information source for stakeholders (Ahmad, 2017). CSR disclosure information was manually extracted from annual and sustainability reports. Governance variables—including board independence, board size, and board meeting frequency—were hand-collected from corporate governance sections of the reports. The study applies panel data techniques to exploit both cross-sectional and time-series variation, thereby enhancing the robustness and generalisability of the empirical findings.

Table 1

Sample selection procedure and distribution

Year	Frequency	Percent	Cum.
2018	99	19.88	19.88
2019	100	20.08	39.96
2020	100	20.08	60.04
2021	100	20.08	80.12
2022	99	19.88	100.00
Total	498	100.00	

3.1 Estimation Technique

The study employs a panel regression model to test the hypothesized relationships between board independence, board size, board meetings, and CSRDQ. Given the panel nature of the data, model selection procedures—including pooled OLS versus random effects and random versus fixed effects—were conducted. The Hausman specification test supported the suitability of the fixed effects (FE) model. However, the presence of heteroscedasticity and autocorrelation necessitated the use of the Generalized Least Squares (GLS) estimator, which is robust to such violations (Gujarati, 2003). The GLS approach is therefore considered more appropriate for the CSR disclosure model and aligns with prior studies (Elaiwu, Ugwu, et al., 2024; Zhuang et al., 2018).

$$\begin{aligned}
 \text{CSR}DQ_{it} = & \beta_0 + \beta_1 \text{BINDEP}_{it} + \beta_2 \text{BSIZE}_{it} + \beta_3 \text{BMEET}_{it} + \beta_4 \text{CSIZE}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{ROE}_{it} \\
 & + \beta_7 \text{INDDUM}_{it} + \beta_8 \text{YEAR}DUM_{it} + \varepsilon_{it} \dots \dots \dots \text{Model}
 \end{aligned}$$

Table 2

Explanation of Variables

Variables	Description
B	Represents the slope coefficient of the regression.
Dependent Variable	
CSRSDQ	CSRSDQ – represents corporate social responsibility disclosure quality, which is measured by an index with a scale of 0 to 3 constructed from a checklist of 44 items through content analysis (AbdulKareem et al., 2021; Ahmad, 2017; Erin et al., 2022; Haniffa & Cooke, 2005; Ju Ahmad et al., 2017; Odoemelam & Okafor, 2018).

CSR DQ_j is computed employing the following formula: a quality index is derived through computing the ratio of total scores to the number of items:

$$CSR\mathit{DQ}_j = \frac{\sum_{t=1}^{n_j} X_{ij}}{n_j}$$

where:

$CSR\mathit{DQ}_j$ = Sustainability Reporting Quality for j th firm

X_{ij} = CSR DQ on a 0 - 3 scale (score of 3 is for reports that provide quantitative and qualitative disclosures; 2 for quantitative or monetary disclosures; 1 for qualitative or general statement disclosures; and 0 for non-disclosure.

n_j = represents the total number of items estimated for j th firm.

Hypothesis variable

BINDEP

BINDEP – represents board independence measured as a percentage of non-executive directors to total directors (Alghorbany et al., 2024; Osazuwa et al., 2017).

BSIZE

BSIZE – represents the number of directors on the board of a firm at a particular period. (Ahmad, 2017; Amran et al., 2014; Zahid et al., 2020)

BMEET

BMEET – represents the board of directors’ meetings. It is measured using the total of the meetings held by the board within the period (Abdullahi et al., 2025; Giannarakis, 2014; Odoemelam & Okafor, 2018).

ROE

ROE – represents Return on Equity. It is measured as a ratio of net income to shareholders’ equity (Al-Dhamari et al., 2022; Haniffa & Cooke, 2005; Manning et al., 2019).

LEV

LEV – this stands for leverage and is measured as the ratio of total liabilities to total assets (Abdullah et al., 2011; Elaigwu et al., 2024; Haniffa & Cooke, 2005; Manning et al., 2019).

ϵ_{it}

The error term

β_1 to β_8	Coefficient of interest to be estimated
β_0	Intercept

4. RESULTS AND DISCUSSION

4.1 Sector Classification

Table 3 shows the classification of the sectors

Table 3

Sector Classification

SECTORS	FREQ.	PERCENT	CUM.
Commercial Services	10	2.01	2.01
Communications	5	1.00	3.01
Consumer Non-Durables	54	10.84	13.86
Consumer Services	25	5.02	18.88
Distribution Services	5	1.00	19.88
Energy Minerals	30	6.02	25.90
Finance	195	39.16	65.06
Health Technology	20	4.02	69.08
Industrial Services	5	1.00	70.08
Non-Energy Minerals	15	3.01	73.09
Process Industries	84	16.87	89.96
Producer Manufacturing	15	3.01	92.97
Technology Services	10	2.01	94.98
Transportation	20	4.02	99.00
Utilities	5	1.00	100.00
Total	498	100.00	

Source: Nigeria Exchange (NGX) Group

As emphasized in the preceding chapter, this study's sample comprises the top 100 listed firms in Nigeria from 2019 to 2023, with 498 firm-year final observations, which makes it an unbalanced panel as a result of missing data. As indicated in Table 3 above, the sampled companies were mostly drawn from Finance (39.16%), followed by Process Industries (16.87%), Consumer Non-Durables (10.84%), Energy Minerals (6.02%), and other sectors from which the sample was drawn.

4.2 Descriptive Statistics

Table 4

Descriptive statistics for dependent, independent, and control variables from 2019 to 2023

Variable	Obs	Mean	Std. Dev.	Min	Max
CSRDQ	498	0.20	0.67	0	58
BINDEP	498	0.39	0.13	18	89
BSIZE	498	9.06	2.04	4	17
BMEET	498	6.43	2.06	3	21
PROFITA	498	14.68	16.77	-47.97	68.8
LEV	498	30.96	19.11	0.31	70

CSRDQ is corporate social responsibility disclosure quality, BINDEP represents board independence, BSIZE is board size, BMEET represents board meetings, CSIZE stands for company size, LEV is leverage, and ROE represents the return on equity.

Table 3 presents the descriptive statistics for the CSRDQ model from 2018 to 2022. The result shows a 20% mean value for CSRDQ, with 0 as the minimum and 58% as the maximum value. This is though low but reveals an improvement in the CSR disclosure quality of listed firms in Nigeria, which is consistent with prior literature (Ofoegbu et al., 2018; Sanusi & Sanusi, 2019). Board independence (BINDEP) has a mean value of 39% with a minimum value of 18% and a maximum of 89%, which is similar to the work of Ofoegbu et al. (2018). It indicates that the independence of the board is below average. The mean value of the board size (BSIZE) is 9.06% with 4 as the minimum and 17 as the maximum, which is consistent with previous studies (Odoemelam & Okafor, 2018; Osazuwa et al., 2017). Board meeting (BMEET) has an average value of 6.43 with 3 minimum of meetings and a maximum of 21, which is in tandem with extant literature (Odoemelam & Okafor, 2018; Ofoegbu et al., 2018).

4.3 Correlation Matrix

Table 4

Pearson Correlation Matrix

VARIABLES	SD	BDINDEP	BSIZE	BMEET
SD	1.000			
BDINDEP	***0.118	1.000		
BSIZE	**0.091	***0.262	1.000	
BMEET	0.001	***0.458	***0.314	1.000

Note: Correlation is significant at * = $p \leq 0.10$, ** = $p \leq 0.05$, and *** = $p \leq 0.01$. SD is sustainability disclosure, BINDEP represents board independence, BSIZE is board size, and BMEET represents board meetings.

The study computes a correlation analysis for all the variables to explain the level of relationship (Asteriou & Hall, 2007). A correlation that is not beyond 0.8 shows the absence of multicollinearity problems (Gujarati, 1995). The coefficient of correlation in this study is between -0.306 and 0.496, which is within the acceptable region. Hence, the rule of thumb for the detection of multicollinearity is if the correlation is significantly more than 0.80 (Corlett & Aigner, 1972; Gujarati & Porter, 2004; Gujarati, 1995). Table 4 presents the results of the Pearson correlation matrix. The results generally suggest the absence of the problem of multicollinearity; there is no high correlation in all the relationships, and the variables are mostly statistically significant. The absence of multicollinearity is equally confirmed by the result of the Variance Inflation Factor (VIF) as shown in Table 5 below.

4.4 Regression Results

Before running the regression, the study conducted some preliminary tests (diagnostic tests) and followed the panel regression rule of selecting the best estimator among pooled, random, and fixed-effect models. The Variance Inflation Factor (VIF) at 1.25 portrays the absence of multicollinearity as indicated by Table 5 and the Pearson correlation matrix, while the serial correlation (Wooldridge test), which is significant at 0.000 (see Table 6), indicates the presence of the first-order autocorrelation. In the same vein, heteroscedasticity is a problem as the Breusch-Pagan/Cook-Weisberg test is significant at 0.000 (see Table 7).

Table 5: *Variance Inflation Factor*

VARIABLE	VIF	1/VIF
BOARDIND	1.35	0.74
BSIZE	1.21	0.82
BMEET	1.18	0.84
MEAN VIF	1.25	

Source: STATA 14 Output

Table 6: *Test for Autocorrelation (serial correlation)*

Wooldridge test for autocorrelation in panel data (xtserial roe fsize log lev)	
H0 =	no first-order autocorrelation
F(1, 9) =	1.102
Prob > F =	0.0001

Source: STATA 14 Output

Table 7: *Test for heteroscedasticity*

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity (Hetest)	
Ho:	Constant variance
Variables:	fitted values of cep
chi2(1) =	0.50
Prob > chi2 =	0.0000

Source: STATA 14 Output

Further, the result of the Lagrangian Multiplier test (Breusch & Pagan, 1980) for the CSRDQ Model is significant at the 0.0000, indicating that the RE model is more appropriate. Equally, the Hausman specification test (Hausman, 1978) is significant at 0.000, indicating that the Fixed Effect model is more appropriate. Due to the presence of autocorrelation and heteroscedasticity, the Feasible Generalized Least Squares method, which is robust for these issues, was used as the estimation technique appropriate for the CSRDQ model, which is consistent with prior investigations (Katmon et al., 2019; Zhuang et al., 2018). The regression results are presented in Table 8 below.

Table 8

Regression results for FE and FGLS

VARIABLES	FE MODEL	FGLS REGRESSION
BOARDIND	0.15 (2.08)**	0.04 (4.79)***
BSIZE	0.00 (0.54)	0.00 (2.80)***

BMEET	0.01 (1.73)*	-0.01 (-2.66)***
YEARDUM	YES	YES
_cons	0.08 (2.18)***	0.38 (8.14)***
<i>Number of obs</i>	498	498
<i>Prob > chi2</i>	0.006	0.000
<i>Panels</i>		homoskedastic
<i>Correlation</i>		no autocorrelation

Note: Correlation is significant at * = $p \leq 0.10$, ** = $p \leq 0.05$, and *** = $p \leq 0.01$. BINDEP represents board independence, BSIZE is board size, and BMEET represents board meetings.

4.4.1 Test of Hypothesis

The study investigates the relationship between board structure (board independence, board size, and board meeting) and CSRDQ. Table 8 presents the regression results of the multiple regression analysis from 2019 to 2023 using the Fixed Effect (FE) and the Feasible Generalized Least Squares (FGLS) estimation techniques. The FGLS regression result indicates a positively significant relationship between board independence ($\beta = 0.04$, $p < 0.01$), board size ($\beta = 0.00$, $p < 0.01$), and CSRDQ. Thereby rejecting the null hypotheses (H1 and H2) that state that there is no significant relationship between board independence, board size, and CSRDQ. This means that an independent board and optimal board size enhance the quality of CSR disclosures. The FGLS regression result equally indicates a negatively significant ($\beta = -0.01$, $p < 0.01$) relationship between board meetings and CSRDQ. Therefore, rejecting H3, which states that there is no significant relationship between board meetings and CSRDQ. This implies that the frequency of board meetings decreases the quality of CSR disclosures.

4.4.2 Discussion of Results

Notwithstanding the global attention on sustainable development and the focus of contemporary research on CSR or sustainability reporting practices, studies on CSRDQ in some emerging markets, like Nigeria, and others, left much to be desired. The present study is one of the few to examine the quality of CSR disclosure of listed 100 firms in Nigeria by considering the effect of board independence, board size, and board meetings. Overall, the findings from a longitudinal sample of 498 firm-year observations are quite impressive and encouraging, as the empirical result indicates a slight improvement in the quality of CSR disclosures of the sampled firms.

The regression result indicates a significantly positive association between board independence and CSRDQ of the sampled firms. As mentioned earlier, this shows that H1 is rejected. This

means board independence is an important determinant of the quality of CSR information disclosure. In other words, the positive relationship suggests that an independent board increases the disclosure quality of CSR information. The positive and significant effect of board independence on CSRDQ is consistent with extant literature (Erin et al., 2022; Odoemelam & Okafor, 2018; Ofoegbu et al., 2018). Odoemelam and Okafor (2018) conclude that a reasonable number of independent directors on the board increases the quality of sustainability disclosure. Similarly, Ofoegbu et al. (2018) recorded a positive and significant association between board independence and corporate sustainability disclosures. The results agree with the premise of the agency and stakeholder theories regarding the reduction of information asymmetry and meeting the information needs of stakeholders in the bid to legitimize firm operations (Fama & Jensen, 1983; Freeman et al., 2004; Freeman, 1984; Suchman, 1995).

Similarly, the regression result shows a significant and positive effect of board size on CSRDQ. This is an indication that H2 is rejected, implying that a larger board size positively influences the quality of CSR disclosures. This finding is in tandem with previous results (Akbas, 2016; Erin et al., 2022; Haniffa & Cooke, 2005; Ofoegbu et al., 2018; Osazuwa et al., 2017) that board size increases the quality of CSR and sustainability disclosures. The results equally support the assumptions of the applicable theories (agency and stakeholder) regarding the reduction of information asymmetry and meeting the information needs of stakeholders in the bid to legitimize firm operations via sustainability practices (Fama & Jensen, 1983; Freeman, 1984).

In the same vein, the regression result shows a negatively significant relationship between board meetings and CSRDQ. This revealed that H3 is rejected, suggesting that board meeting decreases the quality of CSR disclosures. The negative relationship between board meetings and CSRDQ agrees with the finding of Osazuwa et al. (2017), while in disagreement with the result of Ofoegbu et al. (2018). This result equally contradicts the assumption of the agency theory. This indicates that studies relating to board meetings and CSR reporting are inconclusive.

5. Conclusion, Implications, and Limitations

5.1 Conclusion

The study contributes to the growing literature on corporate social responsibility disclosure quality (CSRDQ) in emerging markets by examining how board structure influences disclosure practices among listed firms in Nigeria. Using a longitudinal dataset of 498 firm-year observations from 100 firms, the results show a modest but encouraging improvement in CSR disclosure quality over the study period. Empirically, board independence and board size exhibit significant positive relationships with CSRDQ, indicating that stronger board monitoring and broader board expertise enhance the credibility and depth of sustainability reporting. Conversely, board meetings demonstrate a significant negative association with CSRDQ, suggesting that increased meeting frequency does not necessarily translate into better disclosure outcomes and may reflect inefficiencies or symbolic governance practices. Consequently, the findings reinforce the relevance of governance mechanisms in shaping CSR reporting behaviour in Nigeria while highlighting areas where governance effectiveness remains uneven.

5.2 Implications

5.2.1 Practical Implications

The findings provide useful insights for regulators, corporate boards, investors, and other stakeholders in Nigeria and similar emerging economies. For regulators such as the Nigerian Exchange and financial reporting authorities, the positive role of board independence and board size underscores the need to strengthen and enforce corporate governance codes that emphasize independent directorship and optimal board composition. Firms should prioritize appointing competent independent directors and maintaining adequately sized boards to enhance transparency and stakeholder confidence in sustainability reporting. For board members and management, the negative effect of board meetings signals the need to improve the quality rather than the frequency of meetings, ensuring that CSR and sustainability issues receive substantive attention instead of routine or compliance-driven discussion. Investors and analysts may also use board structure characteristics as governance signals when assessing the credibility of firms' CSR disclosures.

5.2.2 Theoretical Implications

The study extends the application of agency and stakeholder theories within the context of CSR disclosure quality in an emerging market. The positive effects of board independence and board size provide empirical support for agency theory's monitoring argument and stakeholder theory's emphasis on accountability to diverse stakeholder groups. However, the negative association between board meetings and CSRDQ challenges the conventional agency expectation that more intensive board activity improves oversight. This inconsistency suggests that the effectiveness of board processes may depend more on meeting quality, expertise, and agenda focus than on frequency alone. Consequently, the study refines existing governance–CSR literature by indicating that not all board activity proxies uniformly enhance disclosure quality, particularly in developing institutional environments such as Nigeria.

5.3 Limitations of the Study

Despite its contributions, the study has several limitations that should guide interpretation and future research. First, the sample is limited to 100 listed Nigerian firms, which may constrain the generalizability of the findings to unlisted firms or other emerging economies. Second, the measurement of CSRDQ relies on content analysis, which, although widely used, may involve subjective judgment and potential measurement bias. Third, the study focuses only on selected board attributes (independence, size, and meetings) and does not incorporate other potentially relevant governance variables such as board gender diversity, expertise, ownership structure, or audit committee characteristics. Fourth, possible endogeneity issues—such as reverse causality between governance structure and disclosure quality—may not be fully eliminated. Finally, the Nigerian institutional environment is evolving, so the observed relationships may change as sustainability reporting regulations and governance practices mature. Future research may address these limitations by expanding the sample scope, employing alternative CSRDQ measures, incorporating additional governance mechanisms, and applying more robust econometric techniques to better capture causal relationships.

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