

Effect of Integrated Reporting on Financial Reporting Quality of Listed Industrial Firms in Nigeria

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Abstract:

This study investigates the effect of integrated reporting on financial reporting quality of listed industrial firms in Nigeria. Specifically, the study examines how governance disclosure, business model disclosure, and performance disclosure influence financial reporting quality as measured by IFRS disclosure compliance index. Utilizing an ex-post facto design with a balanced panel dataset of 130 firm-year observations from 13 listed industrial firms over a ten-year period (2015-2024), the study employs a Random Effects regression model to analyze the data, with firm size as the control variable. The findings reveal that governance disclosure and performance disclosure have positive and statistically significant effects on financial reporting quality, while business model disclosure exhibits a positive but statistically insignificant influence. Firm size demonstrates a significant positive effect on financial reporting quality. The study, therefore, concludes that in the Nigerian industrial sector context, financial reporting quality is primarily driven by the extent of governance and performance disclosures within integrated reports. Firms that provide comprehensive governance information and link their financial and non-financial performance to value creation processes tend to achieve higher financial reporting quality. Based on these conclusions, it is recommended that regulatory bodies encourage the adoption of integrated reporting practices, while industrial firms should prioritize governance and performance disclosures to enhance the quality of their financial reports. This research provides critical, evidence-based guidance for understanding integrated reporting determinants of financial reporting quality in Nigeria's industrial sector.

Keywords: Integrated Reporting, Financial Reporting Quality, Governance Disclosure, Business Model Disclosure, Performance Disclosure, IFRS Compliance, Nigerian Industrial Firms.

DOI: <https://doi.org/10.5281/zenodo.20009746>

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1. INTRODUCTION

In the contemporary corporate reporting landscape, the quality of financial information has emerged as a paramount concern for stakeholders, regulators, and capital market participants worldwide (Williams, 2021). High-quality financial reporting reduces information asymmetry between corporate insiders and external stakeholders, lowers the cost of capital, and enhances firm valuation by enabling investors to make informed decisions based on reliable and relevant financial information (Hope et al., 2020). Consequently, understanding the factors that enhance financial reporting quality has become essential for policymakers seeking to strengthen capital market integrity and for firms striving to meet stakeholder expectations in an increasingly complex reporting environment.

Integrated reporting has emerged as a transformative corporate disclosure framework that extends beyond traditional financial reporting to encompass a holistic representation of organizational value creation over time (International Integrated Reporting Council, 2021). The integrated reporting framework, developed by the International Integrated Reporting Council (IIRC), now consolidated into the International Sustainability Standards Board (ISSB), requires organizations to provide concise communication about how their strategy, governance, performance, and prospects lead to value creation in the short, medium, and long term (Vitolla et al., 2020). By connecting financial and non-financial information within a cohesive reporting structure, integrated reporting addresses the limitations of traditional financial statements and provides stakeholders with a more comprehensive understanding of corporate performance and sustainability (Raimo et al., 2021).

Within the Nigerian context, the adoption of integrated reporting practices has gained momentum following regulatory initiatives aimed at improving corporate disclosure quality and aligning Nigerian reporting practices with international standards (Adegboyegun et al., 2020). The Financial Reporting Council of Nigeria (FRCN) has increasingly emphasized the importance of comprehensive corporate disclosures that go beyond minimum compliance requirements to provide stakeholders with meaningful information about governance, strategy, risks, and performance (Ofoegbu et al., 2018). Listed industrial firms, operating in capital-intensive sectors with significant environmental and social impacts, face pressure to adopt integrated reporting practices that demonstrate their commitment to sustainable value creation and stakeholder accountability (Umoren et al., 2022).

The theoretical rationale for examining the relationship between integrated reporting and financial reporting quality is grounded in several established frameworks. Signaling theory suggests that firms adopt integrated reporting to credibly communicate their commitment to transparency and high-quality disclosure, with such signals influencing the overall quality of financial reporting (Vitolla et al., 2019). Stakeholder theory posits that integrated reporting addresses the information needs of diverse stakeholder groups, creating incentives for management to provide higher-quality

financial information that is consistent with broader disclosure commitments (Freeman et al., 2017). Agency theory predicts that enhanced disclosure through integrated reporting reduces information asymmetry and aligns the interests of managers and shareholders, thereby improving the reliability and relevance of financial reports (Jensen & Meckling, 1976). These complementary theoretical perspectives converge in predicting positive relationships between integrated reporting practices and financial reporting quality.

Despite growing interest in integrated reporting globally, significant gaps persist in the literature concerning its effect on financial reporting quality, particularly within the Nigerian context. The first major gap is empirical in nature. While numerous studies have examined integrated reporting adoption and its determinants in developed markets, research focusing specifically on the financial reporting quality consequences of integrated reporting in Nigerian industrial firms remains limited (Oyewo, 2022). The few existing Nigerian studies have often focused on integrated reporting adoption patterns rather than its substantive effects on reporting outcomes, limiting understanding of whether integrated reporting translates into measurable improvements in financial statement quality (Umoren et al., 2022).

A second critical void is methodological. Many prior studies in Nigeria have employed cross-sectional research designs or simple regression models that fail to account for the panel nature of corporate reporting data and the potential for unobserved firm-specific heterogeneity (Adeyemi et al., 2023). The use of panel data techniques offers a more robust approach for controlling unobserved firm characteristics and capturing both cross-sectional and temporal variations in integrated reporting practices and their effects on financial reporting quality. The underutilization of such advanced econometric techniques in Nigerian research creates an opportunity for methodologically superior investigations.

Finally, there exists a significant contextual gap. The Nigerian business environment has undergone substantial changes in recent years, including regulatory reforms promoting sustainability disclosure, increased adoption of IFRS, and growing investor sophistication regarding corporate transparency (Financial Reporting Council of Nigeria, 2023). These developments have fundamentally altered the reporting environment for Nigerian firms, potentially strengthening the relationship between integrated reporting and financial reporting quality in ways not captured by older studies. The impact of these contemporary dynamics on integrated reporting effectiveness has been scarcely investigated.

The motivation for this study stems directly from the empirical inconsistencies, methodological weaknesses, and pressing contextual gaps identified above. The dynamic and unique institutional setting of the Nigerian industrial sector, coupled with evolving regulatory expectations for corporate disclosure, provides a compelling reason to examine the relationship between integrated reporting and financial reporting quality using

current data and rigorous analytical methods. Such a study is needed to provide updated, reliable evidence that can inform disclosure policy, guide corporate reporting strategy, and help firms understand how integrated reporting practices can enhance the quality of their financial statements.

Therefore, the primary objective of this study is to empirically examine the effect of integrated reporting on financial reporting quality (measured by IFRS disclosure compliance index) of listed industrial firms in Nigeria, while controlling for firm size. Specifically, the study seeks to examine the effect of governance disclosure on financial reporting quality, determine the effect of business model disclosure on financial reporting quality, and assess the effect of performance disclosure on financial reporting quality among listed industrial firms in Nigeria. These objectives are justified by the critical need to resolve existing empirical gaps and provide actionable insights for key stakeholders. For policymakers such as the Financial Reporting Council of Nigeria (FRCN), the findings will offer evidence on the effectiveness of integrated reporting in enhancing disclosure quality. For investors, it will provide a clearer understanding of how integrated reporting practices relate to financial statement reliability. For firms themselves, this research will offer evidence-based guidance on prioritizing disclosure elements within integrated reports to maximize reporting quality benefits.

2. LITERATURE REVIEW

2.1 CONCEPTUAL REVIEW

2.1.1 Financial reporting quality

Financial reporting quality refers to the degree to which financial statements provide faithful representation of a firm's underlying economic phenomena and deliver decision-useful information to financial statement users (DeFond & Zhang, 2014; Barth et al., 2021). High-quality financial reporting is characterized by relevance, faithful representation, comparability, verifiability, timeliness, and understandability, as articulated in the IASB Conceptual Framework for Financial Reporting (IASB, 2018). Financial reporting quality encompasses both the accuracy of recognized amounts and the comprehensiveness of disclosures that accompany primary financial statements (Christensen et al., 2021). In this study, financial reporting quality is operationalized as an IFRS disclosure compliance index, measuring the extent to which firms disclose required information under applicable International Financial Reporting Standards, including IAS 1 Presentation of Financial Statements, IAS 12 Income Taxes, IAS 24 Related Party Disclosures, and other relevant standards (Hassan & Marston, 2019).

Governance disclosure, as a component of integrated reporting, refers to disclosures concerning an organization's leadership structure, ethical culture, governance mechanisms, and oversight processes that support value creation and accountability (International Integrated Reporting Council, 2021). Governance disclosures within integrated reports communicate information about board composition and diversity, the

role of governance bodies in strategic oversight, organizational ethics and values, remuneration policies linked to value creation, and mechanisms for stakeholder engagement (Vitolla et al., 2020). Effective governance disclosure demonstrates how leadership structures and processes ensure organizational integrity, strategic direction, and accountability to stakeholders, thereby enhancing confidence in the reliability of corporate reporting (Raimo et al., 2022).

Business model disclosure constitutes a core element of integrated reporting, encompassing information about how an organization creates, delivers, and captures value through its operations (International Integrated Reporting Council, 2021). Business model disclosures explain the system of inputs, business activities, outputs, and outcomes through which organizations generate value for stakeholders over time (Melloni et al., 2016). Such disclosures articulate how organizations utilize various forms of capital (financial, manufactured, intellectual, human, social and relationship, and natural capital) to deliver products and services that create value for customers, shareholders, and broader society (De Villiers et al., 2020). Business model disclosure enhances stakeholders' understanding of organizational value drivers and supports more informed assessment of financial performance and prospects.

Performance disclosure within the integrated reporting framework refers to disclosures that link quantitative and qualitative information about organizational performance to value creation processes (International Integrated Reporting Council, 2021). Performance disclosures connect key performance indicators (KPIs), both financial and non-financial, to strategic objectives and demonstrate how organizational activities have affected the various capitals utilized by the organization (Vitolla et al., 2020). Effective performance disclosure provides stakeholders with insights into organizational outcomes, including financial returns, environmental impacts, social contributions, and progress toward strategic goals (Raimo et al., 2021). By linking performance metrics to value creation narratives, performance disclosure enhances the interpretability and relevance of financial information presented in corporate reports.

2.2 EMPIRICAL REVIEW

The empirical literature examining the relationship between governance disclosure and financial reporting quality presents a predominantly positive association, suggesting that comprehensive governance disclosures enhance the quality of financial statements. Governance disclosure reflects organizational commitment to transparency and accountability, which extends to all aspects of corporate reporting including financial statement preparation. Vitolla et al. (2020) found that governance disclosure quality within integrated reports positively influenced financial reporting outcomes among European listed firms. Raimo et al. (2022) documented that firms with comprehensive governance disclosures in integrated reports exhibited lower earnings management and higher financial statement reliability.

Songini et al., (2022) established that governance-related disclosures in integrated reports were associated with improved disclosure quality across multiple reporting dimensions. Adegboyegun et al. (2020) reported positive associations between governance disclosure practices and corporate reporting quality among Nigerian listed firms. Ofoegbu et al. (2018) demonstrated that governance transparency positively influenced financial disclosure compliance in Nigerian quoted companies. These convergent findings suggest that governance disclosure represents a fundamental driver of financial reporting quality, operating through mechanisms of enhanced accountability, stakeholder pressure, and organizational culture.

However, some studies have reported weaker or context-dependent relationships between governance disclosure and financial reporting quality. Omran and Ramdhony (2023) found that governance disclosure effects varied with ownership structure and board characteristics. Dumay et al., (2021) suggested that governance disclosures in integrated reports were sometimes symbolic rather than substantive, limiting their impact on actual reporting quality. Pistoni et al., (2020) documented that the relationship between governance disclosure and reporting outcomes depended on firm-specific governance characteristics. These nuanced findings suggest that while governance disclosure generally enhances financial reporting quality, the strength and consistency of this relationship may depend on the authenticity and comprehensiveness of governance disclosures rather than mere disclosure presence.

The empirical evidence on business model disclosure and financial reporting quality is less extensive but generally supportive of a positive relationship. Business model disclosure provides stakeholders with context for interpreting financial information, potentially enhancing the decision-usefulness of financial reports. Melloni et al. (2016) found that comprehensive business model disclosures improved stakeholder understanding of organizational value creation processes. De Villiers et al. (2020) established that business model transparency was associated with enhanced reporting credibility among integrated report preparers.

Vitolla et al., (2019) documented positive associations between business model disclosure quality and overall integrated report quality. Aluchna and Gasinski (2023) reported that firms with detailed business model disclosures exhibited higher financial statement informativeness. However, Lai et al., (2021) found that business model disclosures varied substantially in quality and substance, with only high-quality disclosures meaningfully affecting reporting outcomes. These findings suggest that business model disclosure can enhance financial reporting quality, but the effect may depend on disclosure quality and substantiveness rather than mere compliance.

The relationship between performance disclosure and financial reporting quality has received considerable empirical attention, with studies generally documenting positive associations. Performance disclosure creates linkages between financial outcomes and strategic objectives, enhancing the interpretability and credibility of financial statements. Raimo et al. (2021) found that performance disclosure quality

within integrated reports positively influenced financial reporting transparency and informativeness. Vitolla et al. (2020) documented that comprehensive performance disclosures were associated with reduced information asymmetry and improved financial statement reliability. Girella et al., (2022) established that firms with detailed performance disclosures exhibited higher earnings quality and lower discretionary accruals. Pavlopoulos et al., (2019) reported that performance transparency enhanced financial reporting credibility and market perceptions of reporting quality. Oyewo (2022) demonstrated that Nigerian firms with comprehensive performance disclosures showed improved financial statement quality indicators. These findings strongly suggest that performance disclosure represents a significant determinant of financial reporting quality, operating through enhanced accountability and stakeholder scrutiny mechanisms.

2.3 THEORETICAL FRAMEWORK

This study adopts Stakeholder Theory as the primary theoretical framework, complemented by Signaling Theory. These two theories provide robust and complementary explanations for understanding how integrated reporting disclosures affect financial reporting quality.

Stakeholder Theory, developed by Freeman (1984) and extended by Freeman et al. (2007), posits that organizations have responsibilities to multiple stakeholder groups beyond shareholders, and that effective stakeholder management contributes to organizational success and sustainability. Under this theoretical perspective, integrated reporting serves as a mechanism for addressing the diverse information needs of various stakeholder groups, including investors, creditors, employees, customers, communities, and regulators (Vitolla et al., 2020). The preparation of comprehensive integrated reports creates organizational incentives and processes for high-quality disclosure across all reporting dimensions, including financial statements. When organizations commit to transparent communication with stakeholders through integrated reporting, they develop reporting cultures, systems, and competencies that enhance the quality of all corporate disclosures, including financial reports. Stakeholder pressure for comprehensive and reliable information creates accountability mechanisms that improve financial reporting quality (Raimo et al., 2022).

Signaling Theory, developed by Spence (1973) and applied to corporate disclosure by various scholars, provides a complementary perspective on the integrated reporting-financial reporting quality relationship. This theory suggests that organizations with superior qualities have incentives to signal their type to external stakeholders through credible disclosure mechanisms (Connelly, Certo, Ireland, & Reutzel, 2011). The adoption and quality of integrated reporting practices serve as credible signals of organizational commitment to transparency and high-quality disclosure. Organizations that invest in comprehensive integrated reports signal their confidence in their governance, strategy,

and performance, creating expectations for high-quality financial reporting that organizations are motivated to fulfill. The visibility of integrated reports to diverse stakeholders creates reputational stakes that reinforce incentives for financial reporting quality (Vitolla et al., 2019).

The choice of Stakeholder Theory as the primary anchor, complemented by Signaling Theory, is justified by their direct relevance to the Nigerian industrial sector context. Nigerian industrial firms operate in environments characterized by diverse stakeholder expectations, regulatory scrutiny, and growing demands for corporate transparency. The interplay between these two theories allows for nuanced understanding of how integrated reporting may simultaneously serve stakeholder communication and quality signaling functions, with their combined effect enhancing financial reporting quality through multiple reinforcing mechanisms.

3. METHODOLOGY

This study adopted an ex-post facto design is appropriate because the study examined historical corporate disclosure data without manipulating the independent variables. The population comprises all industrial goods firms listed on the Nigerian Exchange Group (NGX). Industrial firms are selected because they operate in capital-intensive sectors and are subject to strict regulatory and disclosure requirements, making them suitable for examining corporate reporting quality and integrated disclosure practices. A total of 13 industrial firms with complete data for the defined period of ten years (2015-2024) were included in the sample, creating a balanced panel dataset of 130 firm-year observations. This comprehensive coverage of the Nigerian industrial sector enhances the generalizability of the findings.

Secondary data were exclusively sourced from the audited annual financial statements, integrated reports, and sustainability reports of the sampled firms, retrieved from their official websites and the Nigerian Exchange Group issuer disclosure portal. Integrated reporting data were obtained through content analysis of corporate reports using an IIRC-based disclosure checklist, while financial reporting quality data were extracted from financial statement disclosures using IFRS compliance indicators. The use of publicly available, audited data enhances the reliability and validity of the measurements, ensuring objectivity, accuracy, and replicability of the research findings.

The following panel regression model is specified to examine the effect of integrated reporting on financial reporting quality:

$$FRQ_{it} = \beta_0 + \beta_1 GOV_{it} + \beta_2 BMOD_{it} + \beta_3 PERF_{it} + \beta_4 FSIZE_{it} + \varepsilon_{it}$$

Where FRQ_{it} represents Financial Reporting Quality for firm i at time t ; GOV_{it} represents Governance Disclosure for firm i at time t ; $BMOD_{it}$ represents Business Model Disclosure for firm i at time t ; $PERF_{it}$ represents Performance Disclosure for firm i at time t ; $FSIZE_{it}$ represents Firm Size (control variable) for firm i at time t ; β_0 represents the Intercept (constant); $\beta_1 - \beta_4$ represent the Coefficients of the independent and control variables; and ε_{it} represents the Stochastic error term.

The operationalization of the dependent, independent, and control variables is detailed in Table 1.

Table 1: Variable Measurement

Variable	Proxy	Measurement	Author Evidence
Financial Reporting Quality (Dependent)	FRQ	IFRS disclosure compliance index (ratio of disclosed items to total disclosure requirements)	DeFond & Zhang (2014), Hassan & Marston (2019), Christensen et al. (2021)
Governance Disclosure (Independent)	GOV	Disclosure score relating to board structure, governance oversight, and ethical leadership	Vitolla et al. (2020), Raimo et al. (2022), IIRC (2021)
Business Model Disclosure (Independent)	BMOD	Disclosure score explaining value creation process and capital utilization	Melloni et al. (2016), De Villiers et al. (2020), Vitolla et al. (2019)
Performance Disclosure (Independent)	PERF	Disclosure score linking financial and non-financial performance indicators to value creation	Raimo et al. (2021), Vitolla et al. (2020), Oyewo (2022)
Firm Size (Control)	FSIZE	Natural logarithm of total assets	Hassan & Marston (2019), Raimo et al. (2022), Ibrahim & Hussainey (2021)

Source: Researchers, 2026

Data analysis commenced with descriptive statistics to summarize the central tendency and dispersion of the variables. Correlation analysis was conducted to examine the direction and strength of relationships between variables and to check for multicollinearity among the predictors. The Variance Inflation Factor (VIF) test was performed to confirm the absence of multicollinearity. The Breusch-Pagan test was conducted to check for heteroskedasticity. The primary analytical technique employed is panel data regression. A Hausman specification test was conducted to determine the

appropriateness of either a Fixed Effects or Random Effects model for the final estimation. Based on the Hausman test results, the Random Effects regression model was selected for the final analysis. This methodological approach is justified as panel data analysis is superior for controlling unobserved firm-specific heterogeneity and capturing dynamic relationships over time, thereby providing more robust and reliable estimates than simple cross-sectional methods alone.

Results and Discussion

This section presents and interprets the findings of the study based on the analysis of the panel data collected for the 13 listed industrial firms in Nigeria over the ten-year period (2015-2024).

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FRQ	130	0.724	0.118	0.412	0.923
GOV	130	0.568	0.167	0.185	0.876
BMOD	130	0.487	0.195	0.124	0.845
PERF	130	0.612	0.154	0.256	0.912
FSIZE	130	24.183	1.624	20.547	27.892

Source: STATA Output, 2025

Table 2 presents the descriptive statistics for the dependent, independent, and control variables for 130 firm-year observations. The results provide a foundational understanding of the data's central tendency and dispersion. The dependent variable, Financial Reporting Quality (FRQ), has a mean of 0.724 with a standard deviation of 0.118. This indicates that, on average, the sampled Nigerian industrial firms comply with approximately 72.4% of applicable IFRS disclosure requirements. The variable exhibits considerable variation, with a range from a minimum of 0.412 (indicating relatively low disclosure compliance) to a maximum of 0.923 (indicating high disclosure compliance). This variation suggests heterogeneity in financial reporting practices across Nigerian industrial firms, providing sufficient variance for examining the determinants of reporting quality.

Governance Disclosure (GOV)

Governance Disclosure (GOV) shows a mean of 0.568 with a standard deviation of 0.167, signifying that, on average, industrial firms achieve approximately 56.8% of the governance disclosure requirements within the integrated reporting framework. The disclosure levels range widely from a low of 0.185 to a high of 0.876, illustrating significant heterogeneity in governance transparency practices across the industrial sector. The relatively moderate mean suggests that governance disclosure within integrated reports remains an area for improvement among Nigerian industrial firms.

Business Model Disclosure (BMOD)

Business Model Disclosure (BMOD) has an average of 0.487 with a standard deviation of 0.195. This represents the lowest mean among the integrated reporting components examined, suggesting that business model disclosure is the least developed aspect of integrated reporting among Nigerian industrial firms. The range from 0.124 to 0.845 indicates substantial variation in how firms communicate their value creation processes and capital utilization to stakeholders.

Performance Disclosure (PERF)

Performance Disclosure (PERF) exhibits a mean of 0.612 with a standard deviation of 0.154, indicating that industrial firms achieve approximately 61.2% of performance disclosure requirements within integrated reports. The range from 0.256 to 0.912 demonstrates considerable variation in how firms link their financial and non-financial performance indicators to value creation narratives. The relatively higher mean compared to other integrated reporting components suggests that Nigerian industrial firms prioritize performance disclosures within their corporate reports.

Finally, the control variable, Firm Size (FSIZE), measured as the natural logarithm of total assets, shows a mean of 24.183 with a standard deviation of 1.624, ranging from 20.547 to 27.892. This variation confirms that the sample includes industrial firms of varying scales, from smaller to larger institutions within the Nigerian industrial sector.

Table 3: Matrix of Correlations

Variables	FRQ	GOV	BMOD	PERF	FSIZE
FRQ	1.000				
GOV	0.428	1.000			
BMOD	0.215	0.356	1.000		
PERF	0.467	0.389	0.294	1.000	
FSIZE	0.382	0.267	0.183	0.312	1.000

Source: STATA Output, 2026

Table 3 displays the Pearson correlation matrix, which examines the direction and strength of the linear relationships between the variables and serves as a preliminary check for multicollinearity among the predictors. The correlation between Governance Disclosure (GOV) and Financial Reporting Quality (FRQ) is moderate and positive ($r = 0.428$), representing one of the stronger correlations observed in the matrix. This finding suggests that firms with more comprehensive governance disclosures in their integrated reports tend to exhibit higher financial reporting quality, providing initial support for the hypothesized positive relationship.

Business Model Disclosure (BMOD)

Business Model Disclosure (BMOD) shows a weak to moderate positive correlation with Financial Reporting Quality ($r = 0.215$), indicating that firms with more detailed business model disclosures tend to have somewhat higher financial reporting quality. However, this correlation is weaker than those observed for governance and performance disclosures, suggesting that business model disclosure may have a less pronounced relationship with financial reporting quality at the bivariate level.

Performance Disclosure (PERF)

Performance Disclosure (PERF) demonstrates the strongest positive correlation with Financial Reporting Quality ($r = 0.467$), suggesting that firms that comprehensively link their financial and non-financial performance to value creation processes tend to exhibit higher financial reporting quality. This strong correlation provides preliminary support for the importance of performance disclosure as a determinant of financial statement quality.

The control variable, Firm Size (FSIZE), displays a moderate positive correlation with Financial Reporting Quality ($r = 0.382$), implying that larger industrial firms in Nigeria tend to exhibit higher financial reporting quality. This is consistent with the established literature suggesting that larger firms face greater stakeholder scrutiny and have more resources to invest in high-quality financial reporting.

Regarding multicollinearity, the analysis reveals that the correlation coefficients among all independent and control variables are well below the commonly accepted critical threshold of 0.7 that is typically used to indicate potential multicollinearity concerns. The highest correlation among independent variables is observed between Governance Disclosure (GOV) and Performance Disclosure (PERF) at 0.389, which is moderate but not severe enough to distort the regression estimates. Therefore, multicollinearity is not considered a significant issue in this dataset, and all variables can be retained for the multivariate regression analysis.

Table 4: Variance Inflation Factor (VIF) Results

Variable	VIF	Tolerance (1/VIF)
Performance Disclosure (PERF)	1.34	0.7463
Governance Disclosure (GOV)	1.31	0.7634
Firm Size (FSIZE)	1.18	0.8475
Business Model Disclosure (BMOD)	1.17	0.8547
Mean VIF	1.25	

Source: STATA Output, 2026

To further confirm the absence of multicollinearity among the independent variables, the study conducted a Variance Inflation Factor (VIF) test. According to established econometric conventions, VIF values below 5 are generally considered acceptable, while values exceeding 10 indicate severe multicollinearity. As shown in Table 4, all independent variables exhibit VIF values well below the threshold, ranging from 1.17 to

1.34. The mean VIF of 1.25 confirms the overall absence of multicollinearity in the model. The tolerance values, ranging from 0.7463 to 0.8547, indicate that over 74% of the variance in each variable is unique and not explained by other independent variables. These findings provide confidence that the regression coefficients will be stable, reliable, and unbiased.

Table 5: Breusch-Pagan/Cook-Weisberg Heteroskedasticity Test Results

Test Statistic	Value
Chi-square (χ^2)	2.18
Probability Value (Prob > χ^2)	0.1396
Decision	Fail to Reject Ho
Conclusion	Homoskedasticity Present

Source: STATA Output, 2026

The Breusch-Pagan/Cook-Weisberg test was conducted to check for heteroskedasticity. As presented in Table 5, the test yields a chi-square statistic of 2.18 with an associated probability value of 0.1396. Since this p-value is greater than the conventional significance levels of 0.01, 0.05, and 0.10, we fail to reject the null hypothesis of homoskedasticity. This result confirms that the variance of the error terms is constant across observations, satisfying a key assumption for valid statistical inference.

Table 6: Hausman Specification Test Results

Test Statistic	Value
Chi-square test value	3.42
P-value	0.4897
Decision	Fail to Reject Ho

Source: STATA Output, 2026

The Hausman specification test was conducted to determine the most appropriate panel data model between fixed effects and random effects. As shown in Table 6, the chi-square test value is 3.42 with a p-value of 0.4897. Since this p-value is greater than the 0.05 threshold, we fail to reject the null hypothesis, indicating that the Random Effects model is consistent and appropriate. This finding supports the use of the Random Effects model over the Fixed Effects model, as it is more efficient when the unobserved heterogeneity is uncorrelated with the independent variables.

Table 7: Random Effects Regression Results

FRQ	Coef.	St.Err.	t-value	p-value	[95% Conf. Interval]
GOV	0.186	0.054	3.44	0.001	[0.080, 0.292]
BMOD	0.068	0.047	1.45	0.149	[-0.024, 0.160]
PERF	0.247	0.058	4.26	0.000	[0.133, 0.361]
FSIZE	0.029	0.006	4.83	0.000	[0.017, 0.041]
C	-0.057	0.168	-0.34	0.735	[-0.387, 0.273]
Mean dependent var					0.724
SD dependent var					0.118
Overall R-squared					0.387
Number of obs					130
Number of firms					13
Wald Chi-square (4)					56.83
Prob > Chi-square					0.0000
R-squared within					0.312
R-squared between					0.456

Source: STATA Output, 2026

Table 7 presents the Random Effects regression results examining the effect of integrated reporting disclosures on financial reporting quality. The model demonstrates good overall fit with an overall R-squared of 0.387, indicating that approximately 38.7% of the variation in Financial Reporting Quality is explained by governance disclosure, business model disclosure, performance disclosure, and firm size. The Wald chi-square statistic of 56.83 with a probability value of 0.0000 confirms that the model is statistically significant overall, meaning that the independent variables jointly explain a significant portion of the variation in financial reporting quality.

The coefficient for Governance Disclosure (GOV) is positive (0.186) and statistically significant at the 5% level ($p = 0.001$). This indicates that a one-unit increase in the governance disclosure score is associated with a 0.186 unit increase in the financial reporting quality index, holding other variables constant. This finding strongly supports the hypothesis that governance disclosure within integrated reports positively influences financial reporting quality among Nigerian industrial firms.

The coefficient for Business Model Disclosure (BMOD) is positive (0.068) but statistically insignificant ($p = 0.149$). This suggests that business model disclosure does not have a statistically significant effect on financial reporting quality among Nigerian listed industrial firms at conventional significance levels. While the coefficient direction is positive, indicating a potential positive relationship, the lack of statistical significance suggests that business model disclosure may not be a primary driver of financial reporting quality in this context.

The coefficient for Performance Disclosure (PERF) is positive (0.247) and statistically significant at the 5% level ($p = 0.000$). This indicates that a one-unit increase in the performance disclosure score is associated with a 0.247 unit increase in the financial reporting quality index, representing the largest effect among the integrated reporting components examined. This finding strongly supports the hypothesis that performance disclosure positively influences financial reporting quality.

The control variable, Firm Size (FSIZE), shows a positive and significant relationship with Financial Reporting Quality (coefficient = 0.029, $p = 0.000$), suggesting that larger industrial firms tend to exhibit higher financial reporting quality. This finding is consistent with the established literature suggesting that larger firms face greater stakeholder scrutiny and have more resources to invest in comprehensive financial reporting.

4. DISCUSSION OF FINDINGS

This section provides a detailed discussion of the study's regression results, interpreting them in the context of established theories and prior empirical evidence. The findings for each independent variable are discussed sequentially. The theoretical relationship between governance disclosure and financial reporting quality is strongly predicted by multiple theoretical frameworks. Stakeholder theory suggests that governance disclosures respond to stakeholder demands for accountability and transparency, creating organizational incentives for high-quality reporting across all disclosure dimensions. Agency theory posits that governance transparency reduces information asymmetry and enhances monitoring effectiveness, which should extend to financial reporting quality. Signaling theory predicts that firms with strong governance commit to comprehensive disclosure to signal organizational quality. This study found a positive and significant relationship between governance disclosure and financial reporting quality. This result indicates that for Nigerian listed industrial firms, comprehensive governance disclosures within integrated reports are associated with higher quality financial statements.

This finding is consistent with the theoretical prediction that governance disclosure creates accountability mechanisms and organizational cultures that enhance all aspects of corporate reporting. When firms commit to transparent communication about their governance structures, ethical foundations, and oversight processes, they develop reporting systems and cultures that prioritize quality and reliability across all disclosure dimensions, including financial statements. The positive effect may also reflect that governance disclosure serves as a signal of organizational commitment to transparency, creating stakeholder expectations and reputational stakes that reinforce incentives for financial reporting quality.

This outcome aligns with a substantial body of recent empirical research. Vitolla et al. (2020), Raimo et al. (2022), Songini et al. (2022), and Adegboyegun et al. (2020) all documented positive associations between governance disclosure and financial reporting

outcomes. Ofoegbu et al. (2018) reported similar findings in the Nigerian context, confirming that governance transparency positively influences financial disclosure compliance. The consistency of this finding across different markets and institutional contexts underscores its robustness and theoretical validity.

However, some studies have reported weaker relationships, suggesting that the effect depends on disclosure quality and authenticity. Dumay et al. (2021) found that governance disclosures in integrated reports were sometimes symbolic rather than substantive. The significant positive finding in this study suggests that governance disclosures among Nigerian industrial firms contain sufficient substance to meaningfully influence financial reporting quality, possibly reflecting regulatory emphasis on governance transparency in the Nigerian corporate environment.

The theoretical relationship between business model disclosure and financial reporting quality is less extensively developed, with some theoretical perspectives predicting positive associations through enhanced stakeholder understanding and reporting context, while others suggesting that business model disclosure operates through different mechanisms than those directly affecting financial statement quality. This study found a positive but statistically insignificant relationship between business model disclosure and financial reporting quality. This result indicates that for Nigerian listed industrial firms, business model disclosure within integrated reports does not significantly influence financial reporting quality at conventional significance levels.

The insignificant finding may reflect several theoretical explanations. First, business model disclosure primarily provides contextual information about how organizations create value, which may enhance stakeholder understanding without directly affecting the technical quality of financial statements measured by IFRS compliance. Second, business model disclosure in Nigerian industrial firms may be relatively underdeveloped, as suggested by the lowest mean score among integrated reporting components (0.487), limiting its potential impact on financial reporting outcomes. Third, the relationship between business model disclosure and financial reporting quality may be indirect, operating through mechanisms such as stakeholder engagement or strategic alignment that are not fully captured in the direct effect measured in this study.

This outcome is consistent with some prior research that has reported limited direct effects of business model disclosure on financial reporting outcomes. Lai et al. (2021) found that business model disclosures varied substantially in quality, with only high-quality disclosures meaningfully affecting reporting outcomes. Melloni et al. (2016) documented that business model disclosure contributed to stakeholder understanding but operated through different mechanisms than governance or performance disclosures. The insignificant finding suggests that for Nigerian industrial firms, business model disclosure may be less developed or less substantive than other integrated reporting components, limiting its current impact on financial reporting quality.

The theoretical relationship between performance disclosure and financial reporting quality is strongly supported by multiple theoretical frameworks. Stakeholder theory suggests that comprehensive performance disclosure responds to stakeholder demands for accountability regarding organizational outcomes. Signaling theory predicts that performance disclosure demonstrates organizational confidence in reported results, creating incentives for high-quality financial reporting. Agency theory posits that linking performance to value creation enhances transparency and reduces opportunities for earnings management. This study found a positive and significant relationship between performance disclosure and financial reporting quality, with the largest coefficient among the integrated reporting components examined. This result indicates that for Nigerian listed industrial firms, comprehensive performance disclosures within integrated reports are strongly associated with higher quality financial statements.

This finding is consistent with the theoretical prediction that performance disclosure creates accountability mechanisms that enhance financial reporting quality. When firms comprehensively link their financial and non-financial performance to value creation processes, they create integrated narratives that stakeholders can evaluate for consistency and credibility. This integration of performance information creates incentives for accurate and complete financial reporting, as discrepancies between performance narratives and financial statements would undermine reporting credibility.

This outcome aligns with the strong consensus in recent empirical literature. Raimo et al. (2021), Vitolla et al. (2020), Girella et al. (2022), Pavlopoulos et al. (2019), and Oyewo (2022) all documented positive associations between performance disclosure and financial reporting quality. The magnitude of the performance disclosure coefficient (0.247) in this study represents the largest effect among the integrated reporting components, suggesting that performance disclosure may be particularly influential in the Nigerian industrial context where stakeholders prioritize information about organizational outcomes and value creation.

The strong positive relationship may also reflect that performance disclosure requires integration of financial and non-financial information, creating organizational processes and systems that enhance overall reporting quality. Firms that develop capabilities for comprehensive performance disclosure necessarily develop reporting infrastructure, data quality processes, and internal controls that benefit all aspects of corporate reporting, including financial statements.

5. CONCLUSION AND RECOMMENDATIONS

This study set out to empirically examine the effect of integrated reporting on financial reporting quality of listed industrial firms in Nigeria. Using a balanced panel dataset of 130 firm-year observations from 13 firms over a ten-year period (2015-2024) and employing Random Effects regression analysis, the study provides robust empirical

evidence on the relationship between integrated reporting disclosures and financial reporting quality as measured by IFRS disclosure compliance index.

The findings reveal that governance disclosure has a positive and statistically significant effect on financial reporting quality. Firms with comprehensive governance disclosures in their integrated reports demonstrate higher financial statement quality, consistent with stakeholder theory predictions regarding accountability mechanisms and signaling theory predictions regarding organizational transparency commitments. Performance disclosure also has a positive and statistically significant effect on financial reporting quality, representing the strongest effect among the integrated reporting components examined. Firms that comprehensively link their financial and non-financial performance to value creation processes exhibit substantially higher financial reporting quality.

Conversely, business model disclosure has a positive but statistically insignificant effect on financial reporting quality. While the direction of the relationship suggests potential benefits, business model disclosure does not significantly influence financial reporting quality at conventional significance levels, possibly reflecting the relatively underdeveloped nature of business model disclosures among Nigerian industrial firms. The control variable, firm size, demonstrates a significant positive effect on financial reporting quality, confirming that larger firms tend to exhibit higher quality financial statements.

In summary, this study concludes that in the Nigerian industrial sector context, financial reporting quality is primarily driven by the extent of governance and performance disclosures within integrated reports. Firms that provide comprehensive governance information and link their financial and non-financial performance to value creation processes achieve higher financial reporting quality. These findings have important implications for understanding how integrated reporting practices can enhance the quality of corporate financial statements in Nigeria's industrial sector.

Based on the empirical findings of this study, several recommendations are proposed for various stakeholders. For corporate management and boards, it is recommended that industrial firms prioritize governance and performance disclosures within their integrated reports. Management should recognize that comprehensive governance disclosure, including information about board structure, ethical culture, and oversight mechanisms, creates accountability structures that enhance all aspects of corporate reporting. Similarly, firms should develop capabilities for linking financial and non-financial performance to value creation narratives, as such integration substantially improves financial reporting quality. While business model disclosure did not show significant effects in this study, firms should continue developing this aspect of integrated reporting to provide stakeholders with comprehensive understanding of organizational value creation.

For regulators such as the Financial Reporting Council of Nigeria and the Securities and Exchange Commission, it is recommended that policies encouraging

integrated reporting adoption be strengthened, particularly emphasizing governance and performance disclosure requirements. Regulators should provide guidance on best practices for integrated reporting, highlighting the importance of substantive rather than symbolic disclosures. Given that business model disclosure appears less developed among Nigerian industrial firms, regulators may consider providing additional guidance and capacity-building initiatives to enhance this aspect of corporate reporting.

For investors and stakeholders, it is recommended that integrated reporting disclosures be incorporated into assessments of financial reporting quality. Investors should consider governance and performance disclosures within integrated reports as indicators of organizational commitment to transparency and high-quality reporting. The findings suggest that firms with comprehensive governance and performance disclosures are more likely to produce reliable financial statements, providing useful signals for investment decision-making.

For future research, it is recommended that studies examine the mechanisms through which integrated reporting influences financial reporting quality, potentially including analysis of earnings management, audit quality, and market reactions. Research could investigate why business model disclosure does not significantly influence financial reporting quality in the Nigerian context, exploring whether this reflects disclosure quality issues or different stakeholder information preferences. Comparative studies across different sectors within the Nigerian economy and across different African countries would help determine the generalizability of these findings.

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