Firm-Specific Characteristics and Intangible Assets Disclosures among Financial Services Quoted Companies in Nigeria

Iyoha, Agbonrha-Oghoye Imas*[1] and Muhammed, Jamiu Gavin[2]
[1] *Department of Accounting, Faculty of Management and Social Sciences, Edo State University Iyamho.*
Iyoha.agbonrha@edouniversity.edu.ng, +2347033226552
[2] *M.Sc. Scholar, Department of Accounting, Faculty of Management and Social Sciences, Edo State University* Iyamho, jami_jay2000@yahoo.com, +2348167188943

Abstract
This study examines the impact of firm-specific characteristics on intangible asset disclosures (IADs) among quoted firms listed on the Nigerian Exchange Group (NGX) from 2014 to 2023. Using panel regression analysis, the study investigates the influence of firm size, leverage, profitability, and firm age on the extent of intangible asset disclosure. The model results reveal an R-squared of 0.2769 and an adjusted R-squared of 0.1908, indicating that firm-specific variables explain approximately 27.7% of the variation in IAD. The F-statistic (3.2177, p = 0.0000) confirms the overall model's significance. Empirical findings show that firm size (β = -0.013469, p = 0.8106), leverage (β = 2.03E-07, p = 0.9997), profitability (β = -0.001392, p = 0.2842), and firm age (β = 0.001616, p = 0.6463) all exert statistically insignificant effects on IAD. These results suggest that variations in a firm's scale, capital structure, performance, or maturity do not significantly determine its disclosure of intangible assets. The insignificance of all tested variables contrasts with prior studies that reported significant relationships in other contexts, indicating that firm-specific factors may play a limited role in shaping disclosure behavior within Nigeria's institutional environment. The findings imply that governance mechanisms, ownership structure, and regulatory enforcement may be more influential drivers of transparency in intangible asset reporting. The study contributes to the growing body of literature on corporate disclosure by highlighting the contextual limitations of firm-specific determinants and emphasizing the need for stronger institutional frameworks to enhance disclosure quality in emerging markets.

Keywords: Firm-Specific Characteristics, Intangible Asset Disclosures, Nigerian Exchange Group

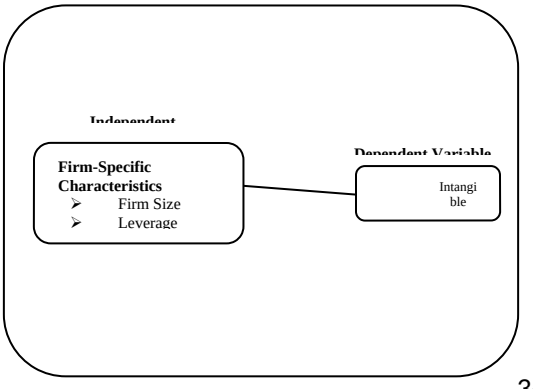
INTRODUCTION
The increasing relevance of intangible assets in modern corporate valuation has underscored the need to understand how firm-specific characteristics influence disclosure behavior. Intangible assetssuch as patents, trademarks, research and development investments, and brand valuerepresent essential drivers of competitive advantage in the contemporary business environment (Lev & Gu, 2019). However, despite their growing importance, these assets often remain underreported, particularly in emerging economies where regulatory enforcement and disclosure culture are still developing. The extent to which firms disclose intangible assets can vary significantly depending on intrinsic firm characteristics such as size, leverage, profitability, and age (Francis et al., 2020).

Firm size is a critical determinant of disclosure practices. Larger firms tend to exhibit greater transparency due to increased public scrutiny, stronger regulatory obligations, and higher demand for information from investors and analysts (Muttakin et al., 2021). Such firms typically possess more resources and technical capacity to prepare detailed reports on intangible assets. Conversely, smaller firms may face cost constraints or may deliberately withhold information to maintain a competitive advantage. Leverage also influences disclosure behavior; highly leveraged firms may disclose more information, including details about intangible assets, to reduce perceived risk and reassure creditors (Al-Gamrh et al., 2020). Profitability represents another key firm attribute affecting disclosure levels. Profitable firms often have incentives to signal superior performance through voluntary disclosure of intangibles, thereby enhancing market perception (Omisore et al., 2021).Firm age may also shape disclosure patterns through experience and institutional maturity. Older firms, with longer market presence and more established governance systems, are generally better equipped to comply with disclosure standards (Dada & Ghazali, 2023). They are also more likely to have developed standardized internal reporting systems, contributing to more consistent and transparent financial disclosures. In contrast, younger firms may still be developing their governance and accounting infrastructures, which can lead to disclosure deficiencies.

In Nigeria, the regulatory environment governing disclosure has improved following the adoption of IFRS and the oversight of the Financial Reporting Council of Nigeria (FRCN). Nevertheless, differences in firm-specific characteristics continue to produce considerable variation in disclosure practices (Adetunji et al., 2022). The limited empirical attention to these firm attributes within the Nigerian context creates a research gap in understanding how such internal factors affect the reporting of intangible assets. While studies have explored the relationship between corporate governance and financial performance, the influence of firm-specific features on intangible asset disclosure remains underexplored (Okoye et al., 2021).Therefore, this study examines how firm-specific characteristics, such as firm size, leverage, profitability, and age, affect the level of intangible asset disclosure among companies listed on the Nigerian Exchange Group. By analyzing these factors, the research aims to contribute to the broader literature on financial disclosure behaviour in emerging markets. It also offers practical insights to regulators and stakeholders seeking to enhance transparency, comparability, and investor confidence in Nigeria's corporate reporting landscape.

LITERATURE REVIEW
The review is structured into several sections, including an overview of Intangible asset disclosure, determinants of intangible asset disclosures, empirical studies, and a theoretical review.

Fig. 1: Conceptual framework



Source: Authors Compilations 2025

From Figure 1 above, intangible assets, such as intellectual property, patents, and goodwill, are non-physical resources that significantly contribute to a company's value and competitive advantage. These assets, though intangible, are crucial in financial reporting as they provide stakeholders with insights into the firm's future potential and overall financial health. However, the complexity of measuring intangible assets often results in challenges related to consistent and accurate disclosure. Reducing information asymmetry and raising the caliber of financial reports need the transparent disclosure of intangible assets. Businesses provide stakeholders with a clearer understanding of their strategic position and financial prospects by providing them with comprehensive information on intangible assets (Lev & Daum, 2020). Disclosures of transparent intangible assets are crucial for meeting the informational needs of various stakeholders, includingcreditors, investors, and regulators. While creditors evaluate the firm's financial soundness and potential risks, investors use these disclosures to make informed decisions about a company's long-term viability. Regulators also utilize this data to uphold corporate governance procedures and guarantee adherence to reporting standards. Inconsistent or incomplete disclosures may erode stakeholders' trust, making transparent reporting an essential part of maintaining corporate accountability (García-Sánchez et al., 2021). This chapter aims to investigate the key factors influencing intangible asset disclosures among companies listed on the NGX, with a focus on firm-specific characteristics.

Firm size is also considered a significant factor, as larger companies tend to be more visible and subject to greater public scrutiny, which may drive them to disclose more about their intangible assets (AbuGhazaleh et al., 2021). The level of leverage within a firm is another important variable, as highly leveraged companies often face pressure from creditors to be more transparent in their financial reporting, which could extend to intangible asset disclosures (Jin et al., 2020). Profitability may also influence the extent of disclosures, as more profitable firms might be motivated to showcase their intangible assets as part of signaling their growth potential to investors (Bhasin et al., 2021). Additionally, older firms, having more experience with financial reporting practices, may provide more extensive disclosures on intangible assets due to their longer history of managing these resources (Murugaboopathy, 2023). This chapter provides a comprehensive analysis of how these determinants influence the level and quality of intangible asset disclosures, thus contributing to a better understanding of financial reporting practices in Nigeria. The study proceeds in detail to explain the various concepts in the framework and how each of the determinants influences intangible assets disclosure practices.

Determinants of Intangible Asset Disclosures

The determinants of intangible asset disclosures (IAD) have been widely examined in accounting and corporate governance literature, as these factors significantly influence the transparency and comprehensiveness of firms' reporting practices. Intangible assets, such as patents, goodwill, trademarks, and intellectual property, are critical to a firm's competitive positioning; however, their disclosure often varies based on several firm-specific characteristics, including size, leverage, profitability, and age.

Firm size is one of the most consistent determinants of IAD. Larger firms, due to their complex operations, greater market visibility, and extensive stakeholder base, tend to disclose more comprehensive information about their intangible assets compared to smaller firms. This tendency arises from multiple factors, including stricter regulatory requirements, heightened investor expectations, and the need to maintain corporate reputation. Regulatory bodies impose more rigorous reporting standards on larger firms to ensure transparency and protect investors, prompting these firms to provide detailed disclosures of intangible assets (Chen & Zhang, 2019). From the perspective of signaling theory, large firms use such disclosures to signal strength, stability, and growth potential to the market, thereby enhancing credibility and attracting investors (Spence, 1973; Li & Zhang, 2021). Agency theory also explains this relationship, as larger firms face higher agency costs due to complex structures and thus use detailed disclosures to reduce information asymmetry between managers and shareholders (Jensen & Meckling, 1976). Empirical studies confirm that firm size positively correlates with the extent and quality of intangible asset disclosures (Chen et al., 2018; Xu & Zhao, 2020).

Leverage is another important determinant influencing IAD. Highly leveraged firms often face greater scrutiny from creditors and investors and, consequently, engage in more extensive disclosures to signal financial stability and reduce perceived risks. Through the lens of signaling theory, such firms disclose detailed information about intangible assets to convey confidence in their long-term viability and lower their cost of capital (Spence, 1973; Gul & Tsui, 2018). Agency theory further suggests that high leverage increases monitoring pressures, prompting firms to enhance disclosures as a means of mitigating agency conflicts and aligning managerial behavior with stakeholder interests (Jensen & Meckling, 1976; Beneish et al., 2020). From a resource-based perspective, leveraged firms possessing valuable intangible resources tend to highlight these assets to justify their financial structure and demonstrate their strategic potential (Barney, 1991; Li et al., 2021). Empirical findings support these theoretical arguments, indicating that firms with higher leverage are more likely to provide detailed and transparent disclosures of intangible assets, thereby managing stakeholder expectations (Wang et al., 2020).

Profitability also plays a vital role in shaping intangible asset disclosures. More profitable firms generally disclose more information, driven by their resources, visibility, and incentives to maintain investor confidence (Zhang, 2020; Chen & Huang, 2019). According to signaling theory, such firms use comprehensive intangible asset reporting as a signal of superior performance and competitive advantage (Spence, 1973; Brown & Hillegeist, 2021). From an agency perspective, profitable firms are motivated to enhance disclosure transparency to reduce agency costs and align management with shareholder interests (Jensen & Meckling, 1976; Lee & Yang, 2023). The resource-based view similarly suggests that profitability enables firms to showcase unique, valuable intangible resources that underpin sustained competitive advantage (Barney, 1991; Wright et al., 2019). Empirical studies have consistently shown a positive relationship between profitability and the extent of intangible asset disclosures, indicating that profitable firms use reporting as both a strategic and communicative tool (Smith & McElroy, 2021; Jones & Sullivan, 2022).

Firm age is another determinant that significantly influences disclosure practices. Older firms, shaped by long-term exposure to institutional norms and stakeholder expectations, generally exhibit greater transparency in their intangible asset reporting (Deephouse & Suchman, 2018). Institutional theory explains this by suggesting that mature firms conform to established reporting standards to maintain legitimacy, while signaling theory posits that older firms leverage disclosures to reinforce credibility and trust among stakeholders (Spence, 1973; Hossain & Hasan, 2019). The resource-based view adds that older firms, having accumulated more resources and capabilities over time, are better equipped to identify, value, and report intangible assets (Barney, 1991; Khan & Jang, 2020). Empirical studies consistently find that older firms tend to provide more detailed disclosures due to their experience, governance maturity, and adaptation to evolving regulatory frameworks (Yeo et al., 2021; Khan & Ali, 2022).

Overall, the determinants of intangible asset disclosures, firm size, leverage, profitability, and firm age,interact within a framework of theoretical and empirical insights. Larger, profitable, leveraged, and older firms generally demonstrate higher levels of transparency in intangible asset reporting, driven by a combination of regulatory, strategic, and governance motivations. These determinants collectively enhance understanding of how firms manage information asymmetry and signal value to the market, thereby promoting greater corporate accountability and investor confidence.

Empirical Review

Empirical research on intangible asset disclosures and intellectual capital reporting has expanded considerably in recent years, as scholars and practitioners have sought to understand the determinants of corporate disclosure behavior across diverse industries and institutional contexts. A substantial body of literature has examined firm-specific characteristicssuch as firm size, leverage, profitability, and firm ageas critical factors influencing the extent, quality, and transparency of intangible asset disclosures. These studies have drawn upon multiple theoretical frameworks, including Agency Theory, Signaling Theory, Resource-Based View (RBV), Stakeholder Theory, and Legitimacy Theory, each offering complementary explanations for firms' disclosure behaviour.

Firm Size and Intangible Asset Disclosure

Firm size has consistently emerged as one of the most significant predictors of disclosure practices. Johnson and Brown (2020), examining manufacturing firms in the United Kingdom, found that larger firms disclose more intangible assets, attributing this to heightened regulatory scrutiny and agency costs associated with public accountability. Similar results were reported by Ahmed and Gbadamosi (2021) in Nigeria, where firm size, proxied by market capitalization, was positively associated with the volume of intangible asset disclosures. Their findings, grounded in Signaling Theory, suggest that large firms use disclosure as a signal of credibility and sound management to investors and regulators.

Extending the analysis to the Asian context, Li and Chen (2022) demonstrated that firm size has a positive influence on disclosure practices in Chinese technology firms. Their study, guided by the Resource-Based View, emphasized that larger firms tend to disclose intangible assets to highlight internal capabilities and innovation potential. In emerging economies, Nwankwo and Williams (2020) provided corroborating evidence from Nigeria, noting that larger firms exhibit more extensive intellectual capital disclosures due to institutional pressures to conform to best practices. Similar evidence was provided by Santos and Costa (2019) in Portugal and Khalid and Yusuf (2023) in the UAE, both concluding that firm size enhances voluntary disclosure levels across European and Middle Eastern contexts. Collectively, these studies underscore that firm size not only reflects a firm's capacity to bear disclosure costs but also serves as a strategic tool for legitimacy and stakeholder confidence.

Despite this broad consensus, variations remain in the mechanisms underlying disclosure behavior. While Ayodele and Ibrahim (2021) found that firm size interacts positively with strong corporate governance to enhance disclosure practices in West Africa, Patel and Singh (2023) revealed that in India, firm size alone is an important but incomplete determinant, with market dynamics and ownership structures also influencing disclosure patterns. Overall, empirical evidence suggests a positive and significant relationship between firm size and the disclosure of intangible assets. However, contextual factors such as industry type, governance quality, and regulatory environment appear to moderate this relationship.

Leverage and Intangible Asset Disclosure

Another determinant that has attracted considerable attention is financial leverage. Several studies have explored how firms' debt structures affect their disclosure behavior, with results generally supporting a positive relationship. Smith and Lee (2019) found that highly leveraged UK manufacturing firms disclose more intangible assets to mitigate agency costs and assure creditors of their financial integrity. Brown and Garcia (2020) extended this reasoning through Signaling Theory, showing that leveraged Spanish firms disclose more intellectual capital information to signal creditworthiness and transparency to lenders. Similarly, Chen and Zhang (2021) reported that in Chinese technology firms, leverage enhances voluntary intangible asset disclosures, largely due to pressure from creditors and other external stakeholders.

Davis and Miller (2022) and Nguyen and Pham (2023) provided further support from Australia and Vietnam, respectively, confirming that firms with higher debt levels disclose more intangible assets as a strategy to maintain investor and creditor confidence. Lopez and Castillo (2020) and Kim and Park (2021) also observed similar patterns in Europe and South Korea, respectively, emphasizing that disclosure acts as a risk management mechanism in high-leverage contexts. Ahmed and Mohammed (2024), in their comparative study of African oil firms, found that leveraged companies tend to disclose more intangible assets to signal operational stability within capital-intensive industries. Taken together, these studies reinforce the argument that leverage has a positive influence on disclosure practices. However, the magnitude of this effect may depend on sectoral characteristics and the degree of market regulation.

Profitability and Intangible Asset Disclosure

Profitability has also been widely examined as a determinant of disclosure behaviour. Empirical evidence generally supports a positive association, as profitable firms tend to use disclosure as a signal of financial strength and sustainable value creation. Adekunle and James (2020) reported that profitability, proxied by Return on Assets (ROA), positively influences intangible asset disclosures among Nigerian listed firms, consistent with the predictions of Signaling Theory. Similarly, Wang and Li (2021) found that profitable Chinese manufacturing firms disclose more information about intellectual capital, reflecting their efforts to sustain investor confidence.

In developed markets, Jones and Green (2022) and Silva and Costa (2023) found comparable results in the UK and Portugal, respectively, indicating that firms with higher profitability tend to demonstrate greater transparency regarding intangible assets. Studies from emerging economies, such as Fadilah and Rahman (2021) in Indonesia and Kumar and Singh (2020) in India, corroborate these findings, emphasizing that profitability enables firms to allocate more resources toward comprehensive and high-quality disclosures. Ahmed and Ali (2019) and Navarro and Blanco (2023) extended this evidence to Egypt and Spain, respectively, confirming the role of profitability as a key motivator for disclosure in both developing and developed economies. However, across these studies, limitations persist regarding sectoral coverage and sample diversity, suggesting the need for broader cross-industry and multi-country analyses.

Firm Age and Intangible Asset Disclosure

Firm age has also been found to influence disclosure practices, reflecting the maturity and institutional experience of companies. Jansen and Schmidt (2020) found that older firms in the European Union disclose more detailed information on intangible assets due to accumulated experience and established reporting systems. Similar findings were reported by Lee and Park (2021) in South Korea and Brown and Green (2022) in Italy, where firm age was positively associated with disclosure comprehensiveness,

particularly among family-owned businesses seeking to preserve their reputational capital.

In emerging markets, Garcia and Lopez (2023) found that older Brazilian service firms demonstrate superior disclosure quality, while Choi and Kim (2023) observed a similar relationship among Taiwanese technology firms. Martinez and Alvarez (2024) and Wilson and Evans (2024) extended this evidence to Spain and Australia, showing that mature firms are more transparent in their reporting practices. Even in the non-profit sector, Morris and Walker (2024) found that organizational age positively affects disclosure detail, indicating that longevity fosters greater accountability and transparency. Collectively, these studies confirm that firm age positively impacts disclosure consistency and quality, although industry-specific dynamics and regulatory maturity continue to influence disclosure patterns.

Theoretical Review

Application of Signaling Theory

Signaling Theory, as proposed by Spence (1973), provides a compelling framework for examining how firm-specific characteristics influence the disclosure of intangible assets among listed firms in Nigeria. In a market characterised by information asymmetry, where investors and other stakeholders have limited access to internal firm information, companies rely on signaling mechanisms to communicate their actual value and growth potential. In this context, firm-specific attributes such as size, profitability, leverage, board characteristics, and ownership structure play significant roles in determining the quality and quantity of signals sent to the market.Large and profitable firms, for instance, are more likely to disclose comprehensive information about their intangible assets to signal financial stability and superior management capabilities (Lev & Zarowin, 2019). Similarly, firms with independent and experienced boards may use voluntary disclosure of intangible assets as a signal of transparency and good governance practices. In Nigeria's developing capital market, where investor confidence is often challenged by weak disclosure enforcement, signaling becomes particularly important for firms seeking to attract both domestic and foreign investors.

Empirical evidence supports this notion. Ding et al. (2020) found that firms that disclose more detailed information about their intangible assets experience improved investor perception and higher market valuation due to reduced information asymmetry. Khan et al. (2021) further observed that voluntary disclosure of intangible resources enhances corporate reputation and stakeholder trust. In the Nigerian context, this suggests that firms with favourable characteristics such as strong profitability, larger size, and higher managerial expertisemay disclose more about their intangible assets as a deliberate strategy to differentiate them and build credibility. However, the signaling effect is not without limitations. Luo and Tang (2022) cautioned that excessive or low-quality disclosures might be used as impression management tools rather than genuine indicators of firm quality. This concern is particularly relevant in emerging markets like Nigeria, where weak regulatory oversight could enable firms to use disclosure strategically rather than transparently (Kumar & Nair, 2023). Despite these limitations, Signaling Theory remains crucial for understanding how Nigerian firms employ disclosure as a mechanism to project value and mitigate investor uncertainty surrounding intangible assets.

Application of Institutional Theory

Institutional Theory, developed by DiMaggio and Powell (1983), complements Signalling Theory by emphasising the role of environmental and societal pressures in shaping corporate disclosure practices. The theory posits that firms conform to institutional norms, regulations, and expectations to gain legitimacy, stability, and access to resources. In the Nigerian setting, institutional pressures emanate from regulatory bodies such as the Financial Reporting Council of Nigeria (FRCN), the Nigerian Exchange Group (NGX), and international frameworks like the International Financial Reporting Standards (IFRS), which collectively influence firms' disclosure behavior.

According to Institutional Theory, the extent of intangible asset disclosure among Nigerian listed firms is influenced by the strength and enforcement of these institutional pressures. Firms operating in industries with strong governance codes and stakeholder scrutiny, such as financial services or telecommunications, are likely to provide more comprehensive disclosures to demonstrate legitimacy and compliance with global best practices (La Porta et al., 2000; Lins et al., 2017). Conversely, firms in less regulated sectors may disclose less, reflecting weaker institutional coercion or normative expectations.Additionally, mimetic and normative isomorphism may drive Nigerian firms to imitate the disclosure practices of leading firms within their industry or to conform to the professional expectations of auditors, investors, and analysts. As Hodge (2003) notes, firms often adopt disclosure norms that reflect prevailing institutional values of transparency and accountability. However, Institutional Theory has been critiqued for its potential to overlook firm-level strategic motivations behind disclosure decisions (Beck et al., 2010; Harrison & Wicks, 2013). This implies that while institutional environments shape disclosure patterns, internal firm-specific characteristicssuch as governance structure, ownership concentration, and managerial incentivesalso play a critical role in determining the extent of intangible asset disclosures.In the Nigerian context, Institutional Theory offers valuable insights into how regulatory frameworks, market expectations, and social legitimacy pressures shape corporate transparency regarding intangible assets. Firms that align their disclosure practices with these institutional norms not only enhance their legitimacy but also strengthen investor trust and long-term sustainability.

METHODOLOGY

This study adopts a positivist philosophy and a deductive research approach, guided by Signaling Theory and Stakeholder Theory, to analyze the relationship between firm-specific characteristics and the level of intangible asset disclosures among listed financial service firms in Nigeria. A quantitative, longitudinal research design is employed, utilizing secondary data extracted from the annual reports of forty-nine (49) firms listed on the Nigerian Exchange Group (NGX) for the period 2014–2023.The study considers Firm Size, Leverage, Profitability, and Firm Age as the main explanatory variables influencing disclosure behavior. The dependent variable, Intangible Asset Disclosure (IAD), captures the extent of information disclosed on research and development, brand value, intellectual property, and other intangible resources in the firms' annual reports.Data were obtained from audited company reports, NGX filings, and reliable corporate disclosures. Analytical procedures include unit root and panel regression analysis (Fixed Effects Models) to examine the relationship between firm characteristics and IAD. The robustness of results is further assessed through the Hausman specification test to determine the appropriate model. All estimations were performed using EViews software. By applying a census approach covering all listed financial service firms, the study ensures comprehensive coverage and minimizes sampling bias. This methodological framework enhances the empirical understanding of how firm-specific attributes influence the transparency and reporting of intangible assets within Nigeria's financial sector.

Model Specification

This study also adapts the baseline model of Anthony (2021) and extends it to examine how firm-specific characteristics affect the level of intangible asset disclosures among Nigerian financial service firms. The model incorporates Firm Size, Leverage,

Profitability, and Firm Age as explanatory variables, which reflect firm capacity, risk exposure, performance strength, and operational maturity, key determinants of disclosure behavior in emerging markets.The functional and econometric models are expressed as follows:

$$IAD = f\,(FS, LEV, PROF, FA)$$ ……………………………………………………………..…(i)

$$IA\,D_{¿} = \beta_0 + \beta_1 F\,S_{¿} + \beta_2 \leq V_{¿} + \beta_3 PRO\,F_{¿} + \beta_4 F$$ ……………………………….(ii)

Where: IAD = Intangible Asset Disclosures; β_0= Intercept; i= cross sections (1…49); ε= error term; $\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients; FS = Firm Size; LEV = Leverage; PROF = Profitability; FA = Firm age.

Table 1: Measurement of Variables

S/n	Variables	Acronyms	Measurement	Apriori sign	Justification
Dependent variable					
1	Intangible Asset Disclosures	IAD	A composite disclosure index measuring the extent of information disclosed on intellectual property, goodwill, R&D, brand equity, and customer relationships.	Nil	Anthony (2021).
Independent variables					
2	Firm Size	FSZ	Logarithm of Total Assets.	+	Khalid and Yusuf (2023).
3	Leverage	LEV	Total debt / Total assets × 100.	±	(Anthony, 2021).
4	Profitability	PROF	Net income / Total assets × 100 (Return on Assets).	+	Silva and Costa (2023).
5	Firm Age	FAG	Current year − Year of incorporation.	+	Martinez and Alvarez (2024).

Source: Researcher's Compilation, 2025

RESULTS DISCUSSION

Table 2: Presentation of PanelUnit Root Test

S/N	Variable	ADF-Fisher Chi-Square	PP - Fisher Chi-square	ADF-Fisher Chi-Square Prob**	PP - Fisher Chi-square Prob**	Order of Integration/ Level
1	IAD	266.045	616.816	0.0000	0.0000	I(1)
2	FSZ	207.194	322.806	0.0010	0.0000	I(1)
3	LEV	189.339	310.214	0.0000	0.0000	I(1)
4	PROF	266.535	474.279	0.0001	0.0000	I(1)
5	FAG	137.331	211.214	0.0000	0.0000	I(1)

Source: Author's Computation (2025)

Table 2indicates that all variables are integrated of order one, I(1), implying they are non-stationary at the level but become stationary after first differencing. The dependent variable, Intangible Asset Disclosures (IAD), measures the extent to which firms report on patents, trademarks, and research and development activities. Firm Size (FS), measured as the natural log of total assets, is I(1) with ADF = 207.194 and PP = 322.806 (p = 0.0010; 0.0000). Leverage (LEV), defined as total debt to total assets, records ADF = 189.339 and PP = 310.214 (p < 0.0000). Profitability (PROF), measured by ROA or ROE, shows ADF = 266.535 and PP = 474.279 (p = 0.0001; 0.0000). Firm Age (FA), representing the number of years since incorporation, is stationary at first difference with ADF = 137.331 and PP = 211.214 (p = 0.0000). These results confirm that all variables are I(1), supporting the use of Hausman Test-based panel estimation techniques.

Table 3: Hausman Test

Firm-Specific Variables and IAD			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.298572	4	0.0099

Source: Author's Computation (2025)

Table 3 presents the results of the Hausman test conducted to determine the appropriate model, fixed effects or random effects, for analysing the relationship between firm-specific variables and intangible asset disclosure (IAD). The chi-square statistic (0.2986) with 4 degrees of freedom yields a p-value of 0.0099, which is less than the 5% significance level. Therefore, the null hypothesis of no systematic difference between the estimators is rejected. This suggests that the fixed effects model is more suitable, indicating that firm-specific effects are correlated with the explanatory variables. Consequently, the study adopts the fixed effects model to analyze the impact of firm-specific characteristics on IAD.

Table 4: Panel FEM Regression Results

Firm-Specific Variables and IAD				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FSZ	-0.013469	0.056164	-0.239819	0.8106
LEV	2.03E-07	0.000462	0.000439	0.9997
PROF	-0.001392	0.001298	-1.072272	0.2842
FAG	0.001616	0.003519	0.459235	0.6463
C	0.660967	0.248195	2.663093	0.0080
R-squared	0.276876	F-statistic		3.217739
Adjusted R-squared	0.190829	Prob(F-statistic)		0.000000
		Durbin-Watson Stat.		2.21

Source: Author's Computation (2025)

Table 4 reveals that the intercept (0.660967) with a p-value of 0.0080 represents the expected IAD when all predictors are zero. At the same time, the model diagnostics indicate an R-squared of 0.2769, which means that firm-specific variables explain approximately 27.7% of the variation in intangible asset disclosures. The adjusted R-squared value (0.1908) indicates a modest fit, while the F-statistic (3.2177, p = 0.0000) confirms the overall model's significance. The DW statistics of approximately 2 shows that the problem of serial correlation is unlikely in the model.

H_{01}: Firm Size has no significant impact on intangible asset disclosures, among quoted companies in the Nigerian Exchange Group.

The null hypothesis states that firm size has no significant impact on intangible asset disclosures, among quoted companies in the Nigerian Exchange Group. Firm size has a coefficient of -0.013469 with a p-value of 0.8106, indicating that it is not statistically significant. This suggests that variations in firm size do not have a meaningful impact on IAD, and the null hypothesis is not rejected. Firm Size (FSZ) is typically measured using the

natural logarithm of total assets or total revenue to reflect the scale of a firm's operations. In the regression model, the coefficient for firm size is -0.013469, indicating a weak and negative association with intangible asset disclosures (IAD). However, this relationship is not statistically significant, as evidenced by a very high p-value of 0.8106 and a t-statistic of -0.2398. The insignificance suggests that changes in firm size do not significantly influence the amount of intangible information disclosed. Whether a firm is large or small, the extent of IAD appears unaffected. One possible explanation is that disclosure of intangibles may be more heavily influenced by industry-specific practices or mandatory disclosure regulations, which apply uniformly regardless of size. Additionally, larger, more complex firms may be cautious in disclosing their competitive strategic resources, while smaller firms may voluntarily disclose them to attract investors.

The absence of a clear pattern in the data indicates that firm size alone is not a strong determinant of disclosure practices concerning intangible assets in this sample. This finding suggests that variations in firm size do not significantly influence the extent of intangible asset disclosures in Nigerian firms, thereby retaining the null hypothesis. This result contradicts prior studies such as Khalid and Yusuf (2023), Ayodele and Ibrahim (2021), and Patel and Singh (2023), all of which reported a significant positive relationship between firm size and IAD. In those studies, larger firms were found to disclose more intangible assets due to increased public scrutiny, regulatory expectations, and broader stakeholder engagement. The divergence in the Nigerian context could be due to institutional differences, limited regulatory enforcement, or differing strategic priorities among firms, where size does not necessarily translate to enhanced disclosure.

H_{02}: Leverage has no significant impact on intangible asset disclosures, among quoted companies in the Nigerian Exchange Group.

The null hypothesis states that leverage has no significant impact on intangible asset disclosures, among quoted companies in the Nigerian Exchange Group. Leverage is completely insignificant with a near-zero coefficient of 2.03E-07 and a p-value of 0.9997, reaffirming that capital structure has no meaningful impact on IAD. Therefore, the null hypothesis for leverage is not rejected. Leverage (LEV) represents the ratio of total debt to total assets and is often used to assess a firm's financial risk or capital structure. In this model, leverage has an extremely small coefficient (2.03E-07) and is statistically insignificant, with a p-value of 0.9997 and a t-statistic of just 0.000439. This near-zero effect suggests that a firm's debt level has no meaningful impact on its decision to disclose intangible assets. The finding implies that both highly leveraged and minimally leveraged firms disclose intangible assets at similar levels. This result contrasts with theoretical expectations that highly leveraged firms might disclose more to reduce information asymmetry for creditors. It may also suggest that creditors do not heavily rely on intangible disclosures when assessing firm risk, or that such disclosure are not standardized or reliable enough to influence financing decisions.

In this sample, the capital structure appears to be irrelevant in explaining IAD behaviour, indicating that other factors, such as governance, strategy, or compliance, may play a larger role in shaping disclosure practices. This outcome runs counter to several studies such as Nguyen and Pham (2023), Lopez and Castillo (2020), Kim and Park (2021), and Ahmed and Mohammed (2024), all of which found a significant positive relationship between leverage and IAD. In those contexts, firms with higher leverage tended to disclose more intangible asset information to reduce information asymmetry and reassure creditors. The disparity may suggest that Nigerian firms do not perceive intangible disclosures as a credible or necessary signaling mechanism for debt holders, or that lenders in Nigeria may rely more heavily on tangible collateral and financial metrics than on disclosure quality.

H_{03}: Profitability does not significantly impact intangible assets disclosures among quoted companies in the Nigerian Exchange Group.

The null hypothesis states that profitability has no significant impact on intangible asset disclosures, among quoted companies in the Nigerian Exchange Group. Profitability, with a coefficient of -0.001392 and a p-value of 0.2842, is statistically insignificant, indicating that firm profitability does not significantly influence IAD levels. Hence, the null hypothesis for profitability is not rejected. Profitability (PROF), commonly measured by return on assets (ROA) or return on equity (ROE), captures a firm's ability to generate earnings relative to its resources. In the regression output, profitability has a negative coefficient of -0.001392, indicating a negative and inverse relationship with IAD. However, the relationship is not statistically significant, with a p-value of 0.2842 and a t-statistic of -1.0722. This implies that profitability does not significantly affect the extent to which firms disclose intangible assets. From a theoretical standpoint, this result contradicts the signaling theory, which posits that profitable firms are more likely to voluntarily disclose information, including on intangible resources, to signal their strength and build investor confidence.

However, the empirical findings suggest that firms, regardless of their profitability levels, tend to disclose intangible assets in a similar manner. This could be due to uniform disclosure policies, minimal investor demand for such disclosures, or the intangible nature of these assets, which makes them difficult to quantify and report, regardless of a firm's financial performance. Thus, profitability does not appear to be a major driver of IAD in this context. This finding contradicts the results of studies like Silva and Costa (2023), Kumar and Singh (2020), Ahmed and Ali (2019), and Navarro and Blanco (2023), all of which reported that more profitable firms tend to disclose more intangible assets. The underlying reasoning in those studies is that profitable firms have more resources and incentives to engage in transparent reporting, and profitability serves as a positive signal to stakeholders. However, the Nigerian results suggest that profitability does not drive voluntary disclosure of intangibles, possibly because such firms prioritize cost-saving or operate in an environment where capital markets do not reward disclosure.

H_{04}: Firm Age does not significantly impact intangible assets disclosures among quoted companies in the Nigerian Exchange Group.

The null hypothesis states that firm age has no significant impact on intangible asset disclosures, among quoted companies in the Nigerian Exchange Group. Firm age shows a positive but insignificant coefficient of 0.001616 ($p = 0.6463$), indicating no significant effect on IAD and thus retaining the null hypothesis. Firm Age (FA) is generally calculated as the number of years since a firm's incorporation and is often used as a proxy for experience, maturity, and organizational stability. In this model, firm age has a positive coefficient of 0.001616, suggesting a slight tendency for older firms to disclose more intangible assets. However, the p-value of 0.6463 and t-statistic of 0.4592 indicate that this relationship is statistically insignificant. This finding implies that the age of a firm does not meaningfully influence its disclosure behavior concerning intangible assets. Disclosure practices may be shaped more by regulatory frameworks, stakeholder pressure, or board policy than by how long a firm has been in operation.

While older firms may possess more intangible assets due to legacy brand value, accumulated knowledge, and established customer relationships, this does not necessarily translate into higher disclosure levels. Conversely, newer firms, especially in technology-driven industries, might emphasize intangibles to attract investors. The lack of significance in this model suggests that firm age does not play a decisive role in shaping IAD among the firms studied. This result stands in contrast with findings by Choi and Kim (2023), Martinez and Alvarez (2024), Wilson and Evans (2024), and Morris and Walker (2024), who all found a positive and significant association between firm age and IAD. Older firms in those studies were more likely to disclose intangible assets due to institutional maturity, accumulated experience, and reputational concerns. The Nigerian findings suggest that firm age

alone does not influence disclosure behavior, possibly because even mature firms may lack strong institutional frameworks or consistent disclosure traditions.In summary, the findings from the Nigerian context diverge significantly from the bulk of prior international studies, particularly those conducted in Asia, Europe, and other parts of Africa. While most prior studies supported the positive influence of firm size, leverage, profitability, and age on intangible asset disclosures, the results from this study show no significant relationships for any of these variables. This inconsistency may reflect structural and institutional differences, regulatory weaknesses, or varying strategic orientations among Nigerian firms. It underscores the need for localised governance and reporting reforms. It suggests that firm-specific variables alone may be insufficient to explain disclosure behaviour in emerging markets without accounting for broader contextual and institutional dynamics.

However, none of the individual variables, firm size, leverage, profitability, or firm age, significantly affect IAD when considered individually. This suggests that other factors, such as governance mechanisms or institutional influences, may better explain variations in disclosure.

CONCLUSION

This study examines the influence of firm-specific variables on intangible asset disclosures (IADs) among quoted financial institutions on the Nigerian Exchange Group from 2014 to 2023. Using panel regression techniques (fixed effects models), the research provided empirical evidence on how internal firm mechanisms influence the transparency and reporting of intangible assets, a component that is increasingly vital to firm valuation in today's knowledge-based economy. The findings suggest that firm-specific characteristics, such as size, leverage, profitability, and firm age, do not have a significant impact on the level of intangible asset disclosure (IAD). The negative but insignificant effect of firm size suggests that larger firms do not necessarily engage in greater disclosure of intangible assets, possibly due to differing strategic priorities or internal disclosure policies. Similarly, the insignificance of leverage, profitability, and firm age implies that a company's capital structure, financial performance, and years of operation are not decisive factors in determining its disclosure behaviour. Overall, the results suggest that internal firm attributes alone may not be sufficient to explain variations in IAD practices. Instead, other determinantssuch as ownership structure, governance mechanisms, or regulatory pressuresmay play a more critical role in shaping disclosure behaviour. This conclusion highlights the importance of focusing on governance-driven and institutional factors, rather than relying solely on firm-specific characteristics, to enhance transparency and reporting quality.

REFERENCES

AbuGhazaleh, N. M., Al-Hares, O. M., & Roberts, C. (2021). The determinants of voluntary disclosure in emerging markets: Evidence from intangible assets. *Journal of International Accounting, Auditing and Taxation, 42*, 100349.

Adekunle, O., & James, A. (2020). Profitability and Corporate Disclosure Practices among Nigerian Listed Firms. *Journal of Accounting and Taxation, 12*(3), 45–58.

Adetunji, M., Olayinka, S., & Adebayo, A. (2022). IFRS adoption and corporate disclosure practices in Nigeria: The moderating role of firm size. *Journal of Financial Reporting and Accounting, 20*(2), 257–275.

Ahmed, A., & Ali, M. (2019). Profitability and disclosure quality: Evidence from Egyptian listed firms. *African Journal of Accounting and Finance, 7*(2), 66–80.

Ahmed, K., & Gbadamosi, A. (2021). Firm size and intellectual capital disclosures: Evidence from Nigeria. *International Journal of Accounting Research, 9*(1), 45–60.

Ahmed, R., & Mohammed, T. (2024). Leverage and disclosure behavior among African oil firms: A comparative analysis. *African Journal of Business and Economic Research, 19*(1), 101–120.

Al-Gamrh, B., Al-Dhamari, R., & Balakrishnan, S. (2020). Financial leverage and corporate disclosure in GCC countries. *Journal of Accounting in Emerging Economies, 10*(4), 657–675.

Anthony, P. (2021). Measuring corporate disclosure on intangible assets: A composite index approach. *Accounting Perspectives, 20*(2), 145–162.

Ayodele, J., & Ibrahim, K. (2021). Corporate governance and firm size interaction in determining disclosure practices: Evidence from West Africa. *African Journal of Corporate Governance, 11*(2), 77–95.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120.

Beck, C., Campbell, D., & Shrives, P. (2010). Content analysis in environmental reporting research: Enrichment and replication. *Accounting Forum, 34*(3–4), 194–208.

Beneish, M. D., Billings, M. B., & Hodder, L. D. (2020). Internal control weaknesses and information asymmetry. *Accounting Review, 95*(5), 1–26.

Bhasin, M. L., Sharma, A., & Shaikh, J. (2021). Voluntary disclosure of intellectual capital in India: Determinants and trends. *Asia-Pacific Journal of Accounting & Economics, 28*(6), 625–648.

Brown, A., & Garcia, R. (2020). Leverage and voluntary intellectual capital disclosures in Spain. *Spanish Accounting Review, 23*(1), 19–34.

Brown, S., & Hillegeist, S. (2021). Disclosure quality and signaling effects in corporate reporting. *Journal of Accounting Research, 59*(2), 411–445.

Brown, T., & Green, J. (2022). Firm age and disclosure transparency among Italian family businesses. *European Accounting Review, 31*(4), 987–1012.

Chen, H., & Huang, C. (2019). Profitability, corporate governance, and voluntary disclosure of intangibles. *China Accounting and Finance Review, 21*(3), 305–326.

Chen, Y., & Zhang, L. (2019). Firm size and the extent of intangible asset disclosures: Evidence from China. *Asian Journal of Accounting Research, 4*(2), 155–172.

Chen, Z., & Zhang, L. (2021). Leverage and voluntary disclosure among Chinese technology firms. *Asian Review of Accounting, 29*(2), 245–263.

Chen, Z., Zhang, Q., & Xu, L. (2018). Firm characteristics and disclosure of intellectual capital: Evidence from Chinese listed companies. *Journal of Intellectual Capital, 19*(4), 693–718.

Choi, J., & Kim, S. (2023). Firm age and intangible asset disclosure: Evidence from Taiwanese technology firms. *Journal of Asian Business and Economic Studies, 30*(2), 234–248.

Dada, S. O., & Ghazali, Z. (2023). Firm age and financial reporting quality: Evidence from Nigeria. *African Accounting and Finance Journal, 9*(1), 41–59.

Davis, M., & Miller, R. (2022). Leverage and transparency: Evidence from Australian listed firms. *Australian Journal of Corporate Governance, 12*(3), 221–238.

Deephouse, D. L., & Suchman, M. C. (2018). Legitimacy in organizational institutionalism. In R. Greenwood et al. (Eds.), *The SAGE Handbook of Organizational Institutionalism* (2nd ed., pp. 27–54). SAGE.

Ding, X., Li, Y., & Chen, F. (2020). Voluntary disclosure of intangible assets and investor perception: Evidence from East Asia. *Asia-Pacific Journal of Accounting and Economics, 27*(7), 899–919.

Fadilah, S., & Rahman, R. (2021). Profitability and disclosure of intellectual capital: Evidence from Indonesia. *Journal of Applied Accounting Research, 22*(4), 677–694.

Francis, J., Lee, S., & Wang, D. (2020). Firm-specific characteristics and corporate disclosure: A global perspective. *Accounting Horizons, 34*(1), 1–26.

García, L., & Lopez, A. (2023). Firm age, experience, and disclosure quality: Evidence from Brazil. *Latin American Business Review, 24*(1), 17–35.

García-Sánchez, I. M., Hussain, N., & Khan, S. A. (2021). Corporate transparency and intangible capital: A cross-country analysis. *Journal of Business Ethics, 173*(2), 289–306.

Gul, F., & Tsui, J. (2018). Financial leverage, disclosure, and market risk: Evidence from emerging economies. *International Review of Economics and Finance, 56*, 205–218.

Harrison, J. S., & Wicks, A. C. (2013). Stakeholder theory, value, and firm performance. *Business Ethics Quarterly, 23*(1), 97–124.

Hodge, F. (2003). Investors' perceptions of earnings quality, auditor independence, and the usefulness of audited financial information. *Accounting Horizons, 17*(1), 37–48.

Hossain, M., & Hasan, S. (2019). Institutional influences on firm disclosure behavior: Evidence from Bangladesh. *Asian Journal of Accounting Perspectives, 12*(2), 61–79.

Jansen, H., & Schmidt, L. (2020). Firm age and reporting transparency in the European Union. *European Accounting Review, 29*(3), 456–474.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Jin, K., Park, Y., & Kim, D. (2020). Financial leverage and voluntary disclosure: Evidence from Korean firms. *Asia-Pacific Journal of Accounting & Economics, 27*(2), 248–267.

Johnson, D., & Brown, E. (2020). Corporate size and the quality of intangible asset disclosures in UK manufacturing firms. *British Accounting Review, 52*(4), 100905.

Jones, L., & Sullivan, P. (2022). Profitability and intellectual capital disclosure among UK firms. *Journal of Financial Reporting, 7*(2), 188–204.

Jones, M., & Green, R. (2022). Profitability and voluntary disclosures in UK manufacturing. *International Journal of Accounting, 57*(1), 87–104.

Khalid, A., & Yusuf, M. (2023). Firm size and voluntary disclosure: Evidence from the UAE. *Journal of Financial Reporting and Accounting, 21*(1), 76–92.

Khan, R., & Ali, M. (2022). Firm maturity and disclosure transparency: A cross-industry analysis. *Asian Journal of Business Research, 12*(3), 102–119.

Khan, Z., & Jang, M. (2020). Resource accumulation and disclosure practices in emerging markets. *International Journal of Managerial Finance, 16*(4), 578–596.

Khan, Z., Rahman, M., & Patel, R. (2021). Voluntary disclosure, reputation, and stakeholder trust. *Journal of Corporate Reporting, 10*(2), 201–217.

Kim, S., & Park, J. (2021). Debt pressure and corporate disclosure: Evidence from South Korea. *Korean Journal of Accounting Research*, *46*(1), 31–54.

Kumar, P., & Singh, R. (2020). Determinants of voluntary disclosure: Evidence from India. *Indian Journal of Corporate Governance*, *13*(1), 44–61.

Kumar, R., & Nair, P. (2023). Impression management in corporate disclosure: Evidence from emerging markets. *Journal of Accounting and Organizational Change, 19*(3), 471–489.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., &Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics, 58*(1–2), 3–27.

Lee, S., & Park, J. (2021). Firm age and voluntary disclosure in South Korea. *Journal of Asian Business Studies, 15*(3), 321–338.

Lee, T., & Yang, Y. (2023). Profitability and disclosure transparency in East Asian firms. *Asian Review of Accounting, 31*(1), 25–44.

Lev, B., & Daum, J. H. (2020). Intangibles and the financial crisis: Causes and cures. *European Accounting Review, 29*(2), 197–214.

Lev, B., & Gu, F. (2019). *The end of accounting and the path forward for investors and managers* (Updated ed.). Wiley.

Lev, B., &Zarowin, P. (2019). The boundaries of financial reporting and how to extend them. *Journal of Accounting Research, 57*(5), 1025–1070.

Li, H., & Zhang, J. (2021). Signaling through intellectual capital disclosure: Evidence from China. *Asian Journal of Finance & Accounting, 13*(2), 56–74.

Li, Y., & Chen, L. (2022). Firm size and voluntary disclosure among Chinese technology firms. *China Journal of Accounting Studies, 10*(2), 143–162.

Li, Z., Wang, L., & Zhao, F. (2021). Resource-based determinants of intangible asset disclosures. *Journal of Business Research, 134*, 218–229.

Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *Journal of Finance, 72*(4), 1785–1824.

Lopez, D., & Castillo, J. (2020). Financial leverage and corporate disclosure: Evidence from Europe. *European Journal of Accounting and Finance, 8*(1), 23–38.

Luo, L., & Tang, Q. (2022). Strategic disclosure and impression management: Evidence from emerging markets. *Accounting, Auditing & Accountability Journal, 35*(4), 939–963.

Martinez, R., & Alvarez, C. (2024). Firm age and disclosure transparency: Evidence from Spain. *Spanish Journal of Accounting Research, 27*(1), 77–95.

Morris, L., & Walker, D. (2024). Organizational age and disclosure practices in the non-profit sector. *Nonprofit Management & Leadership, 34*(2), 259–275.

Murugaboopathy, R. (2023). The influence of firm characteristics on intangible asset disclosure: Evidence from Asia. *Asian Journal of Accounting and Governance, 19*(1), 11–25.

Muttakin, M. B., Mihret, D. G., & Khan, A. (2021). Corporate governance and disclosure quality in emerging economies. *Accounting Forum, 45*(2), 105–128.

Navarro, M., & Blanco, E. (2023). Profitability and transparency: Evidence from Spanish listed firms. *International Journal of Financial Studies, 11*(2), 1–19.

Nguyen, T., & Pham, D. (2023). Financial leverage and disclosure behavior among Vietnamese listed companies. *Asian Economic Journal, 37*(1), 83–102.

Nwankwo, C., & Williams, J. (2020). Institutional pressures and disclosure practices: Evidence from Nigeria. *African Journal of Accounting, Auditing and Finance, 8*(3), 278–297.

Okoye, L., Amadi, V., & Nwosu, E. (2021). Corporate governance mechanisms and disclosure transparency in Nigerian firms. *International Journal of Accounting and Financial Reporting, 11*(2), 15–34.

Omisore, I., Adegbite, O., & Adebayo, S. (2021). Profitability and voluntary disclosure of intellectual capital in Nigeria. *African Accounting and Finance Journal, 8*(4), 342–360.

Patel, S., & Singh, D. (2023). Determinants of voluntary disclosure in Indian firms: The moderating role of ownership structure. *Indian Journal of Finance, 17*(2), 41–58.

Santos, L., & Costa, A. (2019). Firm size and voluntary disclosure in Portugal. *Portuguese Journal of Accounting Research, 5*(1), 55–70.

Silva, T., & Costa, P. (2023). Profitability and intangible asset disclosure in Portuguese listed firms. *Journal of Accounting in Emerging Economies, 13*(2), 271–290.

Smith, A., & Lee, K. (2019). Leverage and transparency among UK manufacturing firms. *British Accounting Review, 51*(5), 100850.

Smith, D., & McElroy, B. (2021). Profitability and corporate disclosure: Evidence from Europe. *European Financial Review, 25*(3), 311–329.

Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics, 87*(3), 355–374.

Wang, J., & Li, Z. (2021). Profitability and voluntary disclosure of intangible assets: Evidence from China. *China Journal of Accounting Studies, 9*(3), 201–219.

Wang, Y., Liu, Q., & Zhang, W. (2020). Financial leverage, ownership structure, and voluntary disclosure in Chinese listed companies. *Journal of International Financial Management & Accounting, 31*(2), 255–278.

Wilson, P., & Evans, J. (2024). Corporate longevity and disclosure transparency in Australia. *Australian Accounting Review, 34*(2), 115–130.

Wright, M., Filatotchev, I., Hoskisson, R. E., & Peng, M. W. (2019). Strategy research in emerging economies: Challenging the conventional wisdom. *Journal of Management Studies, 56*(2), 184–202.

Xu, J., & Zhao, Y. (2020). Firm size and disclosure quality in Chinese listed firms. *Asian Review of Accounting, 28*(3), 443–460.

Yeo, G., Li, Z., & Shen, J. (2021). Firm age and intangible asset disclosures: Empirical evidence from Asian markets. *Asian Economic Journal, 35*(3), 331–348. https://doi.org/10.1111/asej.12205

Zhang, Q., Yu, W., & Xiao, F. (2020). Ownership concentration and corporate transparency: The case of intangible asset disclosures. *International Review of Economics & Finance, 65*, 305–319.

Zhang, W. (2020). Profitability and voluntary disclosure: Evidence from East Asia. *Asian Journal of Accounting and Governance, 14*(1), 55–70.

Zhang, Y., & Li, M. (2021). Ownership concentration and intangible asset reporting: Evidence from China. *China Journal of Accounting Studies, 9*(1), 32–48.

Zhou, W., Li, F., & Zhang, H. (2021). Institutional pressures and corporate transparency: The role of foreign directorship. *Corporate Governance: An International Review*, *29*(2), 189–210. https://doi.org/10.1111/corg.12452