DOES INTELLECTUAL CAPITAL AFFECTS COST OF EQUITY? A STUDY OF FAST-MOVING CONSUMER GOODS (FMCG) FIRMS

EDORO CHRISTOPHER UYI
DEPARTMENT OF ACCOUNTING, COLLEGE OF BUSINESS MANAGEMENT SCIENCE
IGBINEDION UNIVERSITY OKADA, EDO STATE, NIGERIA
edoro.christopher@iuokada.edu.org

&

JOSIAH MARY
DEPARTMENT OF ACCOUNTING, COLLEGE OF BUSINESS MANAGEMENT SCIENCE
IGBINEDION UNIVERSITY OKADA, EDO STATE, NIGERIA
josiah.mary@iuokada.edu.ng

ABSTRACT

The broad objective of this study is to investigate the influence of intellectual capital management on cost of equity of fast-moving consumer goods firms in Nigeria by focusing on three key proxies of intellectual capital, adopted from prior related literature. Specifically, this study evaluates how human capital, structural capital and relational capital affects cost of equity. Anchored on the resource-based view theory, this study ideology aligns with the position that intangible assets, including structural capital, is a critical driver of sustainable competitive advantage. Ex-post facto research design was adopted to examine a sample of twelve (12) out of a population of thirteen (13) fast moving consumer goods firms listed on the Nigerian Exchange Group. The sample size was achieved based on certain criteria to include consistent listing of sampled firms during the 2014 to 2023 period and availability of annual financial reports where the data were sourced. Descriptive and inferential statistical methods were employed to analyze the data, with preliminary diagnostic tests to include descriptive statistics, while fixed effect with clustered standard error regression procedure was used to test the stated hypotheses. The findings clearly reflect the perception of equity investors of fast-moving consumer goods firms in Nigeria indicating that structural capital investments while it may be beneficial for long-term efficiency and innovation, in the immediate term, it signals increased operational complexity or higher capital expenditures, leading to heightened risk premiums. Based on these outcomes, this study carefully recommends that stakeholders in the fast-moving consumer goods industry in Nigeria should prioritize strategic structural capital investments that will not only enhance operational efficiency but also mitigate perceived investor risk. This can be achieved by integrating risk-adjusted capital allocation strategies and demonstrate tangible returns on structural capital investments to help align investor perceptions with the firm's true financial stability, ultimately fostering more favorable equity financing conditions.
Keywords*: Intellectual Capital Management, Cost of Equity, Fixed-Effect with Clustered Standard Error Regression, FMCG Firms.*

Background of Study

Fast-Moving Consumer Goods (FMCG) industry in Africa has seen remarkable expansion, with retail spending reaching $1.4 trillion in 2016, driven by population growth, urbanization, and rising disposable income (Games, 2015: Arvind & Mutegi, 2025: Oseni & Gina 2025). Notably, increasing adoption of e-commerce, projected to generate USD67.8 billion by 2027 with a 13.53% annual growth rate, further accelerates this growth (Oniku & Akintimehin, 2025). Nigeria, the continent's largest FMCG market (Soneye, 2023), recorded household consumption spending exceeding $350 billion in 2016, surpassing South Africa's $250 billion despite the latter's market maturity. While South Africa's FMCG sector grows at an annual rate of 5%,

Nigeria's maintains a robust Compound Annual Growth Rate (CAGR) of approximately 20%, underscoring its dynamic market landscape.

Undoubtably, intellectual capital is one key player to such growth, as firms' transit from traditional production models to knowledge-intensive operations to maintain competitiveness and foster innovation (Lev, 2004; Wang, Wang, & Liang, 2014). The reliance on intellectual capital over physical assets is increasingly evident, particularly in emerging markets like Nigeria, where firms must navigate inflation, foreign exchange scarcity, and shifting consumer behaviors (Cao & Zhang, 2011). Beyond human knowledge, intellectual capital also encompasses structural and relational capital, which collectively enhance firms' innovative capacity (Roos et al., 1997; Senyucel, 2009). Strategic investments in intellectual capital will enable Nigerian consumer goods firms to optimize operational efficiencies, adapt to technological advancements, and sustain long-term growth (Nneji, Amahalu & Ndubuisi-Okolo, 2024).

However, a critical void remains in the reporting of intangible assets, particularly intellectual capital reporting despite International Financial Reporting Standards (IFRS) emphasizing qualitative attributes of relevance, comparability, and faithful representation (Aifuwa & Embebe, 2019; Joshi, Cahill & Sidhu, 2010; Lipunga, 2014). Intellectual capital, comprising of but not limited to human, structural, and relational capital, is increasingly recognized as a key driver of competitive advantage, innovation, and long-term profitability (Hermawan, Hariyanto & Biduri, 2020). COVID-19 pandemic further reinforced the role of knowledge as the primary factor of production, necessitating greater recognition, utilization, and disclosure of intellectual capital for firms' profitability and survival (Costa, Nossa, Nossa, & Oliveira, 2022; Nielsen, 2009).

Nevertheless, the cost of capital remains a crucial factor in corporate finance, influencing investment decisions, shareholder value, and financial sustainability. In particular, cost of equity capital plays a key role in firm valuation, with financial transparency serving as a tool to mitigate investor uncertainty and reduce capital costs (Salvi et al., 2020; Tarigan et al., 2019). In the views of Bianchi Martini et al., (2016), lack of clarity in financial statements heightens risk perception, leading to heighted costs. Therefore, extensive intellectual capital reporting has been linked to lower capital costs by improving investor confidence (Goebel, 2015; Barus & Siregar, 2014). Similarly, Bontis, Keow, and Richardson (2000) emphasize an inverse relationship between intellectual capital information disclosure and capital expenses, particularly when firms integrate forward-looking intellectual capital information into financial reports. Nevertheless, opposing perspectives also exist, with García-Sánchez and Noguera-Gámez (2017) affirming the significant positive impact of intellectual capital management on capital expenses. Boujelbene and Affes (2013) argue that only human and structural capital play a role in reducing costs while Botosan and Plumlee (2002) caution that excessive disclosure can increase volatility and raise capital expenses.

Review of earlier related studies revealed that intellectual capital has been extensively linked to financial performance, particularly return on assets (Adekanmi, Akindehin, Efuntade, Adetula, & Apalowowa, 2025; Madugba, Egbide, Uzondu, Oparah & Adesola, 2023; Nnubia, Okolo & Emeka-Nwokeji, 2019; Vithana et al., 2023). However, there is a growing need to examine

the systematic dimension of firm performance through the lens of cost of capital, particularly the cost of equity, which is crucial for assessing value creation for investors (Barus & Siregar, 2014; Cuadrado-Ballesteros et al., 2016). Understanding the cost of equity capital allows investors to compare returns with alternative investment opportunities and better evaluate firms' profitability beyond traditional performance metrics (Dutta & Nezlobin, 2017; Singh & Van der Zahn, 2007). Further, while the bulk of related extant studies have been conducted in developed economies such as Spain, UK, Poland, Russia, and Iran (Pedro, Leitão & Alves, 2018; Kowalska, 2020; Shakina et al., 2017; Bani et al., 2014), related studies in developing economies, particularly Nigeria, remains largely unavailable, creating a significant knowledge gap (Muhammad & Ismail, 2009).

Further motivation for conducting this study hinged on the fact that the Nigerian FMCG sector is currently facing significant financial distress due to persistent economic crises, including foreign exchange scarcity, inflationary pressures, and declining consumer purchasing power. These challenges have led to a substantial decline in share price valuations, with six listed firms comprising mostly of FMCG firms to include Nestle Plc, Dangote Sugar Refinery, National Salt Company of Nigeria, PZ Cussons, Fidson, and Champion Breweries, experiencing an average 25% loss in share price valuation between December 2023 and August 2024 (The Guardian Newspaper, 14th August, 2024). Firms such as Nestle Plc and Dangote Sugar Refinery suffered year-to-date declines of 26.8% and 22.8%, respectively, while NASCON's Plc's share price dropped by 33%. Analysts predict that unless companies strategically refinance their liabilities through equity injection, prolonged financial struggles will continue, ultimately impacting dividend payouts and shareholder value (Abu, 2024). However, it is worthy to note that despite the challenges, companies like BUA Foods, Unilever, and Cadbury demonstrated resilience, collectively achieving a 104.6% revenue increase in Q4 of 2024, accentuating the potential role which intellectual capital can play in improving financial performance.

Therefore, given the dire need for strategies that optimize intellectual capital efficiency to mitigate capital costs, it is concerning that no study has specifically examined the nexus between intellectual capital efficiency management and cost of equity capital particularly for listed FMCG firms in Nigeria. Hence, this study is timely and necessary to address this knowledge gap by investigating how Nigerian FMCG firms can leverage on disclosure of intellectual capital information to navigate economic volatility, sustain growth, ultimately enhance shareholder value in an increasingly competitive business environment. Notably, this study offers valuable insights into how intellectual capital efficiency management influences the cost of equity capital, serving as a strategic guide for investors, managers, and policymakers in enhancing financial decision-making and performance. It enriches scholarly discourse by advancing corporate finance theory, assists managers of listed fast-moving consumer goods firms in leveraging intellectual resources for sustainable growth, and supports regulators in formulating transparency-driven policies that strengthen investor confidence and corporate resilience.

This paper is structured into five sections. Section 1 presented the introduction. Section 2 presents review of relevant literature on the study's subject matter. Section 3 addresses the methodological procedures and

measurement of the study variables. The results and discussion are presented in Section 4. Finally, Section 5 concludes the study and offers suggestions for future research.

Literature Review Theoretical Framework and Hypotheses Development
Human Capital and Cost of Equity

Human capital, defined as an organization's ability to derive optimal value from employees' knowledge, skills, and expertise (McGuirk, Lenihan, & Hart, 2015), represents a central pillar of intellectual capital and a vital determinant of competitive advantage (Gallotta, Garza-Reyes, & Anosike, 2016). Within the human capital–cost of equity nexus, theoretical interpretations diverge: proponents of the resource-based view (RBV) argue that efficient human capital management enhances innovation and operational performance, thereby reducing perceived investment risk and lowering the cost of equity as investors reward firms with superior intellectual resources (Chaudhary, 2020; Huang, Lee, McFadden, & Murphy, 2016). Conversely, agency theory perspective suggests a negative implication, positing that extensive human capital investments may heighten monitoring costs and managerial discretion, thus increasing equity risk premiums demanded by investors (Jensen & Meckling, 1976; Li, Pike, & Haniffa, 2008). A third strand, drawing from information asymmetry theory, maintains a neutral stance, arguing that unless human capital information is transparently disclosed and verifiable, investors may not adjust their risk assessments or required returns (Xie, Gong, & Lu, 2025). Empirical findings reflect this divergence: while Li et al. (2020) reported a significant negative relationship between human capital efficiency and cost of equity, indicating reduced financing costs in knowledge-driven firms, Si, and Xia, (2023) found insignificant association, reinforcing the notion that the market response to human capital investments depends on contextual transparency and investor confidence. Therefore, due to divergent theoretical positions, an insignificant effect of human capital management on cost of equity is expected, hence hypothesis one is stated as**,**

H_1 *human capital management has no significant influence on cost of equity of listed fast-moving consumer goods firms in Nigeria.*

Structural Capital and Cost of Equity

Structural capital, encompassing an organization's non-human assets such as information systems, intellectual property, and organizational routines, plays a pivotal role in shaping its cost of equity through differing theoretical lenses. Proponents of a positive nexus argue that increased structural capital efficiency signals long-term growth potential and operational robustness, which paradoxically heightens investors' risk perception due to higher fixed costs and technological uncertainties, thereby increasing equity premiums (Pulic, 2004; Chen, Cheng, & Hwang, 2005). Conversely, resource-based theorists contend that effective structural capital management enhances transparency, information symmetry, and organizational learning, thus reducing perceived investment risk and lowering the cost of equity (Sveiby, 2010; Li, Pike, & Haniffa, 2008). A third school grounded in signaling and institutional theory posits a neutral effect, maintaining that structural capital's impact depends on contextual factors such as disclosure credibility, market maturity, and investors' trust in intangible asset valuation mechanisms (Xie, Lin, & Yu, 2019). Hence,

structural capital–cost of equity relationship remains context-dependent, reflecting the dynamic interplay between intangible asset utilization, investor perception, and corporate risk signaling in evolving markets. Therefore, given the divergent theoretical positions, an insignificant effect of structural capital management on cost of equity is expected, hence hypothesis two is stated as,

H_2 *structural capital management has no significant effect on cost of equity of listed fast-moving consumer goods firms in Nigeria.*

Relational Capital Management and Cost of Equity

Relational capital, defined as the management of a firm's external relationships with customers, suppliers, and partners built on trust and collaboration (Caputo, Pironti, & Doni, 2019), has been theorized to influence the cost of equity through multiple perspectives. Proponents of a positive nexus, grounded in the stakeholder and resource-based view theories, argue that firms with high relational capital foster stakeholder trust and information transparency, thereby lowering perceived risk and reducing equity costs, as demonstrated by Dhaliwal et al. (2011), who found that credible stakeholder engagement enhances investor confidence. Conversely, scholars adopting the agency and signaling theories contend that excessive relational commitments may heighten managerial discretion, dilute accountability, and increase monitoring costs, leading investors to demand higher returns, a position supported by Wang, Zhao, Chang-Richards, Zhang, and Li, (2021), who observed that overextended relational networks can heighten financial risk perception. A third perspective, rooted in the legitimacy theory, maintains a neutral stance, suggesting that while relational disclosures promote corporate image, they do not necessarily affect investor-required returns unless accompanied by financial performance improvements (Plumlee et al., 2015). Hence, the relational capital–cost of equity nexus reflects a theoretical tension between trust-driven value creation, risk amplification through over embeddedness, and symbolic legitimacy effects in capital markets. On the basis of the foregoing divergent argument, an insignificant effect of relational capital management effect on cost of equity is expected, hence hypothesis three is stated as,

H_3 *relational capital management has no significant effect on cost of equity of listed fast-moving consumer goods firms in Nigeria.*

Resource Based View Theory

The Resource-Based View (RBV) theory, originally articulated by Penrose (1959) and later advanced by Wernerfelt (1984) and Barney (1991), posits that firms achieve sustainable competitive advantage and superior financial performance by effectively acquiring, developing, and utilizing valuable, rare, inimitable, and non-substitutable (VRIN) resources. The theory assumes that organizational resources weather tangible or intangible, are heterogeneously distributed and imperfectly mobile across firms, making internal capabilities the primary determinants of long-term value creation and market differentiation. Within the context of intellectual capital management, RBV emphasizes that intangible asset such as structural capital, comprising technological systems, organizational routines, and process innovations, are strategic resources that enhance productivity, efficiency, and financial resilience (Cabrita & Bontis, 2008). This theoretical dimension is particularly

relevant to this study where structural capital management demonstrates a negative effect on cost of equity capital, consistent with a priori expectations, as it suggests that effective deployment of structural assets reduces information asymmetry, operational risk, and investors' required risk premiums (Edvinsson & Malone, 1997; Barney, 1991). The RBV provides a foundational explanation for how internal structural capabilities, when managed efficiently, foster investor confidence and lower financing costs by signaling sustained competitive strength and reliability in volatile market conditions such as that experienced by FMCGs firms in Nigeria. Hence, the RBV offers a coherent theoretical framework connecting intellectual capital management to reduced cost of equity capital through strategic optimization of firm-specific structural resources.

Empirical Literature

Onyia et al. (2025) investigated how integrated reporting of intellectual capital, namely structural, human, and relational capital efficiency, affects the financial performance of listed deposit money banks in Nigeria. The study used a least-squares regression model to test its hypotheses using data of twelve banks chosen through judgemental sampling of a population of twenty-two over a five-year period (2008-2023) and applying an ex-post facto research design that used 192 firm-year observations. The findings reveal that structural and human capital efficiency have a strong positive impact on financial performance but relational capital efficiency has no significant impact.

Kusmawati and Anisah (2025), investigated the relationship between green accounting and intellectual capital, with business strategy employed as moderating variable of 20 companies in the coal, food

and beverage firms listed on the Indonesian Stock Exchange for the period 2018-2022. The study used purposive sampling and moderated regression analyses to conclude that green accounting had a positive influence on firm value in the coal industry, but a statistically insignificant negative influence in the food and beverage industry. Intellectual capital had a strong positive impact on firm value in both industries. The overall moderating effect of business strategy was positive; the moderating effect of green accounting on coal sector was negative and on food and beverage sector was positive.

Using panel data obtained through 56 firms listed in the Kompas 100 Index of the Indonesia Stock Exchange, Halimah, Mustaruddin, and Wendy (2025) investigated the effects of intellectual capital, institutional ownership, and independent board commissioners on firm value, with financial performance as a mediating variable, for the period 2020 to 2023 (a total of 224 firm-year observations). The analysis, which employed purposive sampling methods and Ordinary Least Square regression, path regression, and the Sobel test, found that all three variables had a statistically significant effect on financial performance. Notably, financial performance mediated the relationship between the independent variables and firm value, thus highlighting its significance in enhancing firm value.

The study conducted by Pyne and Goswami (2024) examined the mediating effect of firm characteristics in the relationship between intellectual capital efficiency and firm performance with special focus on information technology and healthcare firms listed on Bombay Stock Exchange between 2008 and 2024. The study determined that intellectual capital efficiency had a strong impact on firm performance in

the IT sector but a relatively weak impact in the healthcare sector by using multiple regression and generalized linear model mediation methods to analyse 37 information technology (IT) firms and 69 healthcare firms. Firm size was found to be a critical mediator in both industries, but firm age and leverage were found to be mediating factors only in the healthcare industry.

Ukpong et al. (2024) investigated how intellectual capital efficiency influences the cost of equity of 27 manufacturing companies listed on the Nigerian Exchange Group in the years 2014-2023 using *ex post facto* research design. The study covered three aspects of intellectual capital efficiency, namely, human capital efficiency, relational capital information management, and structural capital efficiency. The hypotheses were tested using Generalized Method of Moments (GMM) to address the endogeneity issues and the findings showed that human capital efficiency has a positive effect on the cost of equity.

Bala, Hassan, Dandago, Abubakar, and Maigoshi (2024) examined how intellectual capital efficiency affects market value of companies in the downstream oil and gas industry of Nigeria. The researchers used the information obtained from sampled firms listed on the Nigerian Exchange Group, covering the period 2004 to 2018. The researchers employed a quantitative research approach and sampled eight companies using purposive sampling. The empirical results showed that the efficiencies of structural capital and capital employed have significant positive influences on market value but the efficiencies of relational capital and human capital did not show any significant influences.

Method and Materials

This study adopted ex-post facto research design since the data were drawn from sampled firms audited annual reports (secondary sources), thereby limiting any manipulation. This study population comprised thirteen (13) FMCG firms listed on the Nigerian Exchange Group (NGX), from which purposive non-probability sampling was employed based on criteria such as continuous listing from 2014–2023 and accessibility of annual financial reports. Consequently, twelve (12) firms met the selection criteria, representing approximately 92% of the population—an adequate proportion for valid inference and generalization (Schmidt et al., 1988). The choice of FMCG firms is informed by their strategic role in Nigeria's economy and the unique challenges they face, including fluctuating consumer demand, inflationary pressures, rising production costs, and foreign exchange volatility, all of which significantly influence capital structure and financing decisions (Olumuyinwa & Faithwin, 2025). Data were analyzed using Microsoft Excel for data organization and Stata version 17 for econometric estimation and statistical analysis.

In this study, fixed-effect regression model with clustered standard errors was employed to account for groupwise heteroskedasticity and to enhance the robustness of the estimation results. Justification for this approach is based on several key considerations. First, fixed-effects model is well-suited for panel data as it effectively controls for unobserved heterogeneity by allowing each cross-sectional unit (firm) have its own intercept, thereby eliminating bias arising from time-invariant omitted variables. Additionally, clustering standard errors at the firm level corrects for heteroskedasticity and within-group correlation, addressing the risk of

overstating statistical significance due to potential dependence in the error structure across time within firms. This technique is particularly relevant in studies involving firm-level financial data, where observations within the same firm are likely to exhibit correlated residuals over time. Accordingly, Arellano (1987) and Wooldridge (2010), noted that clustering standard errors provides more reliable inference by ensuring that standard errors are robust to violations of homoskedasticity and serial correlation.

Measurement of Variables

Three independent variables to include human capital efficiency, structural capital efficiency and relational capital information disclosure were identified as factors that affects cost of equity. Additionally, one control variable was included, i.e., firm profitability, to account for its influence on the perceived relationships. According to the Pecking Order Theory (Myers & Majluf, 1984), firms prefer internal financing (i.e., using retained earnings) over external financing (debt or equity). Therefore, highly profitable firms are likely to rely less on debt, as they have sufficient internal funds. By including profitability, the model adjusts for a firm's internal financing capacity, ensuring that any observed effect of intellectual capital on cost of equity is not confounded by this factor.

Table 1   **Measurement and Description of Variables**

S/N	Variables		Measurements	Sources	Apriori Sign
Dependent Variable					
1	Cost of Equity		Computed as the sum of weighted average cost of debt, corporate tax adjustment and equity weighting.	Vitolla, Salvi, Raimo, Petruzzella, & Rubino, (2020).	
Independent Variables					
1	Human	Capital	Computed as revenue minus cost of revenue divided by staff cost	Rosales-Córdova, & Carmona-Benítez, (2025).	-
	Efficiency				
2	Structural	Capital	Computed as revenue minus cost of revenue and staff cost divided by revenue minus cost of revenue	Dzenopoljac, Yaacoub, Elkanj, & Bontis, (2017),	-
	Efficiency				
3	Relational	Capital	Constructed as dummy variable which takes the value of '1' if the company of interest provided information on customer/community relationship engagement during the period under review, otherwise '0'	Salehi, Fahimi, Zimon, & Homayoun, (2022).	-
	Efficiency				
Control Variable					
1	Profitability		Computed as profit after tax divided by total asset	Adekanmi, Akindehin, Efuntade, Adetula, & Apalowowa, (2025)	-

Source: Author's Compilation (2025)

Model Specification

Based on the theoretical literature and prior empirical studies on intellectual capital management /cost of equity nexus, this study specifies a model that captures the stated hypotheses. This study replicated similar

model employed by Rosales-Córdova and Carmona-Benítez, (2025) but with modifications to suit the hypotheses of this study. The econometric form of the model for this study is expressed as follows.

$$COEC_{it} = \partial_0 + \partial_1 EHCAP_{it} + \partial_2 ESCAP_{it} + \partial_3 ERCAP_{it} + \partial_4 ROTA_{it} + \mu_i$$

Where:

COEC   =   Cost of Equity
EHCAP   =   Human Capital Efficiency
ESCAP   =   Structural Capital Efficiency
ERCAP   =   Relational Capital Efficiency
ROTA   =   Return on Total Asset
∂_0 =   Constant
∂_1- ∂_4 =   Slope Coefficient
μ =   Stochastic disturbance
i & t   = i^{th} company and time notations

4.   Presentation of Results

Descriptive Statistics

In the descriptive statistics, each variable is examined based on its mean, standard deviation, maximum and minimum values. Table 2 reveals the results obtained from the descriptive statistics.

Table 2   Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
COEC	120	3.366	6.559	-54.62	29.1
EHCAP	120	5.037	5.818	.45	52.26
ESCAP	120	.665	.265	-1.24	1
ERCAP	120	.436	.498	0	1
ATANG	120	45.035	18.531	7.5	84.3

Source: Researchers' Computation (2025)

In this study, the descriptive statistics reveal variability among the examined variables. Cost of Equity (COEC) show a mean value of 3.366 with a high standard deviation value of (6.559), indicating huge dispersion. Human Capital Efficiency (EHCAP) averages at 5.037, with notable variability (5.818), while Structural Capital Efficiency (ESCAP) shows a mean value of 0.665, ranging from -1.24 to 1.00. Further, Relational Capital (ERCAP), showed a mean value of 0.436, suggesting that 43.6% of the sample observations disclose community engagement during the period under analysis. Asset Tangibility (ATANG) averages at 45.035, reflecting differences in firms' tangible asset structures. These insights highlight the diverse financial and intellectual capital characteristics of the firms under review.

Regression Analyses

Table 3 shows that the variance inflation factors (VIF) of ESCAP, ATANG, EHCAP, and ERCAP are 5.88, 4.63, 2.22, and 1.70, respectively; hence the mean variance inflation factor of 3.61, which is below the traditional threshold of 10, show that there is no multicollinearity. An examination of the F-statistic (2.95, p = 0.0240) and Wald statistic (9.70, p = 0.0458) of the fixed and random-effects regression model, respectively, shows that both models are statistically significant at 5 percent level. The coefficients of

determination (R^2) of 0.1116 and 0.1043 of the fixed-effects and random-effects models, respectively, suggest that the independent variables jointly explain about 11 and 10 percent of the systematic variation in the cost of equity. The Hausman specification test in this research has a p-value of 0.0243, which statistically supports the fixed-effects specification in testing the hypothesis.

Table 3   **Cost of Equity Regression Analysis Result**

	FIXED EFFECT MODEL	RANDOM EFFECT MODEL	FIXED EFFECT WITH CLUSTERED SE	
EHCAP	-0.031	-0.013	-0.031	
	(0.399)	(0.672)	(0.259)	
ESCAP	0.715	0.029	0.715	
	(0.353)	(0.967)	**(0.005)	
ERCAP	0.259	0.135	0.258	
	(0.511)	(0.689)	(0.373)	
ATANG	-0.051	-0.029	-0.051	
	**(0.002)	**(0.003)	(0.070)	
FISHER STATISTICS/WALD CHI²	2.95	9.70	4.69	
	**(0.0240)	**(0.0458)	**(0.0216)	
VIF TEST				
ESCAP: 3.43, ATANG: 2.82, EHCAP: 1.85, ERCAP: 1.70, MEAN VIF 3.61				
HAUSMAN TEST Chi² = 11.21 Prob = **0.0243	**Test for Fixed Effects** chibar2(01) = 2.04 Prob > chibar2 = **0.0376	**Test for Random Effects** chibar2(01) = 1.02 Prob > chibar2 = 0.1557		Modified Wald test for groupwise heteroskedasticity in fixed effect Prob > chibar2 = ***0.0000
NOTE: (1) BRACKET () ARE P-VALUES; (2) **, *, IMPLIES STATISTICAL SIGNIFICANCE AT 5% AND 1% LEVELS RESPECTIVELY**				

Source: Author's Computation (2025)

However, following the test for groupwise heteroskedasticity in fixed effect regression model, the result shows that constant error variance across entities is violated (the assumption of homoscedasticity of the error term has been violated). Therefore, fixed-effects regression model with clustered standard errors was employed and consequently used to test the hypotheses.

Discussion of Results

The findings from this study reveal that while human capital management exerts insignificant effect on cost of equity (accepting hypothesis one), and suggesting that investors may not yet price human capital investments into equity valuations, structural capital efficiency demonstrates a significant positive effect, indicating that firms with stronger structural frameworks and technological infrastructures face higher equity costs (rejecting hypothesis two). This outcome supports the argument that in Nigeria's volatile FMCG environment, characterized by inflation, liquidity constraints, and exchange rate instability, structural investments may increase perceived operational complexity and risk, prompting investors to demand higher returns (Pulic, 2004; Chen, Cheng, & Hwang, 2005).

Conversely, relational capital management revealed insignificant influence on cost of equity (accepting hypothesis three), reflecting investors' limited sensitivity to community engagement and social responsibility disclosures (Dhaliwal et al.,

2011; Plumlee et al., 2015). Collectively, these outcomes underscore that while intellectual capital components play crucial strategic roles, only structural capital efficiency currently shapes investor risk perception in Nigeria's FMCG sector, revealing a complex dynamic nexus between intangible asset utilization, market volatility, and equity financing dynamics.

Conclusion and Recommendation

The FMCG industry in Africa, particularly in Nigeria, continues to experience significant growth, fueled by urbanization, increasing disposable income, and rapid expansion of e-commerce. Intellectual capital plays a pivotal role in sustaining this growth, as firms transition from asset-based production to knowledge-driven operations to maintain competitive advantage. Among the key intellectual capital components: human capital, structural capital, and relational capital, firms strategically leverage these assets to enhance innovation, efficiency, and long-term value creation. Importantly, in corporate finance, the cost of equity capital remains a critical determinant of firm valuation, with financial transparency and intellectual capital reporting often cited as mechanisms to mitigate investor risk and reduce financing costs.

However, the effect of intellectual capital on equity costs is subject to debate, with studies presenting mixed evidence. In this study, while structural capital efficiency management demonstrated a significant positive effect on cost of equity, human capital efficiency and relational capital information disclosure showed no significant impact. The implications of these findings suggest that while human and relational capital could enhance long-term strategic value, they do not immediately translate into reduced equity financing costs, emphasizing the need for firms to view such investments as drivers of innovation and competitiveness rather than short-term financial levers. Conversely, the significant positive link between structural capital and cost of equity implies that firms must balance technological and organizational investments with enhanced transparency and risk-adjusted capital strategies to manage investors' perceptions in sustaining favorable financing outcomes.

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