



Intellectual Capital Efficiency Management Effect on Cost of Equity Capital

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ABSTRACT

This study looked at how managing intellectual capital affects the cost of equity capital in conglomerate firms in Nigeria that are listed on the stock exchange. It used a detailed dataset from 2013 to 2022. Following the Modigliani and Miller theoretical framework, the research explored how human capital efficiency and capital employed efficiency influence the cost of equity capital. To meet the goals of the study, an ex-post facto research design was chosen for its cost-effectiveness and the reliability of historical data in evaluating past events. The developed hypotheses were tested using a random effect regression analysis method, which helps reduce biases and improve the strength and trustworthiness of the findings. The results suggest that the efficiency of human capital does not have a notable impact on the cost of equity capital, whereas the efficiency of capital employed shows a significant negative effect on equity costs. The result underscores the importance of optimizing capital utilization within Nigeria's conglomerate sector. In line with these findings, the study suggests strategic measures to improve capital efficiency, including policies to promote effective capital management and incentives to support resource optimization practices. Additionally, based on the limited impact of human capital investments on reducing equity costs, this study recommends that managers of listed conglomerate firms in Nigeria should not prioritize such investments solely to fix equity costs.

Keywords: Financial Institutions' Regulation, Banking Sector Competitiveness, Bank Stability

1. INTRODUCTION

In the modern fast-paced economy, influenced by the quick development of information and technological progress, the growth of organisations has transformed to meet the changing environment. One example of this is the increasing global competition, where intellectual capital is now crucial for organisations to maintain their competitive edge (Christina et al., 2024). In an economy driven by knowledge, intellectual capital (referred to as IC) is seen as a valuable asset for creating value, expanding, and fostering innovation (Seetharaman et al. 2004; Chen et al., 2005; Wang et al., 2014; Dženopoljac et al., 2017). According to a study by Cao and Zhang (2011), the current era is characterised by a knowledge-based economy, with businesses transitioning from relying on physical assets to intellectual resources. Companies are increasingly focused on utilising resources effectively to remain competitive in a rapidly evolving business landscape. This shift has led countries to move from traditional manufacturing to intellectual capital and from labour-intensive production to knowledge-driven economies. In today's world, intangible assets such as knowledge are essential for survival and gaining a strategic edge in the marketplace, as highlighted by Latif et al. (2012). Little wonder why Bontis (2001) opined that intellectual capital has become the critical driver for firms' sustainability.

Salvi et al. (2020), along with Rehman et al. (2022), emphasize that the cost of capital serves as a fundamental criterion for assessing investment decisions. Clarity in a company's financial reports, such as its profit margin, helps to reduce uncertainty for shareholders, resulting in a decrease in the cost of capital. According to Martini et al. (2016), incomplete or unclear financial statements can raise uncertainty among

stakeholders, leading to a higher risk premium for information and increasing demands for higher returns. Managers, as representatives of shareholders, have a responsibility to focus on lowering the company's cost of capital, which in turn enhances the overall value of the organization and directly benefits shareholder wealth. Myers and Majluf (1984), referenced in Armstrong et al. (2011), stress the significance of the cost of capital for financial experts and its impact on the difference between accounting profit and economic profit. The cost of capital holds significant relevance for investors, serving as both a benchmark for assessing investment opportunities and a foundational element in two critical dimensions. First, it underpins all security valuation models and second, it informs decisions regarding investment priorities, optimal capital structures, and the allocation of invested funds, which would be impractical to determine without it (Golmohammadi et al., 2022).

The significant impact of the COVID-19 pandemic on the worldwide economy cannot be ignored, with many countries, including Nigeria, struggling to adapt to remote work options. In this new era, knowledge is increasingly valued as a key component of production, suggesting that companies in Nigeria need to embrace the knowledge economy by highlighting intellectual property in their annual reports to ensure future success and longevity. According to the World Health Organization (2020), improving the quality of decisions made by stakeholders and financial report users is crucial for establishing a strong basis for enhanced organizational performance and sustained survival of firms in the post-COVID-19 era.

In this research, emphasis is placed on the recognition that previous studies on the relationship between intellectual capital and cost of capital have focused mainly on data from developed countries. Notably, research conducted in the United Kingdom is a prime example (Mangena et al., 2010), the United States (Goldin, 2024; Liu & Wong, 2011), Germany (Goebel, 2015; Vasconcelos et al., 2019), France (Boujelbene & Affes, 2013), and Indonesia (Barus & Siregar, 2014). Further, Pedro et al. (2018), conducted their study using Spanish data, Kowalska, (2020) evaluated Polish firms, while Shakina et al. (2017) drew samples from listed Russian firms all of which emanated from advanced economies. However, without a doubt, only a handful of extant related studies include but are not limited to those of Ukpong et al. (2024), Angahar et al. (2023), Bala et al. (2021) can be attributed to samples obtained from the Nigerian setting. Nevertheless, while the outcomes from these scholarly works are commendable, they are grossly inadequate for meaningful conclusions and generalization. Furthermore, none of the prior literature had isolated similar investigations for listed conglomerate firms in Nigeria. There is a lack of knowledge that requires attention due to the ever-evolving world of innovation and technology, which poses a threat to companies in both advanced and emerging economies. It is important for more research to be conducted in Nigeria to understand how effectively knowledge capital is being used to enhance intellectual capital utilization and investor trust in a globally interconnected world.

Notably, this study provides a critical framework for government agencies to evaluate and enhance corporate operations through strategic planning and oversight, emphasizing intellectual capital as a key driver of competitive advantage and value creation. It offers investors valuable insights into intellectual capital valuation, associated risks, and returns while aiding policymakers in fostering growth, innovation, and investment. By identifying factors influencing the cost of capital, the outcome of this study equips corporate managers in listed Nigerian conglomerates with guidance to align decisions on intangible assets with investor expectations and optimize financial strategies. The structure of this study is as follows: Section 2 provides a comprehensive review of the conceptual, theoretical, and empirical literature relevant to the research. Section 3 outlines the methodological framework employed to achieve the study's objectives. Section 4 presents the findings derived from the data analysis, accompanied by a critical discussion. Finally, Section 5 concludes the study by offering key policy recommendations based on the research outcomes.

2. LITERATURE REVIEW

2.1. Intellectual Capital

The concept of intellectual capital, first introduced by Galbraith in 1969, is characterized as the "process of value creation." Subsequently, Kaplan and Norton (1996) expanded on this notion, emphasizing that intellectual capital entails strategic investments in key areas such as suppliers, customers, employees, and technological advancements. Intellectual capital is a term used to describe knowledge or expertise as a

resource used to solve problems, knowledge or expertise that adds value, and knowledge that gives a strategic advantage. Some researchers argue that the lack of a consistent definition for intellectual capital leads to different interpretations of its role in creating wealth for companies (Manzari et al., 2012). Unlike concepts like intangibles, intellectual property, or intangible assets, the idea of intellectual capital is seen as encompassing a wider scope that includes relational capital, human capital, capital employed, and structural capital (Stewart, 1997). This distinction is highlighted by scholars such as Montequin et al. (2006) and Kim et al. (2011). According to Makarov, (2010), intellectual capital serves as a foundation for sustainable development. Similarly, Ross et al. (2010) emphasize that intellectual capital integrates intangible assets, comprising human capital: representing organizational knowledge, alongside structural and relational capital. According to Kim and Kumar's (2009) investigation, intellectual capital has varied explanations from different perspectives; it includes individual and firm analysis, current and future value market, and input and output angle. According to Stewart (1997), intellectual capital encompasses the blending of knowledge, information, expertise, practical know-how, and the ability to acquire new knowledge. Within the context of the knowledge-based economy, intellectual capital, which is not a physical asset, can contribute to a company's ability to create financial gains and establish a competitive edge alongside tangible assets (Jardon, 2015; Xu & Wang 2018; Oppong et al., 2019; Cisneros, Perlins, & Garcia, 2020; Xu & Liu 2021).

2.2. Cost of Equity Capital

The cost of equity, a fundamental concept in financial management, is used to evaluate the feasibility and potential returns of a company's investment decisions. It represents the expected return required by investors for committing capital to a particular project or investment. As highlighted by Dirman (2019), the consideration of equity capital costs is essential for informed decision-making, particularly when evaluating the necessity of additional financing to support new initiatives. According to Utami (2005), the cost of equity represents the return investors demand for holding a company's stock, serving as the minimum acceptable rate of return for potential investments. Gupta et al. (2018) highlight its association with the financial risks inherent in the capital allocated to a firm's operations. The level of risk investors are prepared to accept is closely tied to the returns they anticipate, reflecting the principles underlying the cost of equity. This cost of equity is essential for companies to scale their operations and sustain extensive activities. Yang et al. (2024) highlight that the disclosure of intellectual capital is a crucial factor influencing the cost of equity. Such disclosures are essential for producing credible reports, minimizing information asymmetry between report creators and users, and aligning with the principles of signaling and resource-based theories.

2.3. Theoretical Framework

a. Modigliani and Miller Propositions

The theory presented by Franco Modigliani and Merton Miller in 1958, known as the Modigliani and Miller (M&M) proposition, is considered a fundamental concept in the field of corporate finance. It sheds light on the connection between a company's capital structure, its worth, and the expense of equity. According to this proposition, in perfect circumstances, the worth of a company remains unaltered by its capital structure, meaning that decisions regarding financing (e.g., debt or equity) have no impact on the company's value if markets are efficient. This theory is based on certain assumptions like the absence of taxes, transaction costs, and bankruptcy costs, along with the concept of uniform expectations and full market information. M&M's propositions provide an important lens to examine how non-physical assets might affect a firm's financial dynamics independently of its debt-equity mix (Ganesamoorthy, 2016). Intellectual capital, characterized by its intangible and innovative nature, holds the potential to lower a firm's cost of equity. This occurs through its capacity to enhance firm value and influence investor risk perceptions. Such effects align with the Modigliani and Miller (M&M) perspective, which suggests that market-based assets can significantly impact valuation metrics. This theoretical framework enables the exploration of whether intellectual capital alters investor expectations, ultimately contributing to a reduction in the cost of equity for firms.

2.4. Theoretical Literature and Hypothesis Development

a. Human Capital Efficiency and Cost of Equity Capital

The human capital efficiency cost of equity capital nexus is rooted in the notion that the strategic management and optimal use of human capital shape investor perceptions regarding a firm's risk profile and growth potential. This, in turn, affects the return rate investors expect for their financial commitment to the

company (cost of equity capital). Studies indicate that human capital, encompassing the skills of employees, plays a crucial role in establishing a firm's competitive edge (Bontis et al., 1999). Organizations possessing strong human capital are more capable of fostering innovation, adapting to market changes, and sustaining a competitive edge. Extant studies linking human capital efficiency management and the cost of equity capital have presented varied theoretical viewpoints, with some findings indicating negative perception. For instance, Botosan and Plumlee (2002) identified a positive correlation, suggesting that enhanced disclosure levels may attract occasional investors. This leads to higher market fluctuations and could potentially result in an increase in capital costs. Nevertheless, Gietzman and Ireland (2005) and Orens et al. (2009) discovered that improved reporting on intellectual capital is associated with a decrease in the cost of shares. This is supported by the research of Barus and Siregar (2015), as well as the results of Orens et al. (2010), and Li and Mangena (2014). Kristandl and Bontis (2007) highlight an adverse connection between human capital and the expense of equity capital, stressing that this link is noticeable particularly when information on human capital looks to the future. Additionally, García-Sánchez and Noguera-Gámez (2017) back up these discoveries, showing the consistent impact of human capital management on equity capital. These outcomes collectively highlight the significance of intellectual capital management on the cost of equity, emphasizing the importance of distinguishing intellectual capital disclosures from financial information to better understand their influence on capital costs. Therefore, based on the prevailing outcome of the extant study, this study hypothesizes that intellectual capital efficiency has a significant effect on the cost of equity capital.

b. Capital Employed Efficiency and Cost of Equity Capital

The effectiveness of capital utilization plays a crucial role in determining the cost of equity. Businesses that efficiently allocate their capital to generate superior returns often earn positive evaluations from investors. This efficient capital utilization often boosts investor confidence in the company's profitability, which can reduce perceived risk and, consequently, lower the cost of equity capital (Lutzenberger, 2017). Maditinos et al. (2011) emphasize that firms demonstrating greater capital efficiency employed tend to be more favorably assessed by both lenders and investors. Such a favorable perception often facilitates improved access to capital and reduced borrowing costs. Similarly, Xu et al. (2023), highlight that enhanced capital employed efficiency can positively impact a company's valuation and market perception, potentially increasing stock prices and contributing to a lower cost of equity capital. Conversely, firms demonstrating lower efficiency in utilizing capital may encounter heightened perceived risks, prompting investors to demand increased returns as compensation, thereby raising the cost of equity capital. Efforts to enhance capital employed efficiency can introduce challenges, as firms must carefully navigate the trade-off between maximizing returns and managing associated risks. Such a balancing act could result in suboptimal risk-adjusted returns and a subsequent rise in equity capital costs (Li, 2021). Razak and Tobiagi (2016) highlight the difficulties investors encounter in precisely evaluating a firm's efficiency in utilizing its capital often arising from limited or unevenly distributed information, creating uncertainty. Consequently, uncertainty may prompt investors to demand higher returns, which could increase the firm's cost of equity capital. Therefore, based on the prevailing outcome of the extant study, this study hypothesizes that capital employed efficiency has a significant effect on the cost of equity capital.

2.5. Empirical Review

Ukpong et al. (2024) investigated the relationship between intellectual capital efficiency and the cost of equity capital among manufacturing firms listed on the Nigerian Exchange Group from 2014 to 2023. The study conceptualized the cost of equity as the dependent variable, while intellectual capital efficiency was operationalized through three key dimensions: human capital efficiency, relational capital efficiency, and structural capital efficiency. Utilizing ex post facto research design, a sample of 27 manufacturing firms was drawn from a population of 62. To address potential endogeneity concerns and rigorously test the research hypotheses, the study employed the Generalized Method of Moments (GMM) estimation technique. The empirical findings demonstrated a positive association between human capital efficiency and the cost of equity capital.

In his study, Dawodu (2022) investigates how intellectual capital impacts the financial outcomes of nine deposit money banks in Nigeria. By using the VAIC model, the research examines different aspects of intellectual capital in conjunction with financial performance to determine variations in performance. Through an ex-post facto research approach, the study utilises data from annual reports and financial statements from

2010 to 2021. The analysis employs descriptive and inferential statistical methods. The results indicate that both structural capital and capital employed have a beneficial impact on financial performance.

Ali et al. (2022) conducted a study on 140 publicly traded companies in Pakistan and India from 2010 to 2020 to explore how intellectual capital efficiency impacts their financial performance. The study measured financial performance using Return on Assets (ROA) and Return on Equity (ROE), while intellectual capital was assessed using an advanced Value-Added Intellectual Capital (VAIC) model. The study focused on human capital efficiency, structural capital efficiency, relational capital disclosure, and capital employed efficiency as key independent variables, with company size, leverage, and age considered as control variables. Through regression analysis, the study highlights the importance of effective intellectual capital management in improving financial results.

Rehman et al. (2022) have explored the connection between intellectual capital efficiency (ICE) and the financial success of Islamic banks by breaking down ICE into human, structural, and relational capital efficiencies. The research covers 129 Islamic banks in 29 predominantly Muslim countries from 2008 to 2017, evaluating their influence on crucial financial metrics like return on assets (ROA), return on equity (ROE), and Tobin's Q. Through the use of the two-step system generalized method of moments (2SYS-GMM) estimator, the results indicate that structural and relational capital efficiencies have a significant impact on value creation and enhancing bank performance. However, human capital efficiency is found to have a negative effect on the financial performance of Islamic banks.

Mondal and Ghosh (2020) explored how revealing intellectual capital impacts the expense of equity capital, focusing on the effects of disclosures on human, relational, and structural capital. By studying data from 30 Nifty 50 companies during 2018-2019, they found that more openness in reporting intellectual capital leads to a reduced cost of equity capital. Particularly, disclosures concerning human and structural capital show a noteworthy negative relationship with the expenses of equity financing.

Forte et al. (2019) investigated how intellectual capital affects the financial performance and market value of Italian firms traded on the stock market. By using the Value-Added Intellectual Coefficient (VAIC) model, the research looked at information from 135 companies over the years 2008 to 2017. The findings showed a link between intellectual capital and important financial measurements such as profits, sales growth, and market value, emphasising its importance in driving business success. However, the study also pointed out a contrasting impact, with efficiency in structural capital and capital usage having a detrimental effect on market value.

Meei (2019) investigates how disclosing intellectual capital can impact the cost of capital in Malaysian firms from 2017. By using data from annual reports and different statistical models, the study looks at the connection between the two and the impact of technological intensity. The results show a link between the cost of equity and the level of intellectual capital disclosure, especially in terms of external and human capital. On the other hand, revealing internal capital has a negative effect on debt costs. Additionally, the research highlights that in high-tech companies, more intellectual capital disclosure, including internal, external, and human capital, is linked to higher debt costs.

3. RESEARCH METHODS

3.1. Data and Sample Selection

This research utilises ex-post facto methodology to investigate how managing intellectual capital efficiency impacts the cost of equity capital for industrial goods companies in Nigeria that are listed on the Nigerian Exchange Group. In December 2023, there were a total of seventeen (17) conglomerate firms included in the study. A selective non-random sampling method was used to choose companies that met certain requirements: (1) being listed on the Nigerian Exchange Group between 2013 and 2022; (2) giving unrestricted access to their annual financial reports during the study period. The information used in this research was obtained from stock exchange fact books and annual financial reports of certain companies. The data was analysed using both descriptive and inferential statistics, involving preliminary analysis like descriptive and data normality assessment, followed by panel regression analysis using fixed and random effect models. The most suitable model was identified through the Hausman specification test.

3.2. Model Specification

According to previous research and academic theories on the relationship between intellectual capital and the cost of capital, this study adjusted the econometric model used in a study conducted by Handayani et al. (2023). The modified econometric model that better fits the goals of this study is presented in the following form.

Cost of Equity Capital Model

$$COEC_{it} = \alpha_0 + \beta_1 HMCE_{it} + \beta_2 CAEE_{it} + \epsilon_{it} \dots (1)$$

Where:

COEC	=	Cost of Equity Capital
HMCE	=	Human Capital Efficiency
CAEE	=	Capital Employed Efficiency
{i}"	=	Cross Section (Sample Companies)
t	=	Time Frame (2013 to 2022)
ϵ_{it}	=	Stochastic error Term

In this study, the a priori expectation is designed based on the knowledge from reviewed related literature and it is stated as follows; $\beta_1 < 0$, $\beta_2 < 0$.

Table 1. Operationalization of Variables

Variables	Measurement	Source
Cost of Equity Capital	Computed as weighted average cost of equity capital by combining cost of equity, equity weighting, debt weighting and corporate tax adjustment (CCTX)	Embong et al.(2012).
Human Capital Efficiency	Revenue minus cost of revenue divided by staff cost	Cisneros, Perlina, and Garcia (2020)
Capital Employed Efficiency	computed as revenue minus cost of revenue divided by total asset minus intangible asset	Alfraih, (2017).
Fixed Asset Tangibility	Computed in percentage as fixed asset or PPE divided by Total asset	Imtiaz et al. (2016)

Source: Authors Compilation (2024)

4. RESULTS AND DISCUSSION

4.1. Research Results

4.1.1. Descriptive Statistics

Table 2 presents a condensed overview of the statistical details of the variables utilised in the research. The data shows that the average cost of equity capital is 5.87, with a standard deviation of 27.60 and reaching a high of 290.31 during the period under review. In terms of human capital, the statistics suggest an average of 4.35 and a standard deviation of 6.22, indicating that investors expect a positive return of 4.35% when investing in Nigerian conglomerate firms. A positive cost of equity also suggests that investors generally have confidence in conglomerate companies' ability to generate returns on their investments.

Table 2. Descriptive Statistics Result

Variable	OBS	Mean	Std. Dev.	Min	Max
COEC	109	5.870642	27.60864	-1.94	290.31
HMCE	107	4.34785	6.223242	-2.98	52.26
CAEE	109	.2426606	.252937	-1.03	1.2

ATANG	109	50.44018	25.68628	0	95.78
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Source: Authors's Computation (2024)

Upon initial observation of human capital, it is evident that the average value stands at 4.35. This suggests that the companies in question have effectively achieved a profitable revenue to staff costs ratio. A positive human capital efficiency mean value implies that the staff is contributing meaningfully to the revenue generation process (Pike & Li, 2010) which could be due to factors such as employee skills, motivation, training, and alignment with company goals. The mean value of capital employed is seen to be 0.24. Over a decade, Nigerian conglomerates in the goods sector have shown consistent proficiency in utilising their capital resources to generate revenue, as evidenced by the positive mean value of their capital employed. The statistical analysis reveals that these conglomerates have consistently surpassed their capital investment with their revenue generation capabilities.

Table 3. Shapiro Wilk Test for Normality of Data Result

Variable	OBS	W	V	Z	PROB>Z
COEC	109	0.12095	78.007	9.711	0.00000
HMCE	107	0.55959	38.480	8.127	0.00000
CAEE	109	0.81678	16.259	6.215	0.00000
ATANG	109	0.94701	4.702	3.450	0.00028

Source: Authors's Computation (2024)

The results presented in Table 3 indicate that the cost of equity capital (COEC, with Prob > z = 0.00000) does not follow a normal distribution. Similarly, the variables for human capital (HMCE, Prob > z = 0.00000), capital employed efficiency (CAEE, Prob > z = 0.00000), and asset tangibility (ATANG, Prob > z = 0.00028) are also observed to deviate from normal distribution.

Table 4. Cost of Equity Panel Regression Result

Variables	Human Capital	Capital Employed	Asset Tangibility	Constant
Fixed Effect Model				
R2 = 0.1992	Prob. F = 4.28, 0.0016, VIF = 1.14			
Coefficient	-0.032	-3.306	-0.074	5.449
t_Statistics	(-0.76)	(-1.60)	(-4.26)	(5.01)
Probability_t	{0.448}	{0.113}	{0.000} ***	{0.000} ***
Random Effect Model				
R2 = 0.1625	Prob. Wald = 11.66, 0.0398, Hausman = 0.0506			
Coefficient	-0.011	-4.028	-0.035	3.800
Z Statistics	(-0.28)	(-2.69)	(-2.82)	(3.98)
Probability Z	{0.780}	{0.007} **	{0.005} **	{0.000} ***

The t and z-statistics, along with their corresponding probabilities, are indicated within parentheses () and curly braces {}, respectively. Results marked with ** signify a 5% level of statistical significance.

Source: Authors's Computation (2024)

The results of the regression analysis are summarised in Table 4, showing an average VIF value of 1.14 which suggests no multicollinearity between the variables. Both the F-statistic (4.28, p = 0.0016) and Wald-statistic (11.66, p = 0.0398) provide evidence of the overall significance of the regression models, for fixed and random effects models. The fixed and random effects models have R-squared values of 0.1992 and 0.1625 respectively, indicating that around 20% and 16% of the variation in the cost of equity capital can be explained by the variables being considered. The Hausman test's p-value is statistically significant at a level higher than 5%, which supports the use of the random effect model for hypothesis testing.

4.2. Discussions

The significant adverse impact of capital employed efficiency on the cost of equity indicates that listed conglomerate firms in Nigeria that make effective use of its employed capital tend to face a reduced cost of equity. Put differently, companies that proficiently manage and optimize its capital resources to achieve higher returns on investment are favored by investors, who demand a lower rate of return as a result. This outcome supports the Modigliani and Miller Propositions which posit that under certain assumptions, when a firm efficiently utilizes its capital, it can generate higher cash flows and returns, reducing perceived risk for investors. The concepts of the Agency theory and Resource-Based View can also be applied to this discovery. According to the Agency theory, investors view a well-utilized capital base as a sign of efficient management, reduced information disparity, and fewer conflicts between shareholders and management, resulting in a lower cost of equity. The Resource-Based View theory highlights the importance of firm-specific resources for gaining a competitive edge. Efficient capital deployment by firms enhances profitability and worth, leading to a more favourable equity cost. This discovery aligns with previous results from studies by Li et al. (2021), Adegbite et al. (2021), and Nurseha et al. (2024).

5. CONCLUSIONS

Previous research underscores the capacity of intellectual capital to influence the cost of capital, diminish information asymmetries and estimation uncertainties, oversee investor-related costs, and shape investor preferences. However, these impacts are rarely driven by conventional financial reporting. In reality, traditional reporting tends to focus on the short-term and does not accurately reflect a company's ability to generate value over the medium- and long-term. This issue is mainly due to a lack of emphasis on the importance of intangible assets, which play a crucial role in creating value. The research conducted in this study explores how intellectual capital affects the cost of equity capital in publicly traded conglomerates in Nigeria. The results show that the impact varies depending on the specific intellectual capital measures used. Interestingly, the capital employed has a significant negative correlation with the cost of equity capital, whereas human capital does not show any statistically significant influence. This study brings attention to the negative effect of capital employed on the cost of equity capital and emphasises the importance of implementing policies to enhance financial knowledge among Nigerian conglomerates. Policymakers are urged to develop programs that educate managers on the advantages of efficient capital utilization. Further, incentives should be introduced to encourage the adoption of resource optimization practices. Creating a supportive environment for access to finance is crucial, enabling investments in technology, training, and process improvements that enhance the efficiency of capital use. The findings of the study indicate that human capital has no significant impact on lowering the cost of equity capital. Therefore, it is suggested that efforts to optimize human capital should not be prioritized as a strategy for addressing the high cost of equity capital in listed conglomerate firms in Nigeria.

6. REFERENCES

- Ali, S., Murtaza, G., Hedvicakova, M., Jiang, J., & Naeem, M. (2022). Intellectual capital and financial performance: A comparative study. *Frontiers in Psychology*, 13, 967820.
- Alfraih, M. M. (2017). The value relevance of intellectual capital disclosure: Empirical evidence from Kuwait. *Journal of Financial Regulation and Compliance*, 25(1), 22-38.
- Angahar, P. A., Azende, T., & Tsavsar, C. S. (2023). Evaluation of manufacturing and human capital reporting as predictors of cost of capital among listed manufacturing companies in Nigeria. *Jalingo Journal of Social and Management Sciences*, 5(2), 289-298.
- Anjum, N., & Rahaman, M. S. (2022). Human resource management amidst COVID-19 pandemic: Behavioral implications for HR practitioners. *Journal of Advanced Research in Economics and Administrative Sciences*, 3(1), 57-66.
- Armstrong, M., Brown, D., & Reilly, P. (2011). Increasing the effectiveness of reward management: An evidence-based approach. *Employee Relations*, 33(2), 106-120.

- Bala, A. J., Hassan, A., Dandago, K. I., Abubakar, A. B., & Maigoshi, Z. S. (2021). On the relationship between intellectual capital efficiency and firm value: Evidence from the Nigerian oil and gas downstream sector. *International Journal of Learning and Intellectual Capital*, 18(3), 222-251.
- Barus, S. H., & Siregar, S. V. (2014). The effect of intellectual capital disclosure on cost of capital: Evidence from technology-intensive firms in Indonesia. *Journal of Economics, Business, and Accountancy Ventura*, 17(3), 333-344.
- Martini, S., Corvino, A., Doni, F., & Rigolini, A. (2016). Relational capital disclosure, corporate reporting and company performance: Evidence from Europe. *Journal of Intellectual Capital*, 17(2), 186-217.
- Bontis, N. (2001). Assessing knowledge assets: A review of the models used to measure intellectual capital. *International Journal of Management Reviews*, 3(1), 41-60.
- Bontis, N., Dragonetti, N. C., Jacobsen, K., & Roos, G. (1999). The knowledge toolbox: A review of the tools available to measure and manage intangible resources. *European Management Journal*, 17(4), 391-402.
- Botosan, C. A., & Plumlee, M. A. (2002). A re-examination of disclosure level and the expected cost of equity capital. *Journal of Accounting Research*, 40(1), 21-40.
- Boujelbene, M. A., & Affes, H. (2013). The impact of intellectual capital disclosure on cost of equity capital: A case of French firms. *Journal of Economics Finance and Administrative Science*, 18(34), 45-53.
- Cao, M., & Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. *Journal of Operations Management*, 29(3), 163-180.
- Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, 6(2), 159-176.
- Christina, B. A., Candra, A. R., Ayundyayasti, P., Sarana, S., & Mardinawati, M. (2024). The effect of intellectual capital (VACA, VAHU, and STVA) on firm value in healthcare sector companies on the IDX. *International Journal of Business and Quality Research*, 2(1), 14-27.
- Dawodu, O. (2022). Human capital investment and financial performance: A study of deposit money banks in Nigeria. *African Journal of Business and Economic Development*, 2782(7658),
- Dirman, A. (2019). Analysis of good corporate governance and corporate social responsibility disclosure on cost of equity capital in listing CGPI and BEI 2013–2017. *Research Journal of Finance and Accounting*, 10(16), 1–10.
- Dženopoljac, V., Yaacoub, C., & Elkanj, N. (2017). Impact of intellectual capital on corporate performance: Evidence from the Arab region. *Journal of Intellectual Capital*, 18, 884–903.
- Embong, Z., Mohd-Saleh, N., & Hassan, M. S. (2012). Firm size, disclosure, and cost of equity capital. *Asian Review of Accounting*, 20(2), 119–139.
- Forte, W., Matonti, G., & Nicolà, G. (2019). The impact of intellectual capital on firms' financial performance and market value: Empirical evidence from Italian listed firms. *African Journal of Business Management*, 13(5), 147-159.
- García-Sánchez, I. M., & Noguera-Gámez, L. (2017). Integrated information and the cost of capital. *International Business Review*, 26(5), 959-975.
- Ganesamoorthy, L. (2016). Debt-equity mix: the unresolved corporate puzzle. *Saudi Journal of Business Management Studies*, 1(1), 1-5.
- Ghio, A., & Verona, R. (2020). *The evolution of corporate disclosure: Insights on traditional and modern corporate communication*. Cham: Springer Nature.
- Goebel, V. (2015). Intellectual capital reporting in a mandatory management report: The case of Germany. *Journal of Intellectual Capital*, 16(4), 702-720.
- Goldin, C. (2024). *Human capital*. In *Handbook of Cliometrics* (pp. 353-383). Cham: Springer International Publishing.

- Golmohammadi, M., Zarei, F., & Salimi, E. (2022). Accounting comparability, stock liquidity, and firm value. *Interdisciplinary Journal of Management Studies*, 15(4), 721-742.
- Gupta, K., Krishnamurti, C., & Tourani-Rad, A. (2018). Financial development, corporate governance, and cost of equity capital. *Journal of Contemporary Accounting & Economics*, 14(1), 65-82.
- Handayani, L., Afni, F. J., & Rivandi, M. (2023, November). Intellectual capital disclosure, independent commissioner, and leverage on the cost of equity with Ohlson's model approach. In *Proceeding International Conference on Economy, Management, and Business*, 1(1), 1084-1095.
- Imtiaz, M. D., Farhan, M., Khaled, M., & Mallik, K. (2016). Determinants of capital structure and testing of applicable theories: Evidence from pharmaceutical firms of Bangladesh. *International Journal of Economics and Finance*, 8(3), 23-32.
- Jardon, C. M. (2015). The use of intellectual capital to obtain competitive advantages in regional small and medium enterprises. *Knowledge Management Research & Practice*, 13(4), 486-496.
- Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74(1), 75-85.
- Kim, D. Y., & Kumar, V. (2009). A framework for prioritization of intellectual capital indicators in R&D. *Journal of Intellectual Capital*, 10(2), 277-293.
- Kim, T., Yoo, J. J. E., & Lee, G. (2011). The HOINCAP scale: Measuring intellectual capital in the hotel industry. *The Service Industries Journal*, 31(13), 2243-2272.
- Kristandl, G., & Bontis, N. (2007). Constructing a definition for intangibles using the resource-based view of the firm. *Management Decision*, 45(9), 1510-1524.
- Latif, M., Malik, M. S., & Aslam, S. (2012). Intellectual capital efficiency and corporate performance in developing countries: A comparison between Islamic and conventional banks in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4(1), 405-420.
- Li, J., & Mangena, M. (2014). Capital market pressures and the format of intellectual capital disclosure in intellectual capital-intensive firms. *Journal of Applied Accounting Research*, 15(3), 339-354.
- Li, X., Nosheen, S., Haq, N. U., & Gao, X. (2021). Value creation during the fourth industrial revolution: Use of intellectual capital by most innovative companies of the world. *Technological Forecasting and Social Change*, 163, 120479.
- Li, Z. (2021). On banking crisis, liquidity management, and bank risks (Doctoral dissertation). *University of Macau*.
- Liu, Q., & Wong, K. P. (2011). Intellectual capital and financing decisions: Evidence from the US patent data. *Management Science*, 57(10), 1861-1878.
- Lutzenberger, F. T. (2017). Industry cost of equity capital: European evidence for multifactor models. *The European Journal of Finance*, 23(10), 885-915.
- Maditinos, D., Chatzoudes, D., Tsairidis, C., & Theriou, G. (2011). The impact of intellectual capital on firms' market value and financial performance. *Journal of Intellectual Capital*, 12(1), 132-151.
- Makarov, P. (2010). Intellectual capital as an indicator of sustainable development. *Journal of Sustainable Development*, 3(3), 85.
- Mangena, M., Pike, R. H., & Li, J. (2010). *Intellectual capital disclosure practices and effects on the cost of equity capital: UK evidence*. Edinburgh, Scotland: The Institute of Chartered Accountants of Scotland.
- Manzari, M., Kazemi, M., Nazemi, S., & Pooya, A. (2012). Intellectual capital: Concepts, components, and indicators: A literature review. *Management Science Letters*, 2(7), 2255-2270.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review*, 48(3), 261-297.
- Mondal, A., & Ghosh, C. (2020). Effect of intellectual capital disclosure on cost of equity capital: A study on Indian companies. *Asian Journal of Accounting Research*, 6(2), 165-179.

- Montequín, V. R., Fernández, F. O., Cabal, V. A., & Gutierrez, N. R. (2006). An integrated framework for intellectual capital measurement and knowledge management implementation in small and medium-sized enterprises. *Journal of Information Science*, 32(6), 525-538.
- Muhammad, N. M. N., & Ismail, M. K. A. (2009). Intellectual capital efficiency and firm's performance: A study on Malaysian financial sectors. *International Journal of Economics and Finance*, 1(2), 206-212.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13, 187-221.
- Nielsen, C. (2018). Relating successful business models to intellectual capital and knowledge management practices. *Electronic Journal of Knowledge Management*, 16(1), 48-55.
- Nurseha, B. P., Afif, M. N., & Anwar, S. (2024). The effect of human capital efficiency, structural capital efficiency, relational capital efficiency, capital employed efficiency, and rate of growth of intellectual capital on financial performance. *The Accounting Journal of Binaniaga*, 9(1), 51-64.
- Opong, G. K., Pattanayak, J. K., & Irfan, M. (2019). Impact of intellectual capital on the productivity of insurance companies in Ghana: A panel data analysis with system GMM estimation. *Journal of Intellectual Capital*, 20(6), 763-783.
- Orens, R., Aerts, W., & Cormier, D. (2010). Web-based non-financial disclosure and cost of finance. *Journal of Business Finance & Accounting*, 37(9-10), 1057-1093.
- Orens, R., Aerts, W., & Lybaert, N. (2009). Intellectual capital disclosure, cost of finance, and firm value. *Management Decision*, 47(10), 1536-1554.
- Pedro, E., Leitão, J., & Alves, H. (2018). Intellectual capital and performance: Taxonomy of components and multi-dimensional analysis axes. *Journal of Intellectual Capital*, 19(2), 407-452.
- Razak, R. A. & Tobiagi, S. (2016). Intellectual capital disclosure practices in Saudi Arabia financial institutions. Intellectual Capital Disclosures Practices in Saudi Arabia Financial Institution. *Journal of Management Studies*, 43(4), 867-893
- Rehman, A. U., Aslam, E., & Iqbal, A. (2022). Intellectual capital efficiency and bank performance: Evidence from Islamic banks. *Borsa Istanbul Review*, 22(1), 113-121.
- Ross, S., Westerfield, R. W., & Jaffe, J. F. (2008). *Financial management*. São Paulo: Atlas.
- Salvi, A., Vitolla, F., Raimo, N., Rubino, M., & Petruzzella, F. (2020). Does intellectual capital disclosure affect the cost of equity capital? An empirical analysis in the integrated reporting context. *Journal of Intellectual Capital*, 21(6), 985-1007.
- Seetharaman, A., Lock Teng Low, K., & Saravanan, A. S. (2004). Comparative justification on intellectual capital. *Journal of Intellectual Capital*, 5(4), 522-539.
- Shakina, E., Molodchik, M., & Barajas, A. (2017). Endogenous value creation: Managerial decisions on intangibles. *Management Research Review*, 40(4), 410-428.
- Stewart, T. A. (1997). *Intellectual capital: The new wealth of organizations*. New York: Doubleday Currency.
- Ukpong, M. O., Ukpong, E. G., & Ibok, N. (2024). Intellectual capital efficiency and cost of capital among listed manufacturing companies in Nigeria. *FUDMA Journal of Accounting and Finance Research (FUJAFR)*, 2(3), 12-22.
- Utami, W. (2005). The effect of earnings management on the cost of equity capital (Study of public companies in the manufacturing sector). National Accounting Symposium VIII Solo.
- Vasconcelos, T., Forte, D., & Basso, L. F. (2019). The impact of intangibles of German, English, and Portuguese companies: From 1999 to 2016. RAM. *Revista de Administração Mackenzie*, 20, eRAMF190164.
- Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital, and firm performance. *Management Decision*, 52(2), 230-258.
- Xu, J., & Liu, F. (2021). Nexus between intellectual capital and financial performance: An investigation of Chinese manufacturing industry. *Journal of Business Economics and Management*, 22(1), 217-235.

- Xu, J., & Wang, B. (2018). Intellectual capital, financial performance, and companies' sustainable growth: Evidence from the Korean manufacturing industry. *Sustainability*, 10(12), 4651.
- Xu, J., Haris, M., & Liu, F. (2023). Intellectual capital efficiency and firms' financial performance based on the business life cycle. *Journal of Intellectual Capital*, 24(3), 653-682.
- Yang, Z., Zhuo, J., & Zhang, Y. (2024). Risk management and optimal investment with inalienable human capital. *Finance Research Letters*, 104970.