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Assessing Intellectual Capital and Performance of Deposit Money Banks in Nigeria

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ABSTRACT

This study examines the effect of intellectual capital and the performance of deposit money banks in Nigeria. Intellectual capital variables, such as human capital, structural capital, and relational capital, are measured with performance. A field survey design is used for this study. Primary data are collected using a self-administered questionnaire. The population of the study consisted of 1251 managerial-level employees from selected deposit money banks in Nigeria. The validity of the study is based on expert opinions. The reliability is measured using the Cronbach-alpha method. The reliability of all items is above 0.70%, indicating high reliability. Three hypotheses are tested using Pearson's moment correlation coefficient and regression statistics. The results show that intellectual capital parameters are related to the performance of deposit money banks. The findings show that intellectual capital is a part of the intangible assets that is capable of improving a bank's image and performance. Hence, the research suggests that deposit money banks should enhance efforts to foster a deeper comprehension and appreciation of intellectual capital and its facets within their management framework. This entails leveraging a robust intellectual capital dimension that establishes significant connections between banks and third-party stakeholders. By prioritizing awareness of competitors, customers, and employees, banks can discern their needs and deliver ideal values to them.

1. Introduction

In this era of the knowledge economy, intellectual capital plays a vital role in the development and growth of knowledge-intensive organisations [1]. Most organisation faces the challenges of the strategies needed in managing knowledge resources, as all economic activities are associated with the creation, implementation, and dissemination of knowledge resources. Intellectual capital is the main strategic intangible factor of a knowledge economy.

Human capital development lies at the heart of organisational sustainability and growth. The vitality of organisations stems from the energy and creativity of their human workforce [2].

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Therefore, regardless of the sophistication of capital and technology, their efficacy in achieving organisational goals hinges on the utilization of human resources. Underutilized human resources not only lack the capacity but also the motivation to effectively harness other resources towards organisational objectives [3].

While some organisations focus solely on hiring individuals with requisite skills, others prioritize employee development within the workplace [4]. In the latter scenario, employers are tasked with providing necessary skills and knowledge through training and development programs. However, the development of human capital must be driven by knowledge gaps rather than solely serving organisational needs [5]. Therefore, organisational needs must be clearly defined, and development programmes structured to leverage employees' intellectual potential or address deficiencies in their workflow processes.

In the fiercely competitive landscape of the global economy, intellectual capital stands as a cornerstone for organisational resilience and value creation [6]. Bontis [7] further underscored its pivotal role as a driver of corporate sustainability. However, despite its acknowledged importance, the impact of intellectual capital on firm performance remains a subject of contention within the literature, particularly in developing countries [8,9].

This subject matter has gained heightened significance within the context of the knowledge-based economy, characterized by the rapid proliferation of knowledge-intensive industries and the growing emphasis on knowledge creation and utilization, particularly in the banking sector [10]. As organisations navigate this landscape, understanding the dynamics of intellectual capital and its implications for organisational success becomes paramount.

Despite its acknowledged importance, there remains a gap in our understanding of the precise mechanisms through which intellectual capital influences organisational performance. Besides, only a little research work has been devoted to examining the impact of intellectual capital on banks' performance in Nigeria. Based on the above assertions, this research examines the effect of intellectual capital dimension (human capital, structural capital, and relational capital) on the performance of deposit money banks in Nigeria.

The research hypotheses are stated in the null form to guide the thought of this study:

- H_{01} – Human capital does not significantly affect the performance of deposit money banks in Nigeria;
- H_{02} – Structural capital does not significantly affect the performance of deposit money banks in Nigeria;
- H_{03} – Relational capital does not affect the performance of deposit money banks in Nigeria.

2. Capital and Performance Overview

2.1 Intellectual Capital

The concept of intellectual capital has evolved significantly since it was first proposed by economist John Kenneth Galbraith in 1969 [11]. The Galbraith's perspective [11] framed intellectual capital not merely as an intangible asset but also as an ideological process [12]. Over time, scholarly discourse has offered diverse interpretations of intellectual capital. Edvinsson [13] conceptualised intellectual capital as the amalgamation of knowledge, innovation, technology, and individual employees' capacity to govern their work. In contrast, Sha & Kong [14] viewed intellectual capital as a manageable resource that can be standardized, controlled, and leveraged to enhance value creation. Li [15] expanded this understanding by defining corporate intellectual capital as intangible

assets that align with corporate strategic objectives, fostering competitive advantage and value creation. Furthermore, Li [15] emphasized that intellectual capital encompasses the essence of intangible assets, manifesting itself in various forms. This holistic perspective suggests that intellectual capital not only encapsulates the substance of intangible assets but also determines their value content within a company. At its core, intellectual capital represents a meta-level capability for organisations to effectively coordinate, orchestrate, and deploy their knowledge resources towards realizing their future vision and creating sustainable value.

2.2 Human Capital

Human capital is described as comprising a blend of genetic inheritance, education, experience, and attitudes toward life and business. It serves as a pivotal dimension within the broader framework of intellectual capital, wielding significant influence over other organisational elements [16]. This embodiment of human capital resides within the workforce, encompassing their knowledge, skills, and cultural acumen [13,17]. Through deliberate investments in human health, intelligence, and spirit, firms aim to cultivate future value [18]. In the banking sector, human capital encompasses a spectrum of attributes including knowledge, technology proficiency, attitudes, teaching prowess, research capabilities, innovation, and collaborative skills [19,20]. These elements serve as primary drivers of organisational performance. Within this context, human capital signifies the notion of individuals enhancing their productivity and efficiency through dedicated pursuits of education, personal development, and training initiatives in line with organisational goals.

2.3 Structural Capital

Structural capital encompasses all intangible assets within an organisation that fulfill vital functions [21]. This capital represents the organisational capacity to establish corporate routines and structures conducive to enhancing intellectual and business performance [6]. Examples of structural capital include company operating systems, production processes, organisational culture, management philosophy, and all forms of proprietary intellectual property owned by the organisation. This category of capital encompasses both soft assets, such as strategic culture, structural systems, rules, and procedures, and core assets like data, information, and knowledge networks [22]. In essence, structural capital encapsulates the organisational and managerial dimensions of a company, manifesting through a spectrum of coded and uncoded knowledge that characterizes a modern enterprise.

2.4 Relational Capital

Relational capital encompasses all relationships forged between an organisation and its stakeholders, including customers and suppliers [23]. This capital represents the intrinsic value derived from inter-organisational connections, extending to relationships with suppliers, customers, shareholders, and various individuals and circumstances. Within this framework, relational capital encompasses vital elements such as customer satisfaction, loyalty, negotiation prowess, corporate image, and interactions with suppliers through distribution channels, employee engagement, supplier networks, and licensing agreements. Organisations recognize active participation in business networks as pivotal, acknowledging them as fertile grounds for potential opportunities [24]. Relational capital emerges as a linchpin of business success, constituting a mosaic of both formal and informal, temporary and enduring relationships that catalyse business development. Central to its essence is the knowledge amassed through interactions with external parties, underscoring its potential for knowledge exchange and future collaboration. The value of a firm is intricately linked to

the wealth of knowledge accumulated through these external relationships [25]. Thus, relational capital serves as a cornerstone for organisational growth and prosperity, leveraging the collective wisdom gleaned from dynamic interactions with stakeholders to drive sustainable success.

2.5 Performance

Organisational performance stands as a cornerstone of research and practice, drawing keen attention from scholars and practitioners alike [26]. This inquiry spans across diverse organisational settings, encompassing both private and public sectors [27,28]. Traditionally, studies have scrutinized various dimensions of performance, with a particular focus on financial and non-financial components. Non-financial facets of performance, delving into intangible realms, are multifaceted and encompass critical domains such as employee satisfaction, service delivery, quality, efficiency, effectiveness, outcomes, and customer satisfaction. In practice, the prioritization of performance measurement varies across different organisational contexts. Financial performance, a quintessential metric, serves as a barometer of a firm's utilization of assets to generate revenue and assesses its overall financial well-being over time. This metric enables comparative analyses across industries, providing insights into industry-specific dynamics and benchmarks [29].

The hallmarks of business success encompass robust financial performance, stakeholder satisfaction, employee empowerment, productivity, innovation, and alignment of performance measurement and reward systems [30]. While subjective measures dominate performance evaluations, studies tend to operationalize this construct using a subset of indicators, including return on investment, sales growth, market share, access to resources, customer satisfaction, supply chain efficiency, and employee motivation [31,32]. In this study, non-financial performance metrics, as outlined above, are employed to gauge organisational performance, underscoring the multifaceted nature of organisational success beyond monetary benchmarks.

3. Research and Theoretical Framework

3.1 Introduced Model

The research model established a link between the effect of intellectual capital (i.e., human capital, structural capital, and relational capital) and performance in United Bank of Africa Plc, First Bank plc, Zenith Bank Plc, and GT Bank Plc, Nigeria. The relationship between the independent variables and the dependent variable is shown in Figure 1.

3.2 Theoretical Framework: Theory of Dynamic Capabilities

The dimension of intellectual capital, particularly in the form of knowledge resources, plays a pivotal role in shaping the dynamic capabilities of organisations [33]. The dynamic capabilities were first proposed by Teece *et al.* [33], stating that dynamic capabilities reflect the organisation's ability to adapt and innovate in response to changing market conditions, thereby influencing its competitive advantage.

Traditionally, competitive advantage was rooted in market dominance or efficient mass production processes. However, in the modern landscape, competitive advantage is increasingly derived from intangible assets such as brand reputation, patents, standards, and relationships with stakeholders, including employees, suppliers, and customers. These intangible assets represent various forms of intellectual capital that can significantly impact the disparity between a firm's book value and its market value, including undisclosed intellectual capital [34].

In the knowledge economy of the 21st century, competitive advantage hinges on unique competencies that differentiate a company from its competitors. While hiring talented individuals is

essential, success lies in adding value to them and effectively leveraging their contributions within the organisational context [35]. Individuals bring intellectual resources in the form of experiences and expertise, but organisations also provide physical and social resources, as well as a conducive environment for knowledge transformation into competencies [36]. How these competencies and intellectual resources are configured and utilized significantly influences the firm's competitive position and overall business success, underscoring the intrinsic link between intellectual capital and organisational performance within the dynamic capabilities framework.

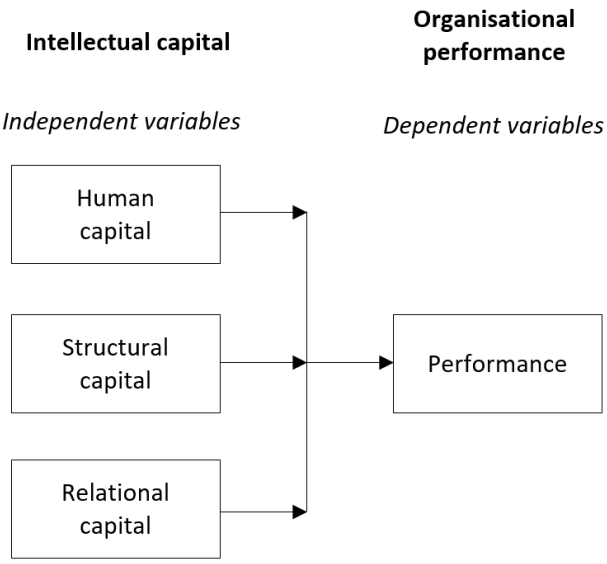

Fig. 1. Relationship between intellectual capital and organisational performance

4. Empirical Review

Aluwong [6] conducted a study to assess the impact of intellectual capital on the performance of non-financial firms listed on the Nigerian Stock Exchange. The study focused on the relationship between performance, measured by return on assets, and various independent variables. The independent variables included structural capital efficiency, capital employed efficiency, human capital efficiency, and intellectual capital value-added coefficient. Econometric techniques, such as fixed panel and random effect regression, were employed to analyse the data. The empirical findings suggested that while human capital efficiency did not significantly affect the performance of listed non-financial firms in Nigeria, structural capital efficiency, capital employed efficiency, and intellectual value-added coefficient exhibited significant positive impacts on firm performance. Consequently, the study recommended that managers prioritize the enhancement of structural capital to drive improved performance outcomes based on these findings.

Afnan & Khamoussi [37] delved into the nexus between intellectual capital, measured by the intellectual value added coefficient, and firm performance within the Saudi Arabian context. Their study drew data from a sample of 25 Saudi firms listed on the Saudi Stock Exchange (Tadawul) spanning the period 2015–2018. Utilizing the VAIC model, the researchers constructed multiple linear regression models to scrutinize the association between intellectual capital and firm performance, assessed in terms of both financial and market metrics. Their findings underscored a positive relationship between the overall efficacy of intellectual capital and each of its three components (i.e., human capital effectiveness, structural capital effectiveness, and capital employed effectiveness) with firms' financial performance. Furthermore, they observed a positive correlation between human

capital efficiency, structural capital efficiency, and firms' market performance, suggesting that human capital efficiency significantly influences both financial and market performance among firms in Saudi Arabia.

Nnubia *et al.* [38] scrutinized the impact of intellectual capital on the performance of non-financial firms in Nigeria. Their study, spanning from 2007 to 2016, involved a sample of 21 Nigerian non-financial firms listed on the Nigerian Stock Exchange. Employing secondary data primarily sourced from the Nigerian Stock Exchange, the researchers applied an ex post facto research design and analysed the data using the ordinary least squares method. Their findings revealed positive and significant effects of efficiency in capital employed, human capital, and structural capital on performance metrics, such as earnings per share and market value of book value, among the listed non-financial firms. The study recommended increased investment in intellectual capital as a means to achieve sustainable value and transition towards an economy grounded in intangible assets.

Gogan *et al.* [39] explored the relationship between intellectual capital and organisational performance across four companies operating in the drinking water distribution sector between 2010 and 2014. The study formulated four hypotheses aligned with its research objectives, all of which were validated through the research results. Their findings underscored a significant relationship between intellectual capital and organisational performance, highlighting the pivotal role of intellectual capital in driving organisational success.

Siddiqui & Asad [40] investigated the impact of relational capital components on the performance of branding firms in Pakistan. Their study aimed to uncover the relational capital components associated with firm performance. Conducted on 40 managers representing 34 branding firms in Pakistan, the research utilized correlation and regression models to test hypotheses. The study revealed correlations between components of relational capital and firm performance, emphasizing the importance of initiatives that foster greater understanding and acceptance of relational capital and its components, as well as the implementation of viable relational capital strategies to build strong social ties with stakeholders, including the community, competitors, customers, and employees, ultimately enhancing firm performance.

4.1 Knowledge Gap

Each study contributes valuable insights into specific aspects of intellectual capital and performance. There is a need for more holistic research that integrates multiple dimensions of intellectual capital (e.g., human capital, structural capital, and relational capital) and investigates their combined impact on organisational performance. There is a potential knowledge gap regarding the mechanisms through which intellectual capital influences performance, particularly in different cultural and economic settings. While some studies have focused on specific regions, such as Saudi Arabia or Nigeria, there is a need for comparative research that examines how intellectual capital strategies and their effectiveness vary across different countries and industries. Moreover, the review highlights the importance of relational capital in organisational performance, but there is room for further exploration into how different components of relational capital (such as customer relationships, corporate alliances, and employee relationships) interact and contribute to overall organisational success. Overall, bridging these knowledge gaps would provide a more comprehensive understanding of the role of intellectual capital in organisational performance and offer actionable insights for practitioners and policymakers seeking to optimize their organisational strategies.

5. Results and Discussion

The research design employed in this study was a correlational research design utilizing a field survey methodology. Field survey research aims to systematically describe phenomena and their interrelationships within real-world settings at a specific point in time, drawing on samples of respondents deemed representative of the population under study. This research was conducted in Nigeria. The population comprises 1251 management staff across four major commercial banks in Nigeria (Table 1).

Table 1
Population of the study

S/N	Bank name	Population
1	United Bank of Africa	67
2	GT Bank Plc	60
3	Zenith Bank Plc	355
4	First Bank Plc	769
	Total	1251

The sample size was determined to be 303 using the statistical formula proposed by Yamane [41], with an additional 10% attrition rate factored in to account for unreturned copies of the questionnaire, while Bowley's proportional allocation formula [42] was used to distribute copies of the questionnaire to the selected banks. Primary data collection was conducted through the questionnaire, which is provided in the Appendix. The questionnaire underwent rigorous validation procedures, including face and content validity checks by two lecturers from the Department of Business Administration at Benson Idahosa University and subsequent validation by four senior Human Resource officers from various banks, before coming up with the final copy.

5.1 Reliability Test

We administered 20 copies of the instrument to the respondents who were part of the sampled population. Cronbach's alpha coefficient was used to compute the reliability of the data. The results are presented in Table 2.

Table 2
Results of the reliability test

S/N	Variables	Number of items	Alpha value
1	Human capital	5	0.828
2	Structural capital	5	0.891
3	Relational capital	5	0.798
4	Performance	5	0.811

From Table 2, the computed Cronbach's alpha coefficient value obtained from the pilot test showed that the questionnaire was reliable. The a priori expectations were $\beta_1 > 0$, $\beta_2 > 0$, and $\beta_3 > 0$. The a priori expectations were positive because previous empirical studies that utilised similar variables had demonstrated a positive relationship with performance.

5.2 Data Presentation, Analyses, and Interpretation

The data analysis involved correlation and multiple regression analyses to assess the predictive capacity of the independent variables on the dependent variables. Data generated from the

distributed questionnaire to the selected bank's employees were presented and analyzed. A total of 334 copies of the questionnaire were distributed to employees of the selected banks in Nigeria. A total of 319 copies of the questionnaire were duly completed and found usable for the study. This gave a response rate of 95.5%.

5.3 Test of Hypotheses

The hypotheses were tested for acceptance and rejection. This was done using Pearson's moment correlation and multiple regression analyses.

Table 3 reveals a noteworthy positive correlation between intellectual capital and performance across its dimensions; i.e., human capital, structural capital, and relational capital. Specifically, the correlation coefficients indicate a degree of 0.599** for human capital, 0.634** for structural capital, and 0.390** for relational capital. Notably, all independent variables demonstrated statistical significance. Consequently, our analysis leads to the conclusion that there exists a positive and significant relationship between the independent variable (intellectual capital) and the dependent variable (performance).

Table 3
Results of the correlation analysis

		Performance	Human capital	Structural capital	Relational capital
Performance	Pearson correlation	1			
	Sig. (2-tailed)				
	n	319			
Human capital	Pearson correlation	0.599**	1		
	Sig. (2-tailed)	0.000			
	n	319	319		
Structural capital	Pearson correlation	0.634**	0.804**	1	
	Sig. (2-tailed)	0.000	0.000		
	n	319	319	319	
Relational capital	Pearson correlation	.390**	0.251**	0.298**	1
	Sig. (2-tailed)	.000	0.000	0.000	
	n	319	319	319	319

** Correlation is significant at the 0.01 level (2-tailed)

Table 4 depicts the model summary outlining the relationship between the independent variable (intellectual capital) and the dependent variable (organisational performance). Notably, the model was found to be significant, as evidenced by a regression value of 0.684. Furthermore, the coefficient of determination stands at 0.468, indicating that 46.8% of the variation in performance was elucidated by the independent variables, human capital, structural capital, and relational capital. Consequently, based on these findings, it is concluded that a significant relationship exists between intellectual capital and organisational performance.

Table 4
Summary of the relationship between intellectual capital and performance

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.684[a]	0.468	0.463	0.44647

[a] Predictors: (constant), relational capital, human capital, structural capital

The F-statistic of 92.362, significant at $p < 0.05$, underscores a statistically meaningful relationship between the independent and dependent variables (Table 5).

Table 5
Analysis of the variance

Model[a]		Sum of squares	Df	Mean square	F	Sig.
1	Regression	55.234	3	18.411	92.362	0.000[b]
	Residual	62.791	315	0.199		
	Total	118.025	318			

[a] Dependent variable: performance
[b] Predictors: (constant), relational capital, human capital, structural capital

Regarding hypothesis one, Table 6 displays the statistical analysis for human capital, revealing a *t*-statistic of 3.515 and a probability value of 0.001, both significant at the 5% level. Consequently, the null hypothesis (H_{01}) was rejected, while the alternative hypothesis was accepted:

- H_1 – Human capital has a significant effect on the performance of deposit money banks in Nigeria.

Thus, we infer that human capital exerts a significant influence on the selected bank's performance. This finding aligns with the conclusions drawn in [37] that similarly noted the significant and positive impact of human capital efficiency on the financial and market performance of firms in Saudi Arabia. Moreover, the study resonates with the findings from [39] that also observed a significant relationship between intellectual capital and organisational performance.

Table 6
Coefficients table of the relationship between intellectual capital and performance

Model[a]		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. error	Beta		
1	(Constant)	1.044	0.166		6.311	0.000
	Human capital	0.185	0.053	0.243	3.515	0.001
	Structural capital	0.261	0.049	0.374	5.339	0.000
	Relational capital	0.218	0.043	0.218	5.060	0.000

[a] Dependent variable: performance

Based on the findings presented in Table 6, structural capital demonstrates a *t*-value of 5.339 and a probability value of 0.000, indicating statistical significance. Consequently, we reject the null hypothesis (H_{02}) and embrace the alternative hypothesis, thus affirming that structural capital exerts a significant positive impact on organisational performance:

- H_2 – Structural capital has a significant effect on performance in deposit money banks in Nigeria.

This outcome resonates with the previous research [37,38] that similarly concluded that intellectual capital positively influences market performance. Additionally, the findings are consistent with the conclusions drawn in [6,39] that highlighted the significant enhancement in firm

performance attributable to structural capital efficiency, capital employed efficiency, and intellectual value added coefficient.

With a *t*-statistic value of 5.060 and a probability value of 0.000, relational capital exhibits statistical significance, surpassing the 5% threshold. Consequently, the null hypothesis (H_{03}) is accepted. Thus, we deduce that relational capital indeed exerts a positive effect on the performance of deposit money banks in Nigeria. These findings resonate with the previous research conducted by [30,39] that underscored the relationship between components of relational capital (such as customer relationships, corporate alliances, and employee relations) and deposit money bank performance. These findings collectively support the apriori expectations of this study.

5.4 Implications of the Findings

The implications of these findings for the selected deposit money banks in Nigeria are as follows:

i. *Human capital effect* – The significant effect of human capital on the performance of the deposit money banks highlights the importance of investing in human resources. This suggests that efforts to recruit, retain, and develop talented employees can lead to improved organisational performance. Therefore, these banks should focus on initiatives such as training, skill development, and creating a conducive work environment to enhance the capabilities and productivity of their workforce.
ii. *Structural capital impact* – The significant effect of structural capital underscores the importance of organisational infrastructure, processes, and systems in driving performance. Deposit money banks should prioritize investments in organisational design, knowledge management, and technology infrastructure to optimize operational efficiency, innovation, and strategic decision-making processes.
iii. *Relational capital influence* – The significant effect of relational capital emphasizes the importance of building and nurturing relationships with key stakeholders, including customers, suppliers, and employees. Deposit money banks should focus on enhancing customer satisfaction, fostering partnerships with suppliers, and maintaining strong employee relations to strengthen trust, collaboration, and loyalty. Building robust relational capital can lead to increased customer retention, improved employee engagement, and ultimately, enhanced organisational performance.

Overall, these findings suggest that deposit money banks in Nigeria can improve their performance by strategically managing and investing in their human, structural, and relational capital resources. This highlights the need for a holistic approach to organisational management that considers the interplay between these different dimensions of capital.

6. Conclusion

Intellectual capital consists of intangible assets that can be converted into profits (and value) but are not reflected in a company's financial statements. This research emphasized different elements of intellectual capital. The dynamic capabilities theory was reviewed in line with the conceptual review of the study. The correlation and multiple regression analysis were used to aid in the findings of this study. Intellectual capital positively affects the performance of banks and supports the value creation process. Intellectual capital is a source of sustainable development. In a knowledge-based economy, intellectual capital is an intangible resource that can help a firm generate economic returns and build competitive advantage alongside tangibles. The critical role of intellectual capital for a firm

in balancing innovation and exploitative activities is further emphasized in the 21st century. Therefore, intellectual capital is a key asset for firm survival. In light of this, the empirical result of this study leads to the conclusion that out of the three independent variables adopted in this study, only the human capital variable has the highest effect on the performance of banks in Nigeria.

The findings regarding the significant effects of human capital, structural capital, and relational capital on the performance of deposit money banks in Nigeria contribute significantly to the existing knowledge in several ways:

i. *Human capital effect* – The significant effect of human capital on the performance of the deposit money banks highlights the importance of investing in human resources. This suggests that efforts to recruit, retain, and develop talented employees can lead to improved organisational performance. Therefore, these banks should focus on initiatives such as training, skill development, and creating a conducive work environment to enhance the capabilities and productivity of their workforce.
ii. *Empirical validation* – The research provides empirical evidence supporting the relationship between intellectual capital dimensions and organisational performance in the specific context of deposit money banks in Nigeria. This adds to the body of knowledge by validating theoretical frameworks and models in a real-world setting.
iii. *Contextual understanding* – By focusing on a specific industry and geographic location, the study offers insights into the unique challenges and opportunities faced by deposit money banks in Nigeria. This contextual understanding enhances the applicability and relevance of the findings for practitioners and policymakers operating in similar contexts.
iv. *Integrated perspective* – The study examines the combined impact of multiple dimensions of intellectual capital (human, structural, and relational) on organisational performance. This integrated perspective provides a comprehensive understanding of the mechanisms through which intellectual capital contributes to organisational success, enriching existing literature that often focuses on individual dimensions in isolation.
v. *Practical implications* – The findings offer practical implications for deposit money banks in Nigeria, informing strategic decision-making processes related to human resource management, organisational design, and stakeholder relations. By highlighting the significance of investing in intellectual capital, the study provides actionable insights for enhancing performance and competitiveness in the banking sector.
vi. *Policy relevance* – The research findings have implications for policy formulation aimed at promoting innovation, knowledge management, and talent development within the banking industry. Policymakers can use these insights to design interventions that foster a conducive environment for intellectual capital accumulation and utilization, ultimately contributing to economic growth and stability.

Overall, the contribution to knowledge lies in the empirical validation, contextual understanding, integrated perspective, practical implications, and policy relevance of the findings regarding the relationship between intellectual capital dimensions and organisational performance in deposit money banks in Nigeria.

Appendix: Questionnaire ''Intellectual capital and performance of selected deposit money banks in Nigeria''

Section A: Personal information

1. Gender: Male [ ] Female [ ]
2. Age: 20-29 [ ] 30-39 [ ] 40-49 [ ] 50 and above [ ]
3. Educational level: BSC/HND [ ] Postgraduates [ ]
4. Years of service: 1 - 5 [ ] 6 -10 [ ] 11 – 15 [ ] 16 and above [ ]
5. Staff categories: Management staff [ ] Non-management staff [ ]

Section B: Tick [√] in the column that best expresses your opinion about the item statements.

S/N	Human capital	SD	D	N	A	SA	Mean	Std. dev.
6	Employees have the required skills for their job responsibilities	45 (14.1%)	51 (16%)	8 (2.5%)	97 (30.4%)	118 (37%)	3.60	1.467
7	The employees are experienced on jobs	52 (16.3%)	45 (14.1%)	16 (5%)	102 (32%)	104 (32.6%)	3.50	1.473
8	The employees are competent in their assigned tasks	42 (13.2%)	59 (18.5%)	18 (5.6%)	117 (36.7%)	83 (26%)	3.44	1.300
9	The employees are creative in job-related issues	48 (15%)	56 (17.6%)	9 (2.8%)	95 (29.8%)	111 (34.8%)	3.52	1.485
10	Employees have the right academic qualifications	54 (16.9%)	38 (11.9%)	16 (5%)	103 (32.3%)	108 (33.9%)	3.54	1.479
	Overall mean						3.52	1.441
	Structural capital	SD	D	N	A	SA	Mean	Std. dev.
11	The culture of the working environment motivates employees	53 (16.6%)	38 (11.9%)	15 (4.7%)	100 (31.3%)	113 (35.4%)	3.57	1.482
12	The organisation is technologically driven by state-of-the-art facilities	43 (13.5%)	54 (16.9%)	15 (4.7%)	104 (32.3%)	103 (32.3%)	3.53	1.431
13	The bank has established methods of achieving its goals	45 (14.1%)	54 (16.9%)	8 (2.5%)	97 (30.4%)	115 (36.1%)	3.57	1.469
14	The products of the bank are marketable	54 (16.9%)	40 (12.5%)	16 (5%)	101 (31.7%)	108 (33.9%)	3.53	1.483
15	Customers can easily access the bank facilities	45 (14.1%)	48 (15%)	10 (3.1%)	102 (32%)	114 (35.7%)	3.60	1.452
	Overall mean						3.56	1.463
	Relational capital	SD	D	N	A	SA	Mean	Std. dev.
16	The employees empathize with their customers	47 (14.7%)	31 (9.7%)	15 (4.7%)	93 (29.2%)	133 (41.7%)	3.73	1.454
17	The employees have a good affinity with the bank's consultants	52 (16.3%)	42 (13.2%)	31 (9.7%)	90 (28.2%)	104 (67.4%)	3.48	1.466
18	The employees are very good at networking the bank's products	62 (19.4%)	54 (16.9%)	23 (7.2%)	80 (25.1%)	100 (31.3%)	3.32	1.535
19	There is a good understanding between suppliers and employees	49 (15.4%)	40 (12.5%)	16 (5%)	103 (32.3%)	111 (34.8%)	3.59	1.455
20	There is a sound management/employee relationship in the bank	45 (14.1%)	56 (17.6%)	20 (6.3%)	113 (35.4%)	85 (26.6%)	3.43	1.408
	Overall mean						3.51	1.464
	Performance	SD	D	N	A	SA	Mean	Std. dev.
21	The bank is efficient in service delivery	58 (18.2%)	56 (17.6%)	18 (5.6%)	89 (27.9%)	98 (30.7%)	3.35	1.514
22	The bank delivers its services on time	45 (14.1%)	50 (15.7%)	8 (2.5%)	98 (30.7%)	118 (37%)	3.61	1.464
23	The set goals of the organisation are usually achieved	75 (23.5%)	71 (22.3%)	27 (8.5%)	68 (21.3%)	78 (24.5%)	3.01	1.537
24	Employees are committed to their work	50 (15.7%)	40 (12.5%)	16 (5%)	103 (32.3%)	110 (34.5%)	3.57	1.460
25	Employees are target-driven	46 (14.4%)	57 (17.9%)	18 (5.6%)	113 (35.4%)	85 (26.6%)	3.42	1.416
	Overall mean						3.39	1.478

Conflict of Interest

The authors declare no conflict of interest.

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