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INFLUENCE OF NIGERIA-LISTED CONSUMER GOODS FIRMS INTELLECTUAL CAPITAL COMPONENTS ON PROFITABILITY

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Abstract
The main objective of any firm worldwide is to make a profit for its shareholders through the effective utilization of intellectual capital. The purpose of this study is to investigate the influence of Nigeria-listed consumer goods firms' intellectual capital components on Profitability for the period of 2009 - 2022. The study's population consisted of 21 CGFs in Nigeria as of December 31, 2021, 13 sample sizes were selected using a purposive sampling technique. The relationship between profitability and intellectual capital efficiency was examined using multiple regression analysis through STATA 13. The study found a positive and significant effect of human capital efficiency (HCE) and capital-employed efficiency (CEE) on return on equity (ROE). However, structural capital efficiency (SCE) has an insignificant effect on roe. This study concludes that increasing human capital and using resources more effectively could result in higher profitability for CGFs in Nigeria. This study recommends that to increase their profitability, Nigerian CGFs should prioritize investing in the development of their human capital and capital usage optimization.

Keywords: Capital-employed, human capital, profitability, structural capital

Introduction
In Nigeria, consumer goods firms (CGFs) are vital to the country's economy since they provide large amounts of employment, GDP growth, and market activity. CGFs are under increasing pressure to improve their profitability and competitiveness in a dynamic market context as Nigeria continues to see demographic shifts, urbanization, and changing customer preferences (Ajayi, 2019). From this perspective, one of the most important factors affecting the financial performance and long-term viability of CGFs in Nigeria is the way intellectual

capital (IC) is managed.

One important indicator of a company's financial health and ability to provide returns for its investors is profitability. Profitability measures like return on equity (ROE) and return on assets (ROA) are frequently used in the CGFs to evaluate how well a firm is doing its operations and investments (Osuagwu & Chukwuemeka, 2020). For CGFs to maintain long-term growth, competitiveness, and value creation for stakeholders, they must increase profitability. The term "intellectual capital" (IC) refers to all of an organization's intangible resources, such as its human, structural, and employed capital (Asutay & Ubaidillah, (2023).). According to Chukwumerije and Ugwunta (2018), IC efficiency is the capacity of an organization to efficiently use its intellectual capital to improve performance and generate value for stakeholders. Understanding and maximizing IC efficiency is essential for attaining sustainable profitability and preserving a competitive advantage in the Nigerian CGF market.

The term "human capital efficiency" (HCE) refers to the abilities, competencies, and knowledge of a company's personnel as well as how they affect organizational performance (Oyekanmi & Salami, 2017). Investing in talent development, workforce diversity, and employee training can boost human capital efficiency (HCE) and stimulate innovation, productivity, and profitability in CGFs (Adeyemi et al., 2021). For CGFs to remain in business, satisfy client requests, and adjust to changes in the market, they must strengthen their HCE. The efficiency of a company's systems, procedures, and organizational structure in utilizing intangible assets like trademarks, patents, and proprietary technologies is known as structural capital efficiency (SCE) (Okunlola et al., 2020). To improve competitiveness and market positioning, optimizing SCE in the CGFs entails strategic management of intellectual property, supply chain networks, and innovation processes (Olokundun et al., 2017). For CGFs in Nigeria, better SCE can result in higher brand value, market share, and profitability.

The efficiency with which a company invests in both tangible and intangible assets to produce returns for its owners is known as capital employed efficiency (CEE) (Osamwonyi & Arinze, 2021). To maximize profitability and shareholder value, CGFs in Nigeria must optimize CEE through judicious capital allocation, resource use, and investment decisions (Nwaogbe et al., 2019). To achieve sustained financial performance, enhancing CEE calls for a systematic strategy for managing both physical and intellectual capital assets. Organizational strategy, human resource management, innovation, and market dynamics are some of the characteristics that make up the domain of intellectual capital efficiency and profitability of CGFs listed in Nigeria (Ufua et al., 2018). In Nigeria's ever-changing business environment, CGFs can improve their competitiveness, market positioning, and long-term sustainability by concentrating on maximizing IC efficiency and profitability.

CGFs listed in Nigeria need to understand the role that intellectual capital plays in fostering profitability and long-term success as they manage the opportunities and challenges presented by the market. CGFs can take advantage of new opportunities, reduce risks, and accomplish their strategic goals in the Nigerian market by making investments in the development of human capital, encouraging an innovative culture, and efficiently utilizing organizational assets (Ogbuji & Uzoka, 2021). CGFs may prosper in a business climate that is changing quickly by adopting a proactive approach to intellectual capital management and generating value for all stakeholders. The capacity of CGFs listed in Nigeria to handle IC well is one of the many elements that affect their profitability. Human capital, structural capital, and capital employed are all components of intellectual capital, and they are all vital to the productivity and profitability of organizations. Notwithstanding its significance, Nigerian CGFs may encounter difficulties in maximizing the effectiveness of their IC and converting it into increased profitability.

Investigating the effects of IC efficiency, including HCE, SCE, and CEE, on the profitability of CGFs listed in Nigeria is, thus, the main issue this study attempts to solve. By tackling these problems, the study hopes to shed light on the variables influencing the IC efficiency of CGFs listed in Nigeria and the effects such variables have on profitability. To improve organizational performance and competitiveness in the CGFs, managerial practices, and strategic interventions can be informed by understanding the factors that contribute to IC efficiency and how they affect profitability.

Literature Review

Profitability is the ability of firms to turn a profit after deducting their expenses and investments. It is an essential indicator for evaluating these companies' performance and financial standing. Some financial statistics, including gross profit margin (GPM), return on equity (ROE), and return on assets (ROA), can be used to assess profitability. According to Hitt, Ireland, and Hoskisson (2016), these ratios show how well a business uses its resources to produce profits for its stakeholders and shareholders. This study utilizes ROE as a measure of profitability. Intellectual capital efficiency refers to the ability of firms to create value and gain a competitive edge through the efficient use of their intellectual assets such as expertise, patents, brands, and customer relationships. This idea highlights how crucial it is to use intangible assets to boost innovation, improve product quality, and set items apart from competitors. Metrics like revenue per employee, patent productivity, and brand equity can be used to evaluate IC efficiency (Yao et al., 2019). The optimization of human resources inside firms to maximize output and performance is the emphasis of human capital efficiency. It entails recruiting, training, and keeping talented workers who add to the success of the firm. Metrics like employee satisfaction ratings, training expenditures per employee, and employee turnover

rate show HCE. Enhanced operational performance and creativity are linked to a high level of HCE (Serpeninova et al. 2022). The ability of firms to effectively manage their systems, procedures, and organizational structures to support corporate operations and accomplish strategic goals is known as structural capital efficiency. It includes making effective use of infrastructure, organizational culture, and technology to boost flexibility and productivity. SCE can be assessed using metrics including organizational agility, process optimization, and rates of technology adoption (Lehenchuk et al., 2023). Capital employed efficiency refers to the efficiency with which firms use the resources they invest to produce returns. It encompasses both material and immaterial resources used in the manufacturing and delivery of goods. Financial ratios such as working capital turnover, asset turnover ratio, and return on investment (ROI) can be used to quantify CEE. A greater CEE shows that the firm is making good use of its resources to produce a profit (Copeland et al. 2016). By taking into consideration additional variable that can affect the relationship, this study adds leverage as a control variable to assist isolate the precise effects of intellectual capital efficiency on profitability. Stewart (1997) established the Intellectual Capital Theory, which holds that a company's intangible assets such as expertise, patents, brands, and customer relationships play a major role in generating value and giving it a competitive edge. This theory has been further developed by academics like Bontis (2001) and Edvinsson and Malone (1997), who highlight the significance of efficiently managing and utilizing IC to improve business performance and profitability (Bontis, 2001; Edvinsson & Malone, 1997; Stewart, 1997). This theory is used to anchor this study.

Wong et al. (2015) used data from Hong Kong-listed blue-chip corporations to examine the effects of three intellectual capital components on profitability: capital employed efficiency, human capital efficiency, and structural capital efficiency. They discovered that these elements had a considerable impact on profitability, however the effects varied by industry. In particular, Structural Capital Efficiency significantly impacted firms in the property sector, but Human Capital Efficiency was more prominent in the financial sector. Capital Employed Efficiency, on the other hand, showed a universal impact. Several issues must be resolved to apply these findings to the setting of CGFs listed in Nigeria. It's critical to acknowledge how Nigeria and Hong Kong differ in market dynamics, legal frameworks, and cultural backgrounds. The significance and applicability of the reported effects may be affected by these changes. It is essential to evaluate the study's approach critically. It is important to carefully consider the selection of blue-chip businesses and the particular measures used to assess the profitability and efficiency of intellectual capital concerning Nigeria. To guarantee the validity of the results, the study's sample size, data-gathering procedures, and statistical approaches must also be assessed. Moreover, the study's time-based component is crucial. To perform a

comparable analysis in Nigeria, information from a certain time frame that ideally reflects the nation's present commercial and economic environment would be needed. Over time, the relationship between the efficiency and profitability of intellectual capital may be impacted by changes in government regulations, technical breakthroughs, and market conditions. This study on intellectual capital and profitability in Nigerian CGFs addresses the gaps identified in the study. The study conducted by Dženopoljac et al. (2016) investigated the relationship between financial performance and intellectual capital (IC) within the information and communication technology (ICT) sector of Serbia. The Value-added Intellectual Coefficient (VAIC), which measures the contribution of IC to value creation, was calculated using data from 13,989 Serbian ICT companies between 2009 and 2013. Financial performance metrics include return on equity, return on assets, and return on invested capital, profitability, and asset turnover. The results showed that only capital-employed efficiency had a significant impact on financial performance in the Serbian ICT sector after adjusting for company size and leverage. Furthermore, insignificant variations in the financial performance of the various ICT subsectors were discovered by the study. It takes significant thought to apply these findings to the context of CGFs listed in Nigeria. Although the study clarifies the connection between IC and financial performance in the ICT industry, sectorial inequalities make it necessary to exercise caution when applying these findings to the CGFs. The ICT and consumer goods sectors may have quite different IC management, value creation, and profitability characteristics. Furthermore, there are restrictions when applying the study's conclusions to CGFS in Nigeria due to its narrow focus on the Serbian ICT industry and its period (2009–2013). There may be differences in Serbia and Nigeria's market, regulatory, and economic settings that affect how IC components and business profitability are related. Moreover, the study ignores the special traits and difficulties experienced by CGFs due to its exclusive focus on the ICT sector. To drive profitability within the CGFs, factors including product innovation, distribution channels, and brand equity are critical, and therefore, this empirical research should pay particular attention to these factors.

With an emphasis on conventional and Islamic banks, Octavio and Soesetio (2019) investigated the effect of intellectual capital on bank profitability in Indonesia. The study examines the impact of intellectual capital and its constituents, Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE), on bank profitability using Value Added Intellectual Capital (VAIC) as the measure. The dataset, which was examined using panel regression, includes Indonesian conventional and Islamic banks from 2010 to 2016. The results show that intellectual capital has a positive and significant impact on bank profitability, with conventional banks showing a larger correlation than Islamic banks. In particular, HCE is found to be a highly important factor affecting

profitability in both types of banks, whereas CEE and SCE show no significant effects. Careful caution is required when applying these findings to the setting of CGFs listed in Nigeria. Although the study sheds light on the connection between intellectual capital and profitability in the banking industry, sectorial disparities make it necessary to exercise caution when extrapolating these findings to the CGFs. In terms of value creation, profitability, and intellectual capital management, banks and CGFs may differ significantly from one another. The present research endeavors to examine sector-specific dynamics and leverages up-to-date data to augment the pertinence and applicability of conclusions. Furthermore, the study's application to the Nigerian CGFs market may be limited due to its focus on Indonesian banks. On this note, a more recent dataset is required for meaningful analysis as the study's timeframe of 2010–2016 would not have captured recent advancements and trends in the Nigerian CGFs.

Weqar et al. (2020) examined the relationship between intellectual capital and profitability/productivity using data from the Bombay Stock Exchange's finance index covering the years 2009 to 2018 and the Value-Added Intellectual Coefficient (VAICTM) methodology. The results indicate that there is no significant correlation between the Value-Added Intellectual Coefficient and the productivity and profitability of the Indian financial enterprises that were sampled. Interestingly, all elements of intellectual capital had negligible effects on productivity; only capital-employed efficiency showed a substantial positive link with profitability. While human capital efficiency greatly increased the return on assets, structural capital efficiency remained insignificant across all financial performance indicators. It takes some consideration to apply these findings to the context of CGFs listed in Nigeria. Although the study sheds light on the relationship between intellectual capital and financial performance in India's banking industry, sectorial disparities make it necessary to exercise caution when extrapolating these findings to CGFs in Nigeria. In terms of value creation, profitability, and intellectual capital management, there may be major differences between the CGFs and financial industries. Furthermore, there are issues with applying the study's conclusions to CGFs in Nigeria due to its narrow focus on the Indian finance industry and its period (2009–2018). Differences in India and Nigeria's market systems, legal frameworks, and economic circumstances may affect how intellectual capital components and business profitability are related. The study investigation endeavors to tackle sector-specific dynamics and leverages more recent data to augment the pertinence and efficacy of conclusions.

Nejjari and Aamoum (2023) investigated the relationship between Moroccan ICT companies listed on the Casablanca Stock Exchange's intellectual capital (IC) and some performance criteria, such as profitability, market value, productivity, and

return on equity (ROE). With the use of annual statement data spanning 11 years (2010-2020), the study sought to determine the major factors affecting these performance metrics. The results showed that profitability is significantly predicted by human capital efficiency (HCE) and Capital Employed Efficiency (CEE). The study also found that, on average, ICT companies had greater levels of HCE than Structural Capital Efficiency (SCE). There is a vacuum in our knowledge of the relationship between the profitability and intellectual capital efficiency of Nigeria's CGFs because the study only looks at ICT enterprises in Morocco. Compared to the ICT sector, CGFs operate in different markets with different opportunities and difficulties, which could affect how IC affects profitability. The study ignores the unique traits and difficulties faced by CGFs in Nigeria by restricting its sample to ICT companies listed on the Casablanca Stock Exchange. Empirical studies focused on CGFs listed in Nigeria will offer valuable insights into the connection between profitability and intellectual capital efficiency in this industry.

A study by Fazil et al. (2024) investigated how climate risk and other internal and external elements, such as the components of intellectual capital, affect a company's financial performance. The study discovered that internal characteristics, notably Structural Capital Efficiency (SCE) and Capital Employed Efficiency (CEE), had a considerable positive impact on the Firm's performance. It did this by using data from 2009 to 2019 and a two-step system GMM model. Nonetheless, it was discovered that performance was not significantly impacted by Human Capital Efficiency (HCE). Although the study clarifies the connection between the various components of intellectual capital and company performance, sectorial disparities make it necessary to exercise caution when extrapolating these findings to CGFs in Nigeria. Industries may differ greatly in the dynamics of intellectual capital management and how it affects profitability. There is a gap in knowledge regarding the unique dynamics of intellectual capital efficiency and its effect on profitability within this sector because the study did not concentrate on CGFs in Nigeria. Empirical studies focused on CGFs listed in Nigeria would yield insightful information suited to the requirements of industry participants. Based on the theory and the empirical review, this study, therefore hypothesize that:

$H0_1$: In Nigeria, the profitability of CGFs is not significantly affected by human capital efficiency.

$H0_2$: The profitability of CGFs in Nigeria is not significantly affected by capital-employed efficiency.

$H0_3$: The profitability of CGFs in Nigeria is mostly unaffected by structural capital efficiency.

Methodology

The study used a causal research design to examine the relationship between ICE and the profitability of CGFs listed in Nigeria. The study's population consisted of

21 CGFs in Nigeria as of December 31, 2021, 13 sample sizes were selected using a purposive sampling technique. This method allowed for the selection of firms with the most relevant and complete data available for analysis. All information about profitability and the components of intellectual capital efficiency namely, capital employed efficiency, human capital efficiency, and structural capital efficiency was taken from the annual reports of the sampled firms between 2009 and 2013. The relationship between profitability and IC efficiency was examined using multiple regression analysis viz STATA 13, making it easier to do regression analysis and explain the findings. This study adapts the model of Mosavi et al. (2012) as:

$$ROE = a0 + a1CEEit + a2CEEit + a3SCE + e$$

And modified as:

$$ROE_{it} = \beta 0_{it} + \beta_1 HCE_{it} + \beta_2 CEE_{it} + \beta_3 SCE_{it} + \beta_4 LEV_{it} + \varepsilon_{it}$$

where: ROE = Profitability; HCE = Human capital efficiency; SCE = Structural capital efficiency; and CEE = Capital employed efficiency; β_1-β_4= Coefficients of determination; β_o= Intercept of the regression line; it = firm i time t; εi= Residual or error term.

Value added (VA) is calculated as the sum of operating profit, staff cost, depreciation, and amortization, as indicated by Mosavi et al. (2012) and Nejjari and Aamoum (2023). Human capital (HC) is measured by employee benefits, according to Mosavi et al. (2012) and Nejjari and Aamoum (2023). Structural capital (SC) is calculated as the difference between value-added and human capital, as suggested by Mosavi et al. (2012) and Weqar et al. (2020). Capital employed (CE) is calculated as total assets minus current liabilities, as outlined by Mosavi et al. (2012). Human capital efficiency (HCE) is calculated as the ratio of value added to human capital, based on Mosavi et al. (2012) and Octavio and Soesetio (2019). Structural capital efficiency (SCE) is calculated as the ratio of structural capital to value-added, according to Mosavi et al. (2012). Capital employed efficiency (CEE) is calculated as the ratio of value added to capital employed, as suggested by Mosavi et al. (2012) and Nejjari and Aamoum (2023).

Results

This part presents the result of data analysis and the discussions as it relates to descriptive statistics, Correlation Matrix, Robustness Tests, Regression results, and test of hypothesis.

Table 1
Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	182	.226	.354	-2.15	1.87
HCE	182	4.869	3.638	-1.67	22.2
CEE	182	.884	1.051	-2.45	8.9
SCE	182	.609	1.096	-13.53	1.92
LEV	182	.438	.713	-1.34	5.8

Source: STATA Output, 2024

Return on equity (ROE), leverage (LEV), capital employed efficiency (CEE), human capital efficiency (HCE), and structural capital efficiency (SCE) are the five variables whose characteristics are provided by descriptive statistics. The profitability of the firm is proxy by the return on equity (ROE, which has a mean of 0.226, the tested firms produced a return on shareholders' equity that was, on average, 22.6%. ROE varies amongst enterprises, as shown by the 0.354 standard deviation. Strong profitability in certain firms is shown by the maximum value of 1.87, while the negative minimum value of -2.15) indicates that other firms suffered losses. The effectiveness with which a firm creates value using its human capital is measured by HCE. The firms had a moderate amount of HCE on average, based on the mean HCE of 4.869. Significant variation in HCE across the selected firms is indicated by the broad standard deviation of 3.638, with some firms demonstrating great efficiency (maximum of 22.2) and others demonstrating lesser efficiency (minimum of -1.67). The efficiency with which a company uses its capital to produce profits is measured by its capital employed efficiency. The average CEE of 0.884 indicates that the companies used their capital to produce profits efficiently. The large standard deviation of 1.051, on the other hand, suggests that CEE varies throughout organizations, with some being more efficient than others.

SCE gauges how well a company creates value by leveraging its structural assets, like organizational procedures and technology. The firms exhibited a moderate level of efficiency in leveraging their structural capital, as indicated by the mean SCE of 0.609. The large standard deviation of 1.096, however, suggests that there is variation in SCE amongst firms, with some demonstrating more efficiency and others worse.

Table 2
Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)
ROE	1.000				
HCE	0.200*	1.000			
	(0.007)				
CEE	0.353*	-0.003	1.000		
	(0.000)	(0.966)			
SCE	0.101	0.227*	0.080	1.000	
	(0.176)	(0.002)	(0.283)		
LEV	0.264*	-0.020	0.824*	0.044	1.000
	(0.000)	(0.791)	(0.000)	(0.553)	

**** p<0.01, ** p<0.05, * p<0.1*
Source: STATA Output, 2024

The Return on Equity (ROE), Human Capital Efficiency (HCE), structural Capital Efficiency (CE), Capital Employed Efficiency (CEE), and Leverage (LEV) pairwise correlations are displayed in Table 2. Significant positive correlations between ROE and CEE (0.353, $p<0.01$) and LEV (0.264, $p<0.01$) have been observed. There is a weak positive connection ($p<0.05$) between HCE and SCE (0.227). CEE and LEV exhibit a robust positive connection (0.824, $p<0.01$). The majority of correlations, however, are weak, indicating that there aren't many linear connections between these variables.

Table 3
Variance inflation factor

	VIF	1/VIF
ce	3.141	.318
lev	3.129	.32
sc	1.063	.941
hc	1.056	.947
Mean	2.097	.
Hettest	0.0000	
Hausman Specification test	0.0013	

Source: STATA Output, 2024

The Variance Inflation Factor (VIF), which gauges the presence or absence of multicollinearity in a regression study, is shown in Table 3. With 1/VIF of less than 1 benchmark and a mean VIF of 2.097 less than the benchmark of 10 implies absent multicollinearity. Also, a heteroscedasticity test was performed, and the result of 0.000 which significant as 5% shows the presence of heteroscedasticity. The

Hausman Specification test result of 0.0013 reveals that endogeneity issues may exist, which specify that the fixed effect model is the best for the panel data. However, due to the heteroscedasticity problem panel correction standard error was performed to address the problem and serve as the optimum model for the study.

Table 4

Regression Model Summary

roe	Coef.	St.Err.	p-value	[95% Conf	Interval]	Sig
HCE	.019	.006	0.002	.007	.015	***
CEE	.138	.050	0.006	.040	.109	***
SCE	.009	.044	0.843	-.078	.023	
LEV	-.035	.075	0.637	-.124	-.181	
Constant	.023	.052	0.667	0	.080	
Number of obs		182	Chi-square			0.1670
Prob > chi2		0.0003	Wald chi2			21.51

*** *p<.01*, ** *p<.05*, * *p<.1*

Source: STATA Output, 2024

$ROE_{it} = \beta 0_{it} + \beta_1 HCE_{it} + \beta_2 CEE_{it} + \beta_3 SCE_{it} + \beta_4 LEV_{it} + \varepsilon_{it}$

In addition, the Wald chi2 (21.51) and other goodness of fit measures, such as the Chi-square value (0.1670) and related probability (0.0003), show that the model is statistically significant overall. This indicates that the variance in the dependent variable, roe, can be explained by the independent variable taken together. Furthermore, the 182 observations offer a strong dataset for the analysis.

Low p-values (p<.01) suggest that human capital efficiency (HCE) positively affects return on equity (ROE) in a statistically significant way. This implies that increases in the HCE metric are linked to greater profitability for CGFs in Nigeria. Since human capital efficiency (HCE) has a statistically significant positive influence on return on equity (ROE), this study rejects hypothesis H01 based on this result. This supports the Intellectual Capital Theory of Stewart (1997) and study of Octavio and Soesetio (2019) but does not support the study of Nejjari and Aamoum (2023).

Their low p-values (p<.05) show that capital-employed efficiency (cee) has statistically significant beneficial effects on return on equity (ROE). This implies that increases in cee metrics are linked to greater profitability for CGFs in Nigeria. Since capital-employed efficiency (CEE) has a statistically significant positive influence on roe, this study also rejects H02. This supports the Intellectual Capital Theory of Stewart (1997) and study of Octavio and Soesetio (2019), Nejjari and Aamoum (2023), and Fazil et al. (2024).

Given its high p-value (p>.1), structural capital efficiency (SCE) does not seem to have a statistically significant impact on roe. It is noteworthy, therefore, that the coefficient for SCE is positive even though it is not statistically significant. Although the coefficient is positive, structural capital efficiency (SCE) in this

model does not demonstrate statistical significance, although we cannot categorically dismiss H03. This does not support the Intellectual Capital Theory of Stewart (1997) and study of Octavio and Soesetio (2019), support the study of Fazil et al. (2024).

Conclusion

The results imply that the profitability of CGFs in Nigeria is highly impacted by both capital-employed efficiency and human capital efficiency. Structural capital efficiency, however, show no appreciable effects in this analysis. Therefore, increasing human capital and using resources more effectively could result in higher profitability for CGFs in Nigeria.

Recommendations

To increase their profitability, Nigerian CGFs should prioritize investing in the development of their human capital and capital usage optimization. In addition, more investigation might look into other elements including competing tactics, market dynamics, and regulatory frameworks that might affect profitability in this situation.

References

Adeyemi, A. S., Adewale, S. O., & Ogundeji, A. A. (2021). The relationship between human capital investment and organizational performance: A study of selected manufacturing companies in Nigeria. *Covenant Journal of Entrepreneurship, 1*(1), 1-18.

Ajayi, O. (2019). Consumer Goods Sector: Key to Unlocking Nigeria's Growth Potential. Retrieved from https://www.pwc.com/ng/en/assets/pdf/consumer-goods-retail/consumer-goods-sector-key-to-unlocking-nigerias-growth-potential.pdf

Asutay, M., & Ubaidillah, H. (2023). Examining the impact of intellectual capital performance on financial performance in islamic banks. *Journal of the Knowledge Economy*, 1-33.

Chukwumerije, U., & Ugwunta, D. (2018). Intellectual capital efficiency and firm performance: The case of selected Nigerian breweries. *Global Journal of Human Resource Management, 6*(2), 1-14.

Copeland, T., Koller, T., & Murrin, J. (2016). *Valuation: Measuring and managing the value of companies* (6th ed.). Hoboken, NJ: John Wiley & Sons.

Dženopoljac, V., Janoševic, S., & Bontis, N. (2016). Intellectual capital and financial performance in the Serbian ICT industry. *Journal of Intellectual Capital, 17*(2), 373–396. doi: 10.1108/JIC-07-2015-0068.

Fazil, S., Mubarik, F., & Gul, F. (2024). Intellectual Capital, Climate Risk and Financial Performance: Firm Level Analysis. *International Journal of Social Science Archives (IJSSA), 7*(1).

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2016). *Strategic management: Concepts and cases: Competitiveness and globalization* (12th ed.). Boston, MA: Cengage Learning.

Ku Nor Izah Ku Ismail, & Mahfoudh Abdul Karem. (2011). Intellectual Capital and the Financial Performance of Banks in Bahrain. *Journal of Business Management and Accounting, 1*(1), 63–77.

Lehenchuk, S., Zeytinoglu, E., Hrabchuk, I., Zhalinska, I., & Oleksich, Z. (2023). Nexus between intellectual capital, financial performance and sustainable growth: evidence from the Turkish ICT industry. *Marketing i menedžment innovacij, 14*(2), 152-162.

Mosavi, S.A , Nekoueizadeh, S., & Ghaedi, M. (2012). A study of relations between intellectual capital components, market value and finance performance. *African Journal of Business Management, 6*(4), 1396-1403. DOI: 10.5897/AJBM11.1466.

Nejjari, Z., & Aamoum, H. (2023). The Impact of intellectual capital on profitability, market value, productivity, and return on equity: Empirical evidence from Moroccan ICT firms. *Journal of the Knowledge Economy, 14*(2), 1734-1748.

Octavio, D. Q., & Soesetio, Y. (2019). Intellectual capital and bank profitability: Evidence from conventional and Islamic bank in Indonesia. *Jurnal Keuangan dan Perbankan, 23*(2), 191–205.

Osuagwu, C. A., & Chukwuemeka, O. (2020). Profitability and growth of consumer goods industries in Nigeria. *International Journal of Scientific & Engineering Research, 11*(1), 1065-1077.

Oyekanmi, A., & Salami, A. (2017). Human capital management and organizational performance: Evidence from the Nigerian insurance sector. Journal of Economics and Sustainable Development, 8(7), 12-22.

Serpeninova, Y., Lehenchuk, S., Mateášová, M., Ostapchuk, T., & Polishchuk, I. (2022). Impact of intellectual capital on profitability: Evidence from software development companies in the Slovak Republic. *Problems and Perspectives in Management, 20*(2), 411-425.

Sveiby, K. E. (1997). The intangible assets monitor. *Journal of Human Resource Costing & Accounting, 2*(1), 73-97.

Weqar, F., Khan, A. M., Raushan, M. A., & Haque, S. M. I. (2020). Measuring the Impact of Intellectual Capital on the Financial Performance of the Finance Sector of India. *Journal of the Knowledge Economy*. doi: 10.1007/s13132-020-00654-0.

Wong, M. C. S., Li, S. C. Y., & Ku, A. C. T. (2015). Impacts of Intellectual Capital on Profitability: An Analysis on Sector Variations in Hong Kong. *Journal of US-China Public Administration, 12*(8), 614–626. doi: 10.17265/1548-6591/2015.08.003

Yao, H., Haris, M., Tariq, G., Javaid, H. M., & Khan, M. A. S. (2019). Intellectual capital, profitability, and productivity: evidence from Pakistani financial institutions. *Sustainability*, *11*(14), 3842.