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INTELLECTUAL CAPITAL AS PREDICTOR OF PROFITABILITY AMONG SELECTED COMPANIES IN CROSS RIVER STATE NIGERIA: IMPLICATIONS FOR EFFECTIVE ACCOUNTING PRACTICES

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ABSTRACT

The study examined the intellectual capital as predictor of profitability among selected companies in Cross River State, Nigeria: Implications for Effective Accounting Practices. The study employed three null hypotheses and the ex-post facto research design of the correlational type was used. The study population comprises 3621 respondents and the sampling technique adopted for this study was the cluster sampling. The sample of the study consists of five hundred and forty-four (544) respondents using Yaro Yamane's formula. The instrument for data collection was a questionnaire titled Intellectual Capital on the Profitability Questionnaire (IC&PQ). Validated by experts in Measurement and Evaluation and Accountancy at the University of Cross River State, Nigeria and the Cronbach alpha reliability of internal consistency was adopted. The coefficients of internal consistency ranged from 0.77 to 0.79. The data was analysed with descriptive (mean and standard deviation) and inferential statistics (simple and multiple regression analysis) and the findings revealed that human capital and structural capital significantly predict the profitability of listed companies in Cross River State, Nigeria. In conclusion, intellectual capital has a positive and significant influence on profitability. Companies that effectively manage and utilise their intellectual capital tend to have higher profitability. It was recommended, among others, that governments should promote human capital within

organisations by investing in education and training, incentivising skilled labour, and creating a supportive environment for employee development.

Keywords: Intellectual capital, Profitability, Effective & Accounting Practices

INTRODUCTION

In the modern business world, intellectual capacity represents a key indicator for the development of both companies and the economy as a whole, to strive for success for economic profitability. Profitability in this context deals with a company's ability to generate profit from its production. Thus, according to Cojocaru (2020), posited that profitability, synthetically defined as the enterprise's capacity to obtain profit, is considered a decisive instrument for the market economy mechanism, for shaping production according to consumers' needs.

Profitability means obtaining an income from the production sale that should exceed expenses. As a consequence, profitability mirrors the efficiency of an enterprise's whole economic activity. Profitability is one of the most important forms of economic efficiency. Regardless of the types of economic activities and resources involved or consumed, the economic effects are finally materialised in the profit obtained by an enterprise.

In the business world, profitability is a measure of how efficiently a business converts its expenses into profits for its owners. Profit margin is perhaps the most common profitability measurement. It shows what portion of each sale goes toward meeting costs, and what portion goes into the bank. Profitability refers to the capacity for a business to generate profit, meaning earning more revenue than expenses. It's a key indicator of a company's financial health and efficiency, reflecting how well it is managing its resources to achieve profitability. This implies that profitability refers to the degree to which an enterprise makes a financial gain from bringing goods and services to market after all expenses of doing so have been taken into consideration. From the researchers' point of view, profitability, synthetically defined as the enterprise's capacity to obtain profit, is considered a decisive instrument for the market economy mechanism, for shaping production according to consumers' needs. Profitability means obtaining an income from the production sale that should exceed expenses.

According to Dulis (2024), the global business environment is undergoing a significant transformation, shifting from a traditional, tangible-based economy to an intangible-driven economy. This paradigm shift has led to the increasing recognition of intellectual capital (IC) as a vital component of firm performance. Intellectual capital, comprising human capital, structural capital, and relational capital, has emerged as a critical factor in determining firm performance. Human capital refers to the knowledge, skills, and expertise of employees, while structural capital encompasses the organisational infrastructure, processes, and systems. Relational capital, on the other hand, pertains to the relationships with customers, suppliers, and partners. Extensive research in developed countries has demonstrated the significance of IC in driving firm performance, innovation, and competitiveness. Rosario and Chavali (2019). However, despite the growing importance of IC, research on its impact in Nigeria remains limited. The Nigerian business environment, characterised by a rapidly growing economy and increasing competition, presents a unique context for IC research. The Nigerian Stock Exchange (NSE), Africa's second-largest stock exchange, provides an ideal platform for exploring the impact of IC on firm performance. Intellectual capacity, in essence, refers to a person's ability to think, learn, and understand complex ideas and information. It encompasses various cognitive skills, including reasoning, problem-solving, abstract thought, and the ability to learn from experience. In other words, it's the mental framework that allows individuals to process, organise, and apply information effectively. Hence, for a business organisation to maximise profit effectively, it must efficiently utilise its intellectual capacity, which describes all the abilities to learn new things and plan and execute them adequately. Examples of intellectual capacity include memory, verbal comprehension, reasoning, analysis, problem-solving, and reasoning skills. It is against the above discourse that the study sought to examine intellectual capital as predictor of profitability among selected companies in Cross River State Nigeria: Implication for Effective Accounting Practices.

Statement of the problem

The persistent failure of most business enterprises has become a serious concern to most stakeholders. This is due to the decline in profit maximisation in most public ventures. It has been observed that more than 70% of startups fail, not from lack of effort, but because they either resist change or adapt too slowly. This reveals that poor planning often leads to a roadblock and the true key to success lies in finding the right balance between persistence and flexibility. The issue of poor business profitability can stem from various issues, including high costs, low revenues, and operational inefficiencies. These problems have led most companies to financial instability, reduced growth, and even business failure. Several factors contribute to these challenges, ranging from financial mismanagement to marketing failures and inadequate cost control. The study has also observed that low profitability by most companies is primarily a result of excessive operating costs, inadequate revenue, or, in most cases, a combination of both. Inefficient operating practices, which result in poor vehicle utilisation, excessive fleet strength, and overstaffing, are common causes of excessive cost in developing countries. It is against this problem that the study sought to examine the intellectual capital as predictor of profitability among selected companies in Cross River State, Nigeria: Implications for Effective Accounting Practices.

Research objective

The main purpose of the study was to examine intellectual capital as predictor of profitability among selected companies in Cross River State Nigeria: Implications for Effective Accounting Practices. Specifically, the study seeks to:

i. Ascertain the extent to which human capital predicts the profitability of listed companies in Cross River State, Nigeria.
ii. To determine the extent to which structural capital predicts the profitability of listed companies in Cross River State, Nigeria.

Research questions

The following research questions were formulated to guide the study:

i. What is the extent to which human capital predicts the profitability of listed companies in Cross River State, Nigeria?
ii. To what extent does structural capital predict the profitability of listed companies in Cross River State, Nigeria?

Statement of null hypotheses

The following null hypotheses will be formulated to guide the study:

i. Human capital does not significantly predict the profitability of listed companies in Cross River State, Nigeria.
ii. Structural capital does not significantly predict the profitability of listed companies in Cross River State, Nigeria.

LITERATURE REVIEW

Concept of Intellectual Capital

Intellectual capital refers to the intangible assets within an organisation, including knowledge, skills, relationships, and innovations, that contribute to its success and competitive advantage. It's more than just intellectual property; it encompasses the collective knowledge and experience of employees, organisational processes, and other valuable intangibles. Essentially, it's the sum of all informational resources a company has at its disposal that can be used to drive profits, gain new customers, create new products, or otherwise improve the business.

Intellectual capital has also been defined as the difference between a firm's market value and the cost of replacing its assets. It is those things that we normally cannot put a price tag on, such as expertise, knowledge and a firm's organisational learning ability. Market value equals book value plus intellectual capital, with book value usually only the tip of the iceberg of wealth. Intellectual capital encompasses much more than patents, copyrights and other forms of intellectual property. It is the sum and synergy of a company's knowledge, experience, relationships, processes, discoveries, innovations, market presence and community influence. The most widely used definition of intellectual capital is "knowledge that is of value to an organization." Its main elements are human capital, structural capital, and customer capital. That definition suggests that the management of knowledge (the sum of what is known) creates intellectual capital.

Empirical literature review

Human capital and profitability of listed companies

The findings revealed that human capital predicts the profitability of listed companies in Cross River State, Nigeria. The possible reason for these findings may be that human capital, encompassing the knowledge, skills, and capabilities of a company's workforce, significantly impacts profitability by directly influencing productivity, innovation, and overall company performance. Companies with strong human capital are better equipped to develop new products and services, improve existing processes, and adapt to changing market conditions, all of which contribute to increased profitability. Thus, from the researcher's speculations, a skilled and knowledgeable workforce is more likely to come up with innovative ideas and develop new products and services. Human capital is crucial for fostering creativity, problem-solving, and the ability to adapt to changing market demands. Hence, companies that prioritise human capital development are better positioned to capitalise on emerging trends and stay ahead of the competition, leading to increased market share and profitability. The present finding is in line with the study of Tamunotonye and Ifeanyichukwu (2022) and Agubata et al. (2022), results suggest that compensation increases have a positive effect on business growth. This means that pension plans for workers will need to be taken into account if the firm is to grow.

Structural capital profitability of listed companies

The results showed that structural capital does not significantly predict the profitability of listed companies in Cross River State, Nigeria. The present finding is because structural capital, encompassing organisational processes, knowledge, and intangible assets, plays a crucial role in a company's profitability. It enhances operational efficiency, fosters innovation, and contributes to competitive advantage, ultimately boosting financial performance. Specifically, efficient structural capital management can lead to reduced production costs, improved resource utilisation, and the ability toleverage knowledge and enhanced competitive differentiation. Structural capital includes organisational routines, procedures, and systems that streamline operations and improve efficiency. By optimising these processes, companies can reduce waste, minimise errors, and improve resource utilisation, leading to lower costs and higher profitability. The present finding aligns with the study of Adekola, Folajinmi and Rafiu (2021correlation analysis indicated a positive relationship between the debt variable and profit, but a slightly negative correlation among other variables.

RESEARCH METHOD

The study was on intellectual capital as predictor of profitability among selected companies in Cross River State, Nigeria: Implications for Effective Accounting Practices. In the course of the study, three research questions and corresponding null hypotheses were formulated to guide the study and the ex-post facto research design of the correlational type was used. The study population comprises 3621 respondents and the sampling technique adopted for this study was the cluster sampling. The sample of the study consists of five hundred and forty-four (544) respondents using Yaro Yamane's formula. The instrument for data collection was a questionnaire titled Intellectual Capital on the Profitability Questionnaire (IC&PQ). Validated by experts in Measurement and Evaluation and Accountancy at the University of Cross River State, Nigeria and the Cronbach alpha reliability of internal consistency was adopted. The coefficients of internal consistency ranged from 0.77 to 0.79. The data was analysed with descriptive (mean and standard deviation) and inferential statistics (simple and multiple regression analysis).

RESULTS AND DISCUSSION

Descriptive statistics of measured variables

The descriptive statistics analysis was computed for the two levels of the independent variables inherent in the research study (mean, standard deviation, standard error, maximum and minimum) were calculated for the levels of dimensions of the independent variables (human capital and structural capital), thus, including the dependent variable respondents ' perceived profitability. The results are presented in Table 1.

Table 1 presents descriptive statistics for the study's independent and dependent variables. It can be discerned that for the independent variables, the highest mean was for structural capital to ($\overline{X} = 23.13$) and closely followed by relational capital ($\overline{X} = 21.40$) and the least is human capital ($\overline{X} = 20.82$). All the observed values were higher than the expected mean ($\mu = 6.00$). This implies that the scores generated were drawn from a random sample.

Table 1
Descriptive statistics effect of intellectual capital on Profitability of listed companies in Cross River, Nigeria(n=502)

S/no	Variable	$\overline{X}$	SD	SEM	Min	Max.
1	Human capital	20.82	2.61	.172	6.00	22.00
2	Structural capital	23.13	2.71	.173	7.00	23.00
3	Relational capital	21.40	2.52	.168	6.00	21.00

4.2 Test of null hypotheses

The stated hypothesis for the study was tested at the .05 alpha level. The decision rule is that a null hypothesis is rejected if the p-value associated with the computed test statistic is less than .05, but retained if otherwise. Hypotheses one to four were tested with simple regression analysis, while hypothesis five was analysed using multiple linear regression analysis. The results are presented below.

4.2.1 Hypothesis One

Human capital does not significantly predict the perceived profitability of listed companies in Cross River State, Nigeria. To test this hypothesis of the study, simple linear regression analysis was employed with human capital of respondents as the predictor (independent) variable and perceived profitability as the criterion (dependent) variable. The choice of simple linear regression is because the independent and dependent variables are measured continuously and the researcher sought to predict these two variables. The results obtained from the test statistical analysis are summarised and presented in Table 2.

Table 2

Regression of perceived profitability on human capital

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.421[a]	.059	.042	17.11		
Sources of variation	Sum of Squares	Df	Mean Square	F-value	p-value
Regression	11780.752	1	3251.700	17.18	.005*
Residual	230275.787	500	121.33		
Total	242056.539	501			
Group	Unstandardized Coefficients B	Std. Error	Unstandardized Coefficients Beta	t-value	p-value
(Constant)	43.871	2.160		11.053	.000
Human capital	.153	.139	.221	6.140	.000

Table 2 gives an interpretation of the results of the simple linear regression analysis of human capital and profitability. An R-value of .421 was obtained, resulting in an R-squared value of .059. This implies that the variation in human capital can account for about 5.9% of the total variation in profitability; thus, the p-value (.000) associated with the computed F-value (17.18) is less than .05. As a result, the null hypothesis was rejected. This means that the human capital significantly predicts profitability,

Hypothesis two

Structural capital does not significantly predict the perceived profitability of listed companies in Cross River State, Nigeria. To test this hypothesis of the study, simple linear regression analysis was employed with structural capital of respondents as the predictor (independent) variable and perceived profitability as the criterion (dependent) variable. The choice of simple linear regression is because the independent and dependent variables are measured continuously and the researcher sought to predict these two variables. The results obtained from the test statistical analysis are summarised and presented in Table 3.

Table 3

Regression of perceived profitability on structural capital

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.555[a]	.712	.074	18.001		
Sources of variation	**Sum of Squares**	**Df**	**Mean Square**	**F-value**	**p-value**
Regression	167587.313	1	18237.313	12.433	.001*
Residual	2218169.226	500	322.607		
Total	2525356.539	501			
Group	**Unstandardized Coefficients B**	**Std. Error**	**Unstandardized Coefficients Beta**	**t-value**	**p-value**
(Constant)	31.535	2.126		9.990	.000
Structural capital	.810	.134	.258	7.624	.000

Table 3 gives an interpretation of the results of the simple linear regression analysis of structural capital and profitability. An R-value of .553 was obtained, resulting in an R-squared value of .712. This implies that the variation in structural capital can account for about 71.2% of the total variation in profitability; thus, the p-value (.000) associated with the computed F-value (12.433) is less than .05. As a result, the null hypothesis was rejected. This means that the structural capital significantly predicts profitability

Summary of findings

The findings of the study on intellectual capital as predictor of profitability among selected companies in Cross River State Nigeria: Implications for Effective Accounting Practices, can be summarised thus;

i. Human capital significantly predicts profitability of listed companies in Cross River State, Nigeria.
ii. Structural capital significantly predicts the profitability of listed companies in Cross River State, Nigeria.

Discussion of findings

The finding of the study was done hypothesis-by-hypothesis, as shown

Human capital and profitability of listed companies

The findings revealed that human capital predicts the profitability of listed companies in Cross River State, Nigeria. The possible reason for these findings may be that human capital, encompassing the knowledge, skills, and capabilities of a company's workforce, significantly impacts profitability by directly influencing productivity, innovation, and overall company performance. Companies with strong human capital are better equipped to develop new products and services, improve existing processes, and adapt to changing market conditions, all of which contribute to increased profitability. Thus, from the researcher's speculations, a skilled and knowledgeable workforce is more likely to come up with innovative ideas and develop new products and services. Human capital is crucial for fostering creativity, problem-solving, and the ability to adapt to changing market demands. Hence, companies that prioritise human capital development are better positioned to capitalise on emerging trends and stay ahead of the competition, leading to increased market share and profitability. The present finding is in line with the study of Agbi, Abiodun and Edem (2023), result revealed that both HCE and VAIC had a significant positive effect on RO. Also in agreement are the studies of Tamunotonye and Ifeanyichukwu (2022) and Agubata et al. (2022), results suggest that compensation increases have a positive effect on business growth. This means that pension plans for workers will need to be taken into account if the firm is to grow. Similar to the present finding are the studies of Eneh et al. (2022), Nangih et al. (2020) and Onyekweluet al. (2020), findings revealed that organisations should choose the appropriate compensation strategy that satisfies the desire of their employees to boost their productivity.

Structural capital profitability of listed companies

The results showed that structural capital does not significantly predict the profitability of listed companies in Cross River State, Nigeria. The present finding is because structural capital, encompassing organisational processes, knowledge, and intangible assets, plays a crucial role in a company's profitability. It enhances operational efficiency, fosters innovation, and contributes to competitive advantage, ultimately boosting financial performance. Specifically, efficient structural capital management can lead to reduced production costs, improved resource utilisation, and the ability toleverage knowledge and enhanced competitive differentiation. Structural capital includes organisational routines, procedures, and systems that streamline operations and improve efficiency. By optimising these processes, companies can reduce waste, minimise errors, and improve resource utilisation, leading to lower costs and higher profitability. The present finding aligns with the study of Adekola, Folajinmi and Rafiu (2021), Pratheepkanth (2011) and Rosario and Chavali (2019) correlation analysis indicated a positive relationship between the debt variable and profit, but a slightly negative correlation among other variables

SUMMARY AND CONCLUSION

Globalisation in the 21st century has resulted in the advancement of technology, which has drastically impacted the way businesses are carried out and changed the production fundamentals in most sectors from tangible assets to a focus more on human capital, where service-oriented organisations dominate the majority of the activities with high-level performance. Profit maximisation is crucial for businesses because it's the primary driver of economic efficiency and ultimately contributes to societal well-being. By aiming to maximise profits, businesses are incentivised to allocate resources efficiently, innovate, and respond to market demands. This pursuit also fuels competition, leading to better products and services for consumers. In conclusion, intellectual capital significantly impacts firm profitability, often acting as a catalyst for increased revenue, innovation, and improved management skills. Studies across various industries, including healthcare, oil marketing, and pharmaceuticals, demonstrate a positive relationship between intellectual capital and profitability, with some suggesting it contributes more to profit than tangible assets. Effectively managing and utilising intellectual capital is crucial for firms to maximise their profitability and achieve sustainable growth.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made;

1. It is recommended that governments should promote human capital within organisations by investing in education and training, incentivising skilled labour, and creating a supportive environment for employee development. This includes fostering a culture of learning, offering training programs, and providing resources to enhance employee skills and knowledge.

2. The study recommends that managers of companies should promote structural capital in an organisation by facilitating knowledge sharing, supporting infrastructure development, and encouraging innovation through policies and funding. This can involve investing in information technology systems, strengthening collaborative networks, and fostering a culture of innovation.

IMPLICATION FOR EFFECTIVE ACCOUNTING PRACTICES

The findings of this study may be beneficial to the customers and the society, employees, business enterprises and the government.

Intellectual capital, encompassing knowledge, innovation, and organisational capabilities, can significantly benefit the masses through increased productivity, improved quality of life of the customers, and access to new technologies and services. By leveraging intellectual capital, organisations can drive innovation, develop new products and services, and ultimately create a more prosperous and equitable society. In essence, intellectual capital is a powerful engine for progress and societal well-being. By harnessing its potential, organisations can create a more innovative, productive, and equitable society for all

Also, when organisations effectively manage their intellectual capital, they are better able to adapt to changing market conditions and seize opportunities. This can lead to greater overall organisational performance, which benefits both the organisation and its stakeholders, including the general public.

REFERENCES

Adekola, A.A., Folajinmi, F.A., & Rafiu, O.S. (2021). Capital structure and profitability of selected listed companies in Nigeria. *International Journal of Research and Scientific Innovation (IJRSI) | 1 (1),* 29-36.

Dulis, E. (2024). Interpersonal conflict and its management in *information system development, MIS Quarterly, 25(15),* 195-228.

Muradoglu, Bakke and Vernes (2005). Human Capital Expenditure and Company Sales Turnover. *Corporate Ownership & Control, 14(3),* 4-5.

Ong, T. & The, G.J. (2011). Capital Structure and Financial Performance: Evidence from Oman, *Indian Journal of Economics and Business, 23 (4),* 1-23.

Pratheepkanth, P. (2011). Capital structure and financial performance: Evidence from business companies in Colombo Stock Exchange, Sri Lanka. Researchers *World Journal of Arts Science and Commerce, 2(2),* 171-180.

Rosario, S., & Chavali, K. (2019). Capital structure and its impact on profitability: A case of the Indian hotel industry. *Journal of Accounting and Finance, 6(1),* 67-72.

Salawu, R.T. (2007). Intellectual capital, management accounting practices and corporate performance. *Accounting, auditing and accountability journal 2(4),* 522-48

Tamunotonye, P. G., & Ifeanyichukwu, O. O. (2022). Assessing the effect of Employee Size and Employee Cost on the Financial Performance of listed deposit money banks in Nigeria. African Journal of Business and Economic Development, 2(11), 86–100.

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