



INTELLECTUAL CAPITAL (IC) AND COMPETITIVE ADVANTAGE IN SELECTED PHARMACEUTICAL FIRMS IN SOUTH-EAST NIGERIA

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ABSTRACT: *Intellectual capital is a key human resource contributor to any organization's survival if properly harnessed. The broad objective of the study was to ascertain the extent of relationship that exists between Intellectual Capital (IC) and Competitive Advantage in selected pharmaceutical Firms in South-East Nigeria. The study adopted a survey research design. Population of the study was 1120 employees and sample size 295 employees derived by using Taro Yamane's formula. Pearson's Product Moment Correlation coefficient was used in data analysis. Findings indicated that employee competence had a significant positive relationship with organizational learning capability in the selected Pharmaceutical Firms in South-East Nigeria (cal. r. 793 > crit. r. 138). The study concluded that intellectual capital plays a major role and significantly impacts on competitive advantage of the studied firms, and recommended to the management of the studied firms to focus on the competence level of prospective employees while recruiting as this would make them fit into the organization and job seamlessly and increase their learning capability.*

KEYWORDS: Competitive Advantage, Employee Competence, Intellectual Capital (IC), Organizational Learning, Human Resources

INTRODUCTION

Background of the Study

The global and national business environment has over the past few years been more concerned with the intangible assets of human resources and information and communication technology. Ekwe (2013) captures it thus: "the global economy has for the past few decades witnessed gradual transition from industry based environment which has a focus on physical assets such as factories, plants, machines and equipment to a high technology, information and innovation based environment, which focuses on the expertise, talents, creativity, skills, dedication and experience of people in the organization's intellectual capital base".

Human resource as an intangible asset has continued to play sterling roles in organizations continued existence. Iswati & Anshori (2007) opine that human being has become the central attention in the twentieth century. In the last few decades, the prominence of human resource has increased tremendously specifically in the developed countries. This is because the world at large has experienced a drastic change in the form of emerging wealthy business and nations (Arenas & Lavandors 2008). Both companies and government have shifted their focus from tangible assets to intellectual capital for sustainable competitive advantage of business and nation (Sarmadi, 2013).



Statement of the Problem

Observation from the studied pharmaceutical firms showed that the firms seem to be laying more emphasis and placing more importance on their production equipment, on its recency, digitalization and production capacity. They seem not to care much about the competencies of the operational staff in terms of their skills, experience and knowledge in handling the machines and in their ability to learn new things and to unlearn old and outdated skills. This seem to affect the organizational learning capability (OLC) and organizational innovative capability (OIC) as the operatives and other lower level staff appear to be finding it difficult to learn and develop new skills, acquire new knowledge and experience.

Objective of the Study

The broad objective of the study was to ascertain the extent of relationship that exists between intellectual capital (IC) and competitive advantage in selected pharmaceutical firms in south-east Nigeria. The specific objective is:

To examine the extent of relationship that exists between employee competence and organizational learning capability (OLC) in the selected pharmaceutical firms in South-East Nigeria.

Research Question

What is the extent of relationship that exists between employee competence and organizational learning capability (OLC) in the selected pharmaceutical firms in south-east Nigeria?

Hypothesis

H₀: Employee competence has no significant relationship with organizational learning capability (OLC) in the selected pharmaceutical firms in South-East, Nigeria.

Scope of the Study

The study focuses on studying the relationship that exists between Intellectual Capital (IC) and Competitive advantage in AC drugs Limited, Enugu, Enugu state, Juhel Nigeria Limited Enugu, Enugu state, Pestow Laboratory Nigeria Limited, Aba, Abia State, Guaze Pharmacy and Laboratory, Enulfite, Anambra and Rico Pharmaceutical.

Limitations of the Study

The lukewarm attitude of the respondents to collect and respond to questions on the questionnaire proved a major stumbling block as it delayed the speedy completion of the work. Persuasion and provision of relevant documents convinced the respondents that the work was purely for academic purpose and that their identity would not be disclosed.



REVIEW OF RELATED LITERATURE

Intellectual Capital (IC)

Intellectual Capital (IC) as a term has over the years gathered momentum in terms of being studied and talked about, but it has not yet been able to have a generally acceptable definition as many authors, scholars and researchers have defined it differently. Engstrom, Westnes and Westnes (2003) state that various studies have made attempt at providing one acceptable definition for IC but have not yet succeeded and as such there is no generally agreed definition. Review of related literature has proved that despite similar composition of knowledge and its contribution, there is no one consistent definition of IC (Ahangar 2011, Bontis, Keow & Richardson, 2000). While there are plenty of generic definitions of IC, there is so far no generally accepted definition or classification (Maaloul & Z'eghal 2010, OECD 2006). These earlier promoters describe IC as 'profit derived from knowledge' while Roos, Dragonetti & Edvison (1997) view it as the totality of knowledge translated into trademark, processes and also brands.

Competitive Advantage

Competitive advantage has over the years been used as a yardstick for measuring performance of organizations. It can also be used to predict how long a firm will last in a business environment. Porter (1995) states that competitive advantage is the extent to which a company is able to have a dominant position superior to its competitor by creating and maintaining value for its customers. It includes capabilities that allow company to distinct itself from its competitors (Tracey & Lim 1999).

Organizational Learning Capability (OLC)

OLC is defined as the organizational and managerial characteristics or factors that facilitate the organizational learning process or allow an organization to learn (Chiva, Alegre & Lapedra 2007). Jones (2000) states that organizational learning is a managerial procedure of development of new ideas that improves capabilities of employees in order to boost organizational competitive advantage. It is the process of retaining of employees in order to boost organizational competitive advantage. In the process of retaining vital knowledge within an organization, management should not only rely on talent retention strategy, but translation of knowledge into organizational change and learning, thereby leading to sustainable competitive advantage (Fam, Mitchell, Abey Suriya & Meek, 2013). Gorelick (2005) posits that organizational learning is the ability of an organization as a whole to detect errors and correct them as well as change in knowledge and values of the organization so that new skills for problem-solving and new capacity for jobs can be created.

Intellectual Capital and Firm Competitiveness

Organizations competitive edge can be obtained through its resources or processes to achieve its mission and vision as opined by Amit and Schoemaker (1993) who state that a firm's competitive capability is "its capacity to deploy resources, usually in combination, using organizational processes" to achieve a strategic objective. In extant literature it has been established that such capabilities are critical to the pursuit of competitive advantage (Tece, Pisano & Shuen 1997). An organizational capability in establishing competitive advantage



emanates from the intellectual strength of its human resources as expressed by Amit and Schoemaker (1993).

Theoretical Framework

This work was anchored on the Resource-based view (RBV) credited to Penrose (1959) and further developed by other scholars including Wenerfelt (1984) and Barney (1991) which later resulted in Resource-Based Theory (RBT). This theory is an important framework through which firm's competitive advantage and performance is explained and predicted using firm's imitable resources (Barney, Ketchen & Wright, 2011, Vorhies & Morgan 2005). This theory was largely to diffuse the dominance of the competitive forces' analysis of firm strategy (Bontis 2002). The central point of the RBV is that resources help to create advantage competitively.

Empirical Review

Ekwe (2013) carried out a study on the effect of Intellectual Capital on employee's productivity of banks in developing economies: The Nigeria Experience. The study used the value-added Intellectual Coefficient (VAIC) model to investigate the effect of the Intellectual Capital indices (i.e. Human Capital Efficiency, Structural Capital Efficiency and the Capital Employed Efficiency) on the employee productivity on banks in Nigeria. Data were collected from the annual reports of six banks and analysis method was adopted to test the hypothesis. SPSS version 17.0 was used for the analysis. The study revealed that there was a significant positive relationship between competent of VAIC and employee productivity of the banks in Nigeria (VIAC coefficient = 1.186, $R^2 = 0.806$, $R^2 t = 0.49$, $p < 0.05$). The study concluded that indeed intellectual capital has positive and significant effect on employee productivity of banks in Nigeria.

Olunifesi and Bontis (2012) studied telecommunications companies in Nigeria using intellectual capital as a strategic resource for creating competitive advantage. A previously published research instrument was administered and survey data were collected from 320 managers in 29 telecommunications companies. Hypotheses related to the relationship of human, structural and customer capital and its influence on business performance were tested. Results indicated that Nigerian telecommunications companies have mostly emphasized the use of customer relationship management to boost their business performance.

METHODOLOGY

Research design

Survey research design was adopted by this study. This method allowed the opinions of respondents to be sampled through questionnaire instrument.

Area of study

The area of this study was conducted in the South East region of Nigeria which is made up of five states of Abia, Anambra, Ebonyi, Enugu and Imo state.



Population of the study

The population of the study consists of the employees of the studied companies. The companies have a total staff of one thousand one hundred and twenty (1120) employees. The distribution is given in the table below:

Table 1: Population Distribution

S/N	State	Organization	Population
1	Enugu	AC Drugs Limited	105
2	Enugu	Juhel Nigeria Limited	357
3	Abia	Petsow Laboratory Nigeria Limited	270
4	Anambra	Gauza Pharmacy and Laboratory	101
5	Anambra	Rico Pharmaceutical and Industry Ltd	287
Total			1120

Source: Human Resource Department of the firms.

Sample Size and Sampling Technique

The population of the study was pruned down (sample) using Taro Yamane's statistical formula. The formula is given below:

$$n = \frac{N}{1+(Ne)^2}$$

Where: n= sample size. N = population size (1120). e= error limit (0.05)

$$n = \frac{1120}{1+ 1120(0.05)^2}$$

$$n = 295$$

To share copies of questionnaire in proportion commensurate to the population of the firms, Bowley's formula was used. The formula and calculation are given below:

$$nh = \frac{nNk}{N}$$

Where: n = total sample size. Nh= number of items in each stratum in the population. N= population size.



AC Drugs Limited: 28. **Juhel Nigeia Limited:** 94. **Petsow Laboratory Nigeria Limited:**71. **Guaze Pharmacy and laboratory:** 27. **Rico Pharmaceutical and industry Ltd:** 75.

Source of Data

Data for the study were sourced through both primary and secondary source. The primary source used was questionnaire instrument while the secondary source used was journal articles and materials, text books and internet sources.

Description of Data Collection Instrument

Questionnaire instrument was used in the study. The instrument was coded in a five point Likert scale format. The code used is as follows: Strongly Agree(5), Agree (4), Undecided (3), Disagree (2) and Strongly Disagree (1). A sample of the questionnaire is attached in Appendix.

Procedure for Data Collection

The appropriate copies of questionnaire were distributed by the researchers to the respondents to ensure those targeted got them. The collection was also handled by the reserachers as this method ensured that all or most of the copies given out were collected.

Validity of Instruent

The instrument was subjected to face and content validity by relevant authorities and experts. Validators from Eductaion Foundation Department of Nnamdi Azikiwe University were consulted to ensure that the questionnaire items are in tandem with the research variables and are enough to capture and measure the variables appropriately.

Reliability of the Instrument

To test the consistency level of the instrument, the questionnaire was subjected to Crombach Alpha technique. The benchmark for acceptance is put at 0.7. that is, any reliability coefficient from 0.7 and above should be acceted as being reliable. The result obtained from the test is shown in the table below:

Table 2: Reliability statistics

Cronbach's Apha	No of Items
.903	10

Source: Field Survey, 2017

Computation: SPSS ver. 20

From the result obtained above (.903), the questionnaire was certified reliable and consistent enough for elicitiugn data for the reserach.

Method of Data Analysis

The data collection was analysed using Pearson's Product Moment Correlation Coefficient. This is occassioned by the fact that the study seeks to identify the extent of relationship that



exist between the dependent and independent variables of the study and correlation analysis is well suited for this. A 5% level significance was used.

Decision Rule

The level of significance used is 0.05, this guided the decision to be made, if the p-value obtained is less than .05, the alternate hypothesis should be accepted, if not, the null hypothesis will be accepted.

Table 3: Correlation Interpretation

Value of Coefficient	Relation Between Variables
0.7-1.00	Very strong Correlation
0.50-0.69	Sustantial Correlation
0.30-0.49	Moderate Correlation
0.10-0.29	Low Correlation
0.01-0.09	Negligible Correlation

Source: Alwadael (2010) Employee's perception of, and satisfaction with, performan appraisal. "International Journa of Service Industry management". 14(2), 17-33.

Data Analysis

Table 4: Questionnaire distribution analysis

S/N	Organization	Questionnaire Distributed	Questionnaire Returned	Questionnaire Analyzed
1	AC Drugs Limited	28	25(89%)	25(89%)
2	Juhel Nigeria Limited	94	87(92%)	83(88%)
3	Petsow Laboratory Nigeria Ltd	71	60(85%)	57(80%)
4	Guaze Pharmacy & Laboratory	27	23(85%)	23(85%)
5	Rico Pharmaceutical and Industry Ltd	75	72(96%)	70(93%)
	Total	295(100%)	267(91%)	258(87%)

Source: Field Survey, 2017

Research Question Analysis

Research question one:

What is the extent of relationship that exists between employee competence and Organizational Learning Capability (OLC) in the selected Pharmaceutical firms in South-East Nigeria?

**Table 5: range of scores for employee competence**

Range of Scores	N	Percentage	Remark
5-14	210	81.4	Poor score on employee competence
15-25	48	18.6	Good scores on employees cometenace
Total	258	100(%)	

Source: Field Survey, 2017

Table 5 shows the range of scores for employee competence, from the table, it revealed that 210 respondents (81.4%) scored poor on the construct while 48 respondents (18.6) had a good score on the construct.

Table 6: Range of scores for organizational learning capability

Range of Scores	N	Percentage	Remark
5-14	37	14.3	Poor scores on organizational learning capability
15-25	221	85.7	Good scores on organizational learning capability
Total	258	100(%)	

Source: Field survey, 2017

Table 6 depicts the range of scores for Organizational Learning Capability (OLC). The table indicated that 37 respondents (14.3%) scored poor on the OLC while 221 respondent (85.7) had a good score on the OLC. Correlation analysis for employee competence and Organizational Leaning Capability (OLC)

Table 7: Correlation Analysis for Hypothesis One

Correlations

	EMPCOM	OLC
Pearson Correlation		.793***
EMPCOM sig. (2-tailed)		.000
N	258	258
Pearson Correlation	.793***	1
OLC Sig. (2-tailed)	.000	
N	258	258

** Correlation is significant at the 0.05 level (2-tailed)

Source: questionnaire responses from field survey, 2017

Keys:

EMPCOM: Employee Competence

OLC: Organizational Learning Capability



Table 7 shows the correlation analysis carried out on employee competence and OLC in the selected Pharmaceutical firms in south-east Nigeria. The correlation coefficient obtained was .793 indicating a strong positive relationship.

Test of Hypothesis

H₀: Employee competence has no significant relationship with Organizational Learning Capability in the selected Pharmaceutical firms in South-East Nigeria.

Table 8: Significance Test of Hypothesis

N	Cal. r	DF	Crit. R.	Remark
258	0.793	256	0.138	Significance

Source: Field Survey, 2017

Table 8 shows the test of significance for hypothesis. It showed that at .05 level of significance and at 256 degrees of freedom, that the critical r is .138. Given that the calculated r .793 is greater than the critical r (cal. R , $.793 > \text{crit. } r$, .138). The research hypothesis is therefore accepted and it is stated that employee competence has a significant relationship with Organizational Learning Capability in the selected Pharmaceutical Firms in South-East Nigeria.

SUMMARY OF FINDING

Test of hypothesis showed that employee competence has a strong significant positive relationship with OLC in the selected pharmaceutical firms in South-East Nigeria with a correlation of .793 (cal. r , $.793 > \text{crit. } r$, .138). This result supports prior studies of Moghadan, Zabihi, Kargaran and Hakimzadeh (2013) who examined the relationship between intellectual capital and organizational learning capability (OLC) and the results from the study showed that human capital and structural capital which employee competence is part of have a significant relationship with organizational learning capability.

CONCLUSION

In conclusion, going by the findings, the study makes bold to say that intellectual capital plays a major role and significantly impacts on competitive advantage of the studied firms. This buttresses the point that intellectual capital positively and significantly relates to competitive advantage in the studied firms.

RECOMMENDATION/ADVOCACY

Management of the studied firms should focus on the competence level of prospective employees while recruiting and to also from time to time engage the employees in training,



workshop, job rotation and knowledge sharing exercise as these would increase the Organizations' Learning Capability and help carve out a competitive niche for the firms.

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APPENDIX

Sample Questionnaire

Instruction: Please tick () in the box provided as it best represent your thought or view

S/N	Questionnaire Items <i>Employee Competence</i>	SA (5)	A (4)	UD (3)	D (2)	SD (1)
1	I am familiar with the way things are done because I am used to it before coming to this organization.					
2	I am experienced with the kind of equipment that is used in my organization.					
3	With the knowledge I have about the kind of machines being used here, my work is less stressful.					
4	I have acquired knowledge on my own about these equipment before I was employed in this firm.					
5	Before coming to this organization, I have worked in similar organization before.					
6	It is easier for me to learn new things faster because I have the knowledge needed.					
7	My organization will perform better if the employees can adopt new way of doing things.					
8	My ability to learn is influenced by the level of skills I have in that area.					
9	When I am thought how to do things better, it is easy for me to learn and understand.					
10	I do not have problem in learning new techniques					