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Effect of Intellectual Capital on the Profitability of Nigerian Deposit Money Banks

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ABSTRACT

This study assessed the effect of intellectual capital on the profitability of Nigerian deposit money banks. The specific objectives are: To ascertain the effect of Structural Capital Efficiency (SCE) on the profitability of Nigerian deposit money banks; to determine the effect of Human Capital Efficiency Coefficient (HCE) on the profitability of Nigerian deposit money banks and to examine the effect of Capital Employed Efficiency Coefficient (CEE) on the profitability in Nigerian deposit money banks. The study adopted Ex post-Facto research design. The study used sample of fifteen (15) Nigerian deposit money banks quoted on the Nigerian Stock Exchange from 2010 to 2018 The data for the study was collected from annual reports and accounts of the deposit money banks quoted on the Nigerian Stock Exchange. Regression analysis was employed to test the formulated hypotheses with the aid of e-view version 9.0. The study revealed that Structural Capital Efficiency (SCE) has positive significant effect on the profitability of Nigerian deposit money banks. The study also revealed that Human Capital Efficiency Coefficient (HCE) has positive effect on the profitability of Nigerian deposit money banks, but is not statistically significant. In addition, Capital Employed Efficiency Coefficient (CEE) has positive effect on the profitability of Nigerian deposit money banks, but is not statistically significant. The study therefore recommended among others that Banks in Nigeria especially the Deposit Money Banks should adopt an intellectual capital strategy. This can be done by banks adding the position of Chief Intellectual Capital Management Officer (CICMO) on their organizational chart to help in structuring relevant strategies and policies on how to obtain and best utilize the required resources underlying IC.

KEYWORDS: *Structural Capital Efficiency, Human Capital Efficiency Coefficient, Capital Employed Efficiency Coefficient and profitability*

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INTRODUCTION

Resources are key drivers for every business success, the need for these adequate resources (in the form of financial, physical and intangible assets) in ensuring the continuous operation of a business function as a going concern can never be overlooked. These resources range from physical assets, financial cum other intangible assets, all needed for the growth of a company. In the millennium, there was a growing prediction that less people will do physical work and more people will do brain work, this is "intellectual capital", and it doesn't appear on the company statement of financial performance, but reflects more value for organizations than that of physical assets. Intellectual capital drives organizational wealth more by knowledge and information rather than the process of production (Oko, Onodi & Tapang, 2018).

Intellectual capital is nowadays important in every company regardless of its size or complexity and can help to increase the company's value added. The importance is so paramount that companies invest more in this asset than in physical and financial assets (Oyedokun & Saidu, 2018). It was on the 90's that the impulse to investigate about intangible assets arose. It emanated from Thomas Stewart, a pioneer of the concept who in 1991 in an article captioned "Brain Power-How Intellect Capital is becoming America's most valuable asset". Notwithstanding, Rodrigues et al. (2009) mentions having distinct strategic and operational barriers in management of intellectual capital, essentially, in the hard task of identifying and measuring these intangible assets and establishing objectives and plans to them.

Wiagustini, Artini and Ramantha (2019) reported that capital problems are related to funding decisions reflected in the company's Capital Structure, namely the proportion of the use of debt and the company's own capital. Based on the controversy of the findings of the influence of the Capital Structure research which is the company's funding decision on the company's financial performance, becoming a Research Gap is done by raising Intellectual Capital as a Variable Antecedent. Intellectual Capital is an intangible asset such as knowledge and skills that can encourage improving Financial performance, in accordance with the Resource Based View (RBV) Theory (Wiagustini, et al 2019). The RBV theory reveals that the company's internal capability is an important factor in managing the unique resources of the company so that the company is able to achieve competitive advantage (Schienstock, 2009). Management of Intellectual Capital by optimizing Human Capital, Structural Capital, and Relational Capital as a whole entity to create superior performance. Ting and Lean (2009)

and Clarke et al. (2011) found that human capital, structural capital and relational capital have a positive and significant effect on business performance. Integration of human capital, structural capital and relational capital was found to have a positive and significant influence on business performance.

In modern times, this is a necessary but not sufficient condition because execution of successful strategies depends on access to human and operational know-how, customer and supplier relationships, a committed workforce, and other such intangibles, at the heart of making these intangibles come alive is the firm's investment in intellectual capital. Societies have experienced four different socio-economic phases throughout history which include primitive society, agricultural society, industrial society, and information society in which we currently live. Nasif, Sinan and Murad (2016) opined that during these periods, hierarchy among production factors varied from one enterprise to another. While prior to the information society, the focus was on traditional factors (labor, capital, natural resources, and entrepreneurship), knowledge, and information technologies and intellectual capital factors took priority after the information society emerged (Kandemir, 2008; Yalama, 2013).

It is common knowledge that statements of financial position do not attempt to provide information on the actual value of an enterprise; instead, they are prepared for reporting purposes. Moreover, the relationship between the data obtained from financial reports (which are produced in line with the traditional accounting systems) and the value of an enterprise has weakened. In addition, traditional accounting systems fail to reflect intangible assets creating value in enterprises (Lhaopadchan, 2010). Intellectual capital is a complex issue that is relatively difficult to conceptualize, define and measure. Research into intellectual capital has multiplied over the past two decades, and the content and significance of the concept have received much discussion in the research literature. On a microeconomic level, 'intellectual capital' refers to the sources of non-physical (added) value for a company or organization: human capital (e.g. skills, experience, and training), relational capital (e.g. customer and stakeholder relations, brands, agreements) and structural capital (e.g. company culture, working environment, systems, and immaterial rights) (Pirjo, Sten & Samuli, 2011).

In today's global economy, particularly in the service industry, where knowledge and information are very crucial to their very existence and survival, intellectual capital is gradually assuming the characteristic of "product". In the process, a company's workforce has evolved into arguably the biggest competitive differentiator for organizations in virtually all industries especially the service oriented industry which banks fall.

Till date, few scholars have focused on the effect of intellectual capital on organizational performance in the Nigerian banking sector **(**Ogbo, Ezeobi and Ituma (2013); Ekwe 2016;, Ogbodo, Amahalu and Abiahu, 2017; Ofurum and Aliyu, 2018; Oyedokun and Saidu, 2018; This is surprising given that scholars (Ruta, 2009, Yand & Lin,2009) argue that intellectual capital development is the hidden value that is not reflected in organization's financial statement but has the potential to contribute to organizational profitability and competitive advantage. Most of the works to date have been based on qualitative research and the building of theoretical models. Empirical measurement of economic impacts of intellectual capital still remains scarce, moreover, they were conducted in developed economies where all information on staff costs are properly documented such as; Nasif, Sinan, and Murad (2016), Pirjoisten & Samuli (2011).

The prior studies conducted both in Nigeria and other countries in commercial banks and other corporate firms revealed mixed results, which means that some show a positive significant relationship, Abdel-Aziz et al, (2013); Moradi et al, (2013) Nasif et al, (2016); Thakur (2017); Virender (2017) while others indicate a negative significant relationship between intellectual capital and financial performance Ofurum and Aliyu (2018) Onyekwelu et al, (2017) Iranmahd et al, (2014). Based on the above development, this study intends to investigate the effect of intellectual capital on the profitability of Nigerian deposit money banks.

The broad objective of the study is to assess the effect of intellectual capital on the profitability of Nigerian deposit money banks, while specific objectives are:

1. To ascertain the effect of Structural Capital Efficiency (SCE) on the profitability of Nigerian deposit money banks.
2. To determine the effect of Human Capital Efficiency (HCE) on the profitability of Nigerian deposit money banks.
3. To examine the effect of Capital Employed Efficiency (CEE) on the profitability in Nigerian deposit money banks.

REVIEW OF RELATED LITERATURE

Conceptual Review

Intellectual Capital

Studies have been providing one acceptable definition for intellectual capital but have not yet succeeded and as such there is no generally agreed definition of intellectual capital. However, some definitions are noted here: Intellectual Capital (IC) can be briefly defined as the knowledge-based equity of organizations and has attracted, during the last decade, a significant amount of practical interest (Campisi & Costa, 2008). This capital is the organization's constant renewable source of creativity and innovativeness, which is not reflected in its financial statements. *Structural capital* can be defined as competitive intelligence, formulas, information systems, patents, policies, processes, and etc., resulted from the products or systems the firm has created over time. Structural capital is the intellectual value that remains with the enterprise when people leave. Structural capital includes the content within the enterprise knowledge asset, as well as the intellectual investment that the enterprise has made in the physical, technical and business culture infrastructures that support its activities (Maheran & Md Khairu, 2009).

Intellectual capital is one of the concepts in accounting that are yet to have universally accepted definitions. This is as a result of its nature and constituents that vary among corporate institutions. Academics, practitioners and managers viewed it in different ways, and thus defined it

based on their perception (Oyedokun & Saidu, 2018).The widespread acceptance of Intellectual Capital (IC) as a source of competitive advantage led to the development of appropriate methods of its measurement, since traditional financial tools are not able to capture all of its aspects (Campisi & Costa, 2008**).**

Ahangar (2011) sees the term intellectual capital to include inventions, ideas, general knowledge, design approaches, computer programs and publications. Karem (2011), defines intellectual capital as the combined intangible assets which enable the company to function and see an enterprise as the sum of its tangible assets and intangible assets as expressed in the following formula: Enterprise = Tangible Assets + Intellectual Capital.

Intellectual Capital Management

Gogan, Cristina, Rennung and Sîrbu (2015) made references to some authors as to their definition of what Intellectual Capital Management entails, amongst those definitions include:

Gogan and Duran (2014) "Intellectual Capital Management is a cyclic and continuous process that is coordinating the activities to identify, evaluate, and initiate action plan and report intangible assets in order to achieve sustainable competitive advantage". Kujansivu (2008) asserted that Intellectual Capital Management include the identification, measurement, valuation, acquisition, and reporting of intellectual capital. From the above definitions, they all reflect a positive relationship between intellectual capital and competitive Advantage. On a contrary view, looking at Intellectual capital management on the basis of knowledge management, Ding and Li (2010) defines Intellectual Capital management can be defined as the management of the expansion, enhancement and value evaluation of knowledge management, taking the knowledge management as the core, taking the enhancement of enterprise value as the intention under the condition adapting with the development strategy of the enterprise.

Serrat (2011) sated that intellectual capital management is the active management of intellectual capital resources with multiplicative effects. The schemes that can be applied singly or across the three types relate to:

1. Value creation - the strategic generation of knowledge and its conversion into valuable forms.
2. Value extraction - the strategic conversion of created value into useful forms.
3. Value reporting - the accurate reflection of the value of intellectual capital - once the what, why, how, when, and where of qualitative and quantitative measurement, as well as its responsibility centre, have been decided - for both analysis and decision making by senior management and externally by clients, audiences, and partners. Managing intellectual capital effectively rests on balancing value creation, extraction, and reporting to meet the goal of the organization.

Firm Performance

Firm performance can be measured through different tools based on financial and non-financial aspect. Traditionally, many performance measures have been based around financial aspects, omitting important non-financial aspects including the importance of dynamic capability through accumulating research and development as well as marketing capability over time, to further enhance firm performance (Hsu & Wang, 2010). The performance can be measured by using various methods such as accounting based technique, which consist of Return on Asset (ROA) and Return on Equity (ROE). With these results, the data must be collected in collective way in order to see what impact it can contribute in measuring banking performance. This measure will include revenues from every single department and operations units available within the banks.

Profitability

Profitability can be defined as either accounting profits or economic profits.

Accounting Profits (Net Income)

Traditionally, farm profits have been computed by using "accounting profits". To understand accounting profits, think of your income tax return. Your Schedule F provides a listing of your taxable income and deductible expenses. These are the same items used in calculating accounting profits. However, your tax statement may not give you an accurate picture of profitability due to IRS rapid depreciation and other factors. To compute an accurate picture of profitability you may want to use a more accurate measure of depreciation.

Accounting profits provide you with an intermediate view of the viability of your business. Although one year of losses may not permanently harm your business, consecutive years of losses (or net income insufficient to cover living expenditures) may jeopardize the viability of your business.

Economic Profits

In addition to deducting business expenses, opportunity costs are also deducted when computing "economic profits". Opportunity costs relate to your money (net worth), your labor and your management ability. If you were not farming, you would have your money invested elsewhere and be employed in a different career. Opportunity cost is the investment returns given up by not having your money invested elsewhere and wages given up by not working elsewhere. These are deduced, along with ordinary business expenses, in calculating economic profit.

Economic profits provide you with a long-term perspective of your business. If you can consistently generate a higher level of personal income by using your money and labor elsewhere, you may want to examine whether you want to continue farming.

Human Capital Efficiency (HCE)

Human Capital Efficiency measures the value added by the Human Resources of an organization. Value Added Intellectual Coefficient (VAIC) is a method used to measure the value creation Efficiency of a company by using its accounting based figures. This monetary measuring system could be useful in providing objective information to stakeholders about company's real value and performance. In addition, it allows comparison and future predictability in respect of the companies' Intellectual Capital performance (Chu, 2011). Human Capital Efficiency (HCE) is computed as the ratio of Value Added (specifically by the human assets) to Human Costs (which indicates personnel expenses salaries and benefits for company) (Kwarbai & Akinpelu, 2016).

Kamal, Mat, Rahim, Husin and Ismail (2012) defined Human Capital "as employee's competence in creating both tangible and intangible assets by contributing in the continuous generation of knowledge and ideas". It involves the knowledge, skills, experiences and abilities of people. Some of this knowledge is unique to the individual, some may be generic. Examples are innovation capacity, creativity, know-how and previous experience, teamwork capacity, employee flexibility, tolerance for ambiguity, motivation, satisfaction, learning capacity, loyalty, formal training and education. Ahangar (2011) human capital is recognized as the largest and the most important intangible asset in an organization which ultimately provides the goods and/or services that customers require or the solutions to their problems which includes the collective knowledge, competency, experience, skills and talents of people within an organization.

Human Capital and Corporate Profitability

It obviously includes intangibilities such as the company values, culture and philosophy. Seviby (2008) argues that people should be seen as the only true agents in business; all tangible physical products, assets as well as the intangible relations, are results of human action and depend ultimately on people for their continued existence.

According to Ahangar (2011), human capital is recognized as the largest and the most important intangible asset in an organization which ultimately provides the goods and/or services that customers require or the solutions to their problems. It includes the collective knowledge, competency, experience, skills and talents of people within an organization. It also includes an organization's creative capacity and its ability to be innovative. Although investment in human capital is growing, there is still no standard measure of its effectiveness in companies' statement of financial position. Structural capital is the supportive infrastructure for human capital. It is the capital which remains in the factory or office when the employees leave at the end of the day. It includes organizational ability, processes, data and patents. Unlike human capital, it is company's' property and can be traded, reproduced and shared by, and within the organization (Ahangar, 2011). Relational capital is a company's relationship with its customers and with its network of suppliers, strategic partners and shareholders.

Human capital is one of the important variables in the study of intellectual capital. It is the dimension of intellectual capital which deals with the human knowledge and its experience, which is based on other elements and which will influence a firm's value by affecting the other elements. Employee knowledge and capabilities are the important sources of innovation (Van Buren, 2008). It can be argued that human capital closely influences innovation capital. Employees are needed to carry out the internal process of a firm. Employees are also required to perform all customer services. By providing quality of service while implementing internal processes, the capability of employees would affect process efficiency and customer satisfaction.

Human capital is interpreted as employee values creating potential depicted in the knowledge competencies, skills, experiences, abilities and talent of firms employees and managers. Human capital captures knowledge, professional skill, experience and innovativeness of employees within an organization, Boujelbene and Affes(2013; Banimadh, 2012; Uadiale and Uwuigbe, 2011; Odogwu and Chidi, 2010). According to Klvisaechana (2008) the concept and perspective of human capital stems from the fact that there is no substitute for knowledge and learning, creativity and innovation, competences and capabilities and that they need to be relentless pursued and focused on the firms environmental context and competitive logic.

Customer/Relational Capital

It is knowledge embedded in relationship with customers, suppliers, industry associations or any other stakeholder that influence the organization's life, (Oba, Lopes, Boiago, Mary, Silva and Montassier 2013; Banimadh,2012; Salman, Abadi, Jalilvand, Sharif and Khanzadeh, 2012). Customer capital encompasses the external intangibles assts of an organization because eternal forces play a part in determining the market position and strength of an organization which customers are the principal determinants of this position. This is the ability of a company to protect its relationship with customers and other stakeholders. Relational capital, consists of potentials such as customers relation, supplier relationship, trademarks and trade names (which have value only by virtue of customer relationships) licence, and franchise. The notion that customer capital is separate from human and structural capital indicates its central importance to an Organization's worth.

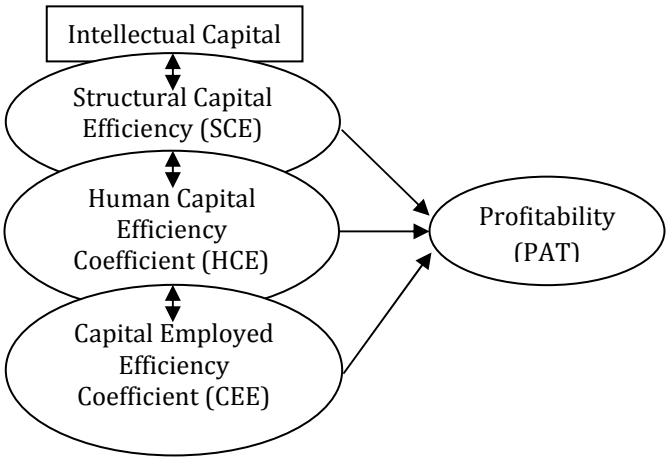
Intellectual Capital (IC) and Market Value

AsThe gradual introduction of the International Accounting Standards (IAS) in nearly every developed and developing country (except from the USA which is expected to implement the IAS in the next five years) forced companies to calculate assets at their real market value, while giving full definition and credit to all intangibles (International Financial Reporting Standards, 2008). Despite that, the inability of most companies to comply with the IAS and the significant cost of such an implementation, still deteriorate the recognition of the intangible assets of every organization (Judge Piccolo, Podsakoff, Shaw and Bruce 2010).

Capital Employed and bank performance

Capital employed on the other hand can be defined as total capital harnessed in a firm's fixed and current assets. Viewed from the funding side, it equals to stockholders' funds or equity capital plus long-term liabilities or loan capital. However, if it is viewed from the asset side, it equals to fixed assets plus working capital. Thus, capital employed represents the value of the assets that contribute to a company's ability to generate revenue and it is also known as operating assets. This capital is normally financed by using two funding methods which are shareholders 'equity and net debts. It is the assets within a manager's direct span of control and typically includes accounts receivable, inventory and plant and equipment (Nik Maheran, 2009). The banking sector is one of the sectors that utilize intensive intellectual capital. With regards to bank performance and intellectual capital, there are some researches that study the role of intellectual capital on banks' performance (Saengchan, 2008; Cabrita and Bontis, 2008). By using intellectual capital to measure performance, it has proved to give benefits towards the banks involved.

Researcher's Conceptual Model



Empirical Review

Wiagustini, Artini and Ramantha (2019) analyzed the influence of Intellectual capital including: Human Capital, Structural Capital and Relational Capital on Capital Structure and Financial performance; and the influence of Capital Structure on Financial performance. The research population is the Handicraft Industry in Gianyar which has been recorded as being active in transactions in the last five years and the products produced are at least 50% exported (total 464 units). The analysis model used was Partial Least Square (PLS). This study found that Intellectual capital which includes Human Capital, Structural Capital, and Relational Capital has a positive effect on Capital Structure and Financial performance; and Capital Structure has a positive effect on financial performance.

Ofurum and Aliyu (2018) examined the relationship between intellectual capital and financial performance of quoted banks in Nigeria. The study employed OLS regression tool to analyze the data with the aid of SPSS version 23 and E-view version 9. The findings revealed mixed results as some elements of Intellectual Capital were not significantly related to revenue growth and return on investment. Inyada (2018) examined salient issues on the impact of intellectual capital on the financial performance of corporate establishments in Nigeria. Secondary sources of data collection were employed with the help of the Nigerian Stock Exchange Fact Book. Regression analysis was employed for analysis, it was discovered that intellectual capital positively and significantly impacted on the financial performance of establishments. Also, physical and structural capitals have positive relationship with the financial performance of the organizations studied. Oyedokun and Saidu (2018) evaluated the impact of intellectual capital on the financial performance of the listed Nigeria oil marketing companies. Multiple regression analysis was used to ascertain the impact of intellectual capital on financial performance. From the result, it was discovered that market to book value has a negative significant impact on return on asset. Monetary model of Q Tobin's has an insignificant impact on return on asset while Value added intellectual coefficient also has an insignificant impact on return on asset. The study, therefore, recommended that the listed Nigerian oil marketing companies should strive to boost the value of their intellectual assets for its ultimate effect on ROA through maximization of their market value, maximization of Intellectual Capital return and more investment in Intellectual Capital components, particularly human, structural and relational capital.

Virender (2017) assessed the intellectual capital (IC) performance of listed public and private banks in India and to find the effects of IC on the financial performance of the banks during the period 2013 to 2015. The panel data taken has been analyzed using panel regression method. The intellectual capital contains physical capital, human capital and structural capital as its components. These components of banks have been analyzed. The results show that intellectual capital performance of Indian banks is much better than the intellectual performance in other countries but it has come down from 2013 to 2015. The component of VAIC which affected most significantly the financial performance of the banks in the Physical capital, but the components of VAIC show a different relationship with the financial performance of banks. Ali (2017) examined the effect of human capital development on the financial performance of agricultural enterprises. Intentional sample of 119 broiler farms with almost equal capacity (20,000 birds for each) were selected to resemble the investigated broiler farms. A cross sectional survey using a 5-point Likert scale questionnaire was conducted on broiler farms included in the sample. The data covered human capital development related characteristics of farms operators (e.g. Level of training, education, level of exposure to agricultural extension activities, experience, education area and level of entrepreneurial skills). The financial performance indicators of the investigated broiler farms (e.g. return on assets, current ratio, debt to asset ratio and profit margin) were also covered. Multiple Regression (MR) and Pearson Product Moment Coefficient Analysis were conducted in this study to analyze the data. The results of the study revealed that among many human capital components, training, education, exposure to agricultural extension activities, experience, education area and entrepreneurial skills of farm operators have significant positive impact on the financial performance of the investigated broiler farms. Onyekwelu, Okoh and Iyidiobi (2017) appraised the effect of intellectual capital on financial performance of firms in Nigeria using the banking industry. The research used the Value Added Intellectual Coefficient (VAIC) to ascertain the extent that intellectual capital indices affect financial performance of three Nigeria. Data were collected from the published annual financial statements of the three banks and analyzed using regression tool. The study indicates that IC has a positive and significant effect on banks' financial performances of the banks but some are not significant. The results further showed that the banks are statistically different in both the intellectual capital and its financial performance indicators. It also shows that the banks with high IC also show high financial performance. Ogbodo, Amahalu and Abiahu (2017) determine the effect of intellectual capital on the financial performance of quoted commercial banks in Nigeria. This study adopted panel data analysis of all the banks quoted on the Nigerian Stock Exchange as at 31st December 2015 for a period of six years (2010 – 2015). This allows for comparison of the performance of intellectual capital indices among the firms considered in this study. The population is made up of the 15 banks listed on the floor of the Nigerian Stock Exchange as at 31st December, 2015. Data were gotten from secondary sources obtained from fact books, annual reports and accounts of the selected quoted commercial banks in Nigeria as at 31st December, 2015. The relevant data obtained were subjected to statistical analysis using Pearson coefficient of correlation, ordinary least square regression, heteroskedasticity test and Hausman test. The

analysis of data was done using the Value Added Intellectual Coefficient (VAIC) made to measure the efficiency of value added of tangible and intangible assets used by a firm in its operation. The results of this study revealed that there is a positive and statistically significant relationship between Intellectual Capital and financial performance of deposit money banks in Nigeria at 5% level of significance. Shafi'u, Noraza and Saleh (2017) examined the impact of intellectual capital (IC) on financial performance of listed Nigerian food products companies for five year period 2010 to 2014 by adopting Pulic model of IC known as value added intellectual coefficient (VAIC). Regression models are used to test the hypotheses of the study where the results show that there was positive significant influence of IC on financial performance.

Thakur (2017) find out the intellectual capital (IC) performance of listed public and private banks in India the effects of IC on the financial performance of the banks during the period 2013 to 2015. The panel data taken has been analyzed using panel regression method. These components of banks have been analyzed. The results show that intellectual capital performance of Indian banks is much better than the intellectual performance in other countries but it has come down from 2013 to 2015. Shafi'u, Noraza and Saleh (2017) examined the impact of intellectual capital (IC) on financial performance of listed Nigerian food products companies for five year period 2010 to 2014 by adopting Pulic model of IC known as value added intellectual coefficient (VAIC). Regression models are used to test the hypotheses of the study where the results show that there was positive significant influence of IC on financial performance. Specifically, the results showed that structural capital (SC) and capital employed (CE) influence the financial performance of Nigerian food products companies.

Kwarbai, and Akinpelu (2016) provided evidence of the impact of Human Capital Efficiency on Corporate Performance of industrial goods companies listed in the Nigerian Stock Exchange Market. For a period of 6 years (2009-2014) the effect of Human Capital Efficiency on Performance was examined by applying the Human Capital component of the Value Added Intellectual Coefficient (VAIC) methodology. Multiple Linear regression models were used for analyzing the relationship between the variables of interest; Employees' growth (EG), Earnings per Share (EPS), Return on Assets (ROA), Human Capital Efficiency (HCE), lagged Human Capital Efficiency and Size of the firms. The finding survived a number of robustness check and the result indicates that there is positive significant relationship between Human Capital Efficiency on ROA and EPS, and an insignificant negative relationship between Human Capital Efficiency on Size, lagged Human Capital Efficiency and Number of Employee Growth. This study contributes to the existing Human Capital theories by revealing the HCE of Industrial goods companies and its impact on Corporate Performance.

Parham and Heling (2015) investigated the Efficiency of Human Capital and its impact on the Financial Performance of Dutch production companies. Using data from 33 Dutch production companies for a period of 6 years (2007-2012) and applying the Human Capital component of the VAIC methodology the monetary value created by the companies' knowledge workers is measured. The study results revealed that there is positive relationship between HCE and all three corporate performance measures, amongst which it should be referred to the strongly statistically significant relationship between HCE and Employee Productivity (EP).

Caroline, et al (2015) aimed in making a model review for measurement of intellectual capital for decision making. The construction of the present article was made through the bibliographic survey covering the Intellectual Capital theme addressing its objectives, peculiarities and definitions. It has been presented a classification of the methods from Sveiby's (2011) perspective, as well as 30 models for evaluation of the Intellectual Capital. It can be concluded that the models differ by its application context, considered assets and set of indicators of measurement, for better decision making.

Iranmahd, Moeinaddin, Shahmoradi and Heyrani (2014) studied the Effect of Intellectual Capital on Cost of Finance and Firm Value" data was gathered from 84 manufacturing companies listed on Tehran Stock exchange for an eight-year period. And the result showed that the value added of capital applied, value added of intellectual capital, and the value added of intellectual capital coefficient negatively influence weighted average cost of capital, yet they had no effect on enterprise value. Mbugua and Rotich (2014) examined the effects of intellectual capital on profitability of listed Kenyan commercial banks. The study focused on four variables; human capital, structural capital, relational capital and innovation capital. Descriptive research design was used to test how independent variables influenced listed banks profitability. The study used secondary data sources from published audited accounts for last 5 years from 2009-2013 in gathering data for analysis. Descriptive statistical tool MS-Excel and SPSS was used to analyze data. The study found that structural capital and innovation capital affects listed commercial banks of Kenya profitability.

Abdel-Aziz, Abdul-Naser and Shamaric (2013) examined the impact of intellectual capital on Jordanian Telecommunication Companies' (JTC) Business Performance (BP). The study surveyed the managers at JTC companies. Practical data were used in the empirical analysis collected from 84 managers out of about 500 managers, by means of a questionnaire. Statistical techniques such as descriptive statistics, t-test, ANOVA test, correlation and multiple regressions were employed. To confirm the suitability of data collection instrument, a Kolmogorov-Smirnov (K-S) test, Cronbach's Alpha and factor analysis were used. The results showed a positive significant effect of IC on JTCs' BP. The results also indicated that RC is positively and significantly affect JTCs' BP, while SC and RC do not significantly affect JTCs' BP. The Empirical results also indicated that there are strong interrelationships and interactions among the three components of IC. Moradi, Saeedi, Hajizadeh and Mohammadi (2013) determined the influence of intellectual capital on the improvement of listed companies‟ financial performance on Tehran stock exchange from 2007 to 2010. The current research indicates that there is positive significant association between each component of intellectual capital which is consisting of physical, human and structural capital and various indexes of financial performance. Ekwe (2013) examined 'the relationship between intellectual capitals and growth in revenue of deposit money banks in Nigeria' the Value Added Intellectual Coefficient (VAIC) model was used to investigate if there is a

positive and significant relationship between the Intellectual Capital indices (such as Human Capital Efficiency, Structural Capital Efficiency and the Capital Employed Efficiency) and growth in revenue of selected banks in Nigeria. The results showed that there was positive and significant relationship between components of VAIC and the growth in revenue of the banks in Nigeria. Djamil, Razafindrambinina and Tandeans (2013) examined the impact of intellectual capital on firm's stock return. The increasing importance of intellectual capital that generates more value is beneficial both for managers and investors at large. The banking sector in Indonesia is chosen as the data sample for this research. The findings show that intellectual capital does not affect the current stock return, but it however contributes to stock return growth. The results may indicate that changes of stock returns are mostly determined by external factors such as inflation, exchange rate and socio-economic conditions. Ngari, Gichira, Aduda and Waititu (2013) examined the relationship between Intellectual Capital Accounting and Business Performance of Pharmaceutical Companies in Kenya. To do this study, the researchers formulated three hypotheses. Data were collected through a 5-Scale Likert structured questionnaire administered to 31 pharmaceutical companies. The Multi-regression analysis tool, Analysis of Variance (ANOVA) and Pearson Bi-variate correlation coefficient were used to test the hypotheses. The result shows that intellectual capital accounting has positive relationship with business performance; however, human capital was the most prominent of intellectual accounting.

Ogbo, Ezeobi and Ituma (2013) examined the impact of intellectual capital on organizational performance: evidence from Nigeria banking sector. The survey method was adopted. From a population of 7,000 workers in the commercial banks in South Eastern States of Nigeria, a sample size of 378 workers was obtained using Taro Yamane Formula. The intellectual capital questionnaire developed by Bontis (1997) was re-administered to bankers in the South Eastern States of Nigeria. The questionnaire contained statements to which respondents indicated the extent of their agreement on a seven-point Likert scale. The researchers conducted a pre-test to check the validity of the research instruments. Concerns raised were resolved by clarification of the statements contained in the questionnaire. The total number of copies of questionnaire distributed was three hundred and seventy-eight (378). The statistical tool used in testing the hypotheses is the Chi-Square statistical test which is helpful in cause and effect situation or to show the relationship between events. Findings indicated a notable similar pattern of intellectual capital –organizational performance link as found in Western countries of North America and Europe. Findings specifically show that human capital and structural capital have a positive and significant effect on organizational outcomes in the Nigerian banking sector.

Chidiebere (2012) examined the relationship between intellectual capital and financial performance in the Nigeria banking sector. It was systematically conducted using longitudinal time series data generated from the Nigeria Stock Exchange and from annual reports and accounts of the selected banks in Nigeria spanning from year 2000 to 2011. The multiple regression analysis method was adopted for the test of all the hypotheses. The SPSS statistical software (version 17.0) was used for the data analysis. There was a positive significant relationship between components of VAIC and the Return on Assets of the banks in Nigeria (VIAC coefficient). The results also showed that there was no positive significant relationship between components of VAIC and the growth in revenue of the banks in Nigeria (VIAC coefficient). There was a positive relationship between the components of VAIC and market to book value ratio of the banks in Nigeria (VIAC coefficient). Wagiciengo and Belal (2012) investigate about Intellectual capital disclosures by South African companies. The results show that intellectual capital disclosures in South Africa have increased over the 5 years study period with certain firms reporting considerably more than others. This finding stands in sharp contrast to the previous studies in this area where external capital was found to be most popular category.

Abeysekera (2011) examine the effect of current-period intellectual capital disclosure on earnings and current annual stock return during a civil-war period. This study finds that firms do not include the current period intellectual capital disclosure in the current stock return and the increase in the current-period intellectual capital disclosure activity have no influence on earnings included in the current stock return. Future accounting-based earnings, if stated in the current period, by contrast are included in the current stock return. Vafaei, Taylor and Ahmed (2011) examined the value relevance of intellectual capital disclosure". The study adopted a content analysis based on annual reports sampled from listed companies in Britain, Australia, Hong Kong and Singapore were incorporated to a model to examine the direct and moderating roles ICD in a firms valuation. The study reveals that ICD is positively associated with the market price (has value relevance) in companies in two or four countries and in non-traditional industries. Ramezan (2011) seeks to investigate the relationship between organizational organic structure and intellectual capital improvement. Researches show that the organic structure and intellectual capital have a strong relationship but this relationship has not been examined systematically. The results support the view that organic structure has a positive impact on intellectual capital. Pirjo, Sten and Samuli (2011) analyzed the validity of the VAIC method as an indicator of intellectual capital. The paper tests the hypothesis according to which VAIC correlates with a company's stock market value. This hypothesis is tested against 2006–2008 financial statement data for 125 listed Finnish companies. Kehelwalatenna and Gunaratne (2010) investigated empirically, the relation between IC, and firm performance and the response of investors. In this respect, the study has been conducted using data drawn for 2002 to 2006 from listed financial services and manufacturing sector firms in Sri Lanka. The researchers use the Pearson's correlation analysis and construct regression models to investigate the said relationships. Results of the main analysis show that IC is positively associated with firm performance, and investor response. Kamukama, Ahiauzu and Ntayi (2010) determined the individual contribution of intellectual capital elements to performance. Its purpose was to explore the extent to which intellectual capital elements can explain financial performance in Uganda's microfinance industry. The findings can help management to intensify initiatives to encourage greater understanding and acceptance of the concept of intellectual capital that boosts performance in the industry.

Abdullah and Coskun (2007) examined intellectual capital performance on quoted banks on Istanbul Stock Exchange (ISE) market to measure their intellectual capital performance, and also the effect of intellectual capital efficiency on financial performance. Data were taken for the period 1995-2004, and VAIC TM was used for measurement of intellectual capital and data envelopment analysis was used for testing the impact of intellectual capital on profitability by descriptive statistical. They found that the effect of intellectual capital on profitability on the banking sector on the ISE was approximately 61.3 percent. Taliyang (2011) conducted a study in Malaysia with data from a sample of 150 companies listed in Bursa Malaysia that consist of five industries: information technology, consumer product, industrial product, trading/services and finance and reported that about 72.6 percent of the companies selected disclosed intellectual capital in their annual reports. Finding showed that their variables were determinants of intellectual age, size, director ownership and growth.

The related literatures to this work were reviewed within the area and the scope of the study. This study reviews the conceptual framework which deals with the definitions of the dependent and the independent variables. The theoretical literature which explains in details the sub objective in relation to the dependent variable and independent variables, while the theoretical framework is anchored on the relevant theories related to the main objective (Human Capital Theory by Bontis 2001) and (Resource Based View by Barney 1991). The work done by other authors, scholars in relation to the topic and the methods and results were empirically reviewed.

From the foregoing literature expose, it is obvious that a number of studies have been done on the effect of intellectual capital on financial performance of firms. Most of these reports however emanated and are domiciled outside Nigeria or specifically the Western World and few from Asia where information on staff costs are properly documented. There are also limited ones on the effect of intellectual Capital on the Profitability of Nigerian Deposit Money Banks.

The prior studies conducted both in Nigeria and other countries, some of these studies conducted in commercial banks and other corporate firms revealed mixed results, which means that some show a positive significant relationship Abdel-Aziz et al, (2013); Moradi et al, (2013) Nasif et al, (2016); Thakur (2017); Virender (2017) while others indicate a negative significant relationship between intellectual capital and financial performance Ofurum and Aliyu (2018) Onyekwelu et al, (2017) Iranmahd et al, (2014). This study thereby set out to determine the effect of intellectual capital on the profitability of deposit money banks in Nigeria.

METHODOLOGY

Research Design

Ex post facto research design was adopted for this study. Ex post facto research uses data already collected, but not necessarily amassed for research purposes. Some major advantages of conducting an ex post facto study are that the data are already collected, obtaining permission to conduct the study is less involved than enrolling participants, and less time is involved in conducting the study than by creating new data.

Population and Sample size of the Study

The population for the study consists of the fifteen (15) Nigerian deposit money banks quoted on the Nigerian Stock Exchange. The periods to be covered by the study were from 2010 to 2018.

Method of Data Analysis

For the purpose of empirical analysis, this study adopted the multiple linear regressions as the underlying statistical tools to test the hypotheses as adopted in previous similar researches (Pulic, 1998; Belkaoui, 2003 Ahangar 2011). The multiple regression analysis was employed in the test of the effect of each of the independent variables (i.e. the indices of value added intellectual coefficient) on the dependent variable (i.e. profit after tax) with the aid of E-view 9.0.

Model Specification

To analyze the respective relationships defined in prior sections multiple regressions analysis is performed based on the following general models as applied in previous studies (Ahangar, 2011; Maditinos *et al*., 2011). These models will be used to test the hypotheses as follows:

$PAT_{it} = \beta_0 + \beta_1 SCE_{it} + \beta_2 HCE + \beta_3 CEE + e$ ..... (i)

$PAT_{it} = \beta_0 + \beta_1 SCE_{it} + e$ ..... (ii)

$PAT_{it} = \beta_0 + \beta_2 HCE + e$ ..... (iii)

$PAT_{it} = \beta_0 + \beta_3 CEE + e$ ..... (iv)

Where:

PAT =Profit after tax- indicates the banks' profitability as measured by the bank's profit for the year.

SCE =Structural Capital Efficiency- shows structural capital performance as measured by the ratio of value added and structural capital.

HCE = Human Capital Efficiency- indicates human capital performance as measured by the ratio of the value added to intellectual capital.

CEE = Capital Employed Efficiency- indicates capital employed performance as measured by the ratio of the value added to capital employed.

VAIC = Value Added Intellectual Coefficient: (VAIC= HCE +SCE+ CEE).

Bo = Constant term (intercept)

Bi = Coefficients to be estimated

E = Error term.

Pulic (1998) states the higher the VAIC coefficient, the better the efficiency of VA by a firm's total resources. The first step in calculating CEE, HCE and SCE is to determine a firm's total VA.

This calculation is defined by the following algebraic equation:

VA = I + DP + D + T + M + R + WS ---------- (i)

Where**:** VA(value added) for the banks are computed as the sum of interest expenses (I); depreciation expenses (DP); dividends (D); corporate taxes (T); equity of minority shareholders in net income of subsidiaries (M); and profits retained for the year (R) wages and salaries.

Alternatively, VA can be calculated by deducting operating expenses (materials costs, maintenance costs, other external costs) from operating revenues.(Pulic 1998).

Pulic (1998) further states that CEE is the ratio of total VA divided by the total amount of capital Employed (CE) where capital employed is defined as the book value of a firm's net assets.

Equation (2) presents the CEE relationship algebraically:
CEE = VA/CE ---------- (ii)

Where:
CEE = capital employed efficiency coefficient of the banks,
VA = VA of the banks; and
CE = book value of the net assets of the banks.

Consistent with views of other leading Intellectual Capital researchers (for example, Edvinsson, 1997; Sveiby, 2001), Pulic (1998) argues total salary and wage costs are an indicator of a firm's human capital (HC).

HCE, therefore, is calculated as the ratio of total VA divided by the total salary and wages spent by the firm on its employees.

Equation (3) shows this relationship algebraically as follows:

HCE = VA/HC ---------- (iii)

Where:
HCE = human capital efficiency coefficient of the banks,
VA = VA of the banks. And
HC = total salary and wage costs of the banks.

In order to calculate SCE, it is first necessary to determine the value of a firm's structural capital (SC). Pulic (1998) proposes a firm's total VA less its human capital is an appropriate proxy of a firm's SC. That is:

SC = VA – HC ---------- (iv)

Where:
SC = Structural capital of the banks,
VA = VA of the banks and
HC = total salary and wage expenditure of the banks.

DATA PRESENTATION AND ANALYSIS

Data analysis

Table 1: Descriptive statistics of the sampled companies

	SCE	HCE	CEE	PAT
Mean	0.285667	0.679222	1.757111	41827012
Median	0.191000	0.123000	1.910000	39941126
Maximum	2.400000	2.081000	3.050000	73596295
Minimum	-1.160000	0.054000	0.310000	12931441
Std. Dev.	1.055689	0.896731	1.087389	21784937
Skewness	0.616513	0.743556	-0.126926	-0.021057
Kurtosis	2.978386	1.613075	1.393587	1.712304
Jarque-Bera	0.570307	1.550650	0.991876	0.622476
Probability	0.751899	0.460554	0.608999	0.732540
Sum	2.571000	6.113000	15.81400	3.76E+08
Sum Sq. Dev.	8.915832	6.433006	9.459315	3.80E+15
Observations	9	9	9	9

Source: E-Views 9.0 Output, 2019

Table.1 shows the mean (average) for each of the variables, their maximum values, minimum values, and standard deviation. The results provide insight in the nature of the selected Nigerian quoted deposit money banks that were used in this study. It was observed that on the average over the nine (9) years periods (2010-2018), the sampled quoted Nigerian banks, value added intellectual coefficient were characterized by improved profitability (PAT, SCE, HCE and CEE) =0.286, 0.679, 1.757 and0.418 respectively. The gap between the maximum and minimum value of the profitability and value added intellectual coefficient (the capital employed efficiency coefficient (CEE) the human capital efficiency coefficient (HCE) and the structural capital efficiency coefficient (SCE) shows that value added intellectual coefficient really determine the level of profitability of the bank.

Table 2: Test of Hypotheses

Dependent Variable: PAT				
Method: Least Squares				
Date: 12/22/19 Time: 11:02				
Sample: 2010 2018				
Included observations: 9				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	54009257	21545607	2.506741	0.0540
SCE	6020419.	5160610.	1.166610	0.2960
HCE	7071906.	9779968.	0.723101	0.5020
CEE	-10645584	8237971.	-1.292258	0.2528

R-squared	0.752714	Mean dependent var	41827012
Adjusted R-squared	0.604342	S.D. dependent var	21784937
S.E. of regression	13703011	Akaike info criterion	36.00523
Sum squared resid	9.39E+14	Schwarz criterion	36.09289
Log likelihood	-158.0235	Hannan-Quinn criter.	35.81607
F-statistic	5.073169	Durbin-Watson stat	2.327645
Prob(F-statistic)	0.056183		

Interpretation of Regression Result

Table 2 reveals an adjusted R^2 value of 0.753. The adjusted R^2, which represents the coefficient of multiple determinations imply that 60% of the total variation in the dependent variable (PAT) of quoted deposit money banks in Nigeria is jointly explained by the explanatory variables (SCE, HCE and CEE). The adjusted R^2 of 60% did not constitute a problem to the study because the F- statistics value of 5.073169 with an associated Prob.>F = 0.056183 indicates that the model is fit to explain the relationship expressed in the study model and further suggests that the explanatory variables are properly selected, combined and used. The value of adjusted R^2 of 60% also shows that 40% of the variation in the dependent variable is explained by other factors not captured in the study model. This suggests that apart from SCE, HCE and CEE, there are other factors that mitigate PAT of quoted deposit money banks in Nigeria.

In addition, Durbin-Watson test is implied to check the auto correlation among the study variables. The Durbin-Watson value is 2.327645 provide an evidence of auto-correlation among the variables.

Hypothesis One

Ho : Structural Capital Efficiency (SCE) does not have effect on the profitability of Nigerian deposit money banks.

H_I : Structural Capital Efficiency (SCE) has effect on the profitability of Nigerian deposit money banks.

Structural Capital Efficiency (SCE), from the result, the t-value of is 2.506741 and p-value of 0.0540, was found to have a positive effect on our sampled quoted banks and this effect is statistically significant as its p-value is equal to 0.05 value. This result, therefore suggests that we should accept our alternative hypothesis one which stated that Structural Capital Efficiency (SCE) has effect on the profitability of Nigerian deposit money banks. However, this result is statistically significant and therefore should be used for any policy consideration.

Hypothesis Two

Ho : Human Capital Efficiency (HCE) does not affect the profitability of Nigerian deposit money banks.

H_I : Human Capital Efficiency (HCE) affects the profitability of Nigerian deposit money banks.

Human Capital Efficiency (HCE), from the result, the t-value of is 1.166610 and p-value of 0.2960, was found to have a positive effect on our sampled quoted banks and this effect is not statistically significant as its p-value is greater than 0.05 value. This result, therefore suggests that we should accept our null hypothesis two which stated that Human Capital Efficiency (HCE) does not affect the profitability of Nigerian deposit money banks. However, this result is statistically significant and therefore should not be used for any policy consideration.

Hypothesis Three

Ho : Capital Employed Efficiency (CEE) does not affect the profitability of Nigerian deposit money banks.

Ho : Capital Employed Efficiency (CEE) affects the profitability of Nigerian deposit money banks.

Capital Employed Efficiency (CEE), from the result, the t-value of is 0.723101 and p-value of 0.5020, was found to have a positive effect on our sampled quoted banks and this effect is not statistically significant as its p-value is greater than 0.05 value. This result, therefore suggests that we should accept our null hypothesis two which stated that Capital Employed Efficiency (CEE) does not affect the profitability of Nigerian deposit money banks. However, this result is statistically significant and therefore should not be used for any policy consideration.

Discussion of Findings

The study revealed that Structural Capital Efficiency (SCE) has positive significant effect on the profitability of Nigerian deposit money banks. The study also revealed that Human Capital Efficiency Coefficient (HCE) has positive effect on the profitability of Nigerian deposit money banks, but is not statistically significant. In addition, Capital Employed Efficiency Coefficient (CEE) has positive effect on the profitability of Nigerian deposit money banks, but is not statistically significant.

These results are in line with Moradi, Saeedi, Hajizadeh and Mohammadi (2013) result that there is positive significant association between each component of intellectual capital and financial performance companies. Ogbo, Ezeobi and Ituma (2013); Emadzadeh, Nadia, Asiya, Mahboobe, Fatemeh and Mojgan (2013) show that human capital and structural capital have a positive and significant effect on organizational outcomes in the Nigerian banking sector. Also, Kiong and Hooi (2009) study revealed that intellectual capital in the form of VAIC index and all its three components were positively and significantly associated with return on assets and profitability of companies in the financial sector. However, the results of this study negate the result of Chidiebere (2012) which showed that there was no positive significant relationship between components of VAIC and the growth in revenue of the banks in Nigeria (VIAC coefficient).

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study investigated whether intellectual capital is a primary root of a company's value and whether intellectual capital is a primary business resource that can explain a company's profitability. With the development of knowledge economy, the key role of intellectual capital impacts on corporate performance is becoming more and more prominent. Intellectual capital is a new perspective to measure business performance. By analyzing the internal and external environmental factors, we found that there are

two aspects of organizational resources: the physical capital, and the intellectual capital. The intellectual capital is made up of human capital and structural capital. We analyzed how these three aspects of capital impact on corporate performance and organizational market value. We also discussed the effect on firm profitability of investment on intellectual capital. Finally, we discovered that in the Nigeria banking sector, there is a significant and positive relationship between intellectual capital and profitability of the banks.

This research study points to some compelling links between investments in intellectual capital and a company's profitability. Empirical evidence was found of a positive relationship between the critical intellectual capital indices (human capital, structural capital and capital employed) and a bank's profitability. These results are particularly promising, because they reveal the possibility that investment in intellectual capital at a given point in time most likely influences a bank's prosperity, in terms of earnings and profits, employee productivity and market value; which ultimately determines shareholder value at a later date. It has been stated that only by collecting data over a period of time can this possibility be truly tested and this was done for the period of seven years from year 2010 to 2018. The rise of intellectual capital is inevitable, given the historical and technological forces that are sweeping across the modern world. Intellectual capital will come to dominate the way in which institutions are valued, because it alone captures the dynamics of organizational sustainability and value creation. Intellectual capital alone recognizes that a modern company changes so rapidly that everything is dependent on its talents, the dedication of its people (human capital) and the quality of the tools that they use (capital employed) as evidenced in the results of the analysis which indicated that both Human capital and Capital employed showed a significant and positive relationship with financial performance indices. Viewed in isolation, these results do not demonstrate anything conclusive. Nevertheless, there is compelling evidence that investments in intellectual capital do matter. If this assertion is true, it will result in profound changes in the way banks work and are valued in the Nigerian economy.

This of course shows that a bank can use its intellectual capital with its physical capital to sharpen its competitive edge. Furthermore, these findings are of special importance to the shareholder of the banks in Nigeria and entire service industry; that adequate working environment be created for workers, with good welfare package, the organizations

Recommendations

The following recommendations would result in a movement towards a greater acknowledgment and incorporation of intellectual capital in the Nigerian banking sector.

1. Banks in Nigeria especially the Deposit Money Banks should adopt an intellectual capital strategy. This can be done by banks adding the position of Chief Intellectual Capital Management Officer (CICMO) on their organizational chart to help in structuring relevant strategies and policies on how to obtain and best utilize the required resources underlying IC.
2. Banks management should identify the expertise, capabilities, brands, intellectual properties, processes and other intellectual capital that can create value. Management should also determine the mixture of human capital, and structural capital assets in order to increase management's ability to leverage the company's intellectual assets.
3. Management should improve the efficiency and productivity of its workforce by constantly reviewing their performances and engaging them in regular training and development programs and scrapping training programs that are worthless or do not actually enhance productivity over time.

References

[1] Abdel-Aziz, A. S., Abdul-Naser I. N. & Shamaric, N. S. (2013). The impact of intellectual capital on Jordanian telecommunication companies' business performance. *American Academic & Scholarly Research Journal.* 5(3), 23-38

[2] Ali, A. (2017). The Impact of human capital development on the financial performance of agricultural enterprises: application on broiler industry *International Journal of Business and Social Science 8(3):* 179.

[3] Abeysekera, I. (2011). Civil war, stock return, and intellectual capital disclosure in Sri Lanka. *Advances Journal in Accounting,* 27, 331-337.

[4] Ahangar, R. G. (2011). The relationship between intellectual capitals and financial performance: an empirical investigation in an Iranian company. *African Journal of Business Management*. 5(1), 88-95, 4

[5] Amrizah, K., & Nawal, K. (2013). The relationship between human resource management and islamic microfinance providers ' Performance: The Medi atıng Role of Human Capital. *International Journal of Business and Social Science*, *4*(16), 52–57.

[6] Amaefule, E. F (2008). Human capital accounting: should employees be classified as assets. *Journal of Business and Public policy,* 2(1) 36-49.

[7] Anuonye, B. N. (2016). Effect of intellectual capital on return on assets of insurance firms in Nigeria*. Global Journal of Management and Business Research.* 16 (1)

[8] Ahangar, R. G. (2011). The relationship between intellectual capitals and financial performance: An empirical investigation in an Iranian company. *African Journal of Business Management 5*(1), pp. 88-95, 4 January, 2011. http://www.academicjournals.org/AJBM.

[9] Brigham, E. F. & Daves, P. R. (2010). *Intermediate financial management*. 10 editions. Cengage Learning

[10] Brigham, E. F. & Houston, J. F. (2011*). Fundamentals of financial management, concise* 7th Edition. South-Western College Pub; 7th edition.

[11] Berzklane, I. (2013). Macroeconomic factors as determinant of company performance: Evidence from the Baltic countries. Proceeding from the 5th *International Conference Economic Challenges in Enlarged Europe, Tallinn, Estonia*, 16-18.

[12] Boujelbene, A. M & Affes, H.(2013). The impact of intellectual capital disclosure on cost of equity capital: A case of French firms; *Journal of Economics, finance and Administrative science.* 18(34)45-53.

[13] Chidiebere, E. M.(2012). The relationship between intellectual capital and financial performance in the Nigeria banking sector. A *thesis submitted* in partial fulfilment of the requirements for the award of doctor of philosophy (Ph.D.) Degree in accountancy department of accountancy faculty of business administration University of Nigeria, Enugu Campus

[14] Chechet, I. L. & Olayiwola, A. B. (2014). Capital structure and profitability of Nigerian quoted firms: the agency cost theory perspective. *American International Journal of Social Science*. 3(1).

[15] Clarke, M., Seng, D., & Whiting, R. H. (2011). Intellectual capital and firm performance in Australia. Journal of Intellectual Capital, 12, 505– 530. http://dx.doi.org/10.1108/ 14691931111181706.

[16] Cabrita, M. D. R. & Bontis, N. (2008). Intellectual capital and business performance in the portugese banking Industry. *International Journal of Technology Management.* 43 (1-3) 212-237.

[17] Campisi, D. & Costa, R. (2008). Based method to enhance intellectual capital Management, *Journal of Knowledge and process management.* 15(3) 170-183.

[18] Chang, W.S.(2013). Are R and D and intellectual property rights related to firms financial performance?: the prospective on intellectual capital: *International Journal of Technology, policy and Management, 13,245-260.*

[19] Clarke, M., Seng. D. & Rosalind, H. W. (2010). Intellectual capital and firm performance in Australia. *Journal of Economic Literature Classification.2 (4)56-77.*

[20] Ding, Y. & Li, G. (2010). Study on the management of intellectual. Vol. 5(2). *International Journal of Business and Management.* Retrieved from www.ccsenet.org/ijbm.

[21] Emadzadeh, Nadia, Asiya, Mahboobe, Fatemeh and Mojgan (2013). Effect of intellectual capital on firm performance. *International Journal of Academic Research in Accounting, Finance and Management Sciences*. 3, (2). 98–103

[22] Gan, K., & Saleh,Z (2008). Intellectual Capital and corporate performance of technology intensive companies: Malaysian Evidence. *Asian Journal of Business and Accounting,* 1(13) 119-130.

[23] Guthrie, J., Ricerri, F., Dumay, J. (2012.). Reflection and Projections: A decade of Intellectual capital accounting research, *British Accounting Review,* 44(2)68-92.

[24] Gogan, L.M., Cristina, B., Rennung, F., &Sirbu, R. (2015). Intellectual capital management – a possible approach. joint international conference. pp. 1321-1327.

[25] Gogan, L.M. & Duran, D. C. (2014). *Intellectual capital management- A new model. Practical Application of Science, 2*(6), 57-64.

[26] Hassan, A. (2014). The challenge in poverty alleviation: role of Islamic microfinance and social capital. *Journal for Humanomics*, *30*(1), 76–90.

[27] Institute of Certified Management Accountants (ICMA), (2001). Intensive workshop in advanced strategic management accounting, ICMA, Australia.

[28] Ismail, M.Y. (2009). Investigation of loss and bandwidth performance of reflect array antennas using lumped components. Proceedings of the 5th *International Conference Telematics, Systems, Services and Applications*. Institute Technology Bandung, Indonesia.

[29] Inyada, S. J. (2018). Intellectual capital and bank performance in Nigeria: an empirical analysis using pragmatic models. *American International Journal of Contemporary Research 8(2), June 2018 doi:10.30845/aijcr.v8n2p7*

[30] Joshi, M., Cahill, D., & Sidhu, J. (2010). Intellectual capital performance in the banking sector: An assessment of Australian owned banks. *Journal of Human Resource Costing & Accounting, 14* (2), 151-170.

[31] Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw J. C., & Bruce, L. R. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior*. 77 (2)157-169

[32] Kim, K. S., Knotts, T. L. & Jones, S. C. (2008) 'Characterizing viability of small manufacturing enterprises (SME) in the market' *Expert Systems with Applications Journal.* 34(1), 128-134

[33] Kehelwalatenna, S. & Gunaratne, P. S. M.(2010) the impact of intellectual capital on the firm performance and investor response: an empirical study of selected sectors in Colombo stock exchange. University of Kelaniya, Sri Lanka.

[34] Kamau, A. & Were, M. (2013). What drives banking sector performance in Kenya. *Global Business and Economics Research Journal*, 2(4)

[35] Kamukama, N. Ahiauzu, A. & Ntayi, J. M.(2010) Intellectual capital and financial performance in uganda's microfinance institutions. *African Journal of Accounting, Economics, Finance and Banking Research.6.(6),* 17-32

[36] Kamukama, N., Ahiauzu, A. & Ntayi, J. M. (2011). Competitive advantage: mediator of intellectual capital and performance', *Journal of Intellectual Capital,* 12(1), 152-164.

[37] Kianto, A., Andreeva, T. & Pavlov, Y. (2013). The impact of intellectual capital management on company competitiveness and financial performance', *Knowledge Management Research & Practice,* 11(2), 112-122.

[38] Kwarbai, J. D. & Akinpelu M. A. (2016). Human capital efficiency and corporate performance: The Nigerian Perspective. *International Journal Of Business & Management* (ISSN 2321–8916).

[39] Kujansivu, P. (2008). *Intellectual Capital, Knowledge Management &Organisational Learning.* In K. O'Sullivan (Ed.), Understanding why organizations do not apply IC management models (pp 249–256). UK: Academic Publishing Limited.

[40] Kamal, M. H. H, Mat, R. C, Rahim, N. A., Husin, N, & Ismail, I. (2012) Intellectual capital and firm performance of commercial banks in Malaysia. *Asian Economic and Financial Review* 2(4):577-590.

[41] Leitner, K.-H. (2011). The effect of intellectual capital on product innovativeness in SMEs', *International Journal of Technology Management,* 53(1), 1-18.

[42] Lu, W. M., Wang, W. K., Tung, W. T., & Lin, F. (2010). Capability and efficiency of intellectual capital: The case of Fabless companies in Taiwan. *Expert Systems with Applications Journal. 37*(1), 546–555.

[43] Latif, M., Malik, M. S., & Aslam, S. (2012). Intellectual capital efficiency and corporate performance in developing countries: A Comparison between Islamic and Conventional Banks of Pakistan.

[44] Liu, A. (2010). Measuring spiritual capital as a latent variable defining spiritual capital as religion capital. *School of accounting Research Paper Series,* 23(12).

[45] Marques, J. F. (2008). Spiritual performance from an organizational perspective: the Starbucks way. *Corporate Governance*, *8*(3), 248–257.

[46] Mbugua, S. M. & Rotich, G. (2014) Effects of intellectual capital on profitability of listed Kenyan commercial banks. *International Journal of Business & Law Research 2(4):16-21,*

[47] Moradi. m., Saeedi, M., Hajizadeh, H. & Mohammadi, M. (2013) The influence of intellectual capital on the improvement of companies' financial performance. *International Journal of Economics, Business and Finance*. 1(5) 120- 139

[48] Nik Maheran, N. M. (2009). Intellectual Ccpital efficiency and firm's performance: study on malaysian financial sector. *International Journal of Economics and Finance*. 1 (2) 115-126.

[49] Ngah, R. (2011). The relationship of intellectual capital, knowledge sharing, innovation and organizational performance of Malaysian SME's.

[50] Oba A, Lopes P.C.F, Boiago M. M,, Mary A, Silva S, & Montassier H, (2012). Características produtivas e imunológicas de frangos de corte submetidos a dietas suplementadas com cromo, criados sob diferentes condições de ambiente. Revista Brasileira de Zootecnia. 41(5)1186-1192

[51] Oyedokun, G. E. & Saidu, E. (2018).Impact of intellectual capital on financial performance of listed nigerian oil marketing companies. *Information and Knowledge Management*. 8(9), ISSN 2224-5758 www.iiste.org

[52] Ogbo, A., Ezeobi, J. & Ituma, A. (2013). The impact of intellectual capital on organizational performance: evidence from Nigeria banking sector. *JORIND* 11(2), 249-255 performance of quoted banks in Nigeria. *International Journal of Advanced Academic Research | Financial Management*. 4(2), 2488-9849.

[53] Ogbodo, O.Cy, Amahalu, N. N. & Abiahu, M. C., (2017). Effect of intellectual capital on financial performance of quoted deposit money banks in Nigeria. *Journal of Global Accounting, 5(1)*

[54] Oko, J. O., Onodi, B. E. & Tapang, A.T (2018). Effect of intellectual capital management on revenue generation of listed commercial banks in Nigeria. *Journal of Accounting and Financial Management* 4(6). ISSN 2504-8856 www.iiardpub.org

[55] Onyekwelu, U. L., Okoh, J. I. & Iyidiobi, F.C, (2017). Effect of intellectual capital on financial performance of banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research* 5(2) pp.28-57,

[56] Ramezan, M. (2011). Intellectual capital and organizational organic structure in knowledge society: How are these concepts related? *International Journal of Information Management,* 31, 88-95.

[57] Ruta, C. D., (2009).HR portal alignment for the creation and development of Intellectual capital, *The International Journal of Human Resource Management*, 20(3), 562–577.

[58] Shafi'u, A. K., Noraza, N. D. & Saleh M. B. (2017). The impact of intellectual capital on the financial performance of listed Nigerian food products companies. *Journal of Accounting and Taxation.* 9(11),147-160, DOI: 10.5897/JAT2017.0246

[59] Salimi, G. A., Abadi, F. E., Jalilvand, M. R., Sharif, M. & Khanzadeh, S. A. (2011) A study of influential factors on employees' motivation for participating in the in-servicee training courses based on modified expectancy theory. *International Business and Management.* 2(1), 157-169.

[60] Samiloglu, A. T. (2006). The performance analysis of the Turkish banks through VAIC and MV/MB ratio", *Journal of Administrative Sciences*. 4 (1)207-26.

a. Saengchan, S. (2008). The Role of Intellectual Capital in Creating Value in the Banking Industry. Online] Available: http:// www.bus.tu.ac.th/uploadPR/ADV.pdf (January 22, 2009)

[61] Serrat, O. (2011). A Premier on intellectual capital knowledge solutions asian development bank. Retrieved from www.adb.org/knowledge Solutions.

[62] Ting,I. W. K. & Lean,H. H. (2009) Intellectual capital performance of financial institutions in Malaysia, *Journal of Intellectual Capital*, 10(4), pp.588-599,

[63] Virender, S. T. (2017). Intellectual capital: its effect on financial performance of Indian public and private sector banks. Research reviews: *Journal of Social Science*. 3(2).

[64] Wiagustini, N. P., Artini, L. G. S. & Ramantha, I. W. (2019). Intellectual capital as a basis in determining the capital structure and financial performance (case study of small handicraft industries in gianyar-bali regency Indonesia) international journal of economics, commerce and management united kingdom vii(1) *http://ijecm.co.uk/* issn 2348 0386

[65] Wagiciengo, M. & Belal, A.R. (2012). Intellectual capital disclosures by South African companies: A longitudinal investigation. *Advances in Accounting,* 28, 111-119.