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EFFECT OF HUMAN CAPITAL INVESTMENT ON FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS LISTED ON NIGERIAN STOCK EXCHANGE

Obiukwu, Ebele .J.[1] and Okoye, Emmanuel. I[2]*
Department of Accountancy, Nnamdi Azikiwe University, Awka, Anambra State[1,2]
obiukwu.judy@gmail.com[1], **eik.okoye@unizik.edu.ng**[2]

Abstract - *This study was carried out to examine the effect of human capital investment on the financial performance of deposit money banks listed on Nigeria Stock Exchange. Specifically, it investigated how human capital investment affects financial performance (as measured by return on capital employed and earnings per share). In pursuit of this objective, research question were raised and hypotheses formulated and tested using secondary data obtained from the Nigeria Stock Exchange. This study adopted ex-post facto research design. The population of this study comprises all fourteen (14) quoted deposit money banks in Nigerian Stock Exchange and purposive sampling method was used to pick a sample of nine (9) deposit money bank listed on NSE. The Correlation Matrix test was employed to establish the degree of association between two or more variables while ordinary Least Square method of regression was utilized in analyzing the hypotheses with aid of E-Views 9.0. The findings show that human capital investment has significant positive effect on return on capital employed (ROCE) and earnings per share at 5% significant level respectively. On the basis of the finding, it was therefore recommended that organizations should put in more financial resources or sources of investments in the human resources and personnel management in order to encourage the employees on the jobs thus enhancing specialization and positive influence on financial performance.*

Keywords**:** Human capital investment, performance, return on capital employed, earnings per share.

I. Introduction

The earliest formal use of the term "human capital" in economics is probably by Irving Fisher in 1897 (Acemoglu, Daron, Simon and James; 2002). It was later adopted by various writers but did not become serious part of the economists' lingua franca until the late 1950s. It became considerably more popular after Jacob Mincer's 1958 Journal of Political Economy article "Investment in Human Capital and Personal Income Distribution, Acemoglu et al (2002). Efforts to make human capital acceptable as costs in organization have not been totally recognized.

Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties" (Micah, Ofurum,, and Ihendinih; 2012). Therefore, anything that contributes to the improvement of human productivity, stimulate resourcefulness and enhance human dignity and overall quality of human life while refining attitudes, is an integral part of the human capital of any nation. These will include four cardinal aspects namely the education system, health and social services as well as good governance.

Though the idea of accounting for human resources started many years back, the concept still lacks general acceptability (Bowers, 2003).

In accounting, expenses on human resource are not capitalized but are expensed as they occur. They are identified as recruitment cost, training cost, staff welfare, pension, and so on. Firms invest heavily in human resource immediately expensed or arbitrarily amortized but this is not reflected in the statement of financial position, thus the book values of firms with significant amounts of human capital investments are unrelated to the market values which simply means that the financial statements are not presenting a true picture of the organizational performance which could be misleading to the users (Lev, 2001, Holland, 2003). Moreover the human resource assets could not be owned or sold by organizations and thus it would differ from other class of assets and human assets measurement often deals with more subjectivity than physical assets which makes accounting for them difficult. As important as the asset is considered to be to the organizations it is nevertheless, always neglected in the valuation of the assets of a firm. This paper opines that it is necessary to establish and record the value of this intellectual part of human workforce within the organization in order to fully appreciate the true value of a firm's productivity (Enyi, 2014).

Many authors have argued that human resource should be treated as a capital expenditure, but just like every tangible asset, human beings cannot be kept at a place without the tendency to move from organization to organization. Also, since the life span cannot be determined, the depreciation rate is difficult to ascertain.

According to Akindele (2007), the issues of who are responsible for the effective use of all other resources in the business have been on the front burner. Human resources being the traditional name for human skills used in the organization over the years have remained less valued and recognized in the literature of the accounting professions. To bring value to human resources is to re-describe it as human capital. Human capital gives rise to human capital assets whose value is significant to the organizations. Baker (2003) stated that, human capital asset (HCA) brings out the investment in human capital. How do will evaluate the value attributable to human capital? There has always been the problem of accounting for human capital value, which is conventionally being applied in reducing the profit of Micro-Finance Bank (MFB) and by implication; result is huge loss to organizations.

It is therefore disheartening to note that the financial statements prepared by most deposit money banks in Nigeria and other parts of the world are yet to fully recognize this all–important -asset (Jeroh, 2008) despite the growing interests in accounting for its value (Okafor and Jeroh, 2010). Hence, this study is an attempt to investigate the extent to which human capital investment affects financial performance of deposit money banks listed on Nigeria Stock Exchange.

The study intends to empirically examine the effect of human capital investment on the financial performance of listed firms on Nigeria stock exchange.

The hypotheses are stated in the null form as follow;

H_o^1: Human capital investment has no significant effect on return on capital employed of selected deposit money banks listed on Nigeria Stock exchange.

H_o^2: Human capital accounting has no significant effect on earnings per share of selected deposit money banks listed on Nigeria Stock exchange.

II. Review of Related Literature

Human capital as a concept can be traced to the classical school of thought in 1776, then as a scientific theory by Fitzsimons (1999). Schultz (1961) recognized human capital as one of the important factors that determine economic growth. He referred to the term human capital as the stock of productive knowledge and skills possessed by workers. Human capital can be categorized by 'something akin to property' that is, knowledge and skills embedded in an individual (Beach, 2009). Rastogi (2002) conceptualizes the human capital as 'knowledge, competency, attitude and behavior embedded in an individual'.

According to Zahid A.G (2015), Human capital is basically a way that is attached to education, training, and other professional initiatives to enhance the levels of knowledge, skill, abilities and social assets of an employee. This eventually leads to the satisfaction and performance of employees and resulting on firm performance. Thus, the definition of human capital is referred to as "the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being". The constantly changing business environment requires firms to strive for superior competitive advantages via dynamic business plans which incorporate creativity and innovativeness. It is basically significant for long term sustainability. There is no doubt in the fact that human resource input performs an important role in increasing competitiveness of a firm.

The impact of Human Resource Management on the performance of a corporate organization was investigated by Ezejiofor, Nwakoby and Okoye (2015), using a five-point Liker's scale in this study, which used a survey research approach. Simple regression analysis was used to examine the hypotheses. Human Resource Management has an impact on the performance of a corporate organization, according to the findings of this study. This has to do with competent management as a motivator, as well as training and growth.

Human capital has also been categorized as important in itself but also important is the accumulation process. This perspective stresses on knowledge and skills obtained throughout educational activities (Dela Fuente & Ciccone, 2002). The third perspective is closely linked to the production-oriented perspective of human capital (Dae-Borg, 2009). Romer (1990) refers to the human capital as 'a fundamental source of economic productivity'. Rosen (1999) states human capital as ‘an investment that people make in themselves to increase their productivity’. Furthermore, the concept of human capital has also be defined as ‘an amalgam of factors such as education, experience, training, intelligence, energy, work habits, trustworthiness, and initiative that affect the value of a worker's marginal product’ (Frank and Bemanke, 2007). The shift of the focus by the global economy towards more knowledge-based sectors (such as research and development, pharmaceuticals and ICT-based sectors), has encouraged policy makers to attend more critically to skills and human capital development (OECD, 1996). Okoye and Ezejiofor (2013) determined the extent to which efficient human resource development may boost productivity and help an organization improve its performance. Data was gathered from both primary and secondary sources in order to meet the study's objectives. The data was examined using means, variance, and standard deviation, and the z-test statistical tool was used to test the results. The study discovered that human resource development is critical for any organization, large or little, because it is well known that no firm can operate without human beings.

Human Capital Accounting is defined as the process of identifying, measuring and communicating information about human resources in order to facilitate effective management within an organization Frederiksen and Westphalen (1998) in Okafor (2010). Human capital accounting thus from the above is the identification, classification, recording and reporting of data on the inputs made to enhance the ability or skill of individual.

The American accounting association (1970) “defined Human Capital Accounting as the process of identifying and measuring data about Human Capital and communicating this information to interested parties” in simple terms, It is an extension of the Accounting principles of matching cost and revenues and of Organizing data to communicate relevant information in financial terms. The concept of HRA implies that employees are resources of the employer. As a type of resource, human capital means the organizations employees described in terms of their training experience, judgment, intelligence, relationships and insights. Therefore, human capital has been defined as a key element in improving a firm assets and employees in order to increase productive as well as sustain competitive advantage (Simkovic, M. 2013).

According to Okika (2018), human capital investment is measured with Human Resource Accounting Disclosure Index (HRADI) which comprised 16 Human Resource Accounting Reporting (HRAD) variables (table: 1) was constructed by reviewing of relevant literature and what Disclosure items the sample companies are reporting.

Table-1: Measurement of HRAR variables

No.	Disclosure Items
1	Separate HRA statement
2	Total Value of Human resource
3	Number of employees
4	Human resource policy
5	Training and development
6	Management succession plan
7	Employment report
8	Employees' value addition
9	Human resource development fund
10	Employees/workers fund
11	Employee categories
12	Managerial remuneration
13	Retirement benefits
14	Performance Recognition
15	Superannuation fund
16	Other employees benefits

Source: Adapted based on Mamun (2009) as cited in Okika (2018)

Financial indicators are the traditional performance measurement techniques used by companies which include profit, return on investment, sales and so on (Harif, Hoe and Ahmed 2013). Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenue (investopedia). It further states that financial performance is a general measure of a firm's financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregate.

Theoretical Framework

There are various theories of human capital investment, each emphasizes on the value of a company and their associated cost of financing of the company. This research work is anchored on human capital theory: A Dictionary of Sociology refers to Human-capital theory as "a modern extension of Adam Smith's explanation of wage differentials by the so-called net (dis)advantages between different employments." This study was based on the Human Capital theory proposed by Schultz (1961) and extensively developed by Becker (1964). The theory has its root from labour economics which is a branch of economics that focuses on general work force in quantitative term. According to the theory, Human capital theory contends that education or training raises the productivity of workers by imparting useful knowledge and skills, thus raising workers' future income through increase in their lifetime earnings. The theory postulates that expenditure on education or training and development is costly, and should be considered as investment since it is undertaken with a view to increasing personal incomes. Human capital approach is used to explain or support occupational wage differential. However, the position of this study is that education or training and development will not only increase employee personal income, it will also serve as a means of achieving corporate competitive advantage which reflects ultimately in financial performance. According to Flamholtz and Lacey (1981), as noted by Baney and Wright (1997) human capital theory distinguished between general skills and firms' specific skills of human resources. General skills are skills possessed by individuals which provide value to a firm and are transferable across a variety of firms. For instance, all competitor firms have the potential to accrue equal value by acquiring employees with knowledge of general management, the ability to apply financial ratios, or general cognitive ability. On the other hand, specific skills provide value only to a particular firm, and such skills are of no value to competing firms. An instance of this is the knowledge of how to use a particular technology used only by one firm, or knowledge of a firm's policies and procedures provided to that firm, but usually would not be valuable to other firms.

III. Methodology

The study employed ex-post facto method. An *Ex-post Facto* research determines the cause-effect relationship among variables. *Ex-post Facto* seeks to find out the factors that are associated with certain occurrence, conditions, events or behaviors by analyzing past events or already existing data for possible causal factors (Kothari & Garg, 2014). The population of this study consists of 14 Deposit money banks listed on the floor of the Nigeria Stock Exchange as at 2017. The researchers made use of purposive sampling techniques in determination of the sample size of the study which is nine (9) Deposit money banks. This research basically considered the effect of human capital investment on the financial performance of listed firms on Nigeria Stock Exchange.

Analyses of Data and Interpretation

The hypotheses were stated in their null form as follow:

H_o^1: Human capital investment has no significant effect on return on capital employed of selected listed deposit money bank in Nigeria.

Table: Simple regression showing the effect of HROCI on ROCE

Dependent Variable: ROCE
Method: Least Squares
Date: 11/04/18 Time: 14:37
Sample: 2007 2017
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.084509	0.059742	1.414556	0.0008
HROCI	-0.167630	0.491834	-0.340827	0.0411

R-squared	0.562743	Mean dependent var	0.064545
Adjusted R-squared	-0.716953	S.D. dependent var	0.037246
S.E. of regression	0.039010	Akaike info criterion	-3.487037
Sum squared resid	0.013696	Schwarz criterion	-3.414692
Log likelihood	21.17870	Hannan-Quinn criter.	-3.532640
F-statistic	0.116163	Durbin-Watson stat	0.128950
Prob(F-statistic)	0.041055		

Source: Researcher's Computation Using E-View 9

Interpretation

The results of the regression on table 4.3 show that there is positive relationship between ROCE and HROCI ($\beta_1 = -0.167630$). The slope coefficients show that the variables are statistically significant because the probability values are less than 5%. This implies that variables have positive significant relationship with ROCE when taken individually.

The result in table 4.3 indicates that the R-squared for the model is .056, meaning that the regression model used for this study is a good predictor. The independent variable explained 56% of the variation in ROCE and HROCI. Only 44% of variation in ROCE and HROCI is not explained by the regression model.
The Durbin-Watson value of 0.128950 indicates the absence of serial correlation in model. From the test of coefficients result in table 4.3, the probability value of F-statistics = 0.041055 implies that the regression model is significant in predicting the relationship between the independent variable and the dependent variables. The significance between the variables is less that α=0.05. This result indicates that the overall regression model is statistically significant and is useful for prediction purposes at 5% significance level.
Conclusively, since the P-value of the test is less than α=0.05, going by the rule of thumb, H_1 is accepted and Ho rejected. Thus, human capital investment has a positive/ significant effect on return on capital employed of selected listed deposit money banks in Nigeria.

Ho^2: Human capital accounting has no significant effect on earnings per share of selected listed deposit money banks in Nigeria.

Simple regression showing the effect of HROCI on EPS

Dependent Variable: EPS
Method: Least Squares
Date: 11/04/18 Time: 14:54
Sample: 2007 2017
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.828251	0.159090	5.206168	0.0006
HROCI	-2.611272	1.309728	-1.993751	0.0073

R-squared	0.606361	Mean dependent var	0.517273
Adjusted R-squared	0.729290	S.D. dependent var	0.118329
S.E. of regression	0.103881	Akaike info criterion	-1.528168
Sum squared resid	0.097122	Schwarz criterion	-1.455823
Log likelihood	10.40492	Hannan-Quinn criter.	-1.573771
F-statistic	3.975044	Durbin-Watson stat	1.372864
Prob(F-statistic)	0.007328		

Source: Researcher's Computation Using E-View 9

Interpretation

The results of the regression on tables show that there is positive relationship between EPS and HROCI (β_1 = --2.611272). The slope coefficients show that the variables are statistically significant because the probability values are less than 5%. This implies that the variables have positive significant relationship with EPS when taken individually.

The result in table indicates that the R-squared for the model is .60, meaning that the regression model used for this study is a good predictor. The independent variable explained 60% of the variation in EPS and HROCI. Only 40% of variation in EPS and HROCI is not explained by the regression model.

The Durbin-Watson value of 1.372864 indicates the absence of serial correlation in model. From the test of coefficients result in the table, the probability value of F-statistics = 0.007328 implies that the regression model is significant in predicting the relationship between the independent variable and the dependent variables. The significance between the variables is less than α=0.05. This result indicates that the overall regression model is statistically significant and is useful for prediction purposes at 5% significance level.

Conclusively, since the P-value of the test is less than α=0.05, going by the rule of thumb, H_1 is accepted and Ho rejected. Thus, human capital investment has a statistical / significant effect on earnings per share of selected listed deposit money banks in Nigeria.

Discussion of findings

This study sought to empirically examine the effect of human capital investment (measured by HROCI) on financial performance (surrogated by return on capital employed and earnings per share) of deposit money banks listed on Nigeria Stock Exchange. In this study, panel data were obtained from publications of Nigeria Stock Exchange, Annual reports and account, and Fact books of the sampled deposit money banks listed. This study covered a ten-year period spanning from 2007-2017.

This study has produced some insightful revelation based on the outcomes of the inferential statistics. The correlation result in tables confirmed that there is absence of multicollinearity among the variables. The highest, Pearson's correlation between each pair of independent variables is between ROE and EPS at 0.5534 which is less than 0.80 (an indication of the absence of multicollinearity). The finding of this study is in line with the works of Omodero and Ihendinihu, (2017) who examined human resource accounting and financial performance of firms in Nigerian. Their hypotheses formulated were tested at 5% level of significance using SPSS software and multiple regression analysis as the statistical tool. They found out that that PBC has significant and positive impact on the PAT and Saced, Shakerfeyh, and Mahanz (2013) who investigated relationship between Human Resource and value added efficiency of human capital with Return on Equity as a firms performance measures. Their result shows that there is significant positive relationship between HR and value added efficiency of human capital with ROE.

Summary of Findings

In the course of this study,

1. It was discovered that human capital investment has significant positive effect on return on capital employed (ROCE) of selected listed Nigeria deposit money banks.
2. There is a significant relationship between human capital investments and earnings per share (EPS) of selected listed deposit money bank in Nigeria.

Conclusion and Recommendations

In this study, effort was made to determine the effect of human capital investment on financial performance. Nine listed quoted companies' financial statements were used, covering 2007–2017. Data obtained from secondary sources were analyzed in relation to the objective of the study. Based on the inferential statistical analysis of the data and the findings there from, the study concludes that two hypotheses tested were all significant at 5% significant level respectively. Therefore, the following recommendations were put forth:

1. Organizations should put in more financial resources or sources of investments in the human resources and personnel management in order to encourage the employees on the jobs thus enhancing specialization and positive influence on financial performance.
2. Relevant tools should be developed in order to facilitate accounting for the Human Resources, its quantification or measure and should be made inclusive as part of an organization's total worth

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