

## EFFECT OF HUMAN CAPITAL INVESTMENT ON FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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### Abstract

*The study examined the effect of human capital investment on return on investment of listed deposit money banks in Nigeria covering 2010-2019 (10 years). The independent variables were proxied by staff cost, number of staff and employee compensation to sales, while the financial performance was proxied by return on investment. Secondary data for this study was extracted from the sampled twelve (12) listed deposit money banks annual financial reports for the period studied. Using the panel regression technique, it was found staff cost, employee compensation to sales and number of staff had insignificant effect on return on investment. It was therefore recommended that banks should institute effective investment plans on various aspects of staff training, retraining, seminars and workshops. Also, management should intensify initiatives, greater understanding and the balance of cost of maintaining the staff in the long run so that employee performance can be improved in the banking sector. Thus, the management should also find initiatives for greater understanding and a balance of cost of maintaining the staff in the sector.*

**Keywords:** *Human capital investment, Staff cost, Employee compensation to sales, Return on investment.*

### Introduction

Human capital is the capacity of an organization's human resources to solve commercial problems and leverage its intellectual property. It is the sum total of an individual's abilities and productive knowledge. The idea of human capital originated from the realization that the decision of a company to invest in human capital is just as significant as the decision of a company to engage in other forms of investments that are carried out by corporations. Investment in human capital is focused on enhancing innovation, productivity and employability. Human capital investment is therefore described as the process of increasing an individual's productivity and creativity in the labour market through many forms of investment, including but not limited to education and training received on the job. It refers to programs that expose employees to information, new skills, or professional development opportunities (Chigozie, Aga, & Onyia, 2018). Specifically, within a company context, human capital investment involves training, educational opportunities, and benefits provided to its workforce.

Arguing the necessity of human capital investment, Mbah, Aga, and Onyia (2018) stated that investment of human resources assists personnel to have a solid grasp of their responsibilities or obligations and provides a strategy for competitive advantage in contemporary business space. Muktar (2005) also opined that human investment ensured that the appropriate people have the required information, skills, and competences to function effectively in a dynamic and complex environment in order to improve the performance of the company. The author implied that without the appropriate investment in human resources, employees, both new and present, do not receive the required knowledge and do not develop the skill sets essential to carry out their responsibilities to the fullest extent possible. This would adversely affect the profitability

of the company. These reasons, according to Mohammad, Mahi, Afzal and Nazamul (2017), compel firms to focus on the management and development of its workforce by making sufficient investment in human capital. Odhong and Were (2013) however emphasised that similar to investments in physical capital, human capital investments can only be made by businesses if the rate of return anticipated from the investment is higher than the cost of the investment. This is especially true for businesses operating within a distressed economy and whose primary goal is wealth maximization. The need to validate the acclaimed benefits of human capital investment has served as an impetus for the sustained attention of empirical studies on the extent human capital investment is transmitted to enhanced performance.

Despite the array of related studies (see; Amahalu, Agbionu & Obi, 2017; Christian & Omodero, 2016; Ismaila, 2013; Mohammad, et al., 2017; Odhong & Were, 2014; Olalere & Adenugba, 2013; Onyinlola & Adeyemi, 2014), most had focused on insurance companies and telecommunication companies with limited studies with regards to the financial sector. Furthermore, the importance and value of intangible and intellectual assets in the financial sector has become increasingly prominent (Olayiwola 2016). Therefore, this study investigated the effect of human capital investment on financial performance of listed Deposit Money Banks in Nigeria.

The following hypotheses were tested:

- H<sub>01</sub>:** Staff cost has no significant effect on return on investment of listed deposit money banks in Nigeria.
- H<sub>02</sub>:** Number of staff has no significant effect on return on investment of listed deposit money banks in Nigeria.
- H<sub>03</sub>:** Employee compensation to sales has no significant effect on return on investment of listed deposit money banks in Nigeria.

The literature review is presented in the next section, followed by methodology, after which the results and discussions are provided. The last section will consist of conclusion and recommendation.

## **Literature Review**

### **Conceptual Framework**

#### ***Human Capital Investment***

A company's human capital can be defined as the aggregate human capability it possesses for resolving business issues and maximizing the use of its intellectual property. Human capital refers to the people who are employed by a company and the knowledge that these individuals possess. (Halidu, 2015). To Ali and Chaudhry (2019), it implies the knowledge that is not consciously known but is present in every employee of a company. The author further stated that examples of tacit knowledge include experience, loyalty, culture, and education. Comprehensively, Becker and Gerhart (1996) and OECD (1998) defined human capital as an individual's knowledge, information, ideas, skills, competence and attributes that are relevant to economic activity. Summarily, Human capital is the value that the personnel of a corporation contribute in the form of their abilities, knowledge, and experience in their respective fields.

Human capital investment refers to the acquired skills, knowledge, and abilities that are owned by individuals and achieved through their finance (Hidayah, 2018). It includes employees' knowledge, skills, innovation, attitude, commitment, wisdom, and experience (Adekanmi &

Elikwu, 2019). Similar to other asset, human capital investment is frequently recognised as an intangible asset that generate income and other useful outputs overtime, however unlike physical and financial capital, it is irretrievably linked to individuals that own it (Becker & Gerhart, 1996). Typical measures of human capital investment include staff cost, number of staff and compensation to sales ratio.

**Staff Cost:** This is the aggregation of all expenses associated with personnel of an organisation. According to Efeeloo, Obuah, Wali and Turakpe (2020), staff cost includes wages paid to employees, costs associated with training employees, medical costs associated with employees, and even expenses associated with providing retirement benefits and pension plans for employees. Staff costs are a substantial component of recurrent or administrative expenditures.

**Number of Staff:** This is the total number of employees who work for an organisation. Employees typically have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay, or remuneration in kind. An adequate number of skilled staff is critical because overstaffing and understaffing can both contribute to a decrease in productivity (Engetou, 2017). Expounding on the decrease in productivity, Engetou (2017) explained that overstaffing wastes money and tie up capital while Staff shortages lead to more work and less supervision, which makes it likely that a business won't achieve its goals. However, the author stressed the overarching importance of qualitative personnel and not just number in achieving organizational goals or objectives.

**Employee Compensation to Sales:** Employee compensation is the payment employees get for the work they do and the services they provide to the company (Khudhair, Rahman & Adnan, 2020). It is a systematic approach to rewarding employees for work performed. A company's compensation package includes all of the benefits it provides to its workers (Nzyoka, Muli & Obere, 2019). It includes monetary incentives like bonuses/commission and profit sharing as well as non-monetary benefits like official cars/housing and stock options. Employee compensation to sales in bank is the ratio of annual staff compensation to annual deposit.

### ***Financial Performance***

Financial performance is described by Ameyaw, Peprah and Anowuo (2019), as the interaction between a company's resources, structure, culture, and environment. It is the ultimate goal of corporate managers as it serves as a benchmark for evaluating individual and organizational performance, and it is also beneficial for shareholders to evaluate the performance of an organization. Some common financial performance indicators are in terms of profitability are return on assets, sales revenue, return on investment (ROI), earnings per share and net income after tax. In this study, performance is estimated as ROI.

**Return on Investment:** ROI is a performance indicator that is used to evaluate the effectiveness of an investment or compare the effectiveness of several distinct investments. According to Gapenski and Brigham (2017), ROI measures how well an organisation is able to allocate its available resources to competitive businesses that generate profits. Hidayah (2018), however simply articulated it as a metric used to compare the amount of money invested to the amount of money earned. Quantitatively, ROI is equal to net income divided by total investment expressed as a percentage or a ratio.

### ***Empirical Review***

Rahman and Akhter (2021) analyzed the impact of employee training, education, knowledge, and skills on Janata Bank Limited's performance using primary data from 261 participants. The results revealed that with the exclusion of education, all dimensions of human capital investment were positively connected to bank performance. Structural equation modelling was utilised for the analysis. Ali and Chaudhry (2019) also examined the impact of human capital investment on organization performance in the service sector of five major cities of Punjab and Pakistan using questionnaires administered to faculty members of universities and officer of banking sector. Human capital was measured by as knowledge, professional proficiency; experience and cognitive ability while organization performance was measured using career satisfaction, life satisfaction and job satisfaction. Analysis of the result showed that human capital had a positive effect on all measures of performance.

Also using survey approach, Mbah, et al. (2018) evaluated the effect of human capital investment on organizational performance in manufacturing industries in South-East Nigeria. Analysis of 306 respondents revealed that knowledge had a positive effect on product quality while skills promoted innovation. The study thus posited that training of staff to acquire knowledge and skill will enhance productivity and market share of the firms. The study utilised ANOVA technique. Beyond the context of organisation, Ude and Ekeagwu (2017) examined the effect of human capital investment on economic performance in Nigeria. The results from employing multiple regression analysis and Wiener- Granger causality using time series data from 1980 to 2012 showed that both education and health expenditure exerted significant impact on economic performance in Nigeria.

Amahalu, et al. (2017) examined the effect of human resource accounting on profitability on eight quoted Telecommunication firms in Nigeria. The OLS analytical technique applied on data covering 2010 to 2015 exposed a positive and significant association between the understudied variables. The study estimated profitability as return on asset, return on equity and return on capital employed. Focusing on the twenty (20) private commercial banks in Bangladesh, Mohammad, et al. (2017) examined the linkage between human resource investment and the financial performance utilising survey approach. Similar to the study by Ali and Chaudhry (2019), the regression model found a significant positive correlation between human capital investment (in salaries and allowances, provident fund and gratuity, bonus and incentives, staff welfare and training, workshop, and seminar) and financial performance of the selected banks. The questionnaires were administered to 120 bank executives.

Omole, Yusuf and Adeyemo (2017) revealed that human capital development had a positive and significant impact on shareholders' value in oil and gas firm in Nigeria (2004 – 2016). Annual data on human capital costs (comprising of Salaries and Wages, Training Cost, Retirement Benefits and Medical/Health costs of the entire listed oil and gas companies) were analysed using correlation and Panel least squares regression analysis. Shareholders value, the dependent variable was measured as dividend per share. Also in Nigeria, Christian and Omodero (2016) explore the interaction between human capital development and financial performance of banks. Using multiple linear regressions (OLS), the study found that investment in human capital (personnel development and welfare) had an insignificant effect on profit after tax and total revenue. Annual data covering from 2011 - 2015 of ten (10) banks were utilised.

## **Theoretical Framework**

### Human Capital Theory

The human capital theory was introduced by Gary Becker and Theodore Schultz in 1961. The fundamental postulation of human capital theory stated that the investments on education and training could add to productivity which has become an increasingly important component of the workforce. Thus, human capital theory rests on the employees' finance of the expected returns on productivity. Dae-bong (2009) recognised that human capital theory holds competences, skills, data and skills of the personnel that contribute to the performance. He also stated that companies have an incentive to seek productive human capital and to add to the human capital of their existing employees. Subsequently, Freeman (1976) critiqued the human capital theory by pointing out the difficulty of measuring the future income and the central idea of human capital itself. Freeman stated that not all investments in education guarantee an advance in productivity as judged by employers or the market.

### Methodology

The expo-facto research design was utilised for the study. Due to data inconsistency for the period of this study, Ecobank Transnational incorporated was excluded out of the thirteen (13) deposit money banks quoted on the Nigerian exchange. This study employed panel regression model to analyse the secondary panel data collected from the Annual reports of the banks from 2010 - 2019.

Dependent variable is the human capital investment measured staff cost, number of staff and Employee compensation to sales, while the independent variable is financial performance estimated as ROI. The model adopted for this study is given as thus:

$$ROI_{it} + \alpha + \beta_1 SCT_{it} + \beta_2 NOS_{it} + \beta_3 ECS_{it} + \varepsilon_t$$

Where:

*ROI* = Return on investment

*SCT* = Staff cost

*NOS* = Number of staff

*ECS* = Employee compensation to sales

$\alpha$  = Constant Term

$\beta$  = Beta coefficient

$\varepsilon$  = error term

### Results and Discussions

**Table 1: Descriptive Analysis**

	ROI	SCT	NOS	ECS
Mean	-3.330016	8.880017	1.02E016	2.65E016
Median	-0.093294	-0.293603	-0.377169	-0.247299
Maximum	3.495889	2.887473	2.588565	4.054248
Minimum	-4.979454	-1.278820	-1.142944	-1.370450
Std. Dev.	1.000000	1.000000	1.000000	1.000000
Skewness	-1.195284	0.926384	1.196818	1.353813
Kurtosis	11.47214	2.891227	3.434373	5.584664
Observations	120	120	120	120

Table 1 presents the descriptive statistics for both the dependent and explanatory variables of the study. The table shows the mean of return on investment, staff cost, number of staff, employee compensation to sales: -3.33300, 8.8800, 2.7800 and 2.65016 respectively. One



important observation is that both the independent variables and the dependent variable have mean value higher than that of its standard deviation.

**Table 2: Correlation Matrix**

Probability	ROI	SCT	NOS	ECS
ROI	1.000000			
SCT	0.146602	1.000000		
	1.609901	-----		
	0.1101	-----		
NOS	0.113697	0.789198	1.000000	
	1.243124	13.95919	-----	
	0.2163	0.0000	-----	
ECS	-0.023604	-0.116310	-0.062877	1.000000
	-0.256474	-1.272083	-0.684371	-----
	0.7980	0.2058	0.4951	-----

Source: E-Views 10, 2022

The table explained the correlation of human capital investment and return on investment measures of deposit money banks in Nigeria where the staff cost was correlated with return on investment to the extent of 0.146602(11%). Also, number of staff were correlated with return on investment to the extent of 0.113697(21%). Finally, employee compensation to sales were correlated with return on investment to the extent of -0.023604 (79%).

**Table 3: Hausman Test**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.410436	3	0.0296

Source: E-Views 10, 2021

The Hausman test statistics of 0.0296 revealed that the fixed effect panel regression was the most appropriate model; hence the fixed effect result is presented in Table 4.

**Table 4: Panel Regression Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.90E-16	0.052487	-5.53E-15	1.0000
SCT	-0.021706	0.134829	-0.160988	0.8724
NOS	-0.023782	0.131034	-0.181493	0.8563
ECS	0.001141	0.084161	0.013562	0.9892
R-squared	0.667050	Mean dependent var		-3.39E-16
Adjusted R-squared	0.652447	S.D. dependent var		1.000000
F-statistic	45.67867	Durbin-Watson stat		1.797808
Prob(F-statistic)	0.000000			

Source: E-Views 10, 2022

Staff cost had negative insignificant effect on return on investment because the p-value was 0.1859 which was greater than the 0.05 significant level, indicating that increase in staff cost will not automatically increase the return on investment. Similarly, number of staff had a negative insignificant effect on return on investment because the p-value was 0.4292 which was greater than the 5% significant level, indicating the absence of association between number of staff and return on investment. Employee compensation to sales also had an insignificant effect (though positive) on return on investment because the p-value was 0.9419, revealing that

change in employee compensation to sales will not necessarily cause a change in return on investment.

The coefficient of determination ( $R^2$ ) is 0.667050 which means that human capital investment variables used in the study explained variation on return on investment to the extent of 67%, while the remaining variation was explained by other variables not captured in the model. The model is fit with F-statistics of 0.0000. This therefore means human capital investment (staff cost, number of staff, employee compensation to sales) has significant effect on return on asset of deposit money banks in Nigeria.

Staff cost and number of staff had insignificant effect on return on investment which signifies that increase in staff cost and number of staff will not lead to an increase in return on investment of quoted deposit money banks in Nigeria. These findings support the research work by Chigozie, et al. (2018). Moreover, employee compensation to sales has positive insignificant effect on return on investment which signifies that increase in employee compensation to sales not lead to an increase in return on investment of quoted deposit money banks in Nigeria. This finding is in tandem with the findings of Ali and Chaudhry (2019). However, it is pertinent to note that the employee cost as used in the study denotes the sum of productive manpower cost and non-productive manpower cost. The productive manpower cost includes employees' salary, wages, allowances, gratuity, contribution to provident fund, bonus and welfare expenses. The manpower cost is the cost of the labour activity engaged in the conversion of sales products and non-productive manpower costs. This study aligns with the human capital theory which evaluated the human capital investment that enhances short and long-term value from investments in the development of knowledge and expertise in employees and groups of individuals.

### **Conclusion and Recommendations**

This research examined effect of human capital investment on return on investment of quoted deposit money banks in Nigeria for a period of 9 years (2010 – 2019). Therefore, an increase in number of staff will decrease return on investment of quoted deposit money banks in Nigeria. However, an increase in employee compensation to sales will increase return on investment of quoted deposit money banks in Nigeria. Finally, the study concluded that an increase in staff cost will not increase return on investment of quoted deposit money banks in Nigeria.

Based on the findings and conclusions from this study, the following recommendations are made:

- i. Bank managers can improve their firms' performance through appropriate management of staff cost. Thus, management should intensify initiatives that enable greater understanding and the balance of cost of maintaining the staff in the long run so that employee performance can be improved in the banking sector.
- ii. Banks should come up with effective investment plans with regards to various aspects of employee compensation.
- iii. Due to the insignificant effect of number of staff, management should rather focus on employing viable human capital and not on only increasing the number of employees. Management should also increase the budget for funding intellectual activities.

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