An Econometric Investigation of Human Capital Investment and the Nigerian Banking Sector Performance

Ekpete, Marshall Simon (Ph.D) & Iyo, Ipeghan (Ph.D)
Department of Banking and Finance
Rivers State University
Port Harcourt, Nigeria.

Ekpete, Kingsley Simon
Department of Economics,
Ignatius Ajuru University of Education
Port Harcourt, Nigeria.

Abstract
The study is an econometric investigation of the relationship between human capital investment and performance of the Nigerian Banking Sector. It utilizes panel data drawn from Annual Financial Statements of thirteen (13) listed commercial Banks covering from 2007-2018. The methods of analysis employed are unit root test, co-integration test, Vector Error Correction model, Granger Causality test and Ordinary Least Square (OLS) to estimate data. The estimation results revealed that a positive and significant relationship exist between total customers deposit ratio and return on asset. Also positive and significant relationship exists among total loans and advance ratio and return on asset. Finally, total asset ratio has a negative and insignificant relationship with return on asset. The study concludes that bank should developed and trained skilled manpower to achieve its goal of profitability. We recommend that human capital investment cost should be recognized as an expenditure item in the financial statement of firms rather being merged with administrative expenses.

Key Words*: Human capital investment; Banking sector performance; Personnel expenditure;*

Introduction

Human capital investment denotatively represents an activity which enhances the productivity of workers. Training is an important component of human capital investment. Human capital investments involve an initial cost on education, training and medical care. However Schultz (1993) asserts that human capital is the value added to a firm by it employees, which can be measured by the employee's skills and competencies. Banks invest in their human capital by offering training and education facilities to its workers. Also training and development of employees' contributes to the skills and abilities to increase the efficiency, productivity and profitability of the Banking sector. Rastogi (2002) stated that human capital is an important input for organizations employees' and continuous improvement on knowledge, skills, and abilities will results to the transformation of organizations output. However, another school of thought postulates that human capital is the knowledge, skill, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being (Organization for Economic Cooperation and Development [OECD], 2001:18).

Human Capital Investment represents the individual stock of knowledge embedded in the firm's collective capability to increase the productivity of individual employees, Bontis (1999, 2001). Furthermore, (Davenport & Prusak, 1998, p. 49) add that human capital

investment includes the intangible resources such as abilities, efforts, and time that workers bring to invest in the organization that take into cognizance high levels of skill and competence for organization security and success. It is common knowledge that education and training improve the production of goods and services, and add new innovations in the work place. Organizational performance and human capital could also be viewed in the context of high performance work systems (Hsu et al., 2007).
The financial performance includes employee productivity; market share and non-financial performance includes workflow improvement, innovation, customer satisfaction and skills development (Kaplan & Norton, 1994). The training of workers should be seen as a challenging task that must be accomplished by the organization. Hence, the economic environment has shifted from industry based which is focused on physical assets such as factory, machines and equipment to a high technology in information communication and innovation based environment with emphasis on expertise, talents, creativity, skills and experience of workers. On the other hand, the human capital intensive economy that essentially drive productivity is neglected through inadequate training information while the traditional accounting will continue to focus on traditional assets to the exclusion of the more important human assets in the financial reporting standards. Essentially, financial services industries are advised to invest hugely on human capital as they are the assets to every organization's performance (Bessong et al., 2012).

The main objective of this study is to evaluate the relationship between human capital investment and performance of the Nigerian banking sector using econometrics tools. This study has contributed immensely to knowledge, bearing in mind that only few studies on human capital investment and performance of the banking sector have been done in Nigeria. This paper is divided into five parts namely introduction, theoretical framework, research methodology, analysis of empirical results and discussion of findings, and finally conclusion and recommendations.

Theoretical Framework

Human Capital Theory gain preeminence from the field of macroeconomic development theory according to Schultz (1993). Becker (1993) argues that there are different kinds of capitals such as schooling, a computer training course, expenditures on medical care as well as lectures on the virtues of punctuality and honesty. These factors improve health, raise earnings, or add to a person's appreciation over a lifetime. Those factors listed above are not simply cost but investments with valuable returns that can be evaluated in predetermine future. The Classical Economic Theory on human capital considers labour as a commodity that can be traded in terms of purchase and sale. However, human capital refers to the knowledge, expertise, and skill one accumulates through education and training emphasizing the social and economic importance of human capital theory Becker (1993).

Arrow Kenneth Growth Theory as postulated by Kenneth (1962) states that endogenous growth theory is concerned with investment in human capital, size of capital stock, innovation and knowledge. These are factors that significantly contributors to economic growth. The theory focuses on positive externalities and spillover effect of a knowledge-based economy which will lead to economic development. Endogenous growth has an impact on the long-term growth rate of an economy. The works of other scholars like Harrod-Domar (1946), Solow – Swan (1956) is a further improvement of the Arrow Kenneth Growth Theory by incorporating investment in technology and knowledge as major factors of economic growth. While the Growth Theory of Solow (1956) and Romer (1990), stipulate that growth depends on the stock of human and physical capital in the economy, as well as technological

progress. Which implies that investment at the level of the firm or the individual can contribute to the above factors and as well play an important role in facilitating long run economic growth.

Review of Related Literature

Bhuiyan et al. (2017) examine the impact of investment in human resource development and financial performance of Bangladesh banking sector using the economic data as well as survey data from purposively selected 120 bank executives of 20 private commercial banks in Bangladesh. They employed regression analysis to estimate data. The estimate shows the results of significant positive correlations between human resources development investment and financial performance of the sample banks. The finding of the study is useful to bankers, policymakers, human resources professionals, and the stakeholders of all types of organizations.

Worlu & Onyinyechi (2016) investigate the effect of human capital development and financial performance of banks in Nigeria. The study employs time series data drawn from Personnel Development Welfare, Profit after Tax, Total Revenue, and Net Assets of quoted commercial banks from the Nigeria Stock Exchange, using the linear regression and student t-test to estimate data. The estimation results obtained showed no effect on Profit After Tax and no effect on Total Revenue, but a negative effect on Net Assets. The study concludes that banks have not invested adequately on human capital development and this has affected their financial performance.

Chinaecherem (2010) examined the application of financial analysis to human capital management in Deposit Money Banks in Nigeria. The multiple regression analysis, co integration and granger causality were employed to analyze data. The result showed that human resources management significantly contributes to deposits money banks performance. The study recommends the adoption of strategic human resources management as a means of improving the performance of deposits money banks.

Bessong et al. (2012) empirically studied the relationship between human resource valuation and performance of Banks in Nigeria. The study data was obtained from banks quoted in the Nigeria Stock Exchange (NSE) and the regression method was used to analyze data. The estimation results reveal that human resource valuation is statistically significant. The study recommends that banks should regularly deploy career management programs to assist their employees in career planning.

Chen et al. (2005) empirically investigate the relationship between intellectual capital and firm's market value and financial performance in Taiwan. The study employed a descriptive and empirical correlation method to estimate data. The estimation result revealed that firm's intellectual capital has a positive impact on market value and financial performance.

Kehelwalatenna & Gunaratne (2007) studied the impact of intellectual capital on firms' performance and investor response: Empirical study of selected sector in Colombo Stock Exchange. They employed Pearson correlation and regression analysis to investigate the relationship between the variables. Their findings revealed that intellectual capital is positively associated with firm performance, and investor response.

Seleim et al. (2007) examined the relationship between human capital and organizational performance of software companies in Egypt. The study employed correlation and stepwise regression analysis to estimate data. The results revealed that human capital indicators show a

positive and statistically significant relationship with firm performance. These indicators are training attended and Team-work practices attended which result in superstar performers, where more productivity could be translated to organizational performances.

Methodology

Data

The study is based on secondary data obtained from balanced panel data of published financial statements of 13 commercial banks listed in the Nigeria Stock Exchange spanning from 2007 – 2018.

Model Specification

In an attempt to determine the effect of human capital investment and performance of the banking sector in Nigeria. It is necessary to develop a model that will justify the relationship that exists among the variables. Therefore, we adopt the model of Chinaecherem (2010) and Bhuiyan et al. (2017) and subsequently modified the model to incorporate the ratio of bank operating expenses (proxy for personnel expenditure) to total assets.

The linear regression model is presented in the functional form as:

$ROA = f(TLAR, TCDR, TAR)$ (1)

Whereas the estimated equation of the study is presented in their econometric form as:

$ROA_t = \beta_0 + \beta_1 TLAR_t + \beta_2 TCDR_t + \beta_3 TAR_t + \mu_t$ (2)

Where:

ROA = Ratio of profit after tax to total assets
TLAR = Ratio of total loans and advance to personnel expenditure
TCDR = Ratio of total customers deposits to personnel expenditure
TAR = Ratio of total assets to personnel expenditure
μ_t = Stochastic Error term
β_0 is a constant.
β_1, β_2 and β_3 are the parameters. t denotes time.
The apriori expectations is that $\beta_0 > 0$, $\beta_1 > 0$, $\beta_2 > 0$ and $\beta_3 > 0$.

Estimation Techniques

Unit Root Test

In other not to have a spurious regression of the variables understudy, we applied Augmented Dickey Fuller (1979) unit root test to check the presence of serial correlation. The mathematical model for ADF test is as follows:

$\Delta y_1 = \beta_1 + \beta_2 t + \delta y_{1-1} + \sum^m \alpha_1 \Delta y_{1-1} + \varepsilon_1$ (3)

Where Δy = the first difference of series interested.

β_1 = constant term parameter,

β_2 = deterministic term parameter,

δ= drift term,

α_1= coefficient associated to each of the first difference of lagged series, and ε_1 is the residual error.

The above is described as ADF test around a constant and deterministic term trend.

The null hypothesis is stated as

Ho: $\delta = 0$ (unit root around a deterministic trend) vs

H_1: $\delta < 0$ (presence of no unit root i.e stationary).

The above null hypothesis is not rejected when the absolute value of ADF test statistic is less than the MacKinnon critical values; hence otherwise we reject the null hypothesis and conclude that the series interested is stationary.

Co-integration Test

Having estimated for unit root test and confirmed that the series are in the same level of integrating order, the co-integration test estimation is employed. The co-integration test was first proposed by Engle and Granger and using the two step procedure. Johansen (1998) and Johansen and Juselius (1990) have adopted methods for multivariate co-integration test. They developed a maximum likelihood procedure on the co-integrating vector and testing procedures for restriction on the co-integrating parameters for each set of variables. Two statistics were used to identify the number of co-integrating vector namely "trace test and the maximum Eigen value test". The trace test statistics state about the null hypothesis "that the number of co-integrating equilibrium is less than or equal to "r" against the alternative hypothesis that more than "r" co-integrating equilibrium, and which is define as:

$\lambda_{trace}(r) = -k \sum_{j=r+1}^{s} \ln(1-\lambda_j)$, (4)

Where λ_j=is the Eigen value, k = total no of observation. The null hypothesis for Eigen value test is almost "r" co-integrating vector is tested against "r+1" co-integrating vector which is given by:

$\lambda_{max}(r,r+1) = -k \ln(\lambda_{r+1})$.

Vector Error Correction Model (VECM)

The Vector Error Correction Model (VECM) was introduced by Sargan and later popularized by Engle and Granger (1987) which state that if two or more variables are co-integrated of the same order, then there order of relationship is justified by vector error correction model.

$$\Delta y_t = \pi y_{t-1} + T_1 \Delta \pi_{t-1} + T_2 \Delta y_{t-2} + \text{------} + \text{-----} + T_{p-1} \Delta y_{t-p+2} + U_t \quad (5)$$

Where: u_t is the error term.

The T_i's are (K x K) short-run coefficient matrices, πo is a (K x 1) vector of intercept terms, π_1, π_2, ------ π_p are K x K matrices of coefficients that relate lagged values of the endogenous variable to current values of those variables.

The vector error correction models **(**VECM) is a VAR with a specific type of coefficient restriction imposed on the long run behaviour of the endogenous variables to converge to their co-integrating relationship while allowing for short run adjustment dynamics.

All the signs of the coefficient value of each variable on the right hand side are expected to be negative while the dependent variable (return-on-assets) is a stochastic variable; its sign need not to be negative. The estimation of VECM is done when number of cointegrating vector is established. The optimal lag length (*k*) of the VECM is determined by the smallest AIC (Alkaike Information Criteria) and SIC (Schwartz Information Criteria) which aids the best VECM model to illustrate the short run disequilibrium.

Multiple Regression Analysis

We conduct multiple regression analysis to test hypothesis, whether the estimated parameters are theoretically meaningful, two criteria are usually applied such as economic *a'priori* and statistical criteria. The linear regression model is stated below:

$$Yi = \beta_1 + \beta_2 X_{2i} + \ldots\ldots + \beta_k X_{ki} + \mu_i = X'_i\beta + \mu_i \qquad I = 1, \ldots\ldots, n, \quad (6)$$

Where:

Yi = dependent variable

Xi = [1, X_{2i}... X_{ki}]' is a k x 1 vector of explanatory variables,

B = (β1... βk)' is a k x 1 vector of coefficients, and μ_i is a random error term.

Granger Causality Test

VAR model is mainly use for forecasting. Therefore, there is need to study the directions of the relationship between variables by using Granger Causality test, Granger (1996). This is used to examine the linear causation-unidirectional between the concerned variables or bilateral causality.

The simplest tests of Granger causality are estimated using the following two regression models:

$$y_t = \beta_{1,0} + \sum_{i=1}^{p} \beta_{1,i} y_{t-1} + \sum_{j=1}^{p} \beta_{1,p} x_{t-j} + \varepsilon_{1t} \quad (7)$$

$$x_t = \beta_{2,0} + \sum_{i=1}^{p} \beta_{2,i} y_{t-1} + \sum_{j=1}^{p} \beta_{2,p} x_{t-j} + \varepsilon_{1t} \quad (8)$$

Where p is the number of lags that adequately models the dynamic structure so that the coefficients of further lags of variables are not statistically significant and the error terms ε are white noise. If the p parameters $\beta_{1,p+j}$ are jointly significant then the null that x does not Granger cause y can be rejected. Similarly, if the p parameters $\beta_{2,i}$ are jointly significant then the null that y does not Granger cause x can be rejected.

Empirical Results and Discussion of Findings

Table 1: Unit Root Test Result

VARIABLE	ADF statistics	Critical value 5%	Prob. Value	Decision
ROA	-10.15269	-2.880088	0.0000	1(0)
TLAR	-11.33874	-2.880088	0.0000	1(0)
TCDR	-9.242694	-2.880088	0.0000	1(0)
TAR	-11.53319	-2.880088	0.0000	1(0)

Source: Author's Computation Using Eview 9 Output 2019

Application of the Augmented Dickey-Fuller(ADF) test reported in (table 1) indicates that the unit root test results showed that the variables in the empirical model are integrated of order zero i.e. 1(0), implying that they are stationary at level. Conclusion, since the ADF statistic is more negative than the critical values, at 5 percent level, the null hypothesis of a unit root in the test regression residuals is strongly rejected.

Table 2: Johansen Co-integration Result

Date: 09/06/19 Time: 07:44
Sample (adjusted): 4 156
Included observations: 153 after adjustments
Trend assumption: Linear deterministic trend
Series: ROA TLAR TCDR TAR
Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.337005	148.7720	47.85613	0.0000
At most 1 *	0.233428	85.89079	29.79707	0.0000

At most 2 *	0.155787	45.21936	15.49471	0.0000
At most 3 *	0.118562	19.30868	3.841466	0.0000

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.337005	62.88119	27.58434	0.0000
At most 1 *	0.233428	40.67144	21.13162	0.0000
At most 2 *	0.155787	25.91067	14.26460	0.0005
At most 3 *	0.118562	19.30868	3.841466	0.0000

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's Computation Using Eview 9 Output 2019

Based on our Johansen multivariate co-integration result in (table 2), trace test indicates four co-integrating equations for r = 0, r ≥ 1, r ≥ 2, r ≥ 3 and r ≥ 4. The trace statistics is higher than the critical values in each case. The Max-Eigen value statistic confirms the trace statistic result with four co-integrating equation. The implication of this result is that there is a long run equilibrium relationship between human capital investment and the performance of the Banking Sector in Nigeria

Table 3: Vector Error Correction Results

Vector Error Correction Estimates
Date: 09/06/19 Time: 07:45
Sample (adjusted): 4 156
Included observations: 153 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
ROA(-1)	1.000000
TLAR(-1)	-0.017049 (0.00331) [-5.15179]
TCDR(-1)	-0.002902 (0.00164) [-1.77107]
TAR(-1)	0.012827 (0.00273) [4.70333]

C	-2.354696			
Error Correction:	D(ROA)	D(TLAR)	D(TCDR)	D(TAR)
CointEq1	-0.571682	23.34461	28.88156	-2.074083
	(0.07967)	(7.94544)	(11.9053)	(8.31849)
	[-7.17561]	[2.93811]	[2.42594]	[-0.24933]
C	0.021580	0.103550	0.189255	-0.055004
	(0.33254)	(33.1644)	(49.6929)	(34.7215)
	[0.06489]	[0.00312]	[0.00381]	[-0.00158]
R-squared	0.546825	0.342511	0.296156	0.315026
Adj. R-squared	0.518303	0.301130	0.251858	0.271915
Sum sq. resids	2419.501	24064119	54027583	26376848
S.E. equation	4.113342	410.2201	614.6668	429.4805
F-statistic	19.17237	8.277119	6.685552	7.307439
Log likelihood	-428.3048	-1132.481	-1194.352	-1139.501
Akaike AIC	5.729475	14.93439	15.74316	15.02616
Schwarz SC	5.927542	15.13246	15.94123	15.22422
Mean dependent	0.019693	-0.017908	0.035889	-0.022412
S.D. dependent	5.926634	490.7032	710.6368	503.3296
Determinant resid covariance (dof adj.)		2.38E+16		
Determinant resid covariance		1.81E+16		
Log likelihood		-3732.331		
Akaike information criterion		49.36380		
Schwarz criterion		50.23530		

Source: Author's Computation Using Eview 9 Output 2019

The co-integrating coefficient of long run relationship in (table 3) is presented as follows: ROA = 1.000000 -0.017049 TLAR (-1) -0.002902 TCDR (-1) + 0.012827 TAR (-1) with an intercept of 0.021580. The coefficient of the long run relationship for the series TLAR, TCDR and TAR are significant at 5 percent while TCDR is not significant at 5 percent level.
The Error Correction Model (ECM) measures the speed at which any disequilibrium in the model is adjusted to equilibrium. From the Error Correction Model (ECM) result, the ECM is -0.571682 and meets the apriori expectation suggesting that about 57.2% of the disequilibrium in the model will be corrected every year by changes in real GDP growth. The implication is that it will take about 4 years and nine months for any disequilibrium to be corrected back to equilibrium. However, the R-squared for ROA is normal at 54% indicating a possible increase in productivity of the banking sector.

Table 4 Pairwise Granger Causality Tests Result

Pairwise Granger Causality Tests
Date: 09/06/19 Time: 07:50
Sample: 1 156
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TLAR does not Granger Cause ROA	154	4.81558	0.0094
ROA does not Granger Cause TLAR		0.30972	0.7341
TCDR does not Granger Cause ROA	154	5.11079	0.0071
ROA does not Granger Cause TCDR		0.21781	0.8045
TAR does not Granger Cause ROA	154	0.18502	0.8313
ROA does not Granger Cause TAR		0.46533	0.6288
TCDR does not Granger Cause TLAR	154	0.07267	0.9299
TLAR does not Granger Cause TCDR		7.81504	0.0006
TAR does not Granger Cause TLAR	154	0.03624	0.9644
TLAR does not Granger Cause TAR		0.03102	0.9695
TAR does not Granger Cause TCDR	154	1.11770	0.3298
TCDR does not Granger Cause TAR		0.03673	0.9639

Source: Author's Computation Using Eview 9 Output 2019

The result of Granger causality test in (table 4) indicates a unidirectional causal relationship between total loans and advance ratio (TLAR) to return on total assets (ROA). The direction of causality runs from TLAR to ROA. There is also a unidirectional causal relationship which runs from total customers' deposits ratio (TCDR) to return on asset (ROA) and total loans and advance ratio (TLAR) to total customer deposits ratio (TCDR) with causality going from TCDR to ROA and TLAR to TCDR respectively.

Table 5: Multiple Regression Estimate

The estimation results of equation (1) are given below:

ROA (-1) = 0.091615	- 0.006630 TLAR(-1)	+ 0.006918TCDR(-1)	-0.001224TAR(-1)
T-Statistic (1.103607)	(-2.681851)	(4.079892)	(-1.068389)
Prob. Value 0.2717	0.0082	0.0001	0.2872
R^2 = 0.303626			
Adjusted R^2 = 0. 227381			
F-Value = 3.982233			
Prob.F = 0.000006			
DW = 1.9455857			

Source: Author's Computation Using Eview 9 Output 2019

The OLS estimation results (table 5) reveals that R-squared-the predictor variables jointly accounts for approximately 30.36 percentage changes in the level of profitability, criterion variable. In other words 30.36 percent of the total variation in profitability is caused by

explanatory variables while the remaining 69.64 percent is due to factors outside the model but coved by the error term.

The Durbin-Watson statistics (1.9455857) was approximately equal to the traditional benchmark of 2.0 in the model and the (F-stat of 3.982233, p = 0.000006) of the model was also significant at five percent confidence level showing that the model has a good fit and is good for our purpose. The intercept value is negative and not significant. By assumption the intercept value is the same for all the 13 banks in the sector.

It was observed from the model that the ratio of total loans and advance to personnel expenditure (TLAR) had a negative sign which was contrary to *a'priori* expectations. The loans and advances constitute a major source of income and risk assets to banks.

The ratio of total customers' deposits to personnel expenditure (TCDR) has a positive sign and in agreement with our *a'priori* expectation. The measure of human capital investment in deposit mobilization has a positive and significant relationship with return on asset (ROA). Customers' deposits represent the intermediation function of banks. Thus bank managements generally show a high disposition for deposit mobilization and often motivate their employees to drive for deposits.

Finally, total assets to personnel expenditure ratio (TAR) have a negative sign which was contrary to *a'priori* expectation. This measure has a negative and not significant relationship between total asset ratio to personnel expenditure (TAR) and return on asset (ROA). The measure has no effect on human capital investment in the performance of the Banking Sector. Hence, we do not reject the null hypothesis.

Discussion of Findings

The positive and significant relationship between the ratio of human capital investment and return on asset agreed with the results reported by Chen et al. (2005), Kehelwalatenna & Gunaratne (2007), Chinaecherem (2010) and Seleim et al. (2007). They employed difference methodology and found the human capital measures positive and significant according to their findings.

The coefficient of Total Customers Deposit Ratio (TCDR) was positive and significant according to our a'priori expectation. This ratio expressed the relationship between capitals mobilized to improve the manpower of the organization for growth of the Banking Sector.

Table 1 shows that all the variables were stationary at their level, indicating that they are all integrated of order zero, i.e. 1 (0). The Johansen multivariate co-integration test confirms the existence of long run equilibrium, upon the presence of (4) co-integration equations of the variables. Furthermore, we conducted the error correction estimate and found the expected negative sign in the variables according to our apriori expectation. The granger causality tests found a unidirectional causality in their relationship such that TLAR to ROA, TCDR to ROA and TLAR to TCDR, the Granger F-test was rejected at 5% critical level of significance.

Conclusion and Recommendation

The human capital investment proxied as personnel expenditure is structured to have overriding influence on the performance of the banking sector. The study results showed that ratio of total customers deposit and total loans and advances to personnel expenditure is the most significant explanatory variable on the performance of deposit money banks. Finally, the results support the impact of human capital investment in enhancing the banking sector profitability.

Recommendations

Since the study result confirms that there exist a high positive relationship between human capital investment and performance of commercial banks. Therefore, we recommend that

banks management should ensure that investment in human capital is given priority in order to record good return on investment. Furthermore, Human capital expenditures should be regarded as investment costs that should be capitalized rather than being treated as operational cost.

Limitation of the Study

The study limitation is premised on the failure of banks to show the specific amount spend on human capital development in their annual financial statement. Virtually all the banks prefer lumping the human capital costs under operating expenses. This, no doubt has constituted a great challenge in this study.

References

Becker, G.S. (1993). Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education (3rd ed.).Chicago: University of Chicago Press.

Bessong, P. K., Effiok, S. O., & Edet, U. O. U. (2012).Human resource valuation and the performance of selected banks in Nigeria. *Global Journal of Social Sciences* 11(2): 133-140

Bhuiyan, M. Z. H., Uddin, M. M., Ahmad, A., & Hoque, N. (2017). Does investment in human resource development affect financial performance? Empirical evidence from the banking sector of Bangladesh. IIUC Studies 14(2): 35-54

Blundell, R., Dearden, L., Meghir, C., & Sianesi, B. (1999) .Human Capital Investment: The Returns from Education and Training to the Individual, the Firm and the Economy. *Fiscal Studies* 20 (1): 1–23

Bontis, N (1999). Managing organizational knowledge by diagnosing intellectual capital: Framing and advancing the state of the field. *Intellectual Journal of Technology Management, 18*(5/6/7/8), 433-462.

Bontis, N. (2001), "Assessing knowledge assets: a review of the models used to measure intellectual capital", *International Journal of Management Reviews*, 3 (1) : 41-60.

Chen, M., Chen, S., & Hwang, Y. (2005): An empirical investigation of the Relationship between intellectual capital and firms' market value and financial Performance. *Journal of Intellectual capital*, 6(2), 159-176.

Chinaecherem, P. N. (2010): Financial Analysis of Human Capital Management in Deposit Money Banks: Evidence from an Emerging Market (Nigeria).

Davenport, T.H., & Prusak, L. (1998), Working Knowledge: How Organizations Manage What they Know, Harvard Business School Press, Boston, MA.

Engle, R. F., & Granger, C. W. J. (1987) 'Cointegration and Error Correction Representation, Estimation and Testing', *Econometrica* pp 255-276

Granger, C. W. J. (1969). Investigating causal relationship by econometric models and cross spectral methods. *Econometrical.* 17(2), 424 -438.

Harrod, R.F. & Domar, E.C. (1957). "An Essay in Dynamic Theory, Capital Expansion Rate of Growth and Employment. New York: Prentice Hall.

Hsu, I. C., Lin, C. C. Y., Lawler,. J. J. & Wu., S. H. (2007): Toward a model of organizational human capital development: Preliminary evidence from Taiwan. *Asia Pacific Business Review*, 13(2), 251-275.

Johansen, S. (1988) 'Statistical Analysis of Cointegration Vectors', *Journal of Economic Dynamics and Control*, 12, pp 231-254.

Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration with applications to the demand for money, *Oxford Bulletin of Economics and Statistics* 52, 169-210.

Kaplan, R. S., & Norton, D. P. (1994). *Balanced scorecard: Translating strategy into action*. Boston, MA: Harvard Business School Press.

Kehelwalatenna, S., & Gunaratne, P. S. M. (2007): The impact of intellectual capital on firm performance and investor response: An empirical study of selected sector in Colombo Stock Exchange.

Organization for Economic Co-operation and Development (OECD) (2001): Investment in Human Capital through post-compulsory education and training. "Centre for the study of African Economics, University of oxford OXI 3UQ UK." P1-42 (August 2002).

Rastogi, P. N. (2002). Sustaining enterprise competitiveness –is human capital the answer. *Human System Management*. 19(3), 193-203.

Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2008). Measuring Organizational Performance as a Dependent Variable: Towards Methodological Best Practice. Available at www.researchgate.net/...Performance.../0fcfd5080dcfcb36f3000000.p df.

Romer, P. M. (1990). "Endogenous Technological Change", *Journal of Political Economy*, 98, pp.S71-S102.

Schult, T. W. (1961), Investment in human Capital'',*American Economic Review*, 51,pp, 1-77.

Schultz, T. W. (1993). The economic importance of human capital in modernization. *Education Economics, 1*(1), 13 19.

Seleim, A., Ashour, A., & Bontis, N. (2007). Human capital and organizational performance: A study of Egyptian software companies. *Management Decision*. *45*(4), 789-801.

Solow, R. M. (1956). "A Contribution to the Theory of Economic Growth", *Quarterly Journal of Economics*, 70, pp.65-94.

Solow, R.M. & Swan, T.W. (1956). A contribution to the Theory of Economics and Capital Accumulation. *Quarterly Journal of Economics.* Retrieved on 15/09/2012 from http://links.jstor.org/sici.

Worlu, C. N., & Onyinyechi. O. C. (2016). The effect of human capital development on financial performance of banks in Nigeria. *Global Journal of Human Resource Management.* 4(6):34-47