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Effects of Human Resource Cost on Profitability of Banks in Nigeria

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This study aims to investigate the effects of human resources cost on the profitability of banks in Nigeria from 2010 - 2014 using First Bank Nigeria, Plc and Zenith bank Nig. Plc. The study adopted content method of analysis and linear regression model to test the stated hypotheses. Findings revealed that staff cost significantly affects Earnings per share, Net profit margin, and Return on capital employed of banks. The researchers recommend, among other things, that there should be an uniformed standard for identification and measurement of human capital assets.

Keywords: Profitability, Staff Cost, Net Profit, Earnings Per Share, Return On Capital Employed (ROCE)

JEL Classification: G21, O15

1. Introduction

1.1. Background to the Study

Human resource is one of the intellectual assets of an organization. Following the recent rapid development in the business environment around the globe, organizations are now increasingly looking at intellectual capital and by extension human resource as a unique asset to reckon with. An examination of financial accounting information sees wages and salaries as the only direct evidence of people in the accounting process (Glautier and Underdown, 1978). They further state that accounting process begins to be aware of people coupled with the development of management accounting and the need to ensure the efficient use of all resources, hence the development of standard costs and the application of such costs to the measurement of labour used in the calculation of unit costs of production.

The discovery that human behaviour is a significant factor affecting business efficiency is an important land-mark. It is noteworthy, however, that this discovery only occurred after the second World War and coincided with the expansion of the social sciences and an emphasis on human welfare in an organization (Glautier, 1976).

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It is regrettable that information with respect to human assets has not been included in the financial statements of companies and thus it adds to the difficulty of measuring or evaluating the real profit of a specific company. In the words of Kpefami, Kazeem and Taiwo (2015) "The issues of who are responsible for the effective use of all other resources in the business have been on the fore front burner". They further reiterate that 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 accounting information. The success of any company depends largely on the calibre of personnel in that organization. It is in the light of the above that this paper will address the effect of human resources on the profitability of banks in Nigeria.

1.2. Statement of the Problem

The idea of HR accounting has been a popular one for many years now, however the concept still lacks general acceptability. Many studies focus on the possibilities to evaluate and report human resources in the financial statements of companies, and these studies, and their subsequent Authors, discovered that corporations and enterprises in developing countries such as Nigeria are still in the first stages of implementation.

Amongst the banks that invested heavily on human resources are the 1st Bank Nigeria Plc and Zenith Bank Nigeria Plc. These banks' investment is not reflected in the balance sheet but it is charged against revenue for the current period to reduce income and invariably the business's value. In the words of Onyam, Usang and Eyisi (2015) "the major challenges encountered in the reorganization of human resources as an asset rest largely on its characteristics, quantification in monetary terms and the method of reporting".

The problem of the research lies in the above statement on how an organization especially banks quantifies, classifies and presents sound financial report on the investments on human resources employed in the organization.

1.3. Objective of the Study

The main purpose of this research is to examine the effects of human resource cost on the profitability of banks in Nigeria. Specifically, the objective intends to achieve the following:

i. To determine the effect of expenditure on Staff cost on Earnings per share (EPS) of banks.

ii. To assess how staff cost can significantly affect Net profit margin (NPM) of banks.

iii. To determine the extent Staff cost can significantly affect Return on capital employed (ROCE) of banks.

1.4. Research Questions

The following research questions will guide this study:

- i. To what extent does staff cost affect Earnings per share of banks?
- ii. How can Staff cost significantly affect Net profit margin of banks?
- iii. To what extent Staff cost significantly affect Return on capital employed of banks?

1.5. Research Hypotheses

The study will be guided by the following hypotheses:

- H₀: (Null) Staff cost does not significantly affect Earnings per share of Banks in Nigeria.
- H₀: (Null) Staff cost does not significantly affect Net profit margin of banks

H₀: (Null) Staff cost does not significantly affect Return on capital employed of banks.

2. Review of Related Literature

2.1. Conceptual Framework

The resources of a business otherwise called the 4-ms including men. Men in this context refer to human asset employed in the production of goods and services. The success or failure of every enterprise is based on the effective utilization of the entity's resources (Obara and Gabriel, 2013). To Micah, Ofurum and Ihendinihu (2013), Human Resources (HR) "are the energies, skills, talents and knowledge of people which are or which potentially can be applied to the production of goods or rendering useful service". They further see human resources accounting "as the process of identifying and measuring data about human resources and communicating this information to the interested parties" (Micah, Ofurum and Ihendinihu, 2013). To Oyewo (2013), "the human asset is the total knowledge, skills, creative abilities, talents and belief of an organization workforce as well as values, attitude and belief of the individuals involved". Syed (2009) sees human resource accounting as "the system of recording of transaction relating to the value of human resource, i.e. the cost of

acquisition of their knowledge and utilization of the energy for production of goods and services in the most profitable manner and thereby achieving the organization goal".

From the above definitions of human resources, it implies that human resource accounting represents the measurement or quantification of human organization inputs, particularly in terms of recruitment, training, experience and commitment. Otherwise, this term can be used to encompass the accounting methods, system and techniques which coupled with special knowledge and ability, can assess the valuation of personnel in financial terms.

Seth (2009) is not left out in a bid to explain human resources accounting and sees Human Resource Accounting (HRA) as "accounting for people as original resources and it is the measurement of cost and value of people for an organization. He reiterates that knowledge of workers are important resources for the survival of any modern business, firm and especially with the growing complexities of business organization". Parameswaran and Jothi (2005) in contributing their quota, describe "human resource accounting as the process of measuring data of human resources and communicating the information to the interested parties".

2.1.1. Concept of Profitability

Profitability in the words of Onyam, Usang and Enyisi (2015) means "the ability to make profit from all the business activities of an organization, company, firm or an enterprise". They further emphasize that profitability presents how a company's management structure can efficiently produce profit by using all the resources available in the company and in the market. Harward and Upton (2012) propose profitability encompasses the "ability of a given investment to earn a return from its use". By further developing this concept of profitability, Onyam, Usang and Enyisi (2015) present it as "an index of efficiency and can be regarded as a measure of efficiency of management guide to greater efficiency", by positioning it as an important "yardstick for measuring efficiency of management".

Profitability is measured in terms of Net profit margin, Earnings per share and Return on capital employed (Pandey, 1991).

From the foregoing analysis, it implies that the profitability of a company should be evaluated in terms of a company's investments in different assets categories, including human capital, and if the company is not able to gain a satisfactory return on investment, then its survival in a competitive market is highly threatened.

2.1.2. Measurement of Human Resource Cost

Gebauer (2002) listed the following approaches as measures of human resources costs:

- A. Cost based approaches
 - i. Historical cost
 - ii. Replacement cost
 - iii. Opportunity cost
 - iv. Standard cost
- B. Monetary Value Based Approaches
 - i. The Lev and Schwartz Model
 - ii. Eric Flamholtz Model
 - iii. Morse Model
- C. Non-Monetary Value-Based Approaches
 - i. Likert Model
 - ii. Flamholtz Model
 - iii. Ogan Model

Flamholtz (1999), Schwarz and Murphy (2008) suggested the following methods of valuing human resource accounting, thus: replacement course model, scholastic reward valuation model, historical cost model, competitive bidding method, and capitalization of future benefits.

2.2. Theoretical Framework

There are different theoretical frameworks used as a motivation to explain the influences of human resource accounting on banks' profitability level. This research will therefore base its theoretical framework on the following theories as it reflects on human resource accounting.

2.2.1. Human Capital Theory (HCT)

This theory according to Akindehinde, Enyi and Olutokunbo (2015) was originally proposed by Schultz (1961) and later developed by Becker (1964). The theorist saw that education and training raises the level of productivity of workers by granting useful knowledge and skills, thus raising workers future income

through increase in their lifetime earnings. It proposes that expenditure on education or training and development is too expensive and should be considered as an investment since it is undertaken with a view to increasing personal incomes. Human capital approach is used to explain or support occupational wage differential. The importance of this human capital theory to this research is that it considered cost of education, training and development of workers as investments towards improving the productivity of individual workers thus resulting to high profitability of banks in particular and other sectors of the economy in general.

2.2.2. Resources Based Theory

This theory of resource is highly connected with Barney (1991) and implies the blending of approaches from organizational, economics and strategic management. The fundamental assumption of this theory is that companies can be successful if they can develop and preserve a competitive advantage on the market. Competitive advantage is earned by focusing on value, i.e. developing a strategy that competitors cannot easily duplicate and sustain and for which there are no immediate substitutes. Barney (1991) further explains that for a competitive advantage to be earned two conditions are needed: firstly, "the resources available for competing firm must be variable among competitors; and secondly, these resources must be immobile not easily obtained".

Barney (1991) also categorized the resources into three categories:

- i. Physical resources (plant, technology and equipment, geographical location)
- ii. Human resources (employees' experience and know-how)
- iii. Organizational resources (structure, system for planning, monitoring and evaluating activities, valuable relations within the organizations and external constituencies).

To Schuler and Macmillian (1984), human resource management greatly impacts the company, its human and organizational resources, and HRM can be used to earn a notable competitive advantage. It is clear that the extent to which human resource management can be utilized to gain competitive advantage and the means of obtaining it are influences by the business environment of the company in question.

2.2.3. General System Theory

The General System theory was is propounded by Von-Bertalamffy (1950), more than 60 years ago, according to Onyam, Usang and Eyisi (2015). The system theory unit of analysis is understood by complex interdependent parts. In this regard, an open verses closed system is dependent on the environment for inputs which are further transformed to develop outputs that are subject of exchange in the business environment.

In this framework, skills and abilities represent inputs, and the behaviours and actions of employees represent outputs. In this model, the HRM subsystem performs to acquire, utilize, retain and displace competencies. Snell (1992) describes human resource management as "a control system based on open system theory".

3. Empirical Review

This paper is based on related empirical review. The following reviews are made with respect to human resource accounting. For clarity, the reviews will be summarized in table 1 below:

Authors	Methodology	Findings
Akindehinde, Enyi and	The study adopted 18 sampled publicity quoted	It confirmed that human asset
Olutokumbo (2015)	banks in Nigeria. The instrument for data	accounting significantly affect the
	collection was questionnaire with a six steps	bank's performance.
	Likert scale. The hypothesis was tested using	
	simple regression model.	
Onyam, Usang and	A case study of Access Bank that used	There is a positive relationship between
Enyisi (2015)	secondary data to analyse and test the	human resources, cost and the profit of
	hypotheses using ordinary least square	the organization.
	analytical technique.	
Micah, Offurum and	The study examined fifty two (52) companies	It discovered that the combined effect of
Ihendinihu (2012)	across all sectors using simple (2005 – 2009)	firm financial performance account for
	random sampling technique, descriptive,	ZF-9% of the variation in Human
	correlation and regression statistical techniques	Resources Accounting disclosure with
	in analysis.	F ratio 3.581

Table 1. Relevant Empirical Review

OyeOyewo (2013)	The study used a total of 12 firms consisting of commercial and manufacturing companies. It	It was discovered that human resources
	adopted content analysis of the financial data	banks are higher in comparison to
	with the use of ANOVA, T-test and correlation, the hypotheses were tested	manufacturing companies. And there is a strong positive relationship between
	the hypotheses were tested	human resource accounting disclosure
		and company size.
Ikpefan, Kazeem and Taiwo (2015)	The study consists of sixteen (16) micro- finance banks in Nigeria. Random sampling techniques was adopted for collection of data which was of primary – the data were analyzed using appropriate simple regression model.	It found that a majority agreed that human resources be capitalized and treated as asset rather than writing it off via profit and loss account. And also that human resources accounting has a significant effect on micro-finance banks in Nigeria.
Akinloye (2012)	It is a case study of Oceanic Bank Nig. Plc for a period covering 2002 – 2006. It adopted simple linear regression model in testing the hypotheses.	It was discovered that human resources has a positive effect on the profit and capital employed by the bank.
Rehma et al (2011).	The study is on intellectual capital performance	It reveals that there is a relationship
	and its implication on corporate performance:	between human capital efficiency and
	An empirical evidence from Modaraba sector	financial performance- Return on
	of Pakistan.	specifically revealed that one of the
		important components to strengthen the
		intellectual capital performance is
		human capital efficiency. This
		on its human capital.
Sharma (2012)	Impact of human resource accounting on	It shows that organization performance
	organizational performance.	depends on the quality of human
		resources and that the success of an
		organization depends on the quality of
		manufacturing service or retail outlet
	1	manaraorannis, service or retail outlet.

From the above empirical reviews and related literature, shows that primary data was the main instrument used. This study therefore considered it imperative to adopt secondary data (content analysis) as appropriate instrument for determining the influence of human resource costs on banks' profitability.

4. Methodology

The research designed adopted is a non-experimental design ideographic method (archival and content analysis method). To Avoweken (2006) archival record involves the research of existing records for data and content analysis involves content analyzing the records in the source to answer specific research questions.

The population of this study therefore consists of 21 quoted banks in the Nigerian Stock Exchange (NSE). The research adopted judgmental sampling technique where two (2) active banks (First Bank of Nig Plc and Zenith bank Nig Plc) were used as sample size. This is because of the changes brought about by the Apex bank to sanitize the sector from 2005 to the present day 2015 (NSE, 2015).

The researcher made use of linear regression analysis to analyze the secondary data and to test the hypothesis.

4.1. Measurement of Variables

The hypotheses and variables for the study is operationalized using regression model. (i)

P = f(HRC)

Where, P = Profitability of banks

f = Function

HRC = Human Resources cost

The profitability values (dependent variables) are measured by Net Profit Margin (NPM), Return on capital employed (ROCE) and Earnings Per Share (EPS). On the other hand, the independent variables are measured by expenditure on Staff cost - (SC).

The above model is expanded to produce the following models:

(ii)

Where a is constant

logEPS and logSC are standardized values for Earnings per share and staff cost.

(iii)

Where logNPM standardized value for Net profit margin(NPM).

 $\log ROCE = a + \log SC$ (iv).

Where logROCE = standardized value for Return on capital employed.

5. Data Analysis and Results

LogEPS = a + logSC

5.1. Testing of Hypotheses

LogNPM = a + logSC

Hypothesis 1:

H₀: Staff Cost does not significantly affect Earnings per share of Banks H_a: Staff Cost significantly affect Earnings per share of Banks

Model	R	R	Adjusted	Std. Error	Change Statistics					
		Square	R Square	of the	R Square	F	df1	df2	Sig.	F
				Estimate	Change	Change			Chang	ge
1	.890ª	.792	.723	.11882	.792	11.432	1	3	.043	
a. Predictors: (Constant), LogStaffCost										
b. Dep	b. Dependent Variable: LogEPS									

 Table 2. Model Summary for Hypothesis 1

The table above depicts a very strong relationship between Earnings per share and staff cost. It shows that 89% level of coefficient exist between Earnings per share (EPS) and the Staff Cost. The coefficient of multiple determination highlighted by R-Square is therefore strong thus indicating that the data does fit well in the statistical model (79.2%)since it is very near to 100%, therefore a reasonable amount of the profitability index (EPS) is been determined by the Staff Cost, this therefore appears to be useful for making predictions since the value of *R-Square* is close to 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 72.3 was observed, this means that the adjusted R-Square is significantly lower than R-Square, this normally do serve as an indication that some other explanatory variable(s) such as Training and development etc by which without them the dependent variable (EPS) cannot be fully measured. Therefore other predictor variables are needed to be sourced out in order to fully measure the dependent variable (EPS).

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 11.432 with an alpha value of 0.043 which was found to be higher than f-tabulated value at 0.05 and df= 1 and 3 is 10.13. This therefore shows that the model is useful for predicting EPS based on Staff Cost.

On these bases we therefore reject the null hypotheses that say "Staff Cost does not significantly affect Earnings per share of Banks." and accept the Alternate Hypothesis.

Hypothesis 2:

 H_0 : Staff Cost does not significantly affect Net Profit Margin of Banks H_a : Staff Cost significantly affect Net Profit Margin of Banks

Model	R	R	Adjusted	Std. Error	Change Statistics				
		Square	R Square	of the	R Square	F	df1	df2	Sig. F
				Estimate	Change	Change			Change
1	.984ª	.967	.957	.01788	.967	89.214	1	3	.003
a. Prec	a. Predictors: (Constant), LogStaffCost								
b. Dep	b. Dependent Variable: LogNP								

 Table 3. Model Summary for Hypothesis 2

The table above depicts a very strong relationship between Net Profit Margin and staff cost. It shows that 98.4% level of coefficient exist between Net Profit Margin (NPM) and the Staff Cost, The coefficient of multiple determination noted by R-Square is therefore strong thus indicating that the data does fit well in the

statistical model (96.7%) since it is very near to 100%, therefore a reasonable amount of the profitability index (NPM) is been determined by the Staff Cost, this therefore appears to be useful for making predictions since the value of R-Square is close to 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 95.7 was observed, this means that the adjusted R-Square is significantly lower than R-Square, this normally do serve as an indication that some other explanatory variable(s) by which without them the dependent variable (NPM) cannot be fully measured. Therefore other predictor variables are needed to be sourced out in order to fully measure the dependent variable (NPM).

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 89.214 with an alpha value of 0.03 which was found to be higher than f-tabulated value at 0.05 and df= 1 and 3 is 10.13. This therefore shows that the model is useful for predicting NPM based on Staff Cost.

On these bases we therefore reject the null hypotheses that say "Staff Cost does not significantly affect Net Profit Margin of Banks." and accept the Alternate Hypothesis.

Hypothesis 3:

H₀: Staff Cost does not significantly affect Return on Capital Employed of Banks H_a: Staff Cost significantly affect Return on Capital Employed of Banks

Model	R	R	Adjusted	Std. Error	Change Statistics				
		Square	R Square	of the	R Square	F	df1	df2	Sig. F
				Estimate	Change	Change			Change
1	.975ª	.950	.934	.04024	.950	57.440	1	3	.005
a. Predictors: (Constant), LogStaffCost									
b. Dep	b. Dependent Variable : ROCE								

Table 4	4.	Model	Summarv	for	Hypot	hesis	3
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The table above depicts a very strong relationship between Return on Capital Employed and staff cost. It shows that 97.5% level of coefficient exist between Return on Capital Employed (ROCE) and the Staff Cost, The coefficient of multiple determination denoted by R-Square is therefore strong thus indicating that the data does fit well in the statistical model (95%) since it is very near to 100%, therefore a reasonable amount of the profitability index (ROCE) is been determined by the Staff Cost, this therefore appears to be useful for making predictions since the value of R-Square is close to 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 93.4 was observed, this normally do serve as an indication that some other explanatory variable(s) by which without them the dependent variable (ROCE) cannot be fully measured. Therefore other predictor variables are needed to be sourced out in order to fully measure the dependent variable (ROCE).

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 57.440 with an alpha value of 0.005 which was found to be higher than f-tabulated value at 0.05 and df= 1 and 3 is 10.13. This therefore shows that the model is useful for predicting ROCE based on Staff Cost.

On these bases we therefore reject the null hypotheses that say "Staff Cost does not significantly affect Return on Capital Employed of Banks." and accept the Alternate Hypothesis.

5.2. Summary of Findings

Based on the empirical reviews and the regression results, the study reveals the following:

- i. Staff cost significantly affects Earnings per share of banks and there is existence of positive relationship. This agrees with Onyam, Usang and Enyisi (2015) and hypothesis I Table 2.
- ii. Staff cost also affects Net profit margin and Return on capital employed. This is in agreement with Akinloye (2012), and also confirmed by hypothesis ii and iii Tables 3 and 4.

6. Conclusion

The study has shown that banks should ensure proper accounting for investments in human resources while they should be capitalized instead of written off to income statement/profit and loss account.

The failure of professional accounting to recognize and treat human resources as assets like physical and financial assets led to the emergence of human resources accounting Kepefan, Kazeem and Taiwo (2015).

The global demands of financial information makes it imperative for banks and other corporate bodies to include the human asset as part of the assets of the organization.

6.1. Recommendations

The following recommendations are made:

- i. The relevant accounting bodies should ensure that there is a regulation guiding the process for human resource reporting in banks and other sectors.
- ii. There should be a uniformed standard for identification and measurements of human capital assets.
- iii. It is the researcher's opinion that if the above recommendations are put into practice, it will go along way in ensuring that the different stakeholders will be satisfied with respect to information on human resource reporting.

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Appendices

Year	Staff cost	EPS	NP	ROCE
	(# million)	(Kobo)	(%)	(%)
2010	393705	93k	17%	4.0%
2011	48,838.5	101k	20%	7.05%
2012	56686.5	243k	22.5%	8.4%
2013	72495	261k	28.6%	11.6%
2014	59927.5	250k	26%	10.2%

 Table 5. Data from Annual Report and Accounts of Banks (2010-2014)

 Table 6. Computed variables from the annual reports and Account of banks (2010-2014)

LogSC	LogESP	LogNP	LogROCE
4.06	1.97	1.26	0.70
4.69	2.01	1.18	0.91
4.75	2.42	1.47	0.97
4.86	2.39	1.49	1.10
4.78	2.41	1.38	1.05

