Effect of Human Resources Accounting on Performance of Listed Deposit Money Bank in Nigeria

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Abstract

This study investigated the effect of human resource accounting on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange. Specifically, the study examined the effect of staff remuneration, staff training and cost of health care with safety of staff on the performance of Deposit Money banks in Nigeria. The study adopted the ex-post facto research design. Data were sourced from annual published accounts of Deposit Money Banks listed on the Nigerian Stock Exchange for the period 2015-2019. Descriptive statistics and correlation were used in the analysis of data. Multiple regression analysis was further used to test the hypotheses at 5% level of significance. Findings from the investigation revealed that; staff remuneration with cost of health care and safety have no significant effects on market value using TQ while cost of staff training has a significant effect on market value of a listed deposit money bank using TQ. The study therefore recommended the need for staff remuneration to be improved so that banks staff can put in their best in other to achieve better performance.

Keywords: *Human resource accounting, Performance of listed deposit money bank in Nigeria.*

INTRODUCTION

1.1 Background to the Study

Human resource is one of the major factors of production and had been generally referred to as all human efforts (skilled, semi-skilled and unskilled) used in the process of production. Human resource is a term which refers to the set of individuals who make up the workforce of an organization or a business entity (Edom, Inah & Adanma, 2015). According to Syed (2009), human resource comprise of energies, skills, talents and knowledge of people which can be potentially applied to the production of goods or rendering useful services. The driving force of an organization is the human force. The success or failure of any organization is directly related to how human resource are able to effectively and efficiently manage and organize other factors of production. Basically, when we talk of human resource (also known as human capital or human assets) it refers to the human knowledge, their inner capabilities and creativity. The development of technology cannot be fully utilized without human knowledge and skill. The capabilities of the human capital in relation to the needs of the organization should be improved by creating a climate in which the human knowledge, skill, capabilities and creativity can be developed. How to develop human capital and put it to optimum use is the challenge faced by the present day corporate sector.

Human resource accounting on the other hand according to Micah, Ofurum and Ihendinihu (2012) is the measurement of the cost and value of the work force in an organization. It involves measuring costs incurred by the organizations to recruit, select, hire, train and develop employees as well as of appraising their economic value to the organization. Furthermore, human resource accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties (Enofe, Mgbame & Otuga, 2013). In the words of Okpala and Chidi (2010), human resource accounting relates to the quantification in monetary terms of human resources employed by an organization. They concluded that a well-developed system of human resource/capital accounting could contribute significantly to internal decisions by management and external decisions by investors. Firms that are human resource-oriented (such as firms in accounting, law, consulting and in educational sectors).

The main objective of human resource accounting is to assist and facilitate management to get information on the cost and value of human resources. Human resources accounting brings to light the quantum of human resources and indicates the right control of conservation, depletion and appreciation of it in the right perspective. It provides data to the interested persons about the cost of human resources and correspondingly comparing it with the benefit obtained out of its utilization.

Generally, performance could be regarded as one of the key determinant factors that are widely used in measuring the success or failure of firms. It is imperative to note that one of the most influential and an indispensible component that drives firms performance is the human resource component. Therefore, the relationship between human resource accounting and firm performance becomes very crucial and a matter of concern for firms especially service-oriented ones. Performance could be viewed as the achievement of a firm in relation with its set goals. It includes outcomes achieved or accomplished through contribution of individuals or team to the firm strategic goals.

Performance of an organization could be categorized into human resource which could be measured in terms of turnover; organizational category which could be measured in terms of productivity, quality, customer satisfaction and manufacturing flexibility; financial accounting category which could be measured in terms of return on assets (ROA), return on equity (ROE), profits, sales, and employee value; while the financial market category could be measured in terms of stock prices or the measure of the ratio of the market value of the firm's assets to their replacement cost in line with the Tobin's Q (Rogers & Wright 1998).

It can be noted that the problem of performance has been an issue in the banking sector; this is so because not all listed banks are declared systematically important by the Central Bank of Nigeria (CBN). As at 2019 only 8 banks were declared systematically important by the CBN. Systematically important banks are banks that are considered by the CBN as being colloquially "too big to fail". This means that the banks maintain an optimal level of performance. In addition, the merger and acquisition of some banks like that of Access Bank and Diamond bank is also an indication of performance failure on the part of Diamond Bank which could be traced to the problem of human resource accounting management deficiencies. The inspiration of this study is to examine the remuneration of staff, cost of staff training and the health and safety cost of staff and how these factors affect the performance of Deposit Money banks in Nigeria. Extant literature like the study of Omodero and Ihendinihu (2017) asserts that if staff is properly and satisfactorily remunerated, they are motivated to work harder for the achievement of the organizational objective. Also Edom (2019) found that training and development of staff have significant effect on the performance of the organization. This implies that well trained staffs have the capacity to handle technical jobs that would help attain the objectives of the organization. Furthermore, it is only a healthy person that can work effectively therefore the performance of an individual is a function of his health status therefore; health and safety could be a factor that affects the performance of Deposit Money banks in Nigeria.

There has been a global transition from manufacturing to service based economies in recent times, the fundamental difference between the two lies in the nature of their assets. In the former, the physical assets like plants, machinery and equipment were of utmost importance. In contrast, in the latter, knowledge and attitudes of the employees assumes greater significance, in the case of the Deposit Money Banks for instance, the value of its physical assets may be less when compared with the value of the knowledge and skills of the personnel. Similarly, in hospitals, academic institutions, consulting firms etc, the total worth of the firm depends mainly on the skills of its employees and the services they render. Hence the success of these organizations is contingent on the quality of their human resource, knowledge, skills, competence, motivation and understanding of the firm culture. In knowledge-driven economies, it is imperative that the humans be recognized as an integral part of the total worth of the human capital (Ofurum, 2018). It then becomes necessary that some methods of qualifying the worth of the knowledge, motivation, skills and contribution of the human elements as well as that of the firm processes like recruitment, selection, training, health care and remuneration which are used to build and support these human aspect is developed to enhance optimal performance.

1.2 Statement of the Problem

Though the idea of accounting for human resources started many years back, the concept still lacks general acceptability. Many authors and scholars have conducted researches on how humans within an organization can be valued and reported in the financial statements of such organization (Edom, Inah & Adanma 2015; Omodero & Ihendinihu, 2017).

Human resource accounting and reporting by corporate organizations is still at the infant stage in Nigeria. One of the companies that has invested heavily in human resources and has applied human resources accounting in one way or the other is Access Bank Plc, amongst others. Access bank Plc in 2007 commenced construction of Access Bank Campus otherwise called Access University of Banking Excellence. This heavy investment to train and retrain quality staff was not reflected in the statement of financial position of the bank. Indeed, the investment was charged against revenue for the periods to reduce income and by extension the value of the business. The investments by this company in human capital development are normally not reflected in statement of financial position as assets but expensed in the income statement. The major challenges encountered in the recognition of human resources as an asset rest largely on its characteristics, quantification in monetary terms and the method of reporting.

The basic problem of human capital valuation is cardinal to human capital management. Today, most firms do not want to invest in human capital development due to quick waste nature of human capital, also the basis of human capital management is the valuation process of human capital and how to account for the value in their financial report. However there is no single acceptable way of evaluating human capital for financial record purpose, it is a wasting assets of a long term nature and at the same time it asset nature cannot be adequately quantified in statement of financial position except treated as an expense.

Most research works on human resource accounting by researchers like (Omodero and Ihendinihu, 2017; Amahalu, Abiahu, Obi and Okika, 2016; Ijeoma and Aronu, 2013 concentrate on the effect of human resource accounting on financial performance of firms in Nigeria with financial performance proxies such as (Return on Assets (ROA), Return on Equity (ROE) which are firms internal financial performance measures. However, most decisions taken on firms performance by most potential investors are not necessary based on internal financial performance measures of firms but on other external market valuation factors of firms such as earning per share, earnings yield, price earnings ratio, dividend cover among others. Therefore, the gap found in literature is the lack of studies on human resource accounting and market valuation of firms in Nigeria with focus on Deposit Money Banks quoted on the Nigerian Stock Exchange which their assets are mainly made up of human resource capital. It was further discovered from the review of extant literature that studies in Nigeria did not capture the cost of employee health and safety which is also a useful proxy of human resource accounting because health is wealth and it is only a healthy worker that can maximize output for optimal performance. Furthermore, if staff are well paid and well trained, it is believed that the financial performance of such a company would be improved.

1.3 Objective of the Study

The main objective of the study is to examine the effect of human resource accounting on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange. The specific objectives of the study are to:

i. Examine the effect of staff remuneration on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange
ii. Examine the effect of cost of staff training on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange
iii. Examine the effect of the cost of health care and safety of staff on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange

1.4 Research Questions

i. What is the extent of the effect of staff remuneration on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange?
ii. To what extent has cost of staff training affected the performance of Deposit Money Banks listed on the Nigerian Stock Exchange?
iii. To what extent is the effect of the cost of health care and safety of staff on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange?

1.5 Research Hypotheses

The following hypotheses are formulated and stated in the null form.

Ho_1: Staff remuneration has no significant effect on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange

Ho_2: There is no significant relationship between cost of staff training and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange.

$H0_3$: There is no significant relationship between cost of health care and safety of staff and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange

1.6 Significance of the Study

The study will be significant to academics and other researchers who would like to carry out studies in this field because the study would serve as a reference material that would encourage further research in the same area of study. It could also propel others to carry out further research that can confirm or oppose the results of this study. The results of this study may help managers of companies investigated to decide on the kind of policies to adopt regarding human resource in order to encourage performance because the study make recommendations regarding policy implementation that would enhance human resource accounting and firm performance.

1.7 Scope of the Study

This study focus on human resource accounting and financial performance of listed DMB in

Nigeria. The study cover a period of five (5) years spanning from 2016 to 2020. The study period is selected because it is the most recent period that data is available to check the effect of human resource accounting on firm financial performance. On the other hand, the choice of the banking sector is made because the sector is service oriented and makes use of high human resources skills and is disposed to release information on the use of these human resources.

2.0 LITERATURE REVIEW

This section of the study reviews the theories that relates to the subject matter and the key concepts that form the main variables of the study are discussed. Empirical studies that relates to the work are also reviewed under this section; a coherent summary of the literature reviewed closes this section.

2.1 Theoretical Framework

The following theories are used to underpin the relationship between human resource accounting and firm performance. The theories include Human Capital Theory and the Resource Based Theory.

2.1.1 Human Capital Theory

Human Capital theory was propounded 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. 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 competing 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.

In Becker's view, Human Capital is similar to "Physical means of production" like factories and machines. One can invest in human capital through education, training and even medical treatment while one's output depends partly on the rate of return on the human capital one owns. Thus, human capital is a means of production into which additional investment yields additional output. Human capital is substitutable, but not transferable like land, labour or fixed capital.

The relevance of the theory to this study is that it considered the cost of education, training, development and even workers' medical treatment as investments towards improved productivity of individual workers and also creates a sort of competitive advantage which ultimately could result in improved organizations performance. Thus, if these are investments like other physical assets which are reflected on the statement of financial position, considerable effort must be made to also reflect such value of human capital on the statement of financial position.

This theory is relevant to this study since it serve as an anchor to human resource accounting which is one of the key variables in the reviewed topic by throwing more light on the importance of human capital to firms performance.

2.1.2 Resource Based Theory

The resource based theory was developed by Baney (1991) the theory posits that individual employee performance affects firms' level of outcomes. This means that the contributions of individual employee at various levels of organization results in corporate goal. For these reasons employee's intellectual competence, employee's skill and corporate human resource function must be properly developed if corporate goals must be achieved (Baney, 1991). The resource based theory indicated that human resource provides a source of sustained competitive advantage which consists of three basic requirements of value, limitation and specialization that must be present within the specialized's human resource at all times as discussed below:

Value :- Firms create value through either decreasing product or service costs or through product or service differentiation in a way that allows the firm to charge a premium price. Thus the ultimate goal of any human resource (HR) executive is to create value through the human resource function. Therefore, the first question to be addressed by (HR) executive is how the (HR) functions can aid in either decreasing costs or increasing revenues.

Imitation :- This explains that the value and the rare characteristics of a firm's human resources can provide above normal profits for the firm in the short term. However, if other firms can imitate the characteristics over time, such characteristic will provide not more than competitive parity. According to Bassey and Tapang (2012), human resources are not subjected to the same degree of imitation as equipment or facilities, investments in firm specific human capital can further decrease the probability of such imitation by qualitatively differentiating a firm's employee from those of its competitors.

Specialization:- For any characteristics of a firm's human resource to provide a source of sustained competitive advantage, the firm must be organized to exploit the resource. Organization requires putting in place the systems and practices that allow human resource characteristics to bear the fruit of their potential advantages. For instance, allowing employees participation in the decision making process could be one of the ways to achieve this, and also allowing them to display their intellectual capabilities in decision making process. Firms' human resources must not be subjected to replacement by substitute if they are to provide a source of sustainable competitive advantage.

This theory connects to the study as it explains the strength of human resource to the overall success or failure (performance) of firms.

2.2 Conceptual Framework

The study reviewed the following key concepts; human resource accounting and firm performance which are discussed below.

2.2.1 Human Resource Accounting

In traditional accounting concepts, every human resource related expenditure is treated as cost which reduces profit. However, Bullen and Egler (2010), stated that Human Resource Accounting involves accounting for expenditures which related to human resources as assets. Woodruff (1973), defined Human Resource Accounting as the identification, accumulation and dissemination of information about Human Resource in dollar (Naira) term. He further explained that, Human Resource Accounting is the systematic accumulation of information about changes in investments made in human resources and reporting back the information to operating managers in order to assist them to make better decisions than they would have been able to make without such additional information.

Seth (2009), stated that Human Resource Accounting (HRA) means accounting for people as original resources. According to him, it is the measurement of cost and value of people for an organization. It is also a way of thinking about the management of people in formal organization. He confirmed that knowledge of workers is important resources for a typical modern business firm and that, with the growing complexities of business organizations the need for competent people continue to increase while financial reporting ignores such resources.

Parameswaran and Jothi (2005) referred to American Accounting Association's definition of human resource accounting as the process of measuring data of human resources and communicating the information to the interested parties. Going by the various definitions above, human resource accounting in simple term is accounting for the value of people in organization to enhance information for decision making by the users of financial information. Parameswaran and Jothi (2005) further identified and categorized the objectives of human resource accounting into three; Internal, Internal and External, and External based on the needs of various users of financial information.

Remuneration

Remuneration could be seen as pay or reward given to individuals for work done. The indicators of remuneration include: basic salary, wages, health schemes, pension schemes, transport allowances overtime allowances and responsibility allowances. This study chooses to align with remuneration as a measure of wages and salaries. Different definitions have been advanced on salaries and wages usually to show the differences that exist between both terms. However, basic salary could be conceptualized as a fixed periodical payment for non-manual employees usually expressed in annual terms, paid per month with generally no additions for productivity. Wage refers to payment to manual workers, always calculated on hourly or piece rates. Surbhi (2015) also defined salary as a fixed amount paid to the employees at regular intervals for their performance and productivity whereas wages are the hourly- based payment given to the labor for the amount of work finished in a day. He further argued that while salaried persons are generally said to be doing "white collar office jobs" which implies that an individual is well educated, skilled and is employed with some firm and holds a good position in the society, whereas the waged person are said to be doing "blue collar labour job" which implies that an individual is engaged in the unskilled or semi-skilled job and is drawing wages on a daily basis.

One purpose of a person as an employee of a company is to earn income in the form of wages or compensation. Every company in determining the amount of wages paid to the employee must be feasible, so that the lowest wage is given to meet the needs of their life (Kanzunnudin, 2007).

It has been argued that wages should not only be adequate but must also show some element of equity, this is particularly true from the point of the employees. Anything short of a fair and equitable wage or reward can quickly influence the wrath of employees in an economy such as Nigeria. Salaries and wages can be measured in terms of the amount paid per annum. Yinka (2017) in his study on the impact of remuneration on employees' performance, found a strong and positive relationship between employee remuneration and performance.

Education and training

Education and training of an employee are all geared towards making an employee skilled enough to handle complex jobs. Across the world, organizations have sought to rely on improved skills, knowledge, and capability of the talented workforce to create competitive advantage (Shu-Rung & Chun-Chieh, 2017). To develop the desirable skills, knowledge, and capability of employee and position them to perform their responsibilities, managers in charge of human resource training design different training programs (Lakra, 2016). Such training programs not only target to improve the familiarity of employees about their responsibilities, but it also helps to encourage employees to develop more commitment towards their job. Huang and Jao (2016) explained that organizations design training programs to prepare their employees to perform their jobs correctly and according to the laid down standards. Organizational personnel design training sessions to ensure that they optimize the potentials of employees. Khan and Baloch (2017) opined that majority of organizations prefer to invest in different programs that create new skills through long-term planning. This is to enable them adapt to any current and future uncertainties. Therefore, they ensure that they improve the performance of their employees through superior levels of commitments and motivation.

It is of great significance to note that employees are the backbone of any organization. No matter how big or small the organization is, employees are the true determinants of how successful or how incompetent an organization will turn out to be. Therefore, having an adequately trained workforce is vital to ensure that the workplace has the right employees that have been professionally trained and qualified to do their tasks properly. According to Jaoude (2015), organizations providing high-level training have been able to realize three times increase in profits compared to its competitors. Also Ali and Nada (2018) conducted a study on effect of training and employee performance and found that education and training has a significant effect on the performance of an organization. Education and training can be measured using the cost involved in the training of staff.

Employee health and safety

Safety customs can enhance proactive injury avoidance, and studies conducted has demonstrated that organizations do perceive health and safety as an essential segment of making and keeping up a healthy workforce by the provision of hospitals for treatment or by providing health care and safety allowances. In altering an association's way of life, it is imperative that top management involvement in health and security issues is paramount and that a vibrant and positive attitude is needed to institute safety culture in the organisation. The implementation and review of any safety programme becomes successful with the involvement of top level or strategic level management (Fitzgerald, 2005). Muchemedzi and Charamba (2006) characterized occupational safety and health "as a science concerned with wellbeing in connection with job setting" and the wellbeing and security of all workers in a working environments is firmly connected to profitability. Gbadago and Honyenuga (2017) found that employee health and safety has significant effect on firm performance. Employee health and safety can be measured using the cost involved in the provision of health care facilities or the allowances that are meant to take care of health and safety issue of workers.

2.2.2 Firm Performance

The concept of performance is understood as achievement of the organization in relation with its set goals. It includes outcomes achieved or accomplished through contribution of individuals or teams to the organization’s strategic goals. The term performance encompasses economic as well as behavioral outcomes. Performance could be regarded as one of the key determinant factors that are widely used in measuring the success or failure of organizations. Although several research works had been carried out on performance related issues as it affects organizations or firms but its definition has been challenging to researchers. According to Roger and Wright (1998), performance is probably the most widely used dependent variable in organizational research today, yet it remains one of the most vague and loosely defined constructs.

According to Baney and Wright (1997), performance is the realization of organizational goals and objectives with minimum resources while performance measurement could be described as the assessment of the level of achievement of organizational goals and objectives with minimum resources. For an organization to effectively and efficiently achieve its goals and objectives, human asset should be considered as a germane factor contributing to the organization's performance.

The performance of an organization could be categorized into human resource which could be measured in terms of turnover; organizational category which could be measured in terms of productivity, quality, customer satisfaction and manufacturing flexibility; financial accounting category which could be measured in terms of return on assets (ROA), return on equity (ROE), profits, sales, and employee value; while the financial market category could be measured in terms of stock prices or the measure of the ratio of the market value of the firm's assets to their replacement cost in line with the Tobin's Q (Rogers & Wright, 1998).

Firm performance is the relative value of the financial measures of the company in relation to its competitors within the same specific industry, because each industry is unique and making comparison across industries may provide bias interpretation about the performance of a firm. For instance, comparing return on assets between a manufacturing company and a consulting company may be meaningless because while one of them is tangible assets intensive, the other one is human capital intensive.

2.2.2.1 Market Valuation

Market valuation is a method used in determining or appraising the value of a business intangible assets, ownership interest, or securities by considering the market prices of comparable assets or businesses that have been sold recently or those that are still available. Price-related indicators like sales, book values, and price to earnings are usually utilized (Sath, 2009).

According to Syed (2009), market valuations are generally based on information regarding comparable properties. The valuation process requires a Value to conduct adequate and relevant research, to perform competent analyses, and to draw informed and supportable judgments. In this process, Valuers do not accept data without question but usually consider all pertinent market evidence, trends, comparable transactions, and other information. Where market data are limited, or essentially non-existent (as for example with certain pecialized properties), the Valuer must make proper disclosure of the situation and must state whether the estimate is in any way limited by the inadequacy of data. All valuations require exercise of a Valuer's judgment, but reports should disclose whether the Valuer bases the Market Value estimate on market evidence, or whether the estimate is more heavily based upon the Valuer's judgement because of the nature of the property and lack of comparable market data.

2.2.4 Historical Development of Human Resource Accounting

Historically, the development of human resources accounting (HRA) has passed through five stages as follows:

Stage I: Derivation of basic HRA concepts

Early interest in HRA came from a variety of sources. Some of the early accounting theorists (Scott, 1925; Paton, 1962) provided support for treating people as assets and accounting for their value. Early organizational psychologists such as Liker were concerned with leadership effectiveness and the ``human resource perspective'' that was based on the premise that people were valuable organizational resources (Odiorne,1963; Likert, 1961). In his pioneering monograph Accounting for Human Assets, Roger Hermanson (1964, 1986) described a model to measure human resource value in external financial reports. Hermanson's work was instrumental in providing inspiration for the next phase in the development of HRA.

Stage II: Basic academic research developing measurement models

Stage two was a period of basic academic research to develop and assess the validity of models for the measurement of human resource cost and value. It was a time of research designed to formulate the present and potential uses of HRA as a tool for human resource professionals, line managers, and external users of corporate financial information. It included a few exploratory experimental applications of HRA in actual organizations. The research done during the early stages of the development of HRA was conducted at the University of Michigan. In addition, beginning in 1967, a research team that included the late Rensis Likert, R. LeeBrummet, William C. Pyle, and Eric Flamholtz, carried out a series of projects designed to develop concepts and methods of accounting for human resources. The outcomes of this research included an article by Brummetet (1968a) representing one of the earliest works in the area of human resource measurement, and the one in which the term`` human resource accounting'' was used for the first time. The authors analyzed the deficiencies of treating employee costs as expenses rather than as assets, and concluded that human resource accounting is primarily used as a managerial tool. In another article published the same year,`` Accounting for human resources'' Brummetet (1968b), the authors assess the impact that HRA can have on management. Flamholtz's (1969) PhD dissertation was an exploratory study that formulated a theory of an individual's value to an organization. In the same year, Brummetet (1969) emphasized HRA as a tool for increasing managerial effectiveness in the acquisition, development, allocation, maintenance, and utilization of its human resources. One of the first attempts to develop a system of accounting for a firm's investments, it studied the application of HRA in Barry Corporation, an entrepreneurial public company.

Stage III: Significant academic research and growth

The third stage of development of HRA, which dated from 1971 to 1977, was a period of rapid growth of interest in human resource accounting. It involved a significant amount of academic research throughout the Western world and in Australia and Japan; and it was a time of early attempts to apply the HRA theory to business organizations. Thus, during this stage, the R.G.

Barry experiment continued and received considerable recognition because, at least few years, the company published proforma financial statements that included human assets. This in turn stimulated increased interest in HRA. Because it was dramatic and innovative, ``putting people on the balance-sheet'' became the dominant image of HRA for many people. But it was controversial. One objection was that HRA communicated management's ownership or control of employees. Nevertheless, over all interest in HRA increased and this stage was characterized by a considerable amount of published research dealing with HRA, as well as a great deal of seminar activity. Another indication of the practical dissemination of academic theory was that, during this stage, the American Accounting Association (AAA) established committees on HRA in 1971-1972 and 1972-1973; and these committees published reports on the development of HRA. The AAA's involvement proved a catalyst for additional research. Empirical research studies found that HRA had an impact on decision making. Some examples of the effect of HRA on external decisions included Elias's (1972) experiment that determined that external users decisions on investments in common stock were made differently with the inclusion of HRA information. Following the work of Elias, Hendricks (1976) who found that stock investment decisions were significantly affected by additional HRA cost accounting information. Schwan (1976) further extended the Elias and Hendricks studies by examining the effects of HRA cost information on financial decisions in comparison with decisions based on conventional financial information. The results showed that the firm with HRA information was considered better prepared; and the inclusion of HRA information resulted in statistically significantly better predictions of a firm's net income. Likewise, Acland (1976), who presented quantified behavioral indicators to financial analysts, found that financial analysts prefer a firm with improving financial operating performance but with declining behavior indicators. Such preferences decrease when the human resource indicators are provided. One study of the effect of HRA on internal managerial decisions was Zaunbrecher's study of the impact of HRA cost information on a personnel selection decision (Zaunbrecher, 1974; Spiceland & Zaunbrecher, 1977). Their results indicated that HRA information was considered even when conflicting traditional information was presented along with it. Tomassini (1974) studied differences in decision preferences involving the length of a layoff and found that HRA data can affect managerial decisions, both at the choice and the process levels. Flamholtz (1976) studied whether human resource value numbers influence the decisions made by certified public accountants. He found statistically significant differences in decisions made using traditional personnel numbers; and either non-monetary HR value numbers; or monetary HR value numbers. He did not find differences using non-monetary versus monetary measures. Flamholtz suggested that the results may have been due to the nature of the research design, and called for future research. Lombardi and Flamholtz (1979) also found a difference in decisions between traditional information and HRA information, but no difference between monetary and non-monetary HRA information. Using Air Force colonels as subjects, Harrell and Klick (1980) found that, contrary to the Flamholtz findings, participants placed significantly greater weight on monetary information and that their decisions were more consistent when they used monetary information. Again the need for future research was emphasized, and a number of researchers heeded the call. In addition to study of the effect of HRA information on decisions, research during the third stage involved the continued development of concepts and models for measuring and accounting for human resource cost and value. Likert and Bowers (1973) included a number of non-monetary behavioral measures, including those involving human resources, in their computation of a monetary estimate of the expected change in the value of a human organization. They expanded the earlier work of Likert (1967) which focused on non-monetary behavioral variables. Flamholtz (1971, 1972) utilized both non-monetary and monetary measures in drawing upon behavioral and economic variables. The Flamholtz model proposes that an individual's value to an organization is based on the future services that are expected to be rendered to the organization in future roles or service states. It views the movement of people among organizational roles overtime as a Markovian stochastic or probabilistic process with service rewards. An individual's ``conditional value'' consisting of promo ability, productivity and transferability, is considered in combination with the probability of the individual's occupying various service states, to result in a monetary measure of an individual's 'expected realizable value.'' Drawing on the Flamholtz model, Ogan (1976) proposed a model that focused on measuring an individual employee's ``certainty-equivalent net benefits.'' Gambling (1974) extended the Flamholtz model by applying a dynamics simulation in order to capture the relevant variable in accounting for human resources. Several other models that combined behavioral and economic approaches were Myers and Flowers (1974), Macy (1976). In their model, Lev and Schwartz (1971) consider the human capital concept and discount the employee's future earnings to the present value. Morse (1973) combined the Flamholtz model and the Lev and Schwartz model into one which specified the present value of the organization's human assets to equal the present value of human resources less the present value of payments to employees. Sadan and Auerbach (1974) also synthesized the contributions of Lev and Schwartz and Flamholtz in their stochastic model for valuation of human resources. During this stage other models included Jaggi and Lau (1974) and Lau and Lau (1978). For further assessment of human resource measurement models, see Groveet (1977), who attempted to clarify and evaluate the various methodologies. In 1974, the first edition of Flamholtz's book Human Resource Accounting (Flamholtz,1974, 1985, 1999) was published, presenting the state-of-the-art of HRA.

Stage IV: Declining interest in HRA

The fourth stage in the evolution of HRA from 1977 to 1980 was characterized by a decreased interest in HRA. Although it waned, interest in HRA did not completely die, and some worthwhile activity took place. For example, Ansari and Flamholtz (1978) suggested that the development of management science facilitated the development of HRA as a managerial tool. In the same year Oliver and Flamholtz (1978) conducted an empirical study on the perceived uncertainty of decisions, decision style, and tolerance for ambiguity and found that HRA monetary replacement cost information did make a difference in layoff decisions. One reason for declining interest in HRA was that most of the relatively easy preliminary research had been accomplished. The remaining research required to develop HRA was complex, could only be accomplished by a relatively few scholars, and required the cooperation of organizations willing to serve as research sites for applied research studies. Since relatively few individuals had either the skills required to do such research or the qualifications required to obtain the necessary corporate participation, few major studies were performed. Furthermore, the required research involved the application of HRA in organizations, and the cost of subsidizing such research was significant, while the benefits either were uncertain or would accrue to the field as a whole and not necessarily to the sponsoring firm. It was at this point that HRA seemed to have been an idea that was promising but that would not be developed much further. Significant trends in the environment changed that within a few years. Stage V: Resurgence of interest in HRA.

Stage five: The current stage of HRA development

The current stage of HRA development dates from 1981. It has involved the beginnings of a resurgence of interest in HRA as well as some practical applications. The first sparks of renewal occurred during 1980, and since that time there have been an increasing number of significant new research studies dealing with the development and application of HRA as well as an increasing number of attempts to apply HRA based on the theory. There has been considerable interaction between theory and application. Flamholtz's resultant study involved the development and application of a model for measuring the replacement costs of civilian industrial engineers. This was the first project of significant scope by a major institution in either the public or the private sector (Flamholtz & Geis, 1984; Flamholtz, 1999). Around this time there was also growing recognition that most of the world's advanced economies had made a gradual yet fundamental transformation in shifting from industrial economies in which plant and equipment are the core assets, topmost-industrial economies in which human capital and intellectual property are the core assets. The potential success of an organization now lies in its intellectual capabilities rather than in its physical assets. Accordingly, organizations must pay attention to the development and deployment of intellectual capital, or the sum of human capital and intellectual property. While long-dominant companies such as US Steel and General Motors have declined, new companies such as Microsoft, Intel and Amgen have emerged as the hallmark of the new era. As a result, measurement tools cause anomalies. Accounting today is still based on an industrial paradigm in which only physical and tangible property is considered an asset. But organizations now need systems that continually assess and re-assess the people they employ, including their skills, talents and behavioral attributes, while paying attention to how human resources impact the bottom line. One accounting tool that irrelevant to the measurement and, in turn, the management of intellectual capital, specifically human capital, is HRA.

2.3 Review of Empirical Studies

This section reviews a number of empirical studies on human resource accounting on firms performance. Prominent among them include the study of Okon, Otuza and Dada (2021) investigated the effect of human resources in accounting information system on management decision making in Seventh-day Adventist institutions in Eastern Nigeria Union Conference. This study adopted a cross-sectional survey research design. The population of this study was 250 accounting officers (Management, and General Administration) in the 24 entities. The sample size was total enumeration of all the 250 employees. A structured and validated questionnaire was used for data collection. The response rate was 84.4%. Data was analyzed using inferential statistics (simple linear regression analysis). The findings revealed that human resources in AIS has a positive and significant effect on management decision-making in Seventh Day Adventist Institutions in the Eastern Nigeria. Based on the findings of this study, the study recommended that institutions should give devoted attention on factors that will promote human resource development in the institutions, as this is capable of contributing positively on the management of the organization, which include informed decision-making.

Kusumastuti, (2021) aims to analyze the impact of the performance of the company and company on disclosures of human resource accounting. The data method uses secondary data and multiple regression analysis is used in the data analysis method. The results of the analysis show that the size of the business, leverage, CAR, and LDR has a positive and significant impact on the disclosure of human resource accounting. Company age and profitability, meanwhile, have no significant impact on the disclosure of human resource accounting.

Ndum and Oranefo (2021) examined the effect of human resource cost on financial performance of quoted brewery firms in Nigeria. The study adopted Ex-Post Facto research design. The population of the study is made up of 5 breweries companies quoted on the floor of the Nigerian Stock Exchange (NSE) as at 2019 and have consistently submitted their annual reports to the NSE from 2007 to 2019. The regression analysis revealed that staff cost has positive and significant effect on the net profit margin of quoted brewery firms in Nigeria, while staff cost has positive and insignificant effect on the return on assets of quoted brewery firms in Nigeria. The study thereby recommended that Nigeria breweries should imbibe to the culture of capitalizing and reporting investment on human resource that can improve the quality and productivity. This will impact positively on their financial performance consequently on the share price value

Olaoye and Afolalu (2020) examined the effect of human capital accounting on Earning per Share (EPS) of deposit money banks in Nigeria. Secondary data were collated from annual reports of the sixteen deposit money banks listed on the Nigerian Stock Exchange between 2006 and 2017. The study employed static panel data of fixed and random effect to explore the relationship between human capital accounting and EPS of deposit money banks in Nigeria. Post estimation test (Hausman Test) was also conducted to select the best and most consistent estimator. Random effect was selected to achieve the stated objective. The results of the random effect revealed that the pension and training and development have significant positive relationship with EPS while other salaries and wages have insignificant positive relationship except director's remuneration (RENMR) that has insignificant negative relationship with EPS. This also implies that training and development, and pension are critical factors that are germane to human capital accounting to boost the earning per share so as to enhance the performance of the banks. Based on these finding, the management of banks should give priority to payment of pension and also engage in continuous training and development of their employees to enjoying better EPS.

Khan, (2020) investigated the impact of human resource accounting (HRA) on the overall performance of the organization. By presenting the details of HRA the study identifies various dimensions of organizations' financial aspects viz., human capital efficiency, organization profitability, return on asset, and return on equity. To understand the impact of various measurements, the study collected required data from 268 responses of human resource and finance departments of SME firms and analyzed the data using linear regression and the result of ANOVA and coefficient values illustrated there is a positive significant effect of HRA on human capital efficiency, organization profitability and return on equity. This is evident that the SME firms in Saudi Arabia are aware of the benefits on HRA of the organization and the only concern is it needs rapid implementation initiatives from the management which is possible with wide awareness across the nation. However, there is no significant effect of HRA on return on assets. This study contributes to the SME firms, human resource departments, and managerial decision-makers to understand the HRA concept and its usefulness to make positive difference in their financial statements.

Olayinka and Adegbie (2020) investigated the effect of human resource accounting on quality of financial reporting (using earnings quality, accounting conservatism, earnings smoothness and persistence as proxies) of quoted oil and gas companies in Nigeria. The study adopted ex-post facto research design. The population of the study was 12 oil and gas companies in Nigeria. Purposive sampling technique was used and considered 12 oil and gas firms which had secondary data information that covered a period of 10 years from 2004 -2018. The empirical findings of financial reporting quality revealed that the human asset provided the basis for this improvement in oil and gas companies. The study concluded that human resource accounting has significant effect on financial reporting quality of quoted oil and gas companies in Nigeria. The study recommended that the regulatory bodies should find ways of rewarding companies that comply with the regulatory guiding standards and comply with information disclosure for earnings quality assessment and sanction erring companies that conceal relevant and purposeful information from the stakeholders.

Nwauzor and Tamunoemi (2020) examined human capital accounting and firms' performance in the oil and gas sector of Nigeria, human capital as a foundation for corporate profitability. The study adopted expo factor research design and the population of the study is the nine (9) downstream oil and gas firms in Nigeria as listed on the Nigeria Stock Exchange (NSE) as at 2018. The result showed that compensation cost and market share is positive and statistically significant. Findings also showed that moderator variable firm size do not moderate the relationship between human capital accounting and financial performance. Therefore, the recommended the 3 Rs for the human resources of oil and gas companies in Nigeria.

Edom (2019) studied the impact of human resource accounting on the profitability of firm with empirical evidence from access bank of Nigeria plc. The crux of the study was to examine the impact of human resource accounting on the profitability of Access Bank Nigeria Plc, from 2003 to 2012. Using the ordinary least square analytical technique, secondary data from Access Bank Nigeria Plc were obtained. Findings revealed that there is a positive relationship between the indicators of human resource cost (training cost, development cost and number of staff) and the profit of the organization (Access Bank Plc). It was also discovered that there was a significant relationship between training cost, development cost and the profit of the bank. However, the number of staff does not have a significant effect on profit of the bank. It was therefore recommended organizations should enhance the retention of education and training on staff so as to enhance performance. Also, accounting standard board should incorporate their accounting standard for the valuation and disclosure of human resource accounting. This study just like the others did not consider staff health and safety as a proxy for human resource accounting.

Akinjare, Idowu and Sule (2019) assesses the impact of Human Resource Accounting (HRA) on the performance of Nigerian firms (2012 – 2016) with the use of secondary data, sourced from ten (10) purposively selected annual report and financial summary of oil and gas companies from 2012 to 2016. The study makes use of ordinary least square for the analysis of collected data. Findings show that both gross staff cost and training and development cost have a positive significant impact on the performance of oil and gas companies in Nigeria. However, the study revealed that there is no significant relationship between health and safety cost and organizational performance. This study concludes that although health and safety cost alone has no significant impact on firm performance, generally, human resource accounting has a positive significant effect on firms' performance. This study therefore recommends that organization should invest more in the training and development of staffs and that there should be a uniformed standard for identification and measurements of human capital assets.

Surarchith and Krishna (2018) examined the effect of human resources on the financial performance of firms in India. The study aimed at ascertaining the relationship between human resource accounting and performance of firm in India. The study was carried out in ten branches of Indian Nationalized bank located in Andhra Pradesh, India. The researchers identified three independent factors under Human Resource Accounting (HRA) and one dependent factor as performance of a firm. The objectives of the study were to examine the relationship between shelter cost and firm's performance, the second objective was to ascertain the effect of health and safety cost on firm's performance' and thirdly to examine the relationship between training and development cost and firm's performance. Ordinary least square was used for the analysis of data. It was found that all the variables had significant and positive relationship with firm performance. According to the findings of the study, shelter cost and training & development cost were strongly correlated with firm's performance, but health and safety cost was moderately correlated with firm's performance. This study was conducted in India with different economic condition of services from that of Nigeria. Thus a Nigerian specific study is needed to ascertain the effect of human resource accounting on financial performance in Nigeria.

Ofurum and Adeola (2018) studied human resource accounting and profitability of quoted firms in Nigeria. The aim of the study was to examine the relationship between Human Resource Accounting and the Profitability of quoted firms in Nigeria. The study used staff remuneration as proxy for Human Resource Accounting; while net operating profit and return on capital employed were used as proxies for profitability. The study used secondary data from audited financial reports of nine (9) service firms quoted on the Nigerian Stock Exchange (NSE) from 2011 -2015. The data collected was analyzed using ordinary least square (OLS) and Pearson Product moment correlation coefficient. The findings revealed that there is no significant relationship between Human Resource Accounting and the profitability of quoted firm. Based on the findings it was recommended that Staff should be well compensated in terms of reward and remuneration so as to bring out the best in them, management should make retirement benefits attractive so as to attract best brain to their respectively firms and establishment and that should be a well coordinated program for staff development if the firms profitability and performance are desired to increase positively. The study was well structured however; the researcher did not exhaust the avenue of the use of OLS for a panel data. By implication, the researcher did not test the data through the Lagranian Multiplier test to ascertain the authenticity or otherwise of the panels to see if the random effect was the most appropriate research technique. This makes the findings opened to doubts, thus our study shall correct this methodological error to see whether the findings would vary.

Inua and Oziegbe (2018) examined the effect of human resource accounting on the performance of quoted banks in Nigeria. The study examined the annual reports of 18 quoted commercial banks from 2009-2017 financial years and the research design adopted was the ex-post facto research design. Using regression analysis, the effect of certain human resource accounting attributes such as staff cost, director remuneration, number of staff and firm size was examined. The results confirm that there is a significant relationship between staff cost, staff strength, and firm size and financial performance. Director remuneration had no significant relationship on financial performance. It was therefore recommend that a better system of communicating employee benefits to the employees of the organization should be adopted.

The study of Vaddadi, Surarchith and Subhashin (2018) aims at ascertaining the relationship between human resource accounting and performance of firm. The study was carried out in ten branches of Indian Nationalized bank located in Andhra Pradesh, India. Quantitative method was used to examine the present study. Researchers identified three independent factors under Human Resource Accounting (HRA) and one dependent factor as performance of a firm. The findings revealed a positive association between shelter cost and firm's performance, a positive association between health and safety cost and firm's performance' and a positive association between training and development cost and firm's performance'. According to findings of current study, shelter cost and training & development cost were strongly correlated with firm's performance, but health and safety cost was moderately correlated with firm's performance. The research helps the banks to identify the importance of investment on human capital.

Kumar and Awasthi (2018) assesses human resource accounting and organizational performance. The study comprises of review of seventy research articles related to human resource accounting and its impact on organizational performance. The study was exploratory in nature and qualitative analysis was done to identify the impact of HRA on organizational performance. Findings of the study are not possible to generalize. But on the basis of available research papers it can be said that HRA has positive impact and negative impact on organizational performance.

Oladele, Aribaba, Ahmodu and Omobola (2018) examined the impact of human resource accounting disclosure on financial performance of selected listed firms in Nigeria. Annual financial report index of the selected firms was used to capture the dependent variable while the human resource accounting disclosure were proxies by firm profitability, firm size, financial leverage and industry type. The study made use of secondary data in eliciting for the required information needed for this study. The population of the study comprises of 188 manufacturing and non-manufacturing firms in the Nigerian Stock Exchange annual report between the period of 2011 – 2015 out of which 20 manufacturing and non-manufacturing firms were selected using ballot system of simple random sampling techniques. The data collected was analysed using descriptive statistics, correlation and regression. The study revealed that there is a positive co-efficient value of 0.565 between the independent and dependent variables. Based on these findings, the study therefore recommends that the listed firms should imbibe the culture of capitalizing their reports and disclose all the expenditure on human resource so as to improve the productivity of the firms.

Omodero and Ihendinihu (2017) investigated human resource accounting and financial performance of firms in Nigerian. The specific objective of the study was to determine the extent to which human resource influence the firms' profit after tax, total revenue and net asset. The hypotheses formulated were tested at 5% level of significance; multiple regression analysis was adopted as the statistical tool. The result revealed that human resource accounting has significant and positive impact on the profit after tax of the companies investigated, while there is a negative impact on the Net Asset. The research therefore concludes that human resources contribution to the financial growth of firms cannot be overemphasized therefore, firms should have the culture of training, developing and motivating the personnel to put in their best for the financial growth of their organizations by providing them with infrastructures and a conducive working environment could increase the rate of job turnover being experienced among firms. This study was conducted in Nigeria however it differed from our study because it did not consider staff health and safety which this study intends to investigate amongst others.

Ezejiofor, Chitom and Chelichi (2017) studied an Appraisal of Human Resource Accounting on Profitability of Corporate Organization in Nigeria the study aimed at determining the adoption of Human Resource Accounting (increase in staff salary, increment in staff and staff retirement benefits) on the Profitability of Corporate Organizations. Specifically, the study sought; to determine the extent at which increase in staff salary has affected organizational profitability; to ascertain if the increment in staff has contributed positively on organizational profitability and to evaluate the extent at which staff retirement benefits has effect on organizational profitability. Research questions and hypotheses were formulated in line with the objectives of the study. Exploratory research design and time series data were adopted for the study. Data for the study was collected from the annual reports of selected ten (10) Deposit money banks in Nigeria. The data was analysed using multiple regression analysis. The study revealed that increase in staff salary has positive effect on organizational profitability, also that the level of increment in staff has influence on organizational profitability. Another finding was that staff retirement benefits have positive effect on organizational profitability. The study recommends among other things that the relevant authorities should look into coming up with a financial reporting standard on human resource activities. Also that organization should enhance the retention of education and training on staff so as to avert wastage of knowledgeable. This study was conducted in Nigeria however it differed from our study because it did not consider staff health and safety which this study intends to investigate amongst others.

Agbiogwu, Ihendinihu, and Azubike (2016) investigated 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 study recommends, among other things, that there should be a uniformed standard for identification and measurement of human capital assets. The reviewed study used content analysis where data is collected using dummy variables. This may not reflect the actual cost incurred by the organizations. This study will use the actual cost of human capital which may give a more appreciable result.

Ahmed, Abiahu, Obi and Okika (2016). Examines the effect of Human Resource Accounting on Financial Performance of Deposit Money Banks listed on Nigeria Stock Exchange. The specific objectives were to ascertain the effect or otherwise of staff cost on return on asset, return on equity and market-to book value of Banks listed on the floor of Nigeria Stock Exchange from 2010-2015. Ex-post facto research design was used for the study. Secondary data were sourced from the publications of the Nigeria Stock Exchange. Ordinary Least Square (OLS) regression analysis was used for the purpose of data analysis. Findings of the study showed that human resource accounting has a positive and statistically significant effect on Financial Performance at 5% level of significance. The study recommended that Human Resource capital should be included in the statement of financial position of organizations to aid investment decision. This study differs from our study because the study did not aim at examining the relationship between the cost of maintaining staff by way of staff health and safety which is one of the objectives of our study.

Kwarbai and Akinpelu (2016) examined the impact of human capital effectiveness (HCE) on corporate performance of industrial goods companies listed in the Nigerian stock exchange market. For a period of 6 years (2009-2014,) the effect of human capital efficiency on performance was examined by applying the human capital component of the value added intellectual coefficient (VAIC) methodology. Multiple linear regression models were used for analyzing the relationship between the variables of interest; employees' growth (EG), earnings per Share (EPS), return on assets (ROA), human capital efficiency (HCE), lagged human capital efficiency and size of the firms. The finding survived a number of robustness check and the result indicates that there is positive significant relationship between human capital efficiency on ROA and EPS, and an insignificant negative relationship between human capital efficiency on size, lagged human capital efficiency and number of employee growth. This study contributes to the existing human capital theories by revealing the HCE of Industrial goods companies and its impact on corporate performance. They suggested that organizations should be committed to regular training and development of employees and ensuring the working environment is conducive for them in order to ensure improvement in employees' productivity and performance.

Olowolaju, and Oluwasesin (2016) examined the effect of human capital on the profitability of quoted manufacturing companies in Nigeria. The study aimed at determining if expenditure on human has influence on the profitability of listed manufacturing companies on the Nigeria Stock Exchange. A sample of 10 listed manufacturing companies on the Nigeria Stock Exchange was used for the study. This study used data mainly from secondary sources and the analysis of data collected was done using descriptive and inferential statistics. The descriptive statistics include mean, standard deviation, kurtosis, skewness while inferential statistics that was used in testing the hypotheses include panel regression and correlation. The study revealed that all the explanatory variables have positive relationship with profitability; however, expenditure on health contributed more to the profitability of the firms. The study concluded that human capital expenditure significantly influenced profitability of manufacturing companies quoted on the Nigerian Stock Exchange and companies that place more emphasis on human capital, maintaining it and treating it as a pure asset will have motivated work force.

Omodero, Alpheaus, and Ihendinihu, (2016) in their study titled "Human resource costs and financial performance: Evidence from selected listed firms in Nigeria" observed that there is general lack of quantification and disclosure of human assets in domestic and international financial reports, and this appears to depress public assessment of the financial performance and value of firms. The study aimed to determine the extent to which investments in human resources influence profit after tax and turnover of firms in Nigeria. Secondary data on relevant financial variables were extracted from published financial statements of ten selected listed firms in Nigeria. The OLS technique was employed in analyzing the data and the results indicate that personnel benefit costs have positive and significant effect on profitability, explaining about 73.9% of the variations in profit after tax of firms in Nigeria. The results however reveal no significant effect of personnel benefit costs on firm turnover. The study therefore concludes that investments in human resources have positive trade-off effects on profitability and growth of firms and recommends greater commitment to manpower development and training, while providing proper infrastructures and conducive working environment to enhance the capacity of employees to drive positive improvements in corporate financial performance.

Amahalu, Okika and Mary (2016) aimed to ascertain the effect of Human Resource Accounting on Financial Performance of deposit money banks listed on Nigeria Stock Exchange. Ex-post fact research design was used for this study. Secondary data were sourced from the publications of Nigeria stock exchange spanning 2010-2015. Inferential statistics of the hypotheses were carried out with the aid of STATA 13 statistical software using Co-efficient of correlation and Ordinary Least Square (OLS) regression analysis. Findings of this study showed that Human Resource Accounting has a positive and statistically significant effect on Financial Performance at 5% significance level. It is recommended among others that Human Resource capital should be included in the statement of financial position of organizations to aid investment decision.

Akindehinde, Enyi and Olutokunbo (2015) investigated the effect of human asset accounting on the performance of business organizations in Nigeria. The study adopted an Ex-post facto research design, conducted on all 18 publicly quoted banks in Nigeria capital market. The instrument of data collection was questionnaire designed on a six steps Likert Scale and validated through peer review with Cronbach Alpha Coefficient of 0.807 and 0.870 for Human Asset and Organization Performance respectively. The hypothesis was tested using simple regression model. The result of their analyses confirmed that human asset accounting significantly affects the banks‟ performance at F-ratio = 56.280, P≤ 0.05, R2 =0.193. They concluded that capitalizing human assets would positively impact on performance of organizations and recommended its disclosure as intangible asset in the statement of financial position. The study used only the banking sector as sample instead of selected firms across the service-oriented firms for a better comparative analysis and conclusion.

Edom., Inah and Adanma (2015), examined the impact of human resource accounting on the profitability of Access Bank of Nigeria Plc, from 2003 to 2012. Using the ordinary least square analytical technique, secondary data from Access Bank of Nigeria Plc were obtained. Their findings revealed that there is a positive relationship between the indicators of human resource cost (training cost, development cost and number of staff) and the profit of the organization (Access Bank Plc). It was also discovered that there was a significant relationship between training cost, development cost and the profit of the bank. However, they noted that, the number of staff does not have a significant effect on profit of the bank. They therefore recommended inter alia that; organization should enhance the retention of education and training on staff so as to avert wastage of knowledgeable investment. Also, accounting standard board should incorporate accounting standard for the valuation and disclosure of human resource accounting. The use of only one firm might not give a result that can be confidently generalized to other firms based on firm policy differences.

Onyekwelu, Osisioma and Ugwuanyi (2015) examined the Impact of Human Capital Accounting (HCA) on financial performance and market valuation using four publicly quoted companies (banks) in Nigeria. The study presented a comparative analysis between the current accounting practice of corporate valuation (net worth) and what it should be if investments on human capital are treated as assets, capitalized and amortized over the useful life span of the assets. Data for their study were sourced through questionnaire which was administered to randomly selected respondents of accountants of management cadre. Secondary data were sourced from the annual financial statements of five selected firms, relevant textbooks and the internet. Data were analyzed using percentages and Chi-Square statistical test. The study reveals among others that there is a significant increase in firms‟ net worth when investments on human capital are treated as assets and capitalized as against the current practice where such expenditures are treated as mere revenue expenses thereby leading to gross undervaluation of firms‟ Statement of Financial Position (Balance Sheet) and the Income Statement (Profit and Loss Account). They recommended that investment in human capital should be treated as asset and so amortized over the expected period of service while the current practice of writing-off the annual investment on human capital from the year's income statement should be discouraged as the practice grossly undervalues firms. Their submission was that relevant regulatory bodies such as Financial Reporting Council of Nigeria, SEC, CBN, NDIC and so on are implored to make laws that will compel quoted firms to compulsorily integrate HCA in their financial reports. The study's attempt to capture all the variables stated in the objectives of this study is plausible however, the use of only one sector (banking) in the limiting factor, since other service firms like insurance, hotels etc were not considered.

Adebawojo, Enyi and Adebawo (2015) investigated the likely effect of human asset accounting on the performance of business organizations in Nigeria. The empirical study adopted an Ex-post facto research design, conducted on all 18 publicly quoted banks in Nigerian Stock Exchange. The instrument of data collection was questionnaire designed on a six steps Likert Scale and validated through peer review with Cronbach Alpha Coefficient of 0.807 and 0.870

for Human Asset and Organisation Performance respectively. The hypothesis was tested using simple regression model. The result of the analyses confirmed that human asset accounting significantly affects the banks' performance. The study concluded that capitalizing human assets would positively impact on performance of organizations and recommended its disclosure as intangible asset in the statement of financial position. The study used only one sector which its findings cannot be conveniently generalized to all the other sectors for decision making.

Adebawojo, Enyi, and Adebawo (2015) in their work titled "Human Asset Accounting and Corporate Performance", conducted their research on all eighteen publicly quoted banks in Nigerian capital market, using an ex-post facto research Design, questionnaire as their instrument of data collection and hypotheses was tested using simple regression model. The result confirmed that human asset accounting significantly affects banks' performance. It concluded that capitalizing human asset would positively impact on performance of organizations and recommends its disclosure as intangible asset in the statement of financial position.

Edom, Inah, Adanma and Eyisi, (2015) studied the impact of human resource accounting on the profitability of Access Bank of Nigeria Plc, from 2003 to 2012. Using the ordinary least square analytical technique, secondary data from audited annual accounts and reports of Access Bank of Nigeria Plc were obtained. Findings revealed that there is a significant positive relationship between the indicators of human resource cost (training cost, development cost and number of staff) and the profit of the organization (Access Bank Plc). However, the number of staff does not have a significant effect on profit of the bank. Nonetheless, organizational performance is dependent upon the performance of the individuals that make up the organization. That is, organization does not exist in a vacuum; there are people (employees) who may work together towards achieving its goal. It was therefore recommended inter alia that; organization should enhance the retention of education and training on staff so as to avert wastage of knowledgeable investment. Also, accounting standard board should incorporate their accounting standard for the valuation and disclosure of human resource accounting.

Parham and Heling, (2015) investigated impact of human capital efficiency on financial performance of Dutch production companies. Using data from 33 Dutch production companies for a period of 6 years (2007-2012) and applying the human capital component of the VAIC methodology the monetary value created by the companies' knowledge workers is measured. Multiple linear regression models are used for analyzing the relationship between the performance of Human Capital and organizational performance measures including ROTA, ROE and EP. The study results revealed that there is positive relationship between HCE and all three corporate performance measures, amongst which it should be referred to the strongly statistically significant relationship between HCE and Employee Productivity (EP). Furthermore, it is significant in the sense that it will provide the companies' managers with vital information required for making decisions on proper deployment of their human capital and investment in this strategic asset.

Ikpefan, Kazeem and Taiwo (2015) presents an appraisal of human capital accounting on performance of Micro Finance Banks (MFB) in Nigeria; specifically using content analysis of the annual reports and financial statements of the sampled Micro Finance Banks. A purposive sample of Sixteen (16) Micro finance banks out of the thirty four (34) existing in Ogun state was investigated. Random sampling technique is used to select respondents in each Micro Finance Banks cutting across directors, employees and shareholders of the Micro Finance Banks. A total of 320 collected questionnaires were used for data analysis. The data were analyzed using (parametric and non-parametric techniques) appropriate descriptive and inferential statistical techniques. The study revealed that human resources expenditure should be capitalized and treated as assets rather than write off to profit and loss accounts. The study also shows that human resources accounting has a significant effect on MFBs performance. The Study recommends that the accounting profession the world over should create a frame work in the balance sheet to recognize treatment of human resources and appropriate value be attached on the inherent qualities of human capital.

Okpako, Atube and Olufawoye (2014) investigated the relationship between human resource accounting and firm performance. A survey on seven (7) companies quoted on the Nigeria Stock Exchange was used. The study adopted firm performance indicator (ROE) over the period 2006-2010.The study used primary data and secondary data. 260 questionnaires were distributed and 246 questionnaires were retrieved on the companies targeted at the staffs of human resource, account ting, and audit/internal control departments which were considered to be the relevant departments for this study. Following the collection of completed questionnaires, the study adopted the principle component analysis to quantify the responses obtained a series which captured the composite value of the human resource accounting variable. The study reveals that human resource accounting variables impacted positively to the level of firm performance. The study's use of questionnaires might not give accurate results which can be confidently dependable upon for generalization of findings.

Prosvirkina (2014) analysed human resources effectiveness in the Russian banking industry and its influence on organizational performance of banks. The sample of the research consists of one hundred ninety seven banks both local and international operated in Russia. Based on the data available in financial statements of banks, published by the Central Bank of the Russian Federation, several indicators were calculated, including return on investment in human capital (HCROI), return on assets (ROA), return on equity (ROE) and productivity. Their findings reveal that there is statistically significant correlation between HCROI and all selected organizational performance indicators of banks in Russia. Their findings demonstrate that HR effectiveness influences the performance of banks in Russia.

Ifurueze, Odesa and Ifurueze (2014), examined the relationship between the aggregated cost of human resource and organizational profitability on one hand and the effect of the disaggregated cost of human resources on organization profitability. Their data was from internal source using a structured information card and annual financial report of BETA NIG PLC. Regression analysis was used. Their findings show that there is a positive relationship between profitability and human resource cost, and that changes in profitability can be explained when the expenditure on human resource are segregated into revenue expenditure and capital expenditure. Their study recommended amongst other, that BETA NIG PLC should imbibe the culture of capitalizing and reporting all investment on human resource that improve the quality and productivity. The use of only one firm might not give a result that can be confidently generalized to other firms based on firms policy differences.

Okpako, Atube and Olufawoye (2014) aimed to determine the relationship between human resource accounting and firm performance. They conducted a survey on seven (7) companies quoted on the Nigeria Stock Exchange. The study used primary data and secondary data. 260 questionnaires were distributed and 246 questionnaires were retrieved on the companies targeted at the staffs of human resource, accounting, and audit/internal control departments which were considered to be the relevant departments for this study. Following the collection of completed questionnaires, the study adopted the principle component analysis to quantify the responses obtained so as to obtain a series which captured the composite value of the human resource accounting variable. It also adopted firm performance indicator (ROE) over the period 2006-2010. The study reveals that human resource accounting variables impacted positively to the level of firm performance.

Vohra and Chaudhary (2014) made effort to understand various effects of human resource accounting practices on firm performance through retention. A questionnaire-based field survey was conducted to collect data from 103 owner/managers from a random sample of Auto sector located at 4 cities of Punjab state of India. The multiple correlation and regression statistical test were used to analyze the derived 5 hypotheses in conjunction with SPSS 16 software to evaluate the findings. The study found detailed significance of human resources accounting practices on firm performance which mediate via decision making planning capabilities. It covers 4 aspects mainly include, employee valuation planning capabilities, employee performance planning capabilities, employee productivity planning capabilities and employee retention planning capabilities.

Ahmadu (2013) in his study investigated the association between human capital efficiency and financial performance of quoted Nigerian banks. Data were obtained from audited annual accounts and reports of the studied banks. The study adopted linear regression method of statistical analysis. The finding reveals that human capital efficiency has no significant impact on the EPS of Nigerian banks and Human capital efficiency has no significant impact on the ROE of Nigerian banks. The study found that efficient utilisation of human capital does not have any significant impact on the return of equity of banks. Also the size of a bank has no significant impact on it return on equity, while the return on equity of banks cannot be predicted by human capital efficiency and size of the banks.

Prince, Lucky and Kingsley (2013) examined the human resource accounting and its impact on organizational profitability. The study made use of cross-sectional data drawn from the Nigerian Stock Exchange fact book (2009). Eleven firms selected from different sectors of the economy were used. The regression result revealed that human capital and intangible asset had a positive and insignificant impact on organizational performance. The study therefore recommends that accounting standard board should incorporate their accounting standard for the valuation and disclosure of human resource accounting; The company law should require companies to attach information about the value of human resource and the result of their performance during their accounting year in notes and schedule among others. The use of eleven service firms was plausible however, only profitability was used as a measure of firm performance whereas, there are also many other measures of performance.

Enofe, Mgbame, Otuya and Ovie (2013) carried out their study to ascertain the relationship between firms' financial performance and human resources accounting disclosures on one hand, and the differences in human resources accounting disclosures reporting level between financial sector and non-financial sector companies quoted in the Nigerian Stock exchange. The study made use of secondary sources of data in eliciting the required information needed for this research. The sample size consisted of fifty (50) listed firms randomly drawn from all sectors in Nigeria. Multiple Regressions was used to analyze the possible relationship between firm financial performance and Human resource Accounting Disclosure in Nigeria, using the statistical package for social science (SPSS) version 15.0.The study finds that a positive relationship exists between the financial performance of a company and its level of Human Resource Accounting Disclosure. The study also indicates that financial companies are disclosing human resources accounting information more than non financial companies and that company's profitability positively influences companies to report the human resources accounting information in their annual report.

Micah, Ofurum and Ihendinihu (2012**)** conducted a study on the relationship between human resource accounting and firm financial performance in Nigeria. Five years financial data from (2005-2009) of fifty two companies across all sectors as listed on the Nigeria stock exchange fact book of (2005-2009) were extracted using simple random sampling techniques. Descriptive, correlation and regression statistical techniques were used in analyzing the data. Their findings show that the combined effect of Firm Financial Performance accounted for 75.9% of the variation in Human Resource Accounting Disclosure (HRAD) with an F– ratio 3.581 being significant at 5% confidence level. The positive correlation between Return on Equity (ROE) and Human Resource Accounting Disclosure (HRAD) suggested that an increase in return on equity encourage firm in reporting human capital information so as to establish trustworthiness with stakeholders; enhance external reputation, appear legitimate in the public eye and avoid cost for non legitimacy. The study used only one internal financial performance measure (ROE) for firms performance which is just one of the measures of firms performance.

Akintoye (2012**)** Adopted the Lev and Schwartz model to determine the value of human resources on effective financial reporting. Simple linear regression was used to analyze the impact of human resource to effective financial reporting using investment in human capital, profitability and capital employed. Secondary data obtained from the annual reports and accounts of Oceanic Bank Plc from 2002-2006 was used. His study discovered that human resource has a positive effect on the profit and capital employed by the bank. The study recommended that the likely length of time an employee will spend in an organization should be considered during recruitment and such estimated human resource be capitalized and amortized overtime. The study focused mainly on the value of human resource on financial reporting rather than firms performance and only one bank was used as a sample.

Ekwe (2012) studied the relationship between intellectual capital and financial performance in the Nigeria banking sector from (2009 – 2011). The research adopted multiple regression analysis method for the test of all the hypotheses. The SPSS statistical software (version 17.0) was used for the data analysis. The result showed a positive significant relationship between components of VAIC and the Return on Assets of the banks in Nigeria. There was also a positive significant relationship between components of VAIC and the Return on Equity of the banks in Nigeria. The study further revealed that there was a positive significant relationship between components of VAIC and employee productivity of the banks in Nigeria. The results also showed that there was no positive significant relationship between components of VAIC and the growth in revenue of the banks in Nigeria. There was a positive relationship between the components of VAIC and market to book value ratio of the banks in Nigeria. The study used only internal financial performance measures (ROA and ROE) to measure firms performance and it also suffer the same limitation like most of the studies by using only one sector of firms (banking).

Ahesha, and Sujani (2012) investigated the impact of investment in human capital on financial performances of the companies in Sri Lanka. In order to achieve the objective of the study, financial information in financial statements of listed companies under Colombo Stock Exchange for the period of 2 years from 2009 to 2010 was used. Sample of the study was selected as 40 companies listed under Colombo Stock Exchange. Data analysis was carried out with aid of SPSS (Statistical Package of Social Sciences). Findings revealed that there is a significant relationship between investment in human capital and firm financial performances. They recommended that investment in HC should include all the expenses incurred on enhancing knowledge, education, expertise and skills of employees. This may involve salaries and wages, training and development, payments for conventions and conferences, dues and subscriptions.

Perera and Thrikawala (2012) investigated the influence of human capital investment on financial performances of companies in Sri Lanka. In order to achieve the objective of the study, financial information was obtained from the annual report of the listed companies' audited annual accounts and reports under Colombo Stock Exchange for the period of 2 years from 2009 to 2010 was used. Sample of the study was selected as 40 companies listed under Colombo Stock Exchange. Correlation coefficient was used as a method of data analysis. Findings revealed that there is a significant relationship between investment in human capital and firm financial performances

Sharma (2012) focuses on the current practices in Human Resources Accounting and to measure the impact of HRA on organizational performance. Aim of the study was to reveal the roles and contribution of human resources, to measure and valued HRA. Primary data is taken to test the hypothesis. Statistical tools like mean, standard deviation, T- test, F-test, correlation and Likerts five point scales is used to analysis the result. The study concluded that that the output of HRA system can be used to enhance performance of employees as well as company and to take a variety of decisions in the area of human resource management.

2.4 Summary of Literature Review

The literature review began with the theoretical framework where two theories were discusses the Human Capital theory and the resource based theory. The human capital theory was propounded by Schultz (1961) and extensively developed by Becker (1964). According to the theory, education or training raises the productivity of workers thereby increasing the performance of the organisation. On the other hand, the resource based theory by Baney (1991) posits that individual employee performance affects firms' level of outcomes. This means that the contributions of individual employee at various levels of organization results in the attainment of corporate goal. The concept of human capital accounting was also discussed in the literature review alongside the concept of firm performance and their measurements. The literature review also captured the review of empirical studies; it was observed from the review that studies in Nigeria did not capture the cost of employee health and safety which is also a useful proxy of human resource accounting. In addition, studies reviewed most especially those in Nigeria did not use external performance measures like earnings per share but rather concentrated on return on assets, return on equity and net profit as measures of performance. This study shall measure performance differently using Tobins Q which is a market performance measure against the internal measures of performance used by other Nigerian researchers.

3.0 METHODOLOGY

This section focuses generally on the methodology employed for an effective examination of the research problem under investigation. It contains a succinct explanation of the research design, population, sampling procedures and their relevance to the research objectives and hypotheses. It also explains the method of data collection and the method of data analysis.

3.1 Research Design

This study adopted the ex-post facto research design to examine the relationship between the dependent and the independent variables. This research design is selected because the study intends to find out how significant human resource accounting relates with the firm financial performance of firms under investigation.

3.2 Population of the Study

The population for the purpose of this study consists of all Deposit Money Banks listed on the Nigerian Stock Exchange. As at 31st December 2019, there were 15 Deposit Money Banks listed on the Nigerian Stock Exchange. The study is focused on Deposit Money Banks because the sector is service oriented and makes high use of human resources and is susceptible to releasing information on the use of this resource.

3.3 Sample Size and Sampling Technique

The sample of this study consists of 14 Deposit Money banks listed on the floor of the NSE; the banks were purposively sampled because the researcher could not access the financial statements of the other banks for the relevant years of the study (2016-2020). These banks include First Bank Nigeria Plc, United Bank for Africa, Zenith Bank, Fidelity Bank, Access Bank, Skye Bank, Guarantee Trust Bank, Eco Bank of Nigeria, Union Bank plc and Wema Bank.

3.4 Sources of Data

The secondary source of data for the companies under investigation was obtained from the published annual reports of the companies from 2015-2019.

3.5 Variables and their Measurements

There are basically two categories of variables in this study; the dependent and the independent variables. The independent variables are the staff remuneration, cost of staff training, cost of health care and safety while the dependent variable is the earnings per share. Earnings per share is selected as a measure of performance because if the staff are well remunerated, trained and taken care of they will be motivated to input more in other to achieve a greater output for the firm. Thus the more the inputs, the more the earnings of the company and the more the earnings per share.

Symbols	Variable name	Variable type	measurement	A priori expectation
TQ	Tobin's Q	Dependent	Market value/total assets	
SRM	Staff remuneration	Independent	Total amount of salaries paid to staff	+
CST	Cost of staff training	Independent	Total cost involved in training of staff	+
HCS	Health care and safety	Independent	Cost of health care	+
SIZ	Firm Size	Control	Value of total assets	+
AGE	Firm Age	Control	Years of Listing	+

Source: Author's compilation 2020.

3.6.1 Model Specifications

The model for the study is multiple regression model; the model is shown below.

$$TQ_{it} = \beta_{01} + \beta_1 SRM_{it} + \beta_2 CST_{it} + \beta_3 HCS_{it} + e_{it}$$

where:

TQ = Tobin's Q
SRM = staff remuneration
CST = cost of staff training
HCS = cost of health care and safety of staff
SIZ = Firm size
AGE = Firm Age
$e_i t$ = Error term
i = company
t = time
β_{01} = Intercept
β_1- β_3 = coefficient of the independent variables

3.7 Data Analysis Techniques

The study was used the descriptive statistics, correlation and multiple regression analysis as the techniques for data analysis. However, multiple regression analysis was considered as the major technique for data analysis. This is because of its ability to predict the relationship between human resource accounting variables and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange. The correlation test was used to determine the strength of the relationship amongst the independent variables. The multiple regression will be used to ascertain the nature of the relationship that exist between the dependent and the independent variables. Econometric tests such as the test of multicollinearity, data normality and the heteroscedasticity tests was conducted to ensure that the data set was fit for multiple regression analysis. The student t-test was used to test the hypotheses that was formulated because the student t-test produces results that can be used to reject or accept the null hypotheses by comparing the values of the t-test with the critical value of +- 1.96.

4.0 RESULTS AND DISCUSSION

This study investigated the effect of human resource accounting on the financial performance of DMBS in Nigeria. In order to achieve the objective, this section analysis the data collected from fourteen banks that are listed on the NSE within the study period. The chapter also analyses the data collected using the regression analyses technique and tests the research hypotheses with a view to answering the research questions stated earlier.

4.1 Descriptive Statistics

With the aid of STATA version 15 Software, the data in appendix II was used to compute the descriptive statistics made up of the mean, standard deviation maximum and minimum for both the dependent and the independent variables.

Table 2: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min.	Max.
TQ	70	1.30	0.19	1.02	1.79
SRM	70	6.37	1.57	2.62	9.89

HCS	70	4.68	3.49	6.19	9.52
CST	70	6.59	1.49	3.43	9.96
SIZ	70	4.76	3.31	3.43	9.52
AGE	70	23.30	6.48	12.00	35

Sours: STATA version 15 output

The results from the descriptive statistics show a total of 70 observations because the panel study was done using 14 sampled Deposit Money Banks for a period of 5 years. Tobin's Q (TQ) has a mean of 1.30 with a variability of 0.19. The maximum and minimum values of TQ are 1.79 and 1.02 respectively. SRM has a mean of 6.37 with a standard deviation of 1.57 and a maximum and minimum of 9.89 and 2.62 respectively. In addition, HCS has a mean of 4.68 with a standard deviation of 3.49 and a minimum and maximum of 6.19 and 9.52. Furthermore; CST has a mean of 6.59 and standard deviation of 1.49 with a maximum and minimum of 1.96 and 3.43 respectively. The control variable SIZ has the mean of 4.76 with a standard deviation of 3.13 with a maximum and minimum of 3.43 and 9.52 respectively. The variable AGE has the mean of 23.3 with a standard deviation of 6.48, the maximum and minimum remains at 35.00 and 12.00 respectively.

Test of Normality

The test of normality showed that three of the variables were normally distributed. The variables are SRM, TQ and CST the other variables were not normally distributed however, due to the robust sample size the other variables may also exhibit some normality characteristics. The test of normality is as shown below.

Table 3 Result of Shapiro Wilk W test for normality

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
SRM	70	0.97220	1.711	1.168	0.12142
HCS	70	0.83214	10.332	5.078	0.00000
SIZ	70	0.85179	9.122	4.808	0.00000
AGE	70	0.96049	2.432	1.932	0.02666
CST	70	0.96735	2.010	1.518	0.06449
TQ	70	0.95032	3.058	2.430	0.00754

Source: STATA version 15

Correlation results

The correlation test was also carried out to ascertain the strength of the relationship between the independent variables. The test result is shown below

Table 4. Correlation statistics

	SRM	HCS	SIZ	AGE	CST
SRM	1.0000				
HCS	-0.0460	1.0000			
SIZ	-0.0998	0.0556	1.0000		
AGE	-0.0560	-0.3193	-0.0624	1.0000	
CST	-0.0747	-0.0215	0.0607	-0.1883	1.0000

Source: STATA version 15 output

From table 4 above, the highest correlation is between HCS and AGE which is 0.0747, this figure is far less than 0.8 which is the threshold for the strength of the correlation. This means that the highest value of correlation among the predictor variables is relatively low, this connotes that the independent variables are related in such a way that their individual effect on the outcome variables can clearly be distinguished implying that there is absence of multicollineality problem.

Heteroskedasticity test: After the Ordinary Least Square regression was conducted on the dataset a heteroskedasticity test was done to check if the variability of the error terms was constant. The null hypothesis is that there is the presence of homoskedasticity however; the result of the test shows a p-value of 0.1667 indicating the presence of homoskedasticity implying that the error terms have a constant variation. (appendix 1I)

Multicollinearity Test

Variance inflation factor (VIF): Table 5 below revealed that the average VIF obtained from the VIF result is 1.07, to be specific the VIF of AGE WAS 1.16, that of HCS was 1.12, CST was 1.05, SRM stood at 1.02 and SIZ was also 1.02 the mean VIF of the model is less than 5. This clearly indicates the absence of multicollinearity problem among the independent variables under investigation; multicollinearity is a situation where the independent variables are correlated such that their individual effect on the dependent variable cannot be clearly identified. This technique ensures that the independent variables are not so correlated to the point of distorting the results and assists in filtering out those ones which are likely to obstruct the robustness of the model.

Table 5 Variance Inflation Factor (VIF) test of multicollinearity

Variable	VIF	1/VIF
AGE	1.16	0.860231

HCS	1.12	0.891735
CST	1.05	0.955797
SRM	1.02	0.977488
SIZ	1.02	0.981084
Mean VIF	1.07	

Source: STATA version 13

Table 5 also show that the tolerance value (TV) for all the variables is above 0 and close to 1 which falls within the recommended range for regression analysis; these results are pointers to the fact that there is absence of multicollinearity problem among the independent variables.

Lagrange multiplier (LM) test: The Breusch-Pagan Lagrange Multiplier is a test that helps the researcher to decide between the random effect (RE) regression and the simple time series ordinarily least square (OLS) regression techniques for the analysis of data. The null hypothesis in the LM test is that variance across entities (panels) is zero implying that there is no panel effect in the data therefore; one can run a simple OLS. The decision rule is that if the prob>chi2 is less than 0.05 the null hypothesis is rejected otherwise accepted. In this study, the LM test show the prob>chi2 of 0.1667 which proves evidence of insignificant differences across panels thus the null hypothesis is accepted which leads us to the choice of OLS as the most appropriate regression technique.

Table 4. The Ordinary least square regression results (OLS)

FV	Coef.	T	P>/t/
SRM	-5.19	-0.38	0.708
HCS	8.10	1.25	0.216
SIZ	6.71	0.10	0.918
AGE	0.01	53.13	0.000
CST	2.94	2.01	0.049
Pob			0.0000
R-squared			0.9809

Source: STATA version 15 output

The significance test: this was used to test the fitness of the regression model adopted for the study at a 5% level of significance. The decision rule is that a significance level of less than or equal to 0.05 shows that the model used for the study is fit and can lead to the generalisation of results otherwise, the model is not fit to generate good and convincing results and should be modified or discarded. However, results from regression above show Prob.>**F** values (0.0000) which is statistically significant showing that the model was fit for the generalisation of the findings of the study.

The table further show the R-square of 0.9809 meaning that 98.09% of the variation in TQ is a function of the changes in the predictor variables under investigation. The result also shows that human resource accounting variables such as HCS and SRM have insignificant relationship with TQ as shown from the P-values of 0.216 and 0.708 respectively. On the contrary, CST has significant effect on TQ as shown from the probability of 0.049.

4.2 Test of Hypotheses

The hypotheses were tested using the student t-score found in the OLS results. The critical value was compared with the calculated t-value. The decision rule was to reject the null hypothesis if the t-value falls outside the region of non rejection of the null hypothesis of ± 1.96 otherwise accept the null hypothesis.

4.2.1 Test of Hypothesis One

Ho_1: Staff remuneration has no significant effect on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange

The results presented in table 4, staff remuneration has a calculated t-test value of -0.38 while the critical t-test reflect a value of ±1.96 which lies within the region of acceptance. The study therefore accept the null hypothes is and concludes that staff remuneration has no significant effect on the performance of Deposit Money Banks listed on the Nigerian Stock Exchange.

4.2.2 Test of Hypothesis Two

Ho_2: There is no significant relationship between cost of staff training and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange.

The results presented in table 4, also reveals that staff trainings has a calculated t-test value of 2.01 while the critical t-test reflect a value of ±1.96 which lies outside the region of acceptance. The study therefore reject the null hypothesis and concludes that there is a significant relationship between cost of staff training and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange.

4.2.3 Test of Hypothesis Three

$H0_3$: There is no significant relationship between cost of health care and safety of staff and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange

Findings from table 4 reveals that cost of health care has a calculated t-test value of 1.25 while the critical t-test reflect a value of ±1.96 which lies within the region of acceptance. The study therefore accepts the null hypothesis and concludes that there is no significant relationship between cost of health care and safety of staff and the performance of Deposit Money Banks listed on the Nigerian Stock Exchange

4.3 Discussion of Findings

The findings of this study are discussed in line with the data analysed. The discussion is done in relation to the effect of the independent variables on the dependent variable.

4.3.1 Staff remuneration (SRM) and Firm Performance

Contrary to the a priori expectation that SRM would have a positive and significant effect of firm financial performance, the experimental result indicates that SRM has a negative (-5.19) and insignificant (0.708) effect on the performance of Deposit Money Banks listed on the Nigeria Stock Exchange. Finding of staff remuneration is in inline with the findings of studies conducted by Ahmed, Abiahu, Obi and Okika 2016; Khan and Baloch 2017;. Micah, Ofurum and Ihendinihu 2012 who also found insignificant effect between SRM and firm financial performance. The insignificant nature of staff remuneration with firm financial performance could mean that the changes in staff remuneration may not matter in terms of increasing or decreasing the market value of the firm.

The remuneration of staff may not also occasion any significant change on the assets of the firm meaning that meaning that an increase or decrease in staff remuneration may not occasion any change in the Tobin's Q value. The study suggests that what may be of value to the changes in market value of the Banks may be the changes in technology and the adoption of latest electronic banking system that may facilitate fast and easy transactions to give the Bank a boost at the capital market and consequently market value. This finding is also supported by Resource Based Theory by Baney (1991). The theory posits that individual employee performance affects firms' level of outcomes. It was expected that remuneration should affect the performance of individuals to give out their best for firms to achieve higher value but empirical findings posit that to achieve the market value of the firm, employees can be motivated through factors other than remuneration. Such factors includes employee's intellectual competence, employee's skill and corporate human psychological function must be properly developed if corporate goals must be achieved.

4.3.2 Cost of Staff Training (CST) and Firm Performance

In line with the a priori expectation, the cost of staff training has positive and significant relationship with firm performance of the Banks investigated. The empirical analysis indicates that a unit increase in staff training cost may significantly increase the market value of the firm by 2.94 units. The student T-value of the results is 2.01 which is greater than the tabulated T-value of ±1.98. This lead to the rejection of the null hypothesis and acceptance of the alternative hypothesis that CST has significant effect on the financial performance of DMBs listed on the Nigerian Stock Exchange. the findings of this results are consistent with the findings of Ofurum and Adeola (2015); Okpala, Atube and Olufawoye. (2014).

The positive association between the variables could possibly be because the result achieved from the training outweighs the cost of the training. Also when staff are trained they are more informed on the jobs they handle and efficiency and effectiveness is achieved. Also, the aim of any organization is to cut cost and improve savings thus, for a Bank that have well trained staff, cost may be reduced by way of avoidance of waste this may improve performance. Also efficiency of work may improve the market value of the firm. If the staff of the Bank are well trained, the bank may always and every time meet up with the demands of customers which may put the bank in a vantage position to achieve positive market values at all times. This finding is supported by the Human Capital Theory which was propounded by Schultz (1961); the theory states 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 finding is also backed up by the Resource Dependency Theory by Baney (1991) who stated that workers are motivated to work if they are properly trained. The study suggests that training of staff should remain paramount not minding the cost implication as the training may not just help in achieving financial performance but in building the capacity of the workers.

4.3.3 Cost of Health Care (HCS) and Firm Performance

Contrary to the stated hypothesis, HCS has a positive (8.10) and insignificant (0.216) relationship with market value of DMB proxied by Tobin's Q. the result further shows that the T-value calculates as the student T test value was 1.25 which falls within the region of non-rejection of the null hypothesis of ± 1.96. This became nature for the researcher to accept the null hypotheses that HCS has no significant effect on the market value of the firm. The same result found by this study was earlier found by Okpala, Atube, Olufawoye 2014; Omodero & Ihandinihu 2017; Adebawojo, Enyi, Adebawo, 2015 Ali & Nada (2018) Ahmed, Abiahu, Obi & Okika, 2016. The insignificant nature of the cost of health care services of staff on performance could exist because; most of the staff are now engaged in one form of health insurance scheme and the other so the burden of health care cost is not heavy on the employer again. This is because when health challenges by staff come knocking, the organization shares the cost with the insurance facilities that the staff are meant to enjoy relieving them of the heavy burden in terms of cost of treatment. This could be a factor that may inhibit the significant interaction expected between the variables. Also if the cost of health care is insignificant, then it means the cost does not matter when it comes to achieving firm value so the cost that is bore by the banks is not that high to reduce the market value of the firm. The insignificant nature of the relationship between the variables could also mean that the banks have a good cost control system by way of mitigating the risk and putting in place safety measures to prevent their staff from hazardous health challenges. This study recommends that banks investigated should insist that all staff is covered by some form of health insurance to further reduce expenditure on health care and safety so as to further improve the market value of the banks.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study discussed the effect of human resource accounting on the financial performance of Deposit Money Banks listed on the Nigeria Stock Exchange. this section discusses the summary arising from the findings of the study, it also discusses the conclusion and recommendations of the study. The limitations of the study and the recommendations for further studies are also started in this section.

5.1 Summary of Findings

The findings of the study are summarized as follows;

i. Staff remuneration has negative and insignificant effect on the performance of deposit money bank listed in the Nigeria stock exchange

ii. Cost of staff training has a significant positive effect on the performance of deposit money bank listed in the Nigeria stock exchange

iii. Cost of Health Care and Safety has no significant effect on the performance of deposit money bank listed in the Nigeria stock exchange

5.2 Conclusion

Based on the summary of findings in this study, the study concluded that;

i. Staff remuneration does not significantly affect market value of quoted deposit money banks in Nigeria.

ii. Cost of staff training does not significantly affect market value of quoted deposit money banks in Nigeria

iii. Cost of Health Care and Safety significantly affect market value of quoted deposit money banks in Nigeria

5.3 Recommendations

i. It has been recommended that staff remuneration should be improved so that staff can put in their best in other to achieve better performance.

ii. The cost of health care of staff should be reduced and maintained at a minimal level so that performance would be enhanced.

iii. The cost of staff training should be maintained or increased since training must be adequate for staff to acquire skills and the knowledge to move performance to higher heights.

5.4 Contribution to Knowledge

This study has contributed to the body of existing literature in a way that it brings to light how surrogates of human resource accounting like staff remuneration, cost of staff training and cost of health care has affected the performance of Nigerian deposit money banks measured by

Tobins Q.

5.5 Limitation of the Study

The limitation of this study can be identified majorly from the method of data collection. This is because; the study did not carry out a census sampling technique since not all the banks had the required data for the study. However, 14 banks out of 15 were sampled implying that the sample was adequately represented. This further suggests that the findings of the study may not be impaired on the basis of inadequate sample.

5.6 Suggestion for Further Studies

Human resource accounting is a major tool in achieving financial performance; this is because the individuals involved must have had some form of educational training be it formal or informal to man some aspects that leads to the financial performance of the company. It is recommended therefore that further studies should try to moderate the level of education of staff before employment with human resource accounting variables to see if a better result can be achieved. This is because the fundamental educational qualification of staff may speak volumes as to how receptive the staff can be in terms of training for better results.

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Appendix I

DATA FOR THE STUDY

BK	Years	COD	SRM	HCS	SIZ	AGE	CST	FINACIAL PERFORMANCE
FIRST	2020	1	4628112345	8123451232	84326009244	35	5342512314	1.544068
	2019	1	5241643243	7834237658	78323689691	34	5352531232	1.531479
	2018	1	5241523567	7867548432	76833650152	33	8484827658	1.518514
	2017	1	6351412341	6756433423	74285414023	32	6151438432	1.50515
	2016	1	5341422314	6754325647	73233060614	31	5251423423	1.491362
ZENITH	2020	2	4141422315	7467453425	72535384440	31	5241325647	1.491362
	2019	2	5342512314	7467453847	64327828916	30	5241693425	1.477121
	2018	2	5352531232	7845344564	59416416553	29	7391832345	1.462398
	2017	2	8484827658	8947366543	52311261372	28	7361582343	1.447158
	2016	2	6151438432	7865342301	46210681618	27	7361532345	1.431364
ACCESS	2020	3	5251423423	7845328949	84334593396	26	7361533243	1.414973
	2019	3	5241325647	6289063425	79336242477	25	7153423567	1.39794
	2018	3	5241693425	6733996748	76223304964	24	8716472341	1.380211
	2017	3	7391832345	6298033456	73716979109	23	7867392314	1.361728
	2016	3	7361582343	6392797634	71320574491	22	7461532315	1.342423
EC0	2020	4	7361532345	6256447823	94327269939	21	9871642314	1.322219
	2019	4	7361533243	6190785612	93220543548	20	6565111232	1.30103
	2018	4	7153423567	7822005634	90426660849	19	5142527658	1.278754
	2017	4	8716472341	84326009244	86120909474	18	5142528432	1.255273
	2016	4	7867392314	83535384440	84330373922	17	4142413423	1.230449
FIDELITY	2020	5	7461532315	18416416553	60226411350	16	5241425647	1.20412
	2019	5	9871642314	43210681618	53221719414	15	5425143425	1.176091
	2018	5	6565111232	52311261372	48115237334	14	6351763847	1.146128
	2017	5	5142527658	64327828916	46232644413	13	6351634564	1.113943
	2016	5	5142528432	74223304964	43229263861	12	3838736543	1.079181
FIR CTY	2020	6	4142413423	84334593396	5142528432	19	7362538765	1.278754
	2019	6	5241425647	84336242477	5241425647	18	6351539813	1.255273
	2018	6	5425143425	73716979109	5142527658	17	5361634325	1.230449
	2017	6	6351763847	12320574491	46224914172	16	4151416534	1.20412
	2016	6	6351634564	18120909474	4242413423	15	6511412342	1.176091
GUAR	2020	7	3838736543	93220543548	78326009244	25	6351434325	1.39794
	2019	7	7362538765	94327269939	72285414023	24	8783711242	1.380211

	2018	7	6351539813	84330373922	63535384440	23	7516153425	1.361728
	2017	7	5361634325	90426660849	5651763847	22	6351632314	1.342423
	2016	7	4151416534	95226411350	5425143425	21	8945239935	1.322219
STBIC	2020	8	6511412342	83221719414	64327828916	17	7845236673	1.230449
	2019	8	6351434325	43115237334	58210681618	16	6722445589	1.20412
	2018	8	8783711242	43223644413	52311261372	15	5342782234	1.176091
	2017	8	7516153425	43229263861	43223644413	14	3426786674	1.146128
	2016	8	6351632314	46224914172	43115237334	13	8345232345	1.113943
UNION	2020	9	6561531325	64327828916	84334593396	35	6467893243	1.544068
	2019	9	6381733263	74223304964	80336242477	34	9955663567	1.531479
	2018	9	7673612314	84334593396	72716979109	33	7123452341	1.518514
	2017	9	6351673245	84336242477	6561531325	32	8911232314	1.50515
	2016	9	6351766734	73716979109	6381733263	31	7611002315	1.491362
UNITY	2020	10	9893802314	6561531325	8381733263	35	6134902314	1.544068
	2019	10	7361736546	6381733263	8245239935	34	5342512314	1.531479
	2018	10	6571672342	7673612314	7673612314	33	5352531232	1.518514
	2017	10	7461514352	6351673245	6851673245	32	8484827658	1.50515
	2016	10	5241366743	6351766734	6551766734	31	6151438432	1.491362
WEMA	2020	11	9482746547	84326009244	8345239935	24	5251423423	1.380211
	2019	11	7265223420	83535384440	6945232345	23	5241325647	1.361728
	2018	11	6317362390	18416416553	6122445589	22	5241693425	1.342423
	2017	11	6153456300	43210681618	5142782234	21	7391832345	1.322219
	2016	11	7516535341	52311261372	4426786674	17	7361582343	1.230449
UNITED	2020	12	8716324372	64327828916	8655663567	24	7361532345	1.380211
	2019	12	9478677537	74223304964	83535384440	23	7361533243	1.361728
	2018	12	5142723595	84334593396	82326009244	22	7153423567	1.342423
	2017	12	6452434953	84336242477	72285414023	21	8716472341	1.322219
	2016	12	8494856382	73716979109	6467893243	17	7867392314	1.230449
STERLIN	2020	13	6716336548	12320574491	74223304964	24	7461532315	1.380211
	2019	13	3516735648	18120909474	66416416553	23	9871642314	1.361728
	2018	13	2716892301	93220543548	61327828916	22	6565111232	1.342423
	2017	13	6351438949	94327269939	52311261372	21	5142527658	1.322219
	2016	13	2615363425	84330373922	45210681618	17	5142528432	1.230449
POLALIS	2020	14	7463526748	90426660849	84334593396	24	4142413423	1.380211
	2019	14	5341783456	95226411350	74336242477	23	5241425647	1.361728
	2018	14	6351427634	83221719414	68716979109	22	5425143425	1.342423
	2017	14	5351423456	43115237334	55223963861	21	6351763847	1.322219
	2016	14	5251433379	43223644413	46124714172	20	6351634564	1.30103

Appendix II

Descriptive statistics

```
. summarize SRM HCS SIZ AGE CST TQ
```

Variable	Obs	Mean	Std. Dev.	Min	Max
SRM	70	6.37e+09	1.57e+09	2.62e+09	9.89e+09
HCS	70	4.68e+10	3.49e+10	6.19e+09	9.52e+10
SIZ	70	4.76e+10	3.31e+10	3.43e+09	9.52e+10
AGE	70	23.3	6.488228	12	35
CST	70	6.59e+09	1.49e+09	3.43e+09	9.96e+09
TQ	70	1.303	.1964493	1.02	1.79

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of TQ1

chi2(1) = 4.58

Prob > chi2 = 0.1667

OLS regression result

```
. regress TQ1 SRM HCS SIZ AGE CST
```

Source	SS	df	MS			
				Number of obs	=	70
				F(5, 64)	=	657.38
Model	1.03505616	5	.207011232	Prob > F	=	0.0000
Residual	.020153761	64	.000314903	R-squared	=	0.9809
				Adj R-squared	=	0.9794
Total	1.05520992	69	.015292897	Root MSE	=	.01775

TQ1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
SRM	-5.19e-13	1.38e-12	-0.38	0.708	-3.27e-12	2.24e-12
HCS	8.10e-14	6.48e-14	1.25	0.216	-4.85e-14	2.10e-13
SIZ	-6.71e-15	6.51e-14	-0.10	0.918	-1.37e-13	1.23e-13
AGE	.0188619	.000355	53.13	0.000	.0181527	.019571
CST	2.94e-12	1.46e-12	2.01	0.049	1.32e-14	5.86e-12
_cons	.8913491	.016781	53.12	0.000	.8578252	.924873

Variance inflation test for multicollinearity

```
. estat vif
```

Variable	VIF	1/VIF
AGE	1.16	0.860231
HCS	1.12	0.891735
CST	1.05	0.955797
SRM	1.02	0.977488
SIZ	1.02	0.981084
Mean VIF	1.07	

Test of normality

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
SRM	70	0.97220	1.711	1.168	0.12142
HCS	70	0.83214	10.332	5.078	0.00000
SIZ	70	0.85179	9.122	4.808	0.00000
AGE	70	0.96049	2.432	1.932	0.02666
CST	70	0.96735	2.010	1.518	0.06449
TQ	70	0.95032	3.058	2.430	0.00754

Correlation Result

```
. correlate SRM HCS SIZ AGE CST
(obs=70)
```

	SRM	HCS	SIZ	AGE	CST
SRM	1.0000				
HCS	-0.0460	1.0000			
SIZ	-0.0998	0.0556	1.0000		
AGE	-0.0560	-0.3193	-0.0624	1.0000	
CST	-0.0747	-0.0215	-0.0607	0.1883	1.0000

Random effect regression

```
Random-effects GLS regression                   Number of obs     =         70
Group variable: COD                             Number of groups  =         14

R-sq:                                           Obs per group:
     within  = 0.9536                                         min =          5
     between = 0.9834                                         avg =        5.0
     overall = 0.9802                                         max =          5

                                                Wald chi2(1)      =          .
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =          .
```

TQ1	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
SRM	7.63e-13	8.85e-13	0.86	0.389	-9.71e-13	2.50e-12
HCS	3.43e-14	5.30e-14	0.65	0.517	-6.96e-14	1.38e-13
SIZ	-6.61e-15	4.38e-14	-0.15	0.880	-9.24e-14	7.92e-14
AGE	.0198904	.0005054	39.35	0.000	.0188997	.020881
CST	1.78e-12	8.98e-13	1.98	0.047	2.03e-14	3.54e-12
_cons	.8690144	.0162071	53.62	0.000	.837249	.9007798
sigma_u	.01810441					
sigma_e	.00899888					
rho	.80188409	(fraction of variance due to u_i)				

Fixed effect regression

```
Fixed-effects (within) regression               Number of obs     =         70
Group variable: COD                             Number of groups  =         14

R-sq:                                           Obs per group:
     within  = 0.9537                                         min =          5
     between = 0.9832                                         avg =        5.0
     overall = 0.9800                                         max =          5

                                                F(5,51)           =     210.08
corr(u_i, Xb)  = -0.6010                        Prob > F          =     0.0000
```

TQ1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
SRM	7.21e-13	9.02e-13	0.80	0.427	-1.09e-12	2.53e-12
HCS	2.01e-14	5.56e-14	0.36	0.719	-9.14e-14	1.32e-13
SIZ	-5.52e-16	4.48e-14	-0.01	0.990	-9.05e-14	8.94e-14
AGE	.0206503	.0006494	31.80	0.000	.0193467	.021954
CST	1.70e-12	9.13e-13	1.86	0.069	-1.34e-13	3.53e-12
_cons	.852477	.0181314	47.02	0.000	.8160767	.8888773
sigma_u	.02019335					
sigma_e	.00899888					
rho	.83431291	(fraction of variance due to u_i)				

```
F test that all u_i=0: F(13, 51) = 15.22                     Prob > F = 0.0000
```

Hausman specification test

	Coefficients (b) fe	(B) .	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
SRM	7.21e-13	7.63e-13	-4.13e-14	1.74e-13
HCS	2.01e-14	3.43e-14	-1.42e-14	1.66e-14
SIZ	-5.52e-16	-6.61e-15	6.05e-15	9.50e-15
AGE	.0206503	.0198904	.00076	.0004077
CST	1.70e-12	1.78e-12	-8.04e-14	1.67e-13

```
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        3.47
                Prob>chi2 =      0.0623
```