HUMAN RESOURCE ACCOUNTING AND THE QUALITY OF FINANCIAL REPORTING OF QUOTED SERVICE COMPANIES IN NIGERIA

BY

ABUBAKAR, Salisu
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BEING A Ph. D. DISSERTATION SUBMITTED TO THE POSTGRADUATE SCHOOL OF AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY IN ACCOUNTING AND FINANCE

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DECLARATION

I hereby declare that this Ph.D. Dissertation entitled "*Human Resource Accounting and the Quality of Financial Reporting of Quoted Service Companies in Nigeria*" is a product of my research effort. It has not been published in any form or presented in any where for the award of any degree being it at undergraduate or postgraduate level. Materials consulted for the purpose of the research and information derived from literature has been adequately and duly acknowledged by way of reference.

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ABUBAKAR, Salisu
Ph.D./Admin/03758/2006-2007

CERTIFICATION

This is to certify that this Dissertation entitled "*Human Resource Accounting and the Quality of Financial Reporting of Quoted Service Companies in Nigeria*" by **ABUBAKAR;** *Salisu* meets the regulations governing the award of Degree of Doctor of Philosophy in Accounting and Finance of Ahmadu Bello University, Zaria and is therefore approved for its contribution to knowledge and literary presentation.

Professor Aminu S. Mikailu	____________	___________
Chairman, Supervisory Committee	Signature	Date
Dr. Ahmad Bello	____________	___________
Member, Supervisory Committee	Signature	Date
Dr. Muhammad Tanko	____________	___________
Member, Supervisory Committee	Signature	Date
Dr. Ahmad Bello	____________	___________
Head of Department	Signature	Date
Professor Adebayo A. Joshua	____________	___________
Dean, Postgraduate School	Signature	Date

DEDICATION

To my father *(Rahimahul-Lah),* mother, and lovely wife. I love you so much!

ACKNOWLEDGEMENT

All praises be to Allah, Who taught man that which he knew not!

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ABSTRACT

The transformation of modern economies from manufacturing to information and knowledge-based requires some modification to accounting and reporting procedures. The fast growth of service organisations in the 21st century, whose major asset is the human capital and the intellectual ability of their work force, prompted the need to look into issues surrounding the capitalisation of human resource expenditure/investment. This study assessed the impact of human resource valuation and reporting on the quality of information contents of Nigerian quoted service companies' financial statements. The study also developed a model for measuring the value of human resource and how the value could be reported in the financial statements of quoted service companies in Nigeria. Descriptive and field survey research methods were employed in the study. Data were collected from the conduct of interviews, administration of questionnaire and financial statements of the selected quoted service companies. The data collected were analysed using Kendall's Coefficient of Concordance (KCC), Pearson's Chi-square technique, and the use of tables and percentages. KCC was used to find the concordance of selected experts regarding the nature and characteristics of human resource expenditure and necessity for their capitalisation. Pearson's Chi-square was used to know the perceptions of questionnaire respondents on the significant effect that reporting human resource value would have on the ability of financial statements' users to make informed decisions. The value relevance of the model developed was tested using Edwards-Bell-Ohlson Model. The study found that the nature and characteristics of investments on the human resource require them to be capitalised rather than expensed. The study established that the value relevance of financial reporting of quoted service companies in Nigeria will be improved by the application of the developed model; thereby boosting the informed decision making abilities of the multiple users. The study recommended that quoted service companies in Nigeria should imbibe the culture of capitalising and reporting all expenditures/investments on human resource that can improve their quality and productivity. Also, there should be a minimum standard of reporting human resource value in the financial statements of service companies especially in the balance sheet and notes to the accounts.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Accounting continues to evolve in response to human civilisation. As human being achieves advancement in concepts and applications, so does accounting. According to Bello (2009), accounting is believed to be an information infrastructure used by economic units to achieve various economic decisions. This means that accounting is an information system that is used for communication purposes and for the purpose of aiding decision making. Corporate organisations use accounting to communicate to all stakeholders about their operating performance and position at a particular time period. The process through which companies communicate to the public about their operations is called financial reporting. Corporate financial reporting is the medium through which companies communicate to the external society about their operational performance in terms of profitability, efficiency, and responsibility (Sanda, Mikailu & Garba, 2005). Financial reporting of a corporate entity constitutes a combination of qualitative and quantitative financial reports, which are referred to as a company's bill of health. Various stakeholders take their decisions relative to a company's performance and position based on the information supplied by it in its annual financial reports and accounts.

Financial reporting by companies is effected via the preparation and publication of financial statements. These financial statements are required to exhibit certain degree of quality in terms of their information contents. Belkaoui (2002) opined that information contained in the financial reports should possess certain qualities as relevance, verifiability, understandability, neutrality, timeliness, comparability, and completeness. When the financial reports disclose quality information, the decision of the users (investors, management, government, employees, creditors, analysts) of the reports could as well be qualitative and informed. The users of the financial reports use the reports frequently in passing judgments on the viability of a company. According to Ghofar and Saraswati (2008), investors in many cases are too dependent on the quality of financial statements disclosure. However, the quality of disclosure in the financial reports of companies has been an area of debate by both accounting theoreticians and those in practice (Higson, 2003).

Disclosure and transparency principles demand that companies report their financial facts which can affect the judgment of the users (Kieso, Weygandt & Warfield, 2004). The Financial Accounting Standard Board (FASB) states that "disclosure refers to the process of providing information about items in the financial statements, via footnotes, supplementary schedule\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\es, or other means" (Shaw, 2003). Disclosure is expected to reduce asymmetric information between management and stakeholders especially investors and lenders (Verrecchia, 1999). Asymmetric information occurs because management has more information and more authority to choose accounting procedures (Milne, 2002). It means that disclosure is expected to improve the effectiveness of communication between companies and their stakeholders (Archambault & Archambault, 2003).

Corporate entities derive their revenue from the combination of the four factors of production. In the conventional financial statements of a company, the factors of production are incorporated. However, whereas three of the four factors (land, capital and entrepreneur) are represented as capitalised values, labour is only recognised to the extent of a deduction as an expense from the operating revenue of a given period (Abubakar, 2009; Adelman, 2009). The difference in the treatment of the factors of production generated philosophical thinking and research during the 1950s (Carper, 2002). The research was based on studying the attributes of human resource expenses and the best way of their treatment and inclusion in the corporate financial reports. In this vein, corporate entities were divided into two: manufacturing-oriented and service-oriented companies. The manufacturing oriented companies depend mostly on their production methods and machineries; while the service-oriented companies depend mostly on the skills and capabilities of their human resource. In this scenario, the manufacturing-oriented company reported machineries as asset but the service-oriented company does not recognise and report human resource as asset (Bagudo, 2010).

The service companies' major asset is the human capital and the intellectual ability of their work force. Although all companies need strong and competitive human resource to succeed, the success of service companies largely depends on the quality of their human resource. According to Robbins (2001), the characteristic that differentiate successful organisations from their less successful counterparts in almost every industry is the quality of the people they are able to get and keep. Service companies do invest heavily in employee training to make sure that their employees' skill levels are kept current (Peris-

Ortiz, 2009; Verma & Dewe, 2004; Robbins, 2001). Thus, money spent on improving employees capacity is one of the best investments that business executives could make (Owen, 1825).

The traditional accounting practice is not able to place value on such intangible assets as employee capabilities and knowledge. Newman (1999) stated that traditional accounting views virtually all expenditure related to the improvement and intellectual development of an organisation's human resource as expenses. The implication of this system of recognition is that such expenses are unimportant beyond the current period. This may not be true because employee's knowledge and skills are important to the future of the organisation. For this reason, the recognition of human resource as an asset becomes necessary provided that the true state of the organisation needs to be revealed.

Newman (1999) also stated that the United States economy has changed from one in which business activity is of an industrial nature to one in which most business activity is of a service nature. His study concluded that investors in the United States are largely, if not completely, skewed towards investing in service companies/businesses rather than in manufacturing companies/businesses. In service businesses, the intellectual capital or the capability and ability of human resources is paramount for success. In this vein, organisations do spend a lot of money in ensuring that their human intellectual capital is enhanced significantly through training and development policies and programs.

Human resource expenses/investment refers to all financial commitments to the human resources of an organisation from recruitment to training and development. According to Oracle (2007), service organisations of all types recognise the critical impact of human resources on their strategic and operational success. They also added that service companies spend, on average, over 50% of their revenues on human resource-related expenses. The financial expenses committed to the human resources are expected to enhance the competitive advantage of the companies. Thus, Adelman (2009) confirmed that a company's market value equals its stock of physical capital i.e. human resource.

The fast growth of service organisations in the United States, United Kingdom, other developed economies, and even in Nigeria recently (such as in communication industry and other service oriented companies), shifts the focus of management towards skill empowerment of their employees (Obe, 2000). This is due to the fact that employees are much more important in these organisations compared with the other assets. Parton (1962) opined that in the business enterprise, a well-organised and loyal personnel may be a much more important asset than a stock of merchandise. The process of attaching monetary value to human resource and its reporting as asset in the financial statements of companies is referred to as Human Resource Accounting (HRA). Despite the fact that service firms are fast growing in the 21st century universally where intellectual capital is the most important asset, the system of human resource accounting has few evidences of its application (Jasrotia, 2004).

Many authors and scholars conducted researches on how human resource within an organisation can be valued and reported in the financial statements of such organisation (Bagudo, 2010; Abubakar, 2008). Thus, the contributions of Kodwani and Tiwari, 2007; George, 2005; Jasrotia, 2004; Hansson, 2004) increased the number of applications of the concept but largely voluntary. An evidence of mandatory accounting and reporting of human resource by organisations was formally and officially declared in Denmark by the Danish Government commencing from the year 2005. Some of the companies that applied HRA in one way or the other include the Jorgensen Engineering, Dissing+Weitling, and Danske Bank in Denmark, R. G. Barry Corporation in the United States, BHEL, Infosys and Reliance Industries in India and other companies in Canada and Australia.

The world has been adjudged to be experiencing a transition to a knowledge-based economy (von Krogh, Roos & Kleine, 1998). A knowledge-based economy refers to an economy where the knowledge, skills, expertise and experience are the surrogate for corporate success and survival (Obe, 2000). Corporate entities are now discovering concepts such as knowledge, intellectual capital and knowledge management ('brain power') as key success factors under the auspices of the knowledge economy (Stewart, 1991). The more critical implication of these emerging concepts is that the already existing patterns, and theoretical frameworks, especially in the corporate world, become obsolete and are no longer able to describe accurately what is going on. This has given further reason and justification for the valuation and reporting human resource as asset in the financial statements of corporate entities. This study, therefore, is primarily aimed at developing a model for measuring the value of human resource in monetary terms and how the value so computed could be reported in the financial statements of quoted service companies in Nigeria. In addition, the study appraises the impact of human resource valuation and reporting on the quality of information contents of Nigerian quoted service companies' financial statements.

The motivation for conducting this study hinges on the rate at which service companies are increasing in terms of their number and significance. In Nigeria, the last ten years have witnessed significant development of the service-oriented industries. The revolution in the Nigerian banking sector and the presence of information and communication businesses have made the service companies grow to some significant level. The contribution of the service sector to the growth and development of the Nigerian economy has also multiplied over the last ten years. Furthermore, the money spent and attention given by the service companies on the training and development of their human resource increased significantly. The accounting treatment of human resource expenses as a charge to profit only might not be sufficient for revealing the true and fair view of these service companies. Although attempts have been made on the area of human resource accounting, the weaknesses identified in the proffered models and the unrealistic nature of the assumptions surrounding the modelling process made the application of the HRA difficult. This study, therefore, develop a more realistic and reliable human resource valuation model. It also determines the effect of human resource valuation and reporting on the quality of the financial reports of quoted service companies in Nigeria.

1.2 Statement of the Problem

Human resource constitutes a valuable resource to every organisation whether manufacturing–oriented or service-oriented. It is as important as the machines, materials and money without whom other resources cannot be blended and coordinated for the purpose of achieving profitability. Characteristics such as experience, skill, knowledge, and age affect the productivity of human resource. Reporting information on the value of a company's human resource via the use of a standard and realistic model could add value to the information content of financial reports of organisations and hence assist users in making informed decisions. In addition, Jasrotia (2004) pointed out that the information generated by HRA systems can be put to use for taking a variety of managerial decisions. She added that decisions on recruitment planning, turnover analysis, personnel advancement analysis and capital budgeting could be aided by the HRA system; and help organisations in taking informed decisions thereon.

The advancement of societies from manufacturing-based to information-based; and the gradual transformation to knowledge-based societies requires the unfreezing of certain processes and procedures including such relating to management, accounting and finance. In knowledge society, human resource constitutes the focal point on which all economic activities revolve. A knowledge economy is one in which the generation and exploitation of knowledge play the predominant part in the creation of wealth (United Kingdom Department of Trade & Industry, 1998). In knowledge-based economies, the major asset is thus the knowledge workers who manipulate symbols rather than machines. In this vein, reporting the financial performance and position of knowledge-based companies (service-based companies) will invariably be incomplete without reporting the value of human resource.

The remarkable growth and economic contribution of the banking sector, information and communication industry, and other service-oriented companies on the Nigerian economy during the last ten years have indicated the significance of the service sector. The activities in the Nigerian Stock Exchange (NSE) for the last decade have been dominated by the service sector, especially the banking sector (NSE Fact Book, 2009). During the period, investors indicated a high proportion of their interest on the shares of the service sector and commit high investment to the sector. In this situation, the investors and other stakeholders rely heavily on the financial reports prepared and published by the service companies in making their investment decisions. They require the service companies to disclose adequate information that are capable of revealing the true and fair view of their operations and which could be of relevance to all stakeholders.

Where a quoted service company reports its financial performance and position for a particular period, it is expected that all the important and material facts are incorporated and adequately disclosed. If these companies failed to report on their major asset (human resource), the adequacy and materiality of their financial information disclosure is questionable. That is why the difference between the market value and book value of their shares is usually significant and attributed to those intangible assets (mostly human resource) not reported by the companies (Abubakar, 2008; Lev, 2001). Take a look at Microsoft® Incorporated of the United States of America, whose success depends solely on the brain power and human capability and capacity. When this company reports only on its corporate building, furniture and fittings, and software gadgets without reporting the value of its human resource, should the financial reports be considered true and fair? The response is more likely to be no. Moreso, the magnitude of the difference between the company's market value and book value is so large thereby revealing a huge amount of intangibles.

Human resource is adjudged as the catalyst for the transformations of the global economies from information-based to knowledge-based (Flamholtz, Bullen & Hua, 2002). In the information and knowledge based economies, human brain and intellectual abilities and capabilities are the key ingredients. However, the accounting aspect of the human capital is yet to be fully accepted and applied in the corporate financial reports of corporate entities. This raised many questions relative to the quality and relevance of the reports prepared and published by corporate entities especially the service-oriented companies. Among these questions are: Do the financial statements of quoted service companies in Nigeria reveal the true and fair view of their financial performance and position? How can the quality of financial reporting of quoted service companies in Nigeria be improved? How can the human resource of service companies be valued and reported? What is the possible impact of reporting the value of human resource on the quality and relevance of the financial reports?

1.3 Objectives of the Study

This study was conducted for the purpose of achieving the following:

i. Study the nature and characteristics of human resource investment/expenditure in quoted Nigerian service companies.

ii. Analyse the perceptions on the necessity for capitalising the human resource expenditure of quoted service companies in Nigeria.

iii. Develop a model for measuring the value of human resource for application of quoted service companies in Nigeria.

iv. Design a reporting procedure for the application of the developed model by quoted service companies in Nigeria.

v. Determine the potential value relevance of the developed model in relation to the quality of financial reporting of quoted service companies in Nigeria.

1.4 Research Questions

In order to achieve the set objectives of this study, efforts were made to find answers to the following questions:

(i) What are the nature and characteristics of human resource investment/expenditure of quoted service companies in Nigeria?

(ii) To what extent can the nature and characteristics of human resource investment/expenditure necessitate their capitalization and recognition as assets?

(iii) How can the human resource value be included in the financial statements of quoted service companies in Nigeria?

(iv) How can the valuation and reporting of human resource improve the quality and adequacy of information contents of a quoted Nigerian service company's financial statements?

(v) What would be the effect of reporting human resource values in the financial statements of quoted Nigerian service companies on the decision of the financial statements users?

1.5 Research Hypotheses

The following hypotheses were formulated in a null form and tested in the process of arriving at a dependable solution to the stated research problem:

H_{01} The nature of expenditure on the components of human resource investment does not warrant their capitalisation and treatment as assets to a quoted Nigerian service company.

H_{02} Reporting human resource value will not have a significant effect on the quality of quoted service companies financial reporting.

H_{03} Reporting human resource value in the financial statements of quoted service companies in Nigeria will not have a significant effect on the ability of users to make informed decisions.

1.6 Significance of the Study

The wide increase in the number of service companies globally where personnel knowledge, skills, expertise and experience are the key to their success makes the human resource accounting a necessity. Organisations do report on capital and other assets in their financial reports but reporting nothing regarding human resource except as a charge in their income statements. Money spent on hiring, recruiting, training and developing human resources are expensed rather than capitalised. Nowadays, the amount invested by organisations on human resource is very huge and calls for a better way of reporting. The financial information contained in the financial statements of organisations is considered inadequate because of many reasons, which inability to account and report human resource is one.

Human Resource Accounting is relatively a virgin area in accounting and yet to be applied in Nigeria (Kodwani & Tiwari, 2007). This study looks at the possible application of the concept in the financial reporting of the quoted Nigerian service companies. Although some Nigerian researchers attempted to unveil the philosophy and epistemology of Human Resource Accounting, none is yet to bring out the possible ways of applying it in the financial reporting of Nigerian service companies. In this regard, the study develops a model that could be acceptable and applicable locally, which could stimulate international application of a standard method of valuing human resource working in service-oriented companies.

By and large, the study is expected to assist the Financial Reporting Council in Nigeria (formerly Nigerian Accounting Standards Board) to adopt a standard measure for valuing human resource for inclusion in the financial statements of organisations. Adoption of a standard way of accounting human resource will increase the acceptance and application of the system by reporting organisations. Secondly, it is expected that the study will assist the various users of financial statements in their analysis and interpretation of service companies' financial statements for informed decision making since they would have access to more useful information than before. Lastly, the study can assist the management of the reporting organisation to put more effort toward the development of their human resource.

1.7 Scope of the Study

This study is limited to the human resource found in the profit-making quoted service companies in Nigeria. As such, personnel found in the manufacturing-oriented organisations and those working with government, at any level, and its agencies are excluded. The reason behind this delimitation is because of the sensitivity of human resource in the success of profit-motive service organisations and the attention that such organisations usually give to their employees or human resource. The study provided detailed discussions on the philosophy and epistemology of human resource accounting. Additionally, the research concentrated on the financial reporting issues of the quoted service companies in Nigeria and how human resource accounting can improve, or otherwise, the quality of such financial reports.

The study comprise of all quoted service companies trading on the floor of the Nigerian Stock Exchange as at the end of December, 2009. A stratified random sampling technique was employed in grouping the population and selecting the sample size of the study based on sectors as classified by the Nigerian Stock Exchange. The human resource valuation model developed in this study is tested empirically by using the financial data of four selected banks in Nigeria covering the period from 2005 to 2008. The reason for the choice of this time frame is availability of published annual reports and accounts of the selected banks.

1.8 Presentation of the Study

This research study is presented in five chapters and arranged in chronological order, starting from chapter one and ending with chapter five. Chapter one contains the study philosophy and general background information on human resource accounting (HRA) and corporate financial reporting. The details of the problem under study will be incorporated in the chapter. Other aspects to be dealt with in chapter one include the objectives of the study, the statement of the research hypotheses, the significance and scope of the study.

Chapter two reviews literature, documents and statistical records, which are relevant and related to the concept of human resource accounting and its application. The chapter covers detailed discussions on the historical development of HRA, methods/models for measuring the value of human resource, approaches for amortising the capitalised human asset, evidence of HRA application and problems associated with HRA. In addition, the chapter reviews the concept of corporate financial reporting and its regulatory framework in Nigeria. The theoretical framework and the modelling process of a standard measure to be used in the valuation of human resource in Nigeria would be properly presented in this chapter.

The research methodology adopted in this study is provided in chapter three and captioned accordingly. In this chapter, the type of research adopted for this study is clearly stated and adequately justified. The population and the sample size through which the relevant data will be collected; and the procedures for their collection are adequately elaborated. The techniques applied in converting the data so collected to information in order to be able to draw relevant conclusions and to achieve the research objectives will also be highlighted in this chapter.

The detailed analysis and interpretations of the data so collected will be provided in chapter four. Thus, the chapter presents and analyses the data collected via interviews, questionnaires and annual reports and accounts of the selected quoted service companies. The tests of the research hypotheses and the research findings are also provided in this chapter.

Finally, chapter five tagged summary, conclusion and recommendations provides a summary of the entire study and the findings therefrom. It also provides conclusions and relevant recommendations on this research study.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter contains the theoretical framework for the research work. It sets the state of the art as far as the concepts of Human Resource Accounting (HRA) and corporate financial reporting are concerned. Literatures relevant and related to the field of HRA and corporate financial reports are reviewed for the purpose of bringing the research into a proper perspective. Areas that are covered in this chapter include the concept and definition of HRA and its historical developments, measures proffered for valuing human resource, evidence of, and problems associated with HRA application, and the theoretical framework upon which this study is based and model developed.

2.2 Conceptual Framework

Most social science researches are surrounded by concepts, which are either applied based on their general interpretation or based on the way they are used in the research. According to Eric (2009), concepts covered by any research should be adequately explained whether used based on their general meaning or operationalised to suit the research. Under this section, the concepts used in this study are explained and discussed so that the target audience would comprehend their meaning and appreciate their usage. The concepts explained and discussed here are divided into three heading. The first heading considered the Human Resource Accounting (henceforth referred to as HRA); while the second heading is dedicated to financial reporting and the issue of quality and value relevance of accounting information contained in the financial reports of organisations.

2.2.1 Human Resource Accounting (HRA)

Human resource (HR) is a term used to describe the individuals who comprise the workforce of an organisation, although it is also applied in labour economics to business sectors or even whole nations. Human resource is also the name of the function within an organisation charged with the overall responsibility for implementing strategies and policies relating to the management of individuals (i.e. the human resource). This function title is often abbreviated to the initials 'HR'.

Human resources is a relatively modern management term, coined as early as the 1960s - when humanity took a shift as human rights came to a brighter light during the Vietnam era (Nadler, 1984). The origins of the function arose in organisations that introduced 'welfare management' practices and also in those that adopted the principles of 'scientific management'. From these terms emerged a largely administrative management activity, coordinating a range of worker related processes and becoming known, in time as the 'personnel function'. Human resources progressively became the more usual name for this function, in the first instance in the United States as well as multinational or international corporations, reflecting the adoption of a more quantitative as well as strategic approach to workforce management, demanded by corporate management to gain a competitive advantage, utilising limited skilled and highly skilled workers.

On the other hand, accounting is viewed as a child of production (Melville, 2009). Production can be either the creation of tangible goods or the provision of services to satisfy human wants. The major factors of production are the land, labour, capital and entrepreneur. While every organisation reports on and includes land, capital and entrepreneur in its financial statements, labour is not given much attention and hence, its expenditure only represents periodic cost made by the organisation. The labour or employees are the human assets or resources organisations have.

HRA considers human resource as equivalent to other assets in the organisation. They require investment over time to make them productive. Such investment relates to the hiring, training, and development costs, which are capitalised and amortised over an assumed probably productive life for the human resource, taking into account attrition and eventual deterioration (Young & Jung, 2003; Myers, 1976). The concept of HRA has been defined in so many ways but the basic feature of the system remains the same in every definition.

The American Accounting Association (1973:23) defined HRA as "the process of identifying, measuring and communicating information about human resource in order to facilitate effective management within an organisation". This definition considers HRA as the process involving recognition and the quantification of human resource for the purpose of assisting the effective management of an organisation. The definition is not specific as to what constitutes the human resource expenditures and how it is to be recognised.

A more specific definition of HRA is the one given by Flamholtz (1974), which refers HRA as the process, which involves measuring the cost incurred by business firms and other organisations to recruit, select, hire, train and develop human asset. This gives a view as to what expenditure on the human resource should be recognised for valuation and reporting purposes. This definition, in other words, regards HRA as involving the measurement of economic value of people to organisations.

Whereas the above definition of HRA centred on the cost incurred in improving and developing human resource, another definition considers the contributory aspect of human resource. Thus, Friedman and Lev (1974) as well as Lau and Lau (1978) view HRA as a method for systematically measuring both the asset value of labour and the amount of asset creation that can be attributed to personnel activities. This definition incorporates the economic benefit attributable to the human resource in addition to recognising their cost implication.

HRA is also seen as an important aspect of management information system. In this view, Gupta (1991) defines the concept as basically an information system that tells management what changes are occurring overtime to the human resource of the business. It involves accounting for investment in people and their replacement costs, and also the economic value of people in an organisation. This definition regards HRA as an information system capable of assisting the management in effective decision-making relative to the hiring and retention of employees. Therefore, HRA provides a comprehensive look at one method of using human resource cost and value information in the decision-making process.

According to Newman (1999), HRA refers to the measurement of the abilities of all employees of a company, at every level – management, supervisory and ordinary employees – to produce value from their knowledge and the capabilities of their minds. This definition considers the current growth in the service industry where the knowledge and intellectual capabilities of employees are the key elements to success. As such, HRA is seen as the wealth of the employees' knowledge and intellectual capabilities added to the organisation thereby making it to earn profit and to succeed.

Jasrotia (2004), also views HRA as a measurement and reporting of the cost and value of people as organisational resources. This definition rests on the premise that knowledge and intellectual capabilities of employees are becoming more and more important in corporate investment decision-making. This is due to the fact that service industries are now overtaking the manufacturing industries and in service delivery business, the knowledge and intellectual capabilities of employees matter more than any other tangible asset.

According to Kodwani and Tiwari (2007), HRA is "an attempt to identify, quantify and report investment made in human resources of an organisation that are not presently accounted for under conventional accounting practice". This definition centred on three key areas of human resource: identification of what constitute it, quantification of it in monetary terms, and reporting it in the financial reports of organisation. From the perspective of this definition, human resource is crude in nature, but needs refining in order to determine what constitute HR for accounting purposes.

Accounting for human resource entails the capitalisation of investments and other expenditures on employees excluding salaries and wages. However, only investments that can improve the quality and productivity of employees should be capitalised (Jasrotia, 2004; Roslender, 2004; Lev, 2001). But Gates (2002) and Jasrotia (2004) opined that the extent of capitalising the investments on human resource should better be left with the reporting companies. Their argument showed that capitalisation of human resource expenditure is better when a voluntary operational environment is created.

Looking at the trend of definitions in the field of HRA, as highlighted above, this study therefore considers the definition of HRA by Flamholtz (1974) and Jasrotia (2004) as explaining the concept better. This is for the fact that HRA is a combination of cost and value, and does not consider all expenditure on human resource in the capitalisation process. In other words, the study views HRA as the measurement process which recognises cost and value of employees in the financial statements of an organisation, as an intangible asset, to the extent of those expenditure that bring benefit to the organisation for more than one accounting year, so that the true value of the organisation can be established thereby assisting the various users of the financial statements in making their respective decisions.

2.2.2 Corporate Financial Reporting

The purpose of this subsection is to define and provide a basic understanding of financial reporting in the corporate environment. Corporate financial reporting is largely an effort to assess financial performance in terms of how well or how poorly the reporting entity performed during a particular date (van Beest, Braam & Boelens, 2009). It is a process of making information public through the use of reports that are considered financial in nature. Many types of financial reports can be generated from the financial reporting of an entity such as balance sheet; profit and loss account; cash flow statement; value added statement; notes to the accounts; statement of accounting policies; and auditors' report. These reports are called financial statements and classified as either quantitative or qualitative. However, considerable amount of attention is given to the quantitative financial statements, which are usually the major reports within the context of financial reporting.

Corporate financial reporting, according to Nzekwu (2009), refers to the supply of key quantitative representation of individual corporations that support a wide range of contractual relationship and enhance the information environment more generally. He added that the quality of financial reporting of an entity impact on the firm's cash flow as well as influencing the cost of capital on which the cash flows are discounted. It can also aid managers and investors in identifying and evaluating investment opportunities. This definition concentrated on the supply of information by an entity and how such information impact on the cash flow of the reporting entity.

In another perspective, corporate financial reporting is regarded as an important and effectual means of dissemination of financial information. Salawu (2009), define corporate financial reporting as the public reporting of operating and financial business data by a business enterprise via the annual reports and accounts. It is a process with ample of advantages to the users of the reports, who use them more often in making various decisions. However, Beuselinck and Manigart (2007) identified increased cost associated with printing, limited copies available to only selected market, less timely information, historical disclosure, and the use of obsolete technology as major problematic features of corporate financial reporting.

An organisation's financial reporting comprises accounting records, which are the principal source of information for the preparation of the annual financial statements and for the efficient conduct of its affairs (Barth, Landsman, Lang, & Williams, 2006; Lee, 2006). It is therefore essential that they are accurate and appropriate for their purposes. The accounting and information systems, under which financial reports are prepared, must provide a basis for the generation of the management information necessary for the effective and efficient day-to-day operation of the organisation, and this should be consistent and compatible with the information in the financial statements (Maines & Wahlen, 2006). The records and the reports that are derived from them are fundamental to the exercise of members' responsibilities to the organisation and its stakeholders.

Financial reporting can also be viewed in terms of those for whom the reports are intended (Leftwich, 2004). At one end of the spectrum are the annual financial statements of an organisation, which are the prime means of demonstrating its responsibility to its stakeholders; while at the other end are the internal reports, aimed at providing information for decision-making by managers (Lee, 2006). The integrity of an organisation's accounting records demands that all reports are compiled using consistent principles and data.

The main objectives of financial reporting are the production of accurate, complete, relevant, timely, and reliable financial information to demonstrate and maintain accountability, to meet statutory reporting requirements, to account to an organisation's stakeholders for its financial performance and to support decision-making (Bello, 2005; Dandago, 2003). On the other hand, van Beest et al (2009) reported that the primary objective of financial reporting is to provide high-quality financial reporting information concerning economic entities, primarily financial in nature, useful for economic decision making. They added that providing high quality financial reporting information is important because it will positively influence capital providers and other stakeholders in making investment, credit, and similar resource allocation decisions enhancing overall market efficiency. The Nigerian Accounting Standards Board, in its Statement of Accounting Standard No. 2 (Information to be Disclosed in the Financial Statements), also defines the objective of financial reporting as being to provide information about the reporting entity's financial performance and financial position that is useful to a wide range of users for assessing the stewardship of the entity's management and for making economic decisions.

Disclosure and transparency principles demand that companies report their financial facts which can affect the judgment of the readers (Kieso, Weygandt & Warfield, 2004). By definition, disclosure refers to the process of providing information about items in the financial statements, via footnotes, supplementary schedules, or other means (Shaw, 2003). Disclosure is sometimes used as synonymous to financial reporting. When adequate and qualitative accounting information are disclosed, it is expected to reduce asymmetric information between management and stakeholders especially investors and lenders (Verrecchia, 1999). Asymmetric information occurs because management has more information; and more authority to choose accounting procedures (Milne, 2002). It means that disclosure is expected to improve the effectiveness of communication between companies and their stakeholders (Archambault & Archambault, 2003).

2.3 Evolution of Human Resource Accounting (HRA)

For more than half of a century, accounting for human resource continued to appear in the accounting literature. Since the idea or approach was first conceived, it continues to be debated upon by both accounting scholars and practitioners. The interest shown by scholars led to many researches been conducted, which open the way to the development of the concept. HRA passes through many developmental stages before reaching its current status; and this trend is expected to continue until the approach or concept is universally accepted and applied as wide as possible.

Initially, the idea of recognising human resources as assets was regarded as impossible. This is due to the fact that human beings are only hired for production purpose and paid accordingly without much consideration on improvement and development of the workforce. The notion of hiring, training and retaining employees was not favored. Entrepreneurs and proprietors of businesses hire and fire at will. For these reasons, it was difficult to convince people that human resource or employees are assets to organisations and also ownership cannot be established. An item or thing can only become an asset if the organisation has ownership of the asset and the item has value to that organisation.

However, the findings in the studies of Stewart (1991), Sveiby (1997), Dingman (1998), Von Krogh, Roos and Kleine (1998), and Lev (2001) have substantiated the claim for the categorisation of human resource as asset. They established that an asset is something or somebody useful; and usefulness in the sense of organisations means the capacity of generating income. According to their studies, the relevance criterion should always come first before reliability. A human resource even though cannot be owned in person, his services can be owned in so far as he is working for the organisation (Bagudo, 2010). This is a form of ownership and can be used as substitute to the ownership included in the definition of asset as contained in the Statement of Accounting Standard No. 2 (SAS2), released by the Nigerian Accounting Standards Board (Now Financial Reporting Council).

More recently, the concept of HRA experienced several developmental processes, which aided the transformation of the concept to a more realistic one. These developmental stages, as captured by Batchelder and Scarbrough (1992), Dawson (1994), Batra (1996), Carper (2002), Flamholtz, Bullen, and Hua (2002), rested on the factors or events that gave impetus to the development of HRA. In a more concise way, the development stages and their underlying events are presented and discussed below:

a) Stage I - Derivation of the Concept: This is referred to as the initial stage of accounting for human resources. The concept human resources accounting derive its substances from the theory of human capital and the organisation psychology. This stage covers the period prior to 1960 and up to the early 1960s.
b) Stage II - Development and Validation Period: This is the period where scholars tried to develop and validate the concept of human resources accounting. The period covered

took effect from the mid 1960s up till the beginning of 1970. The researches conducted in this period were centred on developing approaches on the basis of historical cost and replacement cost as well as monetary and non-monetary values.

c) Stage III - Organisation Application Period: This stage started from the early 1970s through to the middle of the decade. This period was characterised by broad attempts to bring the developed approaches into operation. Most of the organisations that attempted its practice were mostly service oriented and information technology oriented organisations.

d) Stage IV - The Empirical Research Investigation Period: This stage witnessed the empirical investigation of the concept of human resources accounting. This was triggered by the complexity associated with the methods of quantifying human resources in monetary terms, which led to few organisations attempted its practice. This period extended to the present day where researches and investigation are carried out in order to make the concept more practicable and less complex.

e) Stage V - The Growth of Service Organisations: In recent years, service organisations and their activities continue to grow at a faster rate. Knowledge and skill of employees are the distinctive features of these organisations. "It is no longer the sheer size or the number of tangible assets these organisations control that matter most but their intellectual capital" (Harari, 1994).

From the discussions above, it is clear that HRA has been in the accounting, economics and psychology literature for quite long. However, researchers are still undertaking studies in order to make the concept relatively easy to comprehend and apply. The section that follows discusses on foreign and Nigerian studies undertaken in the area of HRA.

2.4. Corporate Financial Reporting Theories

In this section, theories under corporate financial reporting are identified and discussed. The aim here is to provide adequate explanation on the study area so that the reader is carried along as well as enhancing the general level of understanding. Theories under the environment of corporate financial reporting are usually discussed based on the amount of information that is required and the government intervention (McGee & Tarangelo, 2009). However, in most of accounting literature, corporate financial reporting theories are discussed based on two schools of thought. They are referred to as the Leftist theory and Rightist theory.

While the leftist (Leftwich, 2004; Leftwich & Zimmerman, 2002; Holland, 1999; Hendriksen, 1970; Cramer, 1969) are of the view that financial reporting ought not to be regulated, the rightist (Ghofar & Saraswati, 2008; Benston, 2007; Benston, Bromwich & Wagenhofer, 2006; Burgstahler, Hail & Leuz, 2006) argued it should be. These thoughts divide the market in which organisations operate into two: the free market and regulated market (Wolk et al, 2002). Bello (2005) opined that even though financial reporting is a regulatory activity and is likely to remain so in the unforeseeable future, leftists argue that firms may provide better information in unregulated market in competing with other firms for capital. Study by Stiegler (1975) revealed that regulations have not improved any quality of financial report. In the same vein, Benston (2007) concludes that prior to regulation in the United States; firms met the entire regulatory requirements voluntarily.

The arguments for and against regulation, as contained in the study of Bloomfield (2002) and in the publications of Revsine, Collins and Johnson (2008), Melville (2009), Ormiston and Fraser (2009), is here under discussed.

I. The Leftists Theory of Unregulated Market Environment

The idea for allowing financial reporting to operate in free market stems from the "Laissez-faire theory". That is "let them say", which simply allow private entities to operate without intervention. This argument was largely deductive as it lacks adequate empiricisms (Bello, 2005). Arguments in favour of this theory include:

a) Agency Theory

Agency theory conceives firm as a nexus between agents (managers) and their principals (owners). The contractual relationship between agents and principals provide the agents to act on behalf of their principals in a given undertaking. So with or without regulation, agents (managers) might report to their owners their undertaken for the fulfilment of the contract.

Secondly, in Agency relationship the goals of managers and owners may not be in perfect agreement. Owners always are interested in maximising their returns; managers may seek to always get compensation that can satisfy their needs. To appease the owners and narrow the gap of the conflicting interest, managers may report to the owners voluntarily. Not only trying to appease the owners but to reduce monitoring cost, this in return will increase their compensation. As reported by Holthousen and Robert (1988) minimising agency monitoring cost is an economic incentive for management to report accounting result reliably to the owner.

Thirdly, arguments for Agency theory, as stated by Leftwich and Zimmerman (1981), relate to the need for an independent verification. Thus, according to (Wolk, Tearney & Dodd, 2002), historical development of financial reporting and auditing support the agency theory argument in relation to the need for an independent party to review the conduct of the managers.

b) Competitive Capital Market and Signalling Incentives

Here two folds of arguments were raised. One is in relation to the firm's need of capital at cheaper price, which in return will reduce their cost of capital. Capital is obtained from capital market. Competing with other firms for scarce capital resources will force firms to report voluntarily. The other argument was centred towards signalling theory. This stems from the fact that there exists information asymmetry between the firms and outsiders. As a result of few knowledge of the firm, outsiders (investors) will protect themselves by offering lower price for the company. Exposing itself to outsiders through reporting its private information may signal good future prospects to outsiders, thereby reducing uncertainty and hence, increasing value of the company. This argument was supported by Dye (1990); Verrecchia (1990); Holthousen and Robert (1988); and Wong (1988).

c) Private Contracting Opportunities

The argument stems from the fact that accounting information is vital and need not to be free as public goods. Those that are interested in the information should enter into contract agreement with the firms. Secondly, by making information free of charge through regulation certain desired information will not be disclosed. As opined by Wolk, et al (2002), if information were truly desired beyond that which is publicly available and free of charge, private individuals would be able to buy the desired information. In this way market forces should result in the optimal allocation of resources to the production of information.

II. The Rightists Theory of Regulated Market Environment

Mandatory requirement of financial reporting was done to secure public interest (Bello, 2005). The interested parties to financial statement (users) may not be able to reach the information or reached it at higher price. In order to remove the imperfections in information, market regulation becomes necessary. Other arguments in favour of this theory include:

a) Market Failure Argument

As opined by Dye (1990), in a free market, existence of monopoly might hinder the invisible hands to function effectively. This may result in market failure. Conversely, in an unregulated information market, firms being the sole supplier of their financial report can choose to under-produce the information (both in content and quantity) for it to charge exorbitant price. This under-supply of information would not be in the public and economic interest; as such mandatory reporting becomes necessary (Ormiston & Fraser, 2009).

b) Capital Market Argument

In capitalist set-up, capital market serves as a barometer of the economy. Information is seen as an infrastructure in the conduct of the market. Regulation becomes necessary to secure investors confidence in channelling their savings to investments opportunities. Argument that firms may furnish financial report to investors in competing for scarce capital can be discounted to the fact that excess competition without regulation may lead firms to short term window dressing to attract investors. Another argument in this line forwarded by Revsine, et al (2008) is that if the market is unregulated the exorbitant cost of information may temper with efficiency of the market.

c) Social Goals

Proponents of regulation argued that mandatory reporting is desirable on social ground for creating fairness in the capital market. Fairness here referred to a situation were by the major players have access to the same information. Secondly, as commented by Melville (2009), mandatory reporting saves individuals from unnecessary competition and paying for the same product, which is waste of social resources.

d) Cost of Reporting

Proponent of regulation counter the argument that firms bear unnecessary cost of reporting in regulatory environment by saying accounting information is a by-product of the firm's accounting system, so the cost is insignificant in relation to the benefit to the society (Wolk et al, 2002).

From the discussions in this section, it is unveiled that without regulations, financial reporting will be nothing more than window dressing. The economic cost of this to the owners in relation to the security of their investments, government in relation to its development plan, and public in relation to confidence is higher than the cost involved in regulating the market.

The financial cost of setting a regulatory agency by government to issue and ensure compliance with standards and guidelines is borne largely by tax payers, whom in turn benefit from the confidence and security of their investments in those organisations. On the side of a firm the cost of issuing and publishing the financial statements free of charge to general public is shifted to the general public indirectly on the cost of the product. Even though, one can even say that financial reports are by-products of the firm's financial information, the cost is not anything much to bear.

Financial reporting is an act, which has ethics and social objective not only to the firm but also to the economy and general public. The thought for free market is utopia and will take a long way before it can be realised. The benefits of regulation outweigh its cost from whatever angle (Lee, 2006). With regulation, firms stand in better position to compete without unnecessary waste of resources in reporting race; investors' confidence is secured and protected from paying for information. Government can use its agencies in influencing private firms to act in desired direction for attaining economic development. All these could not be attained in a free market.

2.5 Studies on Human Resource Valuation and Reporting

The objective of this section is to account for some notable researches in the area of Human Resource Accounting (HRA) so that the efforts of earlier and recent studies could be comprehended and appreciated. As discussed in section 2.4, the early stages of HRA conceptualisation took place from the later part of 1950s to the early 1960s. Likert (1967) was one of the early researchers in the field of HRA. He stressed that short-term company profits are too often obtained through automatic "system I" methods, which result in the wastage of human resource through neglect of training and development, turnover, reduced co-operation, amongst others. His argument was that conventional accounting procedures ignore human assets, even though their decline in value and productivity almost inevitably lead to reductions in profit. He challenged the accountants to develop measures for valuing the human resource so that changes could be recorded on the scorecard that counts, the profit and loss statement. The changes that could be recorded means depreciation or amortisation.

Many psychologists, economists and accountants conducted researches on how best to measure human resource in monetary terms. Their response to the challenge posed by Likert (1967) led to some significant contributions in the field of HRA. Prominent among the researchers were Flamholtz (1974 & 1985), Lev and Schwartz (1974), Sadan and Auerbach (1974), Schmidt, Hunter and Pearlman (1982). Their contributions led to the suggestion of various methods of valuing human resource such as replacement cost model, stochastic rewards valuation model, historical cost model, competitive bidding method, and capitalisation of future benefit. Strauss (1976) cautioned that numerous conceptual and practical problems must be solved before human resource accounting can be widely accepted. These problems, according to him, relate particularly to the method of calculating human resource values and to the use to which the resulting data will be put such as its impact on managerial or investor behaviour.

Lau and Lau (1978) were quick to identify two major unresolved problems in accounting for human resource as at that time. They were whether and how human resource assets should be recorded in the accounting system; and how the recorded human resource asset should be written off. The researchers based their research on the second problem thereby concentrating on the approaches for writing off capitalised human resource assets. That is, how should the capitalised human resource assets be amortised assuming that the appropriate capitalisation values have been determined and recorded in the first place? The researchers made a significant attempt in developing human resource amortisation procedures that are economically and statistically justifiable. Furthermore, they re-affirm the Jaggi and Lau's (J – L's) (1974) observed implication that human resource capitalisation is statistically meaningful only if the employees are located in large homogeneous groups. This means that capitalising human resource as asset will only be significant where they can be grouped into large groups and recognised as such.

Dawson (1992 & 1994) conducted a rather similar research on the more scientific method of valuing human resource. He used the simulation methodology to explore human resource accounting. The aim of his research basically centred on the exploration of the relationship between the measures of the value of employees obtained from the application of the replacement cost model and the stochastic rewards valuation model. The scope of Dawson's research did not focus on the two models only but also on the reasoning used by managers in determining or arriving at these data.

A year after Dawson's research, Mainoma (1995) conducted a research to find the extent to which reporting human resource by organisation can have a significant effect on the investors' decision. This research was conducted in Nigeria and tailored toward solving the second problem of HRA as pointed out by Strauss (1976). The researcher worked on the assumption that human resource is adequately measured. He, therefore, concentrated on finding out the effect of reporting the value of the human resource in the financial statements on investors' decision making. The conclusion of the research was that appropriate reporting of human resource by organisations could have a significant effect on the investors' decision-making. His findings and conclusion improves on the conclusion made by Craft and Birnberg (in Strauss, 1976) that human resource accounting may eventually prove to be useful internally, as a means of evaluating the effectiveness of personnel and managerial programs; and they are less optimistic as to its value for external reports for use by shareholders and the public.

Jasrotia (2004) stressed the need for human resource accounting with particular emphasis on India. The researcher concentrated on the dramatic shift from manufacturing to service rendering in the Indian economy and how the success of the service rendering organisations depends on the knowledge and intellectual capabilities of personnel. The recommendation from the research was that Indian government should make the accounting and reporting of human resource mandatory for every organisation, just as it is adopted in Denmark from the year 2005. In Nigeria, Abubakar (2007 & 2008) and Bagudo (2010) attempted to explain the necessity of HRA and propose an alternative procedure in arriving at the human resource value. Although the two researchers have not invented a model, the findings from their studies could be useful in arriving at a realistic human resource valuation model.

From the discussions above, it is clear that HRA has been an area of interest among foreign and Nigerian researchers. The researchers have diverse discipline ranging from accounting, economics and psychology. The efforts of these researchers still continue so as to make the concept relatively easy to comprehend and apply. The section that follows dwells into the aspect of human resource valuation thereby reviewing the existing methods and models that are proffered by the HRA researchers.

2.6 Human Resource Accounting Models/Methods

The trend study of the measures/models proffered for quantifying human resources in monetary terms revealed the use of several human resource expenditure units. The earlier methods proffered by Harmanson (1964), Brummet, Vroom and MacCrimmon (1968), Flamholtz (1971 & 1974), Lev and Schwartz (1974), Sadan and Auerbach (1974), Jaggi and Lau (1974), Strauss (1976), Lau and Lau (1978), and Schmidt, Hunter and Pearlman (1982) used salaries and wages, recruitment cost, screening and selection cost, and training cost in the process of measuring the value of human resources. The recent methods, however, favour ex-gratia cost, medical and safety cost, pension and provident fund, training and education cost, welfare cost, and recruitment and selection cost in finding the value of human resources (George, 2005; Becker, Huselid & Ulrich, 2001; Brown, 1999; Monti-Belkaoui and Riahi-Belkaoui, 1995). They frequently ignore the salaries and wages paid to employees because they recurrent rather than investment.

It is observed that from the 1990s, the literature on HRA favour the use of some kind of balanced performance measurement framework such as the Balanced Scorecard in the valuation of human resource (Lynch & Cross, 1991; Maisel, 1992; Adams & Roberts, 1993; Kaplan & Norton, 1996; Tuomela, 2000; Neely, Adams & Kennerly, 2002). The balanced performance measurement frameworks are aimed at providing a comprehensive picture of an organisation's performance. The measures are based on an organisation's business objectives and the main goal for a measurement system is to assist an organisation in achieving those objectives.

Many measures have been put forward through which human resources can be valued for inclusion in the financial reports/statements of organisations. These measures came into being as a result of scientific studies conducted by both early and recent HRA advocates. The methods/models suggested in the valuation of human resource include:

a) Balanced Score Card (BSC) Method:

This method was proposed by Kaplan and Norton (1992). The method is built on such leading indicators as turnover and employee productivity, which affect the general performance of employees within an organisation. Becker et al (2001) argue that human resource/capital is the foundation of value creation in new economy businesses since up to 85% of a corporation's value is based on intangibles. They propose an adoption of the Balanced Score Card Method that concentrates on human resource/capital called the "Human Resource Score Card". The BSC concentrates only on the contribution aspect of the human resource. It ignores the cost incurred on acquisition and subsequent investment on the human resource. The use of turnover and productivity can only tell about the benefits derivable from employees, which may only be arrived at using assumptions and predictions.

(b) Brown's Index (BI):

Brown (1999) conducted yet another study aimed at finding a better way of measuring human resources. His study suggested that a simple human capital index made up of four sub-metrics is better than crude measures like turnover, education level, training attended and developmental plan objectives that most companies use. Brown included in his index the four sub-metrics as level in the company, performance rating, positions and year in field/business.

The Brown's Index works by attaching weights to the four sub-metrics. Thus, the metrics are weighted so that the index will produce a score out of 100. The weighting will depend on the company's specific situation, and the importance of skill/competencies versus experience/performance. The benefit of such a measure is that it is simple (Verma & Dewe, 2004). However, the shortcoming identified with the use of Brown's Index is that it is not an all-encompassing measure, and ignores other possible inputs that might be important to particular companies or industries. Nevertheless, the method is hailed for it has led to the popularisation of the thought that human resources should be recognised as a line item in financial statements.

(c) Competitive Bidding Method (CBM):

This method employs the idea of opportunity cost to value human asset and was pioneered by Flamholtz (1985). It entails the value of an employee in his/her alternative use as a basis for estimating his/her value to an organisation. CBM is based on the assumption that human asset/resource is a scarce resource so that its employment in one division/department denies it working in another division/department. The division/department with the highest bid wins the particular human resource and would include its price in its investment base.

Sveiby (2001) and Tang (2005) opined that this method include the provision of optimal allocation of personnel within an organisation and can give a basis for quantitative planning and development of human resources of an organisation. Its major weakness, as identified by Tang (2005), is that it failed to consider employees of the same type which can be readily available for hiring from outside.

(d) Discounted Future Salaries (DFS):

This method uses the present value of future salaries or earnings profile of homogeneous group of employees. DFS method was pioneered by Hermanson (1964) and Flamholtz (1974). Hermanson (1964) suggested the use of compensation/salary as surrogate to quantify the value of human resources as the sum total of the present value of future salaries/benefits accruable to them. He stated further that the amount of future wages payable represents a liability while human resources an asset in the balance sheet.

Flamholtz (1974) also looked at the valuation of human resources in terms of earnings profile of employees by aggregating and averaging the earnings profile of homogeneous group of employees over the range of their effective service period. The productivity of employees is assumed to diminish as their ages continue to increase. This is due to health deterioration, physical fitness, brain drain, and technological obsolescence. The value is measured by the use of the following formula:

$$Vr = \sum_{t=r}^{t} \frac{I(t)}{(1 + r)^{t - r}}$$

where : Vr = The human asset value of a person 'r' years old

I(t) = The person's annual earnings up to retirement.

r = A discount rate specific to a person.

t = Retirement age.

The major strength of this method is that, it can facilitate the use of new set of financial ratios such as the ratio of human to non-human capital values to indicate the degree of labour intensiveness. It can also provide information about changes in the structure of the labour force. The major set-back of this method is determining the accurate discount rate specific to a person. Though the cost of capital of the organisation used in capital budgeting decision is suggested as the discount factor, the variation of this rate to suit the individual status is difficult if not impossible. Another problem of DFS is the effect on the earnings stream by the actions of labour unions and non-governmental organisations (e.g. strikes or industrial actions), the actions of the labourer or employee (e.g. job-quitting) and other natural causes (e.g. death of an employee, sickness, etc).

(e) Economic Value Method (EVM):

Flamholtz (1971) also pioneered and proposed a normative human resource valuation model, which would trace the movement of an employee through the organisational position or "service state" where he/she is expected to render a specified quantity of service to the organisation during a specified time period. The probability of the individual occupying these service statuses is needed so that the expected services from the individual can be derived. Thus, EVM quantifies the present worth of the set of future services an employee is expected to render/provide during the period he is expected to remain with the organisation.

The EVM uses the following formula:

$$\sum_{i=1}^{n} Si\ P(Si)$$

Where : Si = Services expected from the individual on each service state.

$p(Si)$ = The probability that the individual will occupy a particular service state.

The economic services that the individual will render determined his/her value. The service is quantified in monetary terms by finding the product of the price of the service and the services expected to be rendered. The strengths of this method include its focus on the value or worth of an individual to an organisation. EVM is weakened by many assumptions which are hypothetical and make its practice difficult and, it also focuses on individuals rather than group (Sveiby, 2001).

(f) Historical Cost Method (HCM):

This method is pioneered by Brummet et al (1968). It involves the capitalisation of the organisation's expenditure on selection, recruitment, orientation, training and development of employees. The amount capitalised is to be shown on the balance sheet under the heading 'Human Assets' as distinguished from other physical or tangible assets. The amount so capitalised can then be amortised and written off in the profit and loss appropriation account over the expected service period of the employees.

This method is criticised on the premise that it lacks the precision on how to determine the exact service period of an employee for amortisation purposes. It also fails to consider the effect of inflation on the cost so capitalised. Finally, it is not clear as to whether employees are to be aggregated or reported separately on the balance sheet.

(g) Knowledge-Value-Indicator Matrix (KVIM):

This approach value human resources based on the knowledge-value of an individual employee of which an indicator is applied in accordance with organisation's mission and strategic objective. According to George (2005), the human resources value is equal to the sum of an individual(s) current salary(ies) multiplied by the number of years until retirement age (y) times present value factor (pv) plus the total of value indicator applicable to the specific individual being valued. The model is shown below:

$$V = \Sigma(sy)\ (pv) + \Sigma i$$

Where:

V = Value of human resources; and

Σi = The value of indicator percentage

Common value indicators can be related to:

i) Formal education above minimum education requirement for the job.

ii) Continuing education course that relates to the job.

iii) Industry experience above minimum experience requirement for the job.

iv) Position advancement above normal time frames for the job.

v) Scope of organisational authority and responsibility above minimum requirement for the job.

vi) Life time achievement of an individual other than work related.

(h) Replacement Cost Method (RCM):

This model is pioneered by Flamholtz (1985). It involves the collection of cost associated with hiring and training of human resources at a particular period of time. It is the measurement approach which suggests that human resources are valued at the replacement cost, that is, the monetary implications of replacing existing personnel. Flamholtz (1985) stated that replacement or substitution costs could be positional (replacing personnel for particular positions) or personal (replacing specific talent or ability of particular persons).

The major advantage of this model is that human value can be adjusted to price level changes (i.e. inflation) and can assist in the process of manpower planning by providing estimates of the cost involved in obtaining labour for different positions. The model may not be practicable where there is no similar replacement for certain assets. In addition, the model is also weakened by whether to use entry cost or exit cost as the replacement cost. Finally, the management might be unwilling to replace some particular assets at current cost.

(i) Return on Effort Employed Method (REEM):

This method stresses on measurement effort employed on various functions within an organisation such as buying, manufacturing and selling. This kind of information may lead to a more efficient allocation and use of human resources. Factors which distinguish the quantity and quality of effort expanded may be used to value the contribution made by individuals such as level or grade of work done, effectiveness with which the individual performs his job and experience and efficiency of the job performance.

Advocates of this method opined that the REEM can lead to a more effective allocation of human resources within an organisation. They also added that it is possible, with REEM, to consider the ratio of profit to the effort employed in each of the three separate functions i.e. buying, manufacturing and selling. However, the method is underscored as it does not provide information about the effectiveness with which an organisation maintains the conditions of its human resources. Another demerit of REEM is that it can encourage managers to dissipate valuable human assets and this can become a great problem to the organisation in the long-run.

(j) Value-Addition Method (VAM):

The VAM method of quantifying and reporting human resources was proffered by Monti-Belkaoui and Riahi-Belkaoui (1995). The researchers opined that human resources valuation should be based on value-addition, as it is a measure of wealth. Value-addition, as they defined, refers to the increase in wealth generated by the productive use of the firm's resources before its allocation among shareholders, creditors (bondholders), workers and the government. This type of reporting the worth of human resources became popular in the United Kingdom with the publication of the "Corporate Report" in 1975. The "Corporate Report" is a discussion paper published by the Accounting Standards Committee, which recommended, amongst other things, that a statement of value added showing how the benefits of the efforts of an enterprise are shared by employees, providers of capital, the government and reinvestment, be included in the external reporting (Monti-Belkaoui and Riahi-Belkaoui, 1995).

The statement of Value Added of employees reported by organisations could provide a useful measure to help in gauging performance and activity. By relating key figures such as capital employed and employee costs, the value added can be a significant indicator of performance. One important consideration when using the Value-Added Statement is that the objective of the firm is not necessarily to maximise value added, Monti-Belkaoui and Riahi-Belkaoui (1995), added. For example, management can make a wrong decision of spending money on internal labour to produce a product that could be outsourced more economically. This would increase the company's Value-Added but not the profits. Therefore, the Value-Added is seen as a useful information tool to reporting performance, but not efficiency of the Value-Added.

Finally, the trend study of the measures/techniques proffered for quantifying human resources in monetary terms revealed that the most recent measures incorporate more realistic ways and ideologies in the valuation processes and procedures. Thus, majority of the hypothetical assumptions associated with the earlier measures were simplified leading to the suggestion of more empirically proven methods that portray facts rather than fiction.

2.7 Evidence of Human Resource Accounting Application

In the 1960s, companies in the United States found themselves in a fierce competition with the Japanese companies. The competitive edge in productivity of the Japanese companies was seen in the protection of the human capital (Gebauer, 2002). This incidence arose multiple interests in the United States relative to the human resources accounting. The Americans policy of hire and fire philosophy affects their productivity negatively compared to the policy of the Japanese of long-life engagement in one enterprise.

A celebrated example of applying human resources accounting by an organisation is that of R. G. Barry Corporation. The Corporation is referred to as the pioneer in HRA application. The approach used by the Corporation was to capitalise the outlay costs of recruitment, acquisition, training, familiarisation and development of management personnel only. With reference to the accounting conventions relating to asset accounting and reporting only outlays having an expected value beyond the current accounting period were treated as investments. These investments in human resources were amortised over the expected useful life of the investments. The objectives of R. G. Barry Corporation in developing an

HRA system were to find answers to the following questions: What is the quality of profit performance? Are sufficient human capabilities being acquired to achieve the objective of the corporation? To what degree are they being maintained? Is the corporation properly utilising these capabilities?

After the successful implementation of the HRA system by R. G. Barry Corporation many organisations in the United States, Canada and Mexico follow suit. Organisations like Milwaukee Braves Inc., USA (1963), Touché Ross and Co; Montreal (1971), Texas Instruments (1971), Witte and Co (1975), the U. S. Navy (1984) all have experimented the concept using either historical cost, replacement cost or other valuation models. The information generated by the human resources accounting systems of these organisations has been put to use to take a variety of major decisions such as recruitment planning, turnover analysis, personnel advancement analysis and capital budgeting.

Other evidences revealed that a number of companies adopted HRA in India for external reporting (Gupta, 1991). The nature of HRA system in India included the profile of human assets, the compensation pattern, training and development, human asset productivity, human asset value and the total wealth of the organisation. Thus, Bharat Heavy Electrical Limited (BHEL), Infosys and Reliance Industries (all Indian companies) were the pioneer in publishing human resources in the annual reports (Jasrotia, 2004).

The National Indian Information Technology (NIIT) had followed a similar method as Bharat, but with a different model called Economic Value Addition (EVA). This model assisted NIIT in assessing the real value that an employee can fetch for the company. Other companies that adopted one method or another in accounting for human resources included Steel Authority of India Limited, the Minerals and Metals Trading Company of India, the Southern Petrochemicals Industries Corporation of India and the Infosys and Reliance Industries (Gupta, 1991).

Furthermore, football clubs in Europe and Latin America have since adopted the idea of human resource accounting. This is because they keep record for each player relative to his signing fees and transfer fees. Each player has a target or expectation of his performance set by the club managers. At any point in time, the records reveal the amount a player cost the club (George, 2005).

Moreover, realising the immense benefits associated with HRA many companies world-over are making the concept a necessary element in their balance sheet (Jasrotia, 2004). Also, governments of many nations are reacting positively towards accounting and reporting of human assets. One of the best examples is of the Danish Government. The Danish Ministry of Business and Industry has issued a directive that with effect from the trading year 2005, all companies registered in Denmark are required to include in their annual reports information on human capital, among others. Thus, a minimum of five measures is required for the inclusion of the human capital or asset in the annual reports, and comparison with the previous two years must be shown. This means that figures for investment in intellectual capital must be shown and compared with the previous two years (Jasrotia, 2004).

More so, a narrative statement should accompany each set of figures thereby giving additional information and explanations on the movements on the value of the human capital. In addition, the Danish Government required that at least one-third of the report should be occupied by the information for investors about intellectual capital, both current and future. Other countries like the United States of America, United Kingdom, Australia, Brazil, Canada, France, Germany, Japan, The Netherlands, South Africa, Spain, Sweden, Switzerland, and Thailand have taken very significant steps towards a wider application of HRA (PricewaterhouseCoopers, 2003).

Many factors serve as deterrents to the application of HRA. According to Gates (2002), the problems of HRA rest majorly on the reporting companies themselves. In other words, the writer concentrated on the reporting entities in pin-pointing the problems of HRA. Based on his research, he identified the problems of HRA application as comprising of: HR not something that can be shared externally; measurement of the HR not first priority for companies; no enough time and resources to carry out the measurement; HR professionals unaware of its value; no clear impact of HR on return on investment; lack of clear guidance and universal practice; and implication of global and group issues.

From another perspective, Jasrotia (2004) looked at the trends in the field of HRA and came up with some factors that deter the progress in the area and the application of the concept. The researcher uncovered low level of awareness and acceptance, lack of industry standards, extensiveness of the research involved, and dynamism of some industries as the basic obstacles of HRA application. It is important to note also that the complexity of most of the measures proffered and the hypothetical nature of some of the assumptions underlying such measures limit, to some extent, the level at which the HRA is accepted and applied.

Other emerging countries like Nigeria have attempted the report of human resource as asset in corporate reporting system. Although evidences revealed that HRA is mostly applied by advanced and developed countries, there are other emerging countries that attempted the application of HRA. Brazil, for example, has established Human Capital reporting practices, even though there are no government initiatives and only light legislative requirements (PricewaterhouseCoopers, 2003). By law, companies operating in the country must report externally on workforce demographics and the percentage of employees who have a disability (Kiase, 1996). Apart from these legally required metrics, it is common practice to report the expenditure on training, remuneration policies, absenteeism and staff turnover rates, and increasingly metrics relating to corporate social responsibility. In Brazil multinational companies tend to report on their human capital more than the locally based companies (Tang, 2005). The multinational companies report on their human capital externally to target both the recruitment market and the investor community. However, the use of Human Resource scorecards is common practice across all types of organisations in Brazil (PricewaterhouseCoopers, 2003).

In Africa, only South Africa made a noticeable attempt on the application of HRA. In South Africa, legislation designed to stamp out racial discrimination (the ‘Employment Equity Act’, the ‘Black Economic Empowerment Act’) strongly influences reporting and measurement of South Africa's Human Capital by companies operating in the country (Guthrie, 2001; Kiase, 1996). Due to the volume of requirements, technicalities and complications surrounding the valuation processes, many of the South African companies are yet to comply. According to PricewaterhouseCoopers (2003), the requirements are challenging as shown by the following example - companies have to report externally on workforce demographics to show that they comply with the requirement to have at least 40% of their workforce comprised of black workers. They have to demonstrate equal measures of training investment, and they even have to give measures of the effectiveness of the training in relation to their black staff. For companies who wish to work for the government there is a further requirement that at least 70% of their share capital is held by black investors (PricewaterhouseCoopers, 2003). The burden of regulatory compliance has hampered some companies in using the data in more strategic ways as management has become bogged down in the actual process of compliance (Guthrie, 2001).

The discussions in this section revealed that the application of HRA is hampered by many obstacles most especially the processes of human resource valuation. Most of the countries that attempted the HRA based their reporting format on qualitative information on their human resource. The valuation remains the major difficulty in the application of HRA. The next section looks at the human resource policies in Nigeria with a view to discover those attributes that could be used in the model development, which is the major objective of this study.

2.8 Human Resource (HR) Policies in Nigeria

HR policies provide an organisation with a mechanism to manage risk by staying up to date with current trends in employment standards and legislation (Nadler, 1984). The policies are framed in a manner that the companies vision and the HR helping the company to achieve it or work towards it are at all levels benefited and at the same time not deviated from their main objective. According to Kelly (2001), HR policies allow an organisation to be clear with employees on the following areas: the nature of the organisation, what they should expect from the organisation, what the organisation expects of them, how policies and procedures work, what are acceptable and unacceptable behaviour, and the consequences of unacceptable behaviour.

Young-Shi and Jung (2003) and Nadler (1984) opined that the establishment of HR policies can help an organisation demonstrate, both internally and externally, that it meets requirements for diversity, ethics and training as well as its commitments in relation to regulation and corporate governance. For example, in order to dismiss an employee in accordance with employment law requirements, amongst other considerations, it will normally be necessary to meet provisions within employment contracts and collective bargaining agreements. The establishment of an HR Policy which sets out obligations, standards of behaviour and document disciplinary procedures, is now the standard approach to meeting these obligations (McLean, Osman-Gani, & Cho, 2004). HR policies can also be very effective at supporting and building the desired organisational culture.

HR policies in Nigeria are facing a massive transformation. With the achievement of democracy in Nigeria as from 1999, many industries in both the service and industrial sectors are being set up. These sectors employ a large number of working staff and need a reformed HR policy so as to increase the productivity of the companies. As a result, HR policies in Nigeria are restructured for the convenience of both the employers and the employees (Obe, 2000). Many discussions were held in this regard and for overall development, the existing HR policies are being transformed.

A large number of expatriates are also working in both the service and industrial sectors in Nigeria. The coming of information and telecommunication firms in the early 2000s, and the transformation of petroleum industry (downstream), companies like MTN, GLO, and Oando brought about expatriates that are employed from both within the country and abroad. Setting up of HR policies as per international standards is essential for the retention of these employees. Therefore, the Nigerian government has taken initiatives to formulate suitable HR policies catering to the demands of the new era (Obe, 2000). Some prominent features of HR policies in Nigeria that underwent reformation are: recruitment policies, training and manpower development, employment policy and conditions, management environment, and external environmental factor.

Recruitment policies in Nigeria have been witnessing several changes in the recent years. Previously, it was believed that recruitment policies in the country were corrupted (Obe, 2000). But in the present decade, it is based on different criteria such as educational qualification, work experience, communication skills, leadership qualities etc. The most important feature of the HR policies in Nigeria is the training of the recruited employees and the development of manpower (Mainoma, 2004). It is essential to impart a proper training to the newly joined employees so that they are empowered with the working methods and techniques to ensure a smooth operation of different projects.

If there is a lapse on the part of the recruiters to provide proper training to the employees then it is the company that would incur loss. As for employment policies, the company has to have appropriate terms and conditions so that the staff does not face any problem regarding working hours, taking of leaves and other similar staff policies. If these are very stringent, then the company would face loss of qualified employees. Therefore, in order to retain the staff, HR policies in Nigeria are structured so as to minimise loss of efficient staff. The external environment for employees is modified so that they don't face any external trouble while at work. In Nigeria, the work places have decent work ambience. The companies are taking measures to ensure that there are no disturbances regarding ethnicity, religion, language, culture and gender discriminations.

The revolutionary trend in HR policies in Nigeria made it clear that HR is the most important factor for economic growth and development. Lamberg (2006) said that the world's evolution nowadays made it clear that valuation of intangibles will soon dominate the measurement of income. HR contribution to organisation's income is growing stronger and organisations spend substantial money in developing their workforce (Peris-Ortiz, 2009). From the point of advertisement for a particular post to the point when an employee leaves an organisation, organisations do commit some financial resources to the employee. Many reasons culminated into the spending nature of organisations on their HR. Jasrotia (2004) identified the reasons why organisations commit huge financial resources on their

HR as including: to get the best human brain, to command respect in the eyes of stakeholders, and to gain competitive advantage. Other reasons for spending much money on the HR, as identified by Toulson and Dewe (2004), Abubakar (2007) and Hidalgo, Garcia-Meca and Mertinez (2010) are to become the pace setter, and to achieve the pre-determined objectives of the organisation.

Lau and Lau (1978), Steffy and Maurer (1988), Roslender and Fincham (2001), and Leffingwell (2002) revealed areas through which organisations commit money relative to their human resources. The following are the identified areas:

(i) Advertisement: Although the cost associated with advertisement relative to human resource might not be significantly high, we gathered from our interviews that organisations must still spend some money in letting the public know what they want and to widen up their chances of getting the best especially in external recruitment. In this respect advertisement cost of human resource is identified as one area of financial commitment on human resource asset.

(ii) Recruitment and Selection: The cost of recruitment and selection could be significantly high. The exercise could be tedious and time-consuming involving the commitment of human, material and financial resources. It is the process of actually selecting the best man or men for the advertised posts/jobs.

(iii) Familiarisation and Training: Another area that organisations do spend money on their human resource is familiarisation and training. This involves exposing the recruits to the way of doing things within an organisation through an inhouse or a formal training exercise. The main aim is to introduce and acquaint the recruits with the tradition, core values, mission and vision of the organisation.

(iv) Training and Development: In order to catch up with the current movement in technological advancement, organisations organise seminars, workshops and conferences for the purpose of improving and updating their personnel abilities and capabilities. This will go a long way in developing the personnel and improve their productivity levels.

(v) Medical and Entertainment: Proper medical arrangement is always put in place by organisations in order to keep the personnel healthy. A healthy employee has the tendency of becoming a very productive employee. On the other hand, organisations do set aside some money to entertain the employees. A well-entertained employee could be a very motivated employee and hence a very productive employee. Both on medical and entertainment, organisations do spend money to ensure that things go well within their organisations.

In order to follow the teachings and requirements of materiality convention in accounting, which says that any economic activity that is capable of distorting the true and fair view of financial statements and the value of an organisation, should be reported; investment on HR is recommended for capitalisation. The amount committed to the HR is considered substantial and therefore material.

2.9 Theoretical Framework and Model Development

This section provides the theoretical underpinnings upon which the model development and empirical testing of the model developed under this study are based. The aim of the section is to convey to the reader the theoretical basis of the study. There are basic underlying theories upon which the HRA has been developed. These theories are the theoretical framework of human resource valuation and reporting. Theoretical framework is a foundation for the parameters, or boundaries, of any study. HRA researchers such as Toulson and Dewe (2004), Kodwani and Tiwari (2007), and Hidalgo et al (2010) believed that the success of every firm depends upon calibre, honesty, quality and character of employee working in it. Employees are the important assets of an organisation and the success and the failure depends upon the skill and performance of the employees. Human resources are considered to be improperly presented in the financial reports of organisations. Organisations only consider salaries and wages as revenue expenditure and expensed any other costs incurred in relation to employees. No effort was made to calculate cost of hiring, training and developing of human beings. In line with this argument, theories were developed through which human resource value can be computed. These theories are the theories under the human resource accounting and they are explained below.

a) ***Cost Theory***: Under this theory, organisation's investment on employees are measured using the costs incurred on recruitment, acquisition; formal training and familiarisation; informal training and familiarisation; experience; and development. The costs are amortised over the expected working lives of employees and unamortised costs (for example, when an employee left the firm) are to be written off. Models developed under this theory are historical cost method and replacement cost method. The advocates of this theory are Brummet et al (1968), Flamholtz (1985) and Tang (2005). Cost-based human resource models are easier to apply and less technical. The major weakness associated with models developed under this theory is that they measure only the costs to the organisation but ignores completely any measure of the value of the employee to the organisation.

b) Value Theory: The proponents of this theory are of the view that the measurement of the value of employees should focus on the value they can create for their organisations while rendering their services. The soundness of the human resource valuation under this theory depends wholly on information, judgment, and impartiality of the estimates and guesstimates. Notable contributors under this approach are Flamholtz (1971), Kaplan and Norton (1992), Monti-Belkaoui and Riahi-Belkaoui (1995), and George (2005).

c) Present Value of Future Earnings/Benefits: Lev and Schwartz (1971) proposed an economic valuation of employees based on the present value of future earnings, adjusted for the probability of employees' death/separation/retirement. This method helps in determining what an employee's future contribution is worth today. According to this theory, the value of human capital embodied in a person who is 'y' years old, is the present value of his/her future earnings from employment. Other proponents of this theory are Hermanson (1964) and Flamholtz (1974). The models developed under this theory tend to be more objective because they use widely based statistics such as census income return and mortality tables. However, the human resource models under this theory assign more weight to averages than to the value of any specific group or individual.

d) Expense Theory: This theory focuses on attaching money estimates to the behavioural outcomes produced by working in an organisation. Criteria such as absenteeism, turnover, and job performance are measured using traditional organisational tools, and then costs are estimated for each criterion. For example, in costing labour turnover, Naira figures are attached to separation costs, replacement costs, and training costs. This method is philosophical in its development (Lim, Chan & Dallimore, 2010) but uses too many variables that are too qualitative to be estimated in figures.

Studies undertaken in the field of HRA, which focus on quality or value relevance of financial reporting, are rather few. Martin-de-Catro, et al (2010) conducted a study on the origin and nature of human capital view of firms. Their study centred on the firm's reported value and how human capital could change such value. Though their study established that human capital could transform a firm's value, no evidence was provided relative to the degree of such transformation. Their study is also limited to the extent that no measurement attempt of the value of human capital was made and no specific measurement theory was used in their study. Hidalgo, et al (2010) studied the relationship between corporate governance and intellectual capital disclosure. Intellectual capital was taken as synonymous to human resource value. Their study established a relatively strong positive relationship between corporate governance and the disclosure of human resource value in the financial statements. They concluded that when human resource value is reported, the quality of corporate governance of the reporting entity will be increased. The limitation of this research is that it failed to measure the value of the human resource and use the resulting value in making arriving at the conclusion.

Peris-Ortiz (2009) used the expense theory in designing an analytical model for human resource management. Though his research was not captioned as HRA, the model developed by the researcher was proven and concluded to have a significant impact on human resource management within an organisation. The application of the model from the study was also concluded to have a capability of transforming organisations and enhance their competitive advantage. Verma and Dewe (2004) conducted a study on the measurement of human resource value. His study raised many questions that must be answered so that a realistic value of human resource could be obtained. The study concentrated only on the measurement process and procedure without linking it up to either the quality of financial reporting or the value of firms. However, the study shaped the thinking of accountants over HRA.

The model developed in this research draw substantially from the cost and expense theories for the purpose of producing a more comprehensive HR model that takes care of majority of the weaknesses identified with the existing models. However, some elements of the present value theory are used in the model development. The section that follows presents the detailed stages in the modelling process and the procedures followed accordingly.

There is satisfactory number of theoretical framework in the area of assessing the quality of financial reporting. These frameworks as available in existing literature revealed the use of various measurement methods. The methods most widely used to assess financial reporting quality are accrual models, value relevance models, research focusing on specific elements in the annual report, and methods operationalising the qualitative characteristics. Accrual and value relevance models focus on the measurement of earnings quality. Accrual models are used to measure the extent of earnings management under current rules and legislation.

In the words of Healy and Wahlen (1999) and Dechow et al. (1995), these models assume that managers use discretionary accruals, i.e. accruals over which the manager can exert some control, to manage earnings. Earnings management is assumed to negatively influence the quality of financial reporting by reducing its decision usefulness (Stainbank, 2009; Brown, 1999).

The principal advantage of using discretionary accruals to measure earnings management is that it can be calculated based on the information in the annual report. Additionally, when using regression models it is possible to examine the effect of company characteristics on the extent of earnings management (Healy & Wahlen, 1999; Dechow et al., 1995). Moreover, this type of research is replicable. When using accrual models, however, the main difficulty is how to distinguish between discretionary and non-discretionary accruals (Healy & Wahlen, 1999). Moreover, it is only an indirect proxy of earnings quality, excluding non-financial information. Therefore, conclusions about the quality of financial reporting information based on accrual models do not provide direct and comprehensive evidence concerning the quality of financial reporting information and its dimensions of decision usefulness (Healy & Wahlen, 1999).

Value relevance models focus on the associations between accounting figures and stock-market reactions in the measurement of the quality of financial reporting information (Nichols & Wahlen, 2004; Barth et al., 2001; Choi et al., 1997). The stock price is assumed to represent the market value of the firm, while accounting figures represent firm value based on accounting procedures. According to Nichols and Wahlen (2004), when both concepts are strongly correlated, it is assumed that earnings information provides relevant and reliable information. This method is also used to examine earnings persistence, predictive ability, and variability, as elements of earnings quality (Francis et al., 2004; Schipper & Vincent, 2003).

The third area of interest in the study of the quality of financial reporting focuses on assessment tools that measure the quality of specific elements of the annual report in depth and includes both financial and non-financial information. It evaluates the influence of presenting specific information in the annual report on the decisions made by the users. Studies using this framework include Hirst et al. (2004), who put emphasis on the use of fair value accounting and financial reporting quality. Also, Gearemynck and Willekens (2003) examine the relationship between the auditor's report and decision usefulness of financial reporting information; while Beretta and Bozzolan (2004) focus on the quality of internal control and risk disclosure information. Cohen et al. (2004) highlights the relationship between corporate governance mechanisms and financial reporting quality. However, research that focuses on a specific element in the annual report has a partial focus, and thus does not provide a comprehensive overview of total financial reporting quality.

Methods that operationalise the qualitative characteristics aim to assess the quality of different dimensions of information simultaneously to determine the decision usefulness of financial reporting information. Jonas and Blanchet (2000), Lee et al. (2002) and McDaniel et al. (2002) developed questions referring to the separate qualitative characteristics in order to assess information quality. Although their research indicates that qualitative characteristics can be made operational, their operationalisations are based on the current frameworks of International Financial Reporting Standards (IFRS). In addition, some of these operationalisations are not complete and focus solely on relevance and faithful representation (McDaniel et al., 2002). Although understandability, comparability, and timeliness are perceived to be less important than relevance and faithful representation, for a comprehensive assessment it remains important to include them in the analysis. In addition, the complete annual report has to be taken into account since financial reporting refers to both financial and non-financial information.

In conclusion, accrual models and value relevance literature only focus on information disclosed in financial statements to assess the financial reporting quality (Nichols & Wahlen, 2004; Leuz, 2003; Barth et al., 2001; Healy & Wahlen, 1999; Choi et al., 1997; Dechow et al., 1995). Research papers focusing on specific elements in the annual report include both financial and non-financial information, but are not able to assess financial reporting quality comprehensively (Beretta & Bozzolan, 2004; Cohen et al., 2004; Hirst et al., 2004; Gearemynck & Willekens, 2003).

The model developed from this study is empirically tested in order to find its impact on the quality of financial reporting of quoted service companies in Nigeria. In the pursuit of this, value relevance theory is used via the application of Price Model as advocated by Edwards-Bell-Ohlson (1995). The EBO Model, as it is shortened, uses book values, earnings and change in earnings to determine how they affect the share price. The next subsection provides adequate explanations on the model development and the modelling process.

2.9.1 Model Development

One of the major objectives of this research is to produce a model that would be used in the valuation of human resources for inclusion in the financial statements of quoted service companies in Nigeria. Developing a model is a stage by stage process. This section therefore contained detailed discussions on the modelling process and procedure following scientific process of mathematical modelling.

2.9.1.1 Underlying Assumptions

The modelling of the human resource valuation model is based on the following key assumptions:

i) The value of human resource comprises of both acquisition costs and the continuous expenditure on the resource for the duration of the service period.

ii) The human resource can leave the organisation or die before the expiration of his/her service period.

iii) An organisation owns the employee to the extent of his/her service; provided he/she remains under the employment of the organisation.

iv) An organisation will continue to invest on the human resource.

v) Employee’s annual salaries and wages is regarded as a recurrent expenditure and therefore not capitalised and also not included in determining the total value of an employee.

2.9.1.2 Identification and Coding of Variables

The variables incorporated in the model are identified and coded in this section.

a) Identification of Variables: The following variable are adjudged to have effect on the value of quoted service companies in Nigeria:-

i) Recruitment and selection costs: These are the aggregate costs incurred by the company in the advertisement of the vacant positions, application screening costs, and aptitude test and interview costs. These costs are capitalised and they add to the value of the human resource.

ii) Induction training costs: These are the total costs of training the selected recruits prior to their job placements and actual start of work. These costs are capitalised and added to the total of recruitment and selection costs.

iii) Settlement Allowance: These are the total costs incurred by the hiring company on the selected recruits during or after the induction training for inconvenience, mobility, and dressing/wardrobe allowance. These costs are also capitalised and added to the other costs.

iv) Education, training and development costs: These are costs incurred by the company in respect of updating the knowledge of their human resource in order to make them more competitive and productive. These costs are capitalised whenever the company incurred them and add to the total value of the human resource.

v) Health and safety costs: These are costs incurred from time to time by the company in respect of providing a safe working environment and healthy human resource. These costs have direct bearing on the productivity of the human resource and therefore capitalised.

vi) Pension and provident fund contribution: All employers contribute to the retirement fund of their employees. These costs are capitalised and added to the total value of the human resource.

vii) Retirement age: Employees do not work forever. Therefore the period in which an employee is expected to provide economic service to the company is a variable in determining the value of the employee. For the purpose of this model, sixty (60) years is adopted as the retirement age as applicable in Nigeria.

viii) Mortality age: The average mortality age of a person within a country will have impact on the expected service period of the person. In this model therefore this fact is taking into consideration. The average mortality age to be used at any given time is the average mortality age in Nigeria. As at 2009, the average mortality age in Nigeria is forty seven (47) years.

ix) Labour turnover rate: This refers to the rate at which employees join and leave a company or industry, measured against a standard or over a fixed period. This is considered an important variable and therefore included into the model.

x) Employee age: The age of the employee is a factor in determining the expected service period of the employee, which directly determines the value of the employee to the company.

xi) Discounting rate: This is the rate at which the present value of continuous expenditure on human resource will be computed. The rate could be the market rate of return or weighted average cost of capital of the company.

b) Coding of Variables for Inclusion into the Model:

The variables defined above are coded using Greek and Coptic, and Cyrillic symbols for easy incorporation into the model. The symbols and what they represent are provided hereunder:

τ	=	Recruitment and selection costs
ι	=	Induction training costs
ς	=	Settlement Allowance
ε	=	Education, training and development costs
λ	=	Health and safety costs
б	=	Pension and provident fund contribution
ґ	=	Retirement age
ω	=	The proportion of the difference between the employee retirement age and the country's mortality age to the expected number of active/economic years of service i.e. $\frac{(\text{ґ}\quad)}{(\text{ґ}\quad e)}$. This represents the probability that an employee can die before the retirement age of 60 thereby causing loss of employee service period.
ℓ	=	Labour turnover rate
e	=	Employee age
i	=	Discounting factor or rate.
μ	=	Mortality age

2.9.1.3 Mathematical Deduction

i) The value of human resource is the function of acquisition costs (C) and continuous expenditure on the resource (*K*). This can be represented geometrically as:

$$HR_{value} = f\,(\text{Acquisition costs, Continuous expenditure})$$

$$\rightarrow \quad HR_{value} = C + K \qquad \text{(for an employee) --------------- (1)}$$

$$\text{Or} \quad HR_{value} = \sum \quad + \qquad \text{(for group of employees) ---------- (2)}$$

ii) The acquisition costs on human resource comprises of recruitment and selection costs (τ), induction training costs (ι), and settlement allowance (ς). This can be stated symbolically as follows:

$$C = \tau + \iota + \varsigma \qquad \text{(for an employee) --------------- (3)}$$

$$\text{Or} \quad C = \sum \tau + \iota + \varsigma \qquad \text{(for group of employees) -------- (4)}$$

iii) The continuous expenditure on the human resource consists of the aggregate of ε, λ, б, ɾ, ω, ℓ, and е. This implies that *K* is the summation of ε, λ, б, ɾ, ω, ℓ, and е. This can be stated symbolically as follows:

$$K = \varepsilon + \lambda + б \qquad \text{(for an employee) ------------- (5)}$$

$$\text{Or} \quad K = \sum \varepsilon + \lambda + б \qquad \text{(for group of employees) ------ (6)}$$

iv) This model recognises the relevance and impact of other variables in the computation of human resource value. These variables are the retirement age, average mortality age, labour turnover rate, and employee age. The justification behind the identification and inclusion of these variables into the model is the application of prudence and conservatism in the valuation of the human resource. The impact that these variables will have on the human resource valuation is explained below:

a) Retirement age: This is the age at which an employee will be expected to withdraw his service under normal circumstances after active and economic service to the company. This is used in determining the expected number of years that an employee is expected to render active and economic service to the company.

b) Employee age: Employees join the services of a company at different ages. Therefore, the age of the employee is important in determining the expected number of years that an employee is expected to render active and economic service to the company.

c) Average mortality age: Each country is having a different life expectancy age of its citizenry. This is determined by a composition of many factors such as health care facilities and service delivery, disaster forecasts, standard of living, etc just to mention but a few. This variable introduces the inevitable element of death into the model. The average mortality age reduces the expected number of years that an employee is expected to render active and economic service to the company. This is a clear application of the accounting concept of prudence in the computation of human resource value. The average mortality age in Nigeria (i.e.47 years) is used in this model.

d) Labour turnover rate: Employees do come to an organisation and leave. The rate at which employees leave an organisation or industry is the turnover rate. Even though employees can leave at any time, the practice nowadays is for the employee to sign bondage or an agreement that he/she will remain in the company for at least some definite years to come.

v) The four variables explained above can be symbolically represented as follows:

⇨ $(1 - \ell)\,(\acute{r} - e)\,(1 - \omega)$ ----------------------------- (7)

vi) Since the total costs of acquiring a human resource (C) is incurred prior to when the employee will start rendering his service to the company, equation (7) will not have effect on C. However, *K* will be affected by expression (7) since the amount will be incurred after the employee must have started working with the company. Therefore, incorporate expression (7) to equation (5) in the case of an employee and also incorporate expression (7) to equation (6) in the case of group of employees. This can be stated symbolically as follows:

$K = \varepsilon + \lambda + б\,(1 - \ell)\,(\acute{r} - e)\,(1 - \omega)$ (for an employee) ---------------- (8)

$K = \sum \varepsilon + \lambda + б(1 - \ell)(\acute{r} - e)(1 - \omega)$(for group of employees)---(9)

vii) Also, since the composition of *K* have to do with the future expenditure on the human resource, it is imperative to find their present value as at the time they will be included into the financial reports. So, find the present value of equation (9). This can be stated as follows:

$$K_{pv} = \sum \frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad)(\acute{r} \quad \Theta(\quad)}{(\quad)(\acute{r} \quad \Theta} . \text{ ----------------------- (10)}$$

viii) Add equation (10) to the total acquisition costs (C). This gives us:

$$HR_{value} = \sum \quad + \frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad)(\acute{r} \quad \Theta(\quad)}{(\quad)(\acute{r} \quad \Theta} . \text{ ------------------------ (11)}$$

Since $K_{pv} = \frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad)(r \quad ϴ)(\quad)}{(\quad)^{(r \quad ϴ}}$., the value of human resource is finally stated symbolically as:

$$HR_{value} = \sum \quad (\tau + \iota + \varsigma) + \frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad)(r \quad ϴ)(\quad)}{(\quad)^{(r \quad ϴ}} \text{ ----------- } (12)$$

Or $\quad HR_{value} = \quad \sum \quad + \sum$ ------------------------- (13)

xi) The model should be called and referred to as "*Salisu HRV Model*".

The empirical test of this developed model ("*Salisu HRV Model*") is provided in chapter four. The objective of the empirical test is to determine the value relevance of the model in enhancing the quality of the information contents of quoted Nigerian service companies' financial reporting.

2.10 Summary

It has been established here that the concept of HRA existed for about half a century. The concept witnessed many break-through in terms of recognition, measurement and depreciating the cost capitalised as human resource assets. Various models and methods proffered for the valuation of human resources were adequately discussed, thereby revealing their strengths and weaknesses. The few experiences regarding the application of the concept were unveiled. Thus, R. G. Barry Corporation and the BHEL Company were the first to apply the concept and report same in their annual reports and accounts. Though lack of a universal standard as to the measurement and reporting format hinder the recognition and application of the concept, companies that did apply the concept did it in such a way that it is more appropriate taking into consideration their mode of business and the operating environment. The chapter also discussed the theoretical framework upon which this study is based and the procedure for model development.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides details on the design and methodology applied in this study. It provides discussions on the methods adopted in carrying out the study. It also provides discussions on the various sources and methods through which the data for this study were acquired, the techniques used in the analysis of such data, and the justification for the selection of the methods and techniques.

3.2 Research Design

This study employed a synthesis of descriptive and survey research methods with a large population of 102 quoted service companies in Nigeria and about 91,000 respondents [see Appendix B (5)]. It is a cross-sectional study that examined the impact of reporting human resource values as assets on the quality of financial reporting of quoted Nigerian service companies. Data were collected from the administration of questionnaire and conduct of interviews. While questionnaires were used to obtain evidence of patterns amongst the large population of the study, interviews were employed to gather more in-depth insights on interviewees' attitudes, thoughts, and actions relative to the concept of HRA and its possible impact on the quality of quoted Nigerian service companies.

Questionnaire is usually viewed as a more objective research tool that can produce generalised results where the sample size is large. In this study, the questionnaire was used to test hypothesis three specifically using questions eleven to twenty and applying the

Pearson's Chi-square technique. But on another hand, interviews provide contexts where interviewees can be asked for clarification, to elaborate on ideas, and explain perspectives in their own words. The responses from the interviews conducted were used to test hypothesis one specifically using the rankings in question ten and applying Kendall's Coefficient of Concordance (KCC). For these reasons, the two data collection instruments were used. The data collected from the annual reports and accounts of the selected sample was used to test hypothesis two using Edwards-Bell-Ohlson (EBO) Model.

3.3 Study Population

The population of this study consisted of the total number of quoted service companies in the Nigerian Stock Exchange (NSE). The study population is considered finite and divided into sectors as classified by the NSE. The total number of sectors in the NSE is 35; out of which 13 sectors are classified as containing service-oriented companies. The details of the service-oriented sectors and the number of companies in each sector are presented in Table 3.1.

Table 3.1 List of NSE Classified Sectors Considered as Service-Oriented

S/No.	Service Sectors as Classified by the NSE	No. of Companies
1	Air Services	2
2	Aviation	2
3	Banking	24
4	Commercial Services	3
5	Hotel and Tourism	3
6	Insurance	32
7	Leasing	1
8	Maritime	1
9	Memorandum Quotations	25
10	Mortgage	2
11	Other Financial Institutions	5
12	Real Estate Investment Trust	1
13	Telecommunications	1
	Total	102

Source: The Nigerian Stock Exchange (http://www.nigerianstockexchange.com), 2009

3.4 Sample Size and Sampling Techniques

The sample size used in this study was divided into two: sample size of the quoted service companies and sample size of the respondents for questionnaires administration. The two samples were drawn from their populations scientifically.

a) Sample Size of the Quoted Service Companies:

Using the information contained in Table 3.1, the sample size of the quoted service companies used in this study was determined using Israel (1992) formula:

$$n = \left[\frac{Z\alpha_{/2}.\sigma}{\varepsilon} \right]^2$$

Where: $Z\alpha_{/2}$ = Critical value i.e. the positive Z value that is at the boundary for the area of $Z\alpha_{/2}$ in the right tail of the standard normal curve;

σ = Standard deviation of the population;

ε = Marginal/Standard error;

n = Computed sample size.

Based on the computations in Appendix B (5), the sample size was twenty-three (23) quoted service companies representing 22.55% of the population. The technique used in selecting the members of the sample was the combination of proportional and simple random sampling techniques where each member of the population was awarded an equal chance of being selected into the sample. The sample of the quoted service companies reflected the statistical distribution of the population. However, where a service sector as classified by the NSE has only one company, the company is automatically selected into the sample. Through that process, the companies selected and the modalities in arriving at them are contained in Appendix B (5).

b) Sampled Respondents for Questionnaire Administration

Table 3.2 – Total Questionnaires Administered

S/No.	Category of Respondents	Number
1	Staff of Selected Quoted Service Companies	393
2	Accountants in Practice	150
3	Accounting Theoreticians	150
4	Members/Staff of Regulatory Bodies/Professional Accounting Bodies and Agencies in Nigeria (FRC, ICAN, ANAN, NAA)	150
	Total	843

Source: Personal Computations and Estimates, 2009 [see Appendix B (5)]
FRC = Financial Reporting Council
ICAN = The Institute of Chartered Accountants of Nigeria
ANAN = Association of National Accountants of Nigeria
NAA = Nigerian Accounting Association.

The 393 staff of quoted service companies in Nigeria was selected using the Yemane (1967) formula as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where: N = Total number of employees

e = Marginal error

n = Sample size

The details of the computation process are contained in Appendix B (5). The Yemane (1967) sampling technique was considered more appropriate where the population of respondents is very large (Eric, 2009; Borgatti, 1999). This is why it was considered and adopted in this study. Due to the nature of the research, concentration was given on the executive officers and other management staff of the companies during the questionnaire administration process. The number of questionnaires administered on other categories of the respondents was arrived at using convenience and value judgment.

3.5 Sources and Methods of Data Collection

This study used both primary and secondary data in an attempt to achieve the set objectives of the study and to solve the problem under study. The study recognised the importance of primary data and used them in making conclusion about the problem under study. The primary data used in the study were primarily sourced and they are:

i) Personal Interview: - Both structured and unstructured interviews were conducted on selective executives and key officers of Financial Reporting Council (FRC), the Institute of Chartered Accountants of Nigeria (ICAN), Association of National Accountants of Nigeria (ANAN), and Nigerian Accounting Association (NAA). The essence of this exercise was to get a clear understanding and information on the concept of human resource accounting and the issues surrounding its valuation, regulation, adoption and application. The interview was adopted in order to provide an atmosphere where interviewees could ask for clarification, elaborate on ideas, and explain perspectives in their own words; and to confirm the accuracy of some of the responses to the questionnaire questions. Thus, face-to-face interview method was applied. A total of ten questions were drawn for the interview [see Appendix A (2)].

ii) Questionnaire: - This method was employed in order to collect data/information from the study's diverse respondents. The questionnaire contained twenty questions, which was designed to contain a combination of both open and closed questions. The decision to adopt the combination of the two was done purposely to give the respondents opportunities to say their minds in form of writing their views, feelings or opinions as the case may be.

The questionnaire respondents consisted of the following:

i) The Staff of the Selected Quoted Service Companies:

This research study, as mentioned in chapter one, is limited to the quoted service companies in Nigeria, whose major asset is the capacity, capability and intellectual ability of their human resource. The reason for this is that service companies depend more on human capabilities to survive than the manufacturing or merchandising companies. Thus, 393 questionnaires were distributed to them. It was decided to sample the opinion of the mentioned companies because they are responsible for the implementation of the valuation and reporting of the human assets. The respondents under this category were the executive and other management staff of the respective companies. The questionnaire administration was restricted to the Kaduna state business offices of the selected companies. However, where the selected company has no business office in Kaduna state, the head office of the company was used in the questionnaire administration.

ii) Accounting Theoreticians:

This constitutes the first cluster in the population of the study. Accounting teachers, lecturers and other advocates of accounting, which are found in the tertiary institutions in Nigeria, make up this cluster. The study however limits the distribution to accounting teachers and lecturers found in the seven tertiary institutions in Kaduna state that run accounting program. They are Ahmadu Bello University, Zaria; Nuhu Bamalli Polytechnic, Zaria; Ameer Shehu Idris College of Advanced Studies, Zaria; Kaduna State University, Kaduna; Kaduna Polytechnic, Kaduna; Nigeria Defence Academy, Kaduna; and Federal College of Education, Zaria. A sample size of one hundred and fifty (150) respondents was selected from this group via convenience of contact (to the extent on only those found present during any of the three consecutive visits).

iii) Accountants in Practice:

This group consists of Accountants considered to be practicing Accounting either in form of auditing, consultancy or other means. Thus, the auditing firms in Kaduna State were used because there is a fair representation of practicing accountants within the area. A total of one hundred and fifty (150) questionnaires were distributed to the staff of the practice firms, which concentrated on the principal owners and/or other key staff members working with the firms. The total number of accounting firms in Kaduna State as at December 2009 is forty-six (46).

iv) Regulators of Accounting Practice in Nigeria:

This group of respondents consists of the staff of Financial Reporting Council (FRC), the Institute of Chartered Accountants of Nigeria (ICAN), Association of National Accountants of Nigerian (ANAN) and Nigerian Accounting Association (NAA). The reason for their selection is simply because of their impact towards regulating the profession of accounting and its practice in Nigeria. Thus, one hundred and fifty (150) questionnaires were distributed. The questionnaire administration was restricted to the Kaduna state offices of the selected regulatory bodies and agencies. Where any of the bodies and agencies has no office in Kaduna state, the national secretariat was used in the questionnaire administration.

3.6 Data Analysis Techniques

The analysis techniques used in this study have direct relationship with the objectives of the study outlined and the hypotheses formulated in chapter one. The techniques are used to test the hypotheses and details on them are provided hereunder.

a) Use of Kendall's Coefficient of Concordance (*KCC*):

The Kendall's Coefficient of Concordance (*W*) was used to test hypothesis one (H_{01}) of the study based on the rankings of human resource expenditure. This technique was used for the purpose of establishing the concordance of the interviewees on the degree of importance attached to the human resource expenditure for capitalisation as assets. The steps involved in the computation of KCC, according to Kendall and Babington (1939) and as improved by Siegel and Castellan (1988) are:

i) Let N represents the number of entities/attributes to be ranked; and let *k* represents the number of judges assigning ranks.

ii) Cast the observed ranks in a Kx N table.

iii) For each entity/attribute, determine the sum of the ranks assigned to that entity/attribute by the judges, Rj.

iv) Determine the mean of the Rj and express each Rj as a deviation from that mean.

v) Square the deviations and sum the squares to obtain *s*.

vi) compute the value of *W* using the following formula (Legendre, 2005):

$$W = \frac{s}{— k^2 (N^3 - N)}$$

Where: s = Sum of squares of the observed deviations from the mean, Rj.

k = Number of sets of ranking, e.g. the number of judges.

N = Number of entities (objects/individuals ranked).

$1/12\ k^2 (N^3 - N)$ = Maximum possible sum of the squared deviation.

vii) From the concordance table look for the value of W at a given significance level and based on the result accept or reject hypothesis.

viii) When N is larger than 7, the expression is approximately distributed as Chi-Square with $X^2 = k(N - 1)W$.

b) Use of Pearson's Chi – Square (χ^2) Technique:

This technique was used to test hypotheses three (3). It is a non–parametric method that makes no assumptions about the population being sampled for study. The technique was employed in the study to determine the significance of including human resource capitalised value in the financial reports and how the value could impact on the users' ability to make informed decision. The formula for computing Chi – square is given below:

$$\chi^2 = \Sigma (O - E)^2/E$$

Where: O = Observed frequency

E = Expected or theoretical Frequency

The final interpretation of Chi–square value is done via comparison with the table value of (χ^2) for given degrees of freedom at specified level of significance. If the calculated value of (χ^2) is greater than the table value, the relationship between the observed and expected frequency is significance. Where the calculated value of (χ^2) is less than its table value, the difference between the theory and observation is considered not significant. The *MicrosoftExcel+Analyze-It* statistical software was employed to obtain the Chi-square results.

c) Use of Tables and Simple Percentages:

Some of the questionnaire questions were statistically analysed using tables and simple percentages. They are used to assist in answering research questions one and two. Thus, the options given to the respondent and their respective percentages on the total responses received were entered onto the tables and their percentages on the total computed. The issue/option that has the highest percentage is favoured and conclusion passed to its advantage.

d) Use of Descriptive Method of Analysis:

The data mostly collected from interviews conducted were analysed using the descriptive method of data analysis. In this regard, the data were descriptively analysed based on the explanations and discussions given by the interviewees. This method was used to analyse the interviewees' responses to interview questions one to nine.

3.7 Model Specification for Testing the Developed Model

In order to find the value relevance of "*Salisu HRV Model*" on the quality of financial reporting of quoted service companies in Nigeria, EBO (1995) Model was used. The objective here is to show empirically the impact of "*Salisu HRV Model*" thereby testing hypothesis two (2). In line with this, the study formulated the following equations to find the multiple regression results using the EBO (1995) Model.

$$AMP_i = \alpha_i + \beta_{i1}BVPS + \beta_{i2}BEPS + \beta_{i3}CEPS + \varepsilon_i \text{ ----------- } (14)$$

$$AMP_t = \alpha_t + \beta_{t1}BVPS + \beta_{t2}BEPS + \beta_{t3}CEPS + \varepsilon_t \text{ ----------- } (15)$$

Where: AMP = Average Annual Market Price

BVPS = Book Value Per Share

BEPS = Basic Earnings Per Share

CEPS = Change in Earnings Per Share

α = The intercept

β = The coefficients of independent variables

ε = Standard error

Equation (14) considered the variables without the inclusion of HR value; while equation (15) considered the variables after the inclusion of HR value. Based on the two equations, the variables used are the BVPS, BEPS, CEPS and AMP. In order to test hypothesis two, a functional relationship between the Average Market Price (AMP) and Book Value Per Share (BVPS), Basic Earnings Per Share (BEPS), and Change in Earnings Per Share (CEPS) was postulated in line with the EBO Model. As captured in chapter two, EBO

Model is one of the techniques of assessing the quality of financial reporting of companies under the value relevance theory.

3.8 Justification for the Methods and Techniques Chosen

The concept of HRA is an issue that is on deliberation as far as its valuation and application are concerned. People now understood its necessity but its measurement in monetary terms is still in a dilemma. This study assesses the impact of reporting human resource as assets on the quality of financial reporting of quoted service companies in Nigeria. During the process, various measurement methods/models proffered for valuing human resource were adequately reviewed with the aim of discovering their strengths, weaknesses, and application possibilities/limitations.

To effectively achieve the set objectives of this study, the opinions and feelings of the various stakeholders that could be affected by the acceptance and application of the concept of HRA need to be sourced. Also, considering the population size, it is more convenient, economical and time effective to study a representative sample rather than the whole population. For these reasons, a combination of descriptive and survey methods of research were adopted for this study.

The choice of primary sources of data collection was adopted in order to have a greater view and understanding about the problem under study. Thus, the use of questionnaires was chosen so that enough information could be obtained. Interviews were conducted in order to obtain more clarification on certain issues considered critical in the study and also to validate some of the responses given by the respondents in the questionnaire.

The techniques used in the data analysis are justified for and linked to their basis of application in each case. Techniques for data analysis, for the purpose of this study, are chosen based on the peculiarities and nature of the data used as the input for accurate and clearer analysis and interpretation. Thus, the selection of the techniques was done with the objectives of the study and their achievement at the forefront; and the nature and aim of the hypotheses formulated for the study.

3.9 Summary

The credibility of any research undertaking hinges on how scientifically and logically it was conducted. The more scientific a research is, the more credibility it earns, and the more it is generally accepted. This chapter revealed the details of all the procedures and processes followed in arriving at the solution to the stated research problem. From the discussions in the chapter, the research design adopted for the study was the synthesis of descriptive and survey research methods. The study used only primary data and they were collected via the conduct of interviews and administration of questionnaire. The population upon which this study is based was adequately explained and reported. Sample size used for this study and the modalities of how they were arrived at was also adequately covered in this chapter. Lastly, the techniques used in the data analyses for this study and their justifications were extensively elaborated.

CHAPTER FOUR

ANALYSES, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the data collected for this study, exhibits the analyses and other mathematical operations on them, and interprets the results obtained therefrom. The hypotheses formulated for this study are also tested in this chapter and decision on their acceptance or rejection incorporated. Though 843 copies of questionnaire were distributed to the study respondents; only 769 were completed and retrieved. The analyses in so far as they affect the questionnaires were based on the 769 completed and retrieved.

It could be recalled that three hypotheses were formulated in this study. The test of the hypotheses and the decision on their rejection or otherwise, are included in this chapter. Whereas the questionnaire was used to test hypothesis three specifically using questions eleven to twenty and applying the Pearson's Chi-square technique; the interviews responses were used to test hypothesis one specifically using the rankings in question ten and applying Kendall's Coefficient of Concordance (KCC). As for hypothesis two, the data collected from the annual reports and accounts of the selected sample was used in testing it using Edwards-Bell-Ohlson (EBO) Model.

The table below shows the analysis of questionnaires distributed and received for this study based on the category of respondents:

Table 4.1: Analysis of Number of Questionnaire Distributed and Retrieved

Category of Respondents	No. Distri-buted	% on No. Distri-buted	No. Retrie-ved	% on No. Distri-buted	% on No. Retrieved
Staff of Quoted service Companies	393	46.63	369	43.77	47.98
Accountants in Practice	150	17.79	133	15.78	17.30
Accounting Theoreticians	150	17.79	136	16.13	17.69
Staff of Accounting Regulatory Bodies	150	17.79	131	15.54	17.03
Total	843	100.00	769	91.22	100.00

Source: Personal Computations, 2009

4.2 Experts' Perception on the Capitalisation of Human Resource Investments of Quoted Service Companies in Nigeria

In this section, the hypothesis one formulated for this study is tested using the Kendall's Coefficient of Concordance (KCC). It can be recalled that the hypothesis was stated thus: The nature of expenditure on the components of human resource investment does not warrant their capitalisation and treatment as assets to a quoted Nigerian service company. Appendix B (1) gives the detailed computation and the results are summarised in the Table 4.2.

Table 4.2: Kendall's Coefficient of Concordance Results

Variable	Symbol	Coefficient
Chi-squareAdjusted KCC	W	70.38
Number of experts	K	23
Number of HR expenditure considered	N	10
Chi-square critical value	χ^2	35.17

Source: Computational Results [See Appendix B (1)]

The table in the appendix shows the ranking of the experts selected from the 23 quoted service companies. The summarised results in Table 4.2 showed the computed value of chi-square adjusted KCC as 70.38, which is higher than its chi-square critical value of 35.17 at 95% confidence level. Since the computed value of W is higher than its chi-square critical value, the study rejects the null hypothesis one. This implies that the nature of service companies' investments on human resource may warrant their capitalisation and treatment as assets in the balance sheet of the companies. This result agrees with the findings of Abubakar (2008), Roslender (2004) and Stewart (1991). However, the finding contradicts that of Johansson (1999) who studied why human resource costing and accounting cannot work in Swedish companies. His findings revealed that companies in Sweden will not be better off when they capitalise their human asset cost and report them as assets in the financial statements. He added that the nature of human asset expenditure/investment and the reporting requirements in Sweden make the application of HRA difficult.

4.2.1 *Analysis of Questionnaire and Interview Questions*

Some questions were incorporated into the questionnaire in order to source more information on the relevance of human resource accounting and the necessity of a change in the treatment of human resource investments/expenditures that are capable of increasing the productivity of the resource. The responses from the questions are analysed in Table 4.3. The Table contains the opinions of the respondents on whether human resource is the major asset of a Quoted Service Company (QSC) in Nigeria. The analysis in the Table is presented in absolute and percentage form based on the categories of the respondents.

Table 4.3: Respondents' consideration on whether human resource is the major asset of a quoted service company in Nigeria

Response	Staff of QSC	Accountants in Practice	Accounting Theoreticians	Staff of Accounting Regulatory Bodies	Total	%
Yes	277	89	91	77	534	69.44
No	56	21	19	44	140	18.21
Not Sure	36	23	26	10	95	12.35
Total	369	133	136	131	769	100.00

Source: Survey data, 2009

The results in Table 4.3 exhibited that 69.44% of our respondents believed that human resource is the major asset of a quoted service company in Nigeria. On the contrary, 18.21% felt that human resource is not the companies' major asset. The balance of 12.35% were not sure about whether human resource can be considered as the major asset of quoted service companies in Nigeria. This analysis revealed that more two-third of the respondents considered human resource as the major asset possessed by a quoted Nigerian service company.

In order to find the relationship between money expended on human resource and productivity, a question was forwarded to the respondents in that respect. The aim of the question is to gather the opinion of the respondents on the impact of human resource expenditure on the productivity of the human resource. The responses on this question are presented and analysed in Table 4.4.

Table 4.4: Respondents' consideration on whether money expended on human resource by quoted Nigerian service companies have significant impact on the human resource productivity

Response	Staff of QSC	Accountants in Practice	Accounting Theoreticians	Staff of Accounting Regulatory Bodies	Total	%
Yes	189	47	99	43	378	49.15
No	76	34	28	41	179	23.28
Cannot say precisely	104	52	09	47	212	27.57
Total	369	133	136	131	769	100.00

Source: Survey data, 2009

Majority of our respondents (49.15%), even though not up to half of their total number, were of the opinion that money expended on human resource by quoted Nigerian service companies do have significant impact on the human resource productivity. The other 50.85% were either of the opinion that money expended on human resource by quoted

Nigerian service companies does not have significant impact on the human resource productivity or cannot say precisely whether money expended on human resource by quoted Nigerian service companies have significant impact on the human resource productivity.

As was discussed in this study, human resource accounting is all about capitalisation of human resource expenditure. A question was included in the questionnaire in order to find the perception of the respondents on whether expenditure incurred on human resource should be capitalised and reported as asset instead of the conventional expensing method. The responses to this question is presented and analysed in Table 4.5. The table contains the details of the responses, category of respondents, and the absolute number and percentages in each case.

Table 4.5: Respondents' thinking on whether human resource expenditure incurred by quoted service companies in Nigeria should better be capitalised and reported as assets

Response	Staff of QSC	Accountants in Practice	Accounting Theoreticians	Staff of Accounting Regulatory Bodies	Total	%
Yes	187	61	75	54	377	49.02
No	123	33	41	49	246	31.99
Cannot say precisely	59	39	20	28	146	18.99
Total	369	133	136	131	769	100.00

Source: Survey data, 2009

On the issue of capitalising and reporting human resource expenditure incurred by quoted service companies in Nigeria as assets, 377 out of the respondents (totaling 49.02%) responded positively. 31.99% of them did not believe that human resource expenditure incurred by quoted service companies in Nigeria should better be capitalised and reported as assets. However, 18.99% of the respondents could not say precisely whether human resource expenditure incurred by quoted service companies in Nigeria should better be capitalised and reported as assets.

The open question that follows the question analysed in Table 4.5 request the respondents to state their responses. The reasons collated therefrom revealed that since the success of service companies depends largely on the human skills and expertise, capitalisation of expenditure on employees should better be capitalised and reported as asset by the service companies. However, others stated that since it is difficult to arrive at the human resource value to be capitalised, the conventional way of expensing should be continued for now.

Salaries and wages paid to employees is one of the expenses on human resource. The question is can it be included among the expenditure to be capitalised for the purpose of reporting human resource value as asset? This kind of question was included in the questionnaire in order to seek the respondents' opinion on whether employees' salaries and wages should be capitalised. The responses received on this question are analysed on Table 4.6.

Table 4.6: Respondents' opinion on whether salaries and wages paid to employees should be considered as one of the human resource expenditure to be capitalised

Response	Staff of QSC	Accountants in Practice	Accounting Theore-ticians	Staff of Accounting Regulatory Bodies	Total	%
Yes	108	11	25	34	178	23.15
No	261	122	111	97	591	76.85
Total	369	133	136	131	769	100.00

Source: Survey data, 2009

From Table 4.6, it is glaring that majority of the respondents (76.85%) opined that salaries and wages should not be among the expenditure that warrant capitalisation. Only about 23% suggested that salaries and wages should be capitalised in arriving at the human resource value for reporting as asset. Those that believe the salaries and wages should be excluded buttress supported their opinion by adding that salaries and wages paid to employees are recurrent in nature and relates to the current service rendered by the employee. Thus, they believed that salaries and wages have no attributes of capitalisation like in the case of training and education, for example, whose benefits can go beyond one accounting period. However, those that believed salaries and wages should be incorporated cemented their opinion by adding that all money expended on human resource should be used in the capitalisation process.

In order to get the best way of presenting the computed human resource value in the balance sheet and other components of financial statements, we forwarded a question to our questionnaire respondents. This question is numbered Q8 in the questionnaire and the responses to that question is hereunder analysed on Table 4.7.

Table 4.7: Ways of Presenting Human Resource Value in the Financial Statements

Response	Staff of QSC	%	Accoun-tants in Practice	%	Accting. Theore-ticians	%	Staff of Accting. Reg. Bodies	%	Total	% on Total
a) In the Balance Sheet only	98	27	27	20	17	13	11	08	153	20
b) As a Note to the Accounts only	53	14	21	16	25	18	24	18	123	16
c) As a Separate Statement only	20	05	31	23	11	08	43	33	105	13
d) (a) and (b) only	155	42	45	34	38	28	21	16	259	34
e) (a) and (c) only	24	07	04	03	23	17	18	14	69	09
f) (b) and (c) only	19	05	05	04	22	16	14	11	60	08
Total	369	100	133	100	136	100	131	100	769	100

Source: Survey data, 2009

From the analysis in Table 4.7, the highest number/percentage of our respondents (259/34%) believed that human resource value should be presented in the balance sheet and as a note to the accounts. Thus, 20% of them felt that it should be presented only in the balance sheet; while 16% were of the opinion that human resource value should be presented as a note to the accounts only. However, 13% of the respondents believed that reporting human resource in a separate statement dedicated for that purpose would be the most ideal way of presentation. From all the categories of respondents, only the staff of accounting regulatory bodies in Nigeria had the majority percentage not supporting reporting human resource value in both the balance sheet and notes to the accounts.

Furthermore, the interviews conducted reflected almost the same conclusion about the nature of human resource investments of quoted service companies in Nigeria and the necessity for their capitalisation. Majority of the interviewees agreed that the financial statements of service companies, especially the balance sheet, do not really show the true and fair view of the financial position of the company. This is due to the unaccountability of some key intangibles, which human resource valuation and reporting is paramount. All the interviewees concurred that the major asset of service-oriented companies is the intellectual ability and capability of their human resource. When asked whether they can report and make public the detailed report of their human resource, fourteen (14) of them, representing 61%, expressed their willingness to do so. However, the remaining proportion exhibited their fear and therefore will be skeptical unless it is made mandatory by the regulatory bodies/agencies.

Finally, the interviewees agree that investments on human resource in terms of training, education, welfare, and contribution to pension are capital in nature and therefore should be capitalised rather than expensed. This is because of their expected future benefits accruing to the company. They also agreed that when those expenditures are expensed, the concept of matching in accounting is violated. This finding goes in line with the findings of Abubakar (2007) and Kodwani and Tiwari (2007).

4.3 Empirical Test of the Developed Model ("*Salisu HRV Model"*)

Empirical testing of any model developed is one of the integral parts of the scientific modelling process. The "*Salisu HRV Model*" needs to be experimented to determine the extent of its value relevance. Under this section, the "*Salisu HRV Model*" is empirically tested in order to see how it would add value to the quality of financial reporting of quoted service companies in Nigeria and to enable the test of hypothesis two of this study. The empirical test result provides a criterion for the model to be accepted and applied; so that its superiority over the existing models could be established. In order to test the "*Salisu HRV Model*", EBO Model is used to determine the quality of financial reporting of selected quoted service companies in Nigeria without the HR value and with the HR value.

The Nigerian banking sector was chosen to test-run the value relevance of the "*Salisu HRV Model*" using the EBO Model. The following table (Table 4.8) presents the computed values of EBO Model variables with and without the HR value as measured by the "*Salisu HRV Model*":

Table 4.8: Computed Values of EBO Model Variables with and without HR Value

Year	Bank	Without HR value				With HR value			
		EBO Model Variables				EBO Model Variables			
		AMP	BVPS	BEPS	CEPS	AMP	BVPS	BEPS	CEPS
2006	Afribank	7.93	5.69	0.55	0.46	7.93	5.69	1.02	0.46*
"	Bank PHB	2.60	1.86	0.16	-0.01	2.60	1.86	0.16	-0.01*
"	First Bank	31.18	10.88	2.94	-0.41	31.18	10.87	2.96	-0.40*
"	Zenith Bank	18.92	16.72	1.93	0.58	18.92	16.72	2.01	0.60*
2007	Afribank	9.76	6.02	0.99	0.44	9.76	6.02	1.60	0.58
"	Bank PHB	7.41	5.56	1.19	1.03	7.41	5.62	1.21	1.05
"	First Bank	42.17	7.21	1.78	-1.16	42.17	7.21	1.79	-1.17
"	Zenith Bank	39.42	12.33	2.02	0.09	39.42	12.37	2.11	0.10
2008	Afribank	23.72	6.45	1.76	0.77	23.72	6.45	2.34	0.74
"	Bank PHB	28.13	21.24	2.48	1.29	28.13	21.24	2.49	1.28
"	First Bank	42.86	25.61	2.67	0.89	42.86	25.61	2.69	0.90
"	Zenith Bank	45.74	25.37	3.83	1.81	45.74	25.37	3.93	1.82

Source: NSE Fact Book, 2009; Banks' Annual Reports & Accounts, 2006 – 2008; and Personal Computations [See also Appendix B (4)]

AMP = Average Annual Market Price
BVPS = Book Value Per Share
BEPS = Basic Earnings Per Share
CEPS = Change in Earnings Per Share

Note: Figures with * mark for 2006 under CEPS are computed by comparing the 2006 figures with the 2005 figures.

4.3.1 Basic Descriptive Statistics

In this section, the descriptive statistics, tolerance and Variance Inflation Factor (VIF) are presented and discussed. The objective here is to provide explanations on the basic features of the data used. Table 4.9 below shows the mean, standard deviation, tolerance and VIF values of the variables considered. The full results are contained in Appendix B (2).

Table 4.9 Descriptive Statistics Results

Variables	BVPS	BEPS	CEPS	AMP
With HR Value:				
Mean	12.0858	2.0258	0.4958	24.9867
Std. Deviation	8.3417	0.98427	0.79245	15.58926
Tolerance	0.305	0.377	0.685	N/A
VIF	3.278	2.652	1.460	N/A
Without HR Value:				
Mean	12.1275	1.8583	0.3333	24.9867
Std. Deviation	8.20164	1.04214	0.86950	15.58926
Tolerance	0.307	0.312	0.956	N/A
VIF	3.260	3.203	1.046	N/A

Source: SPSS Regression Results

The results in Table 4.9 indicate that the average BVPS of the banks under consideration is ₦12.13 when the HR value is not included in their financial reports. But as the HR value, computed using the "*Salisu HRV Model*", is incorporated the BVPS is ₦12.09 representing a reduction of 4k. On the contrary, both the average values of BEPS and CEPS show an increment of 17k each when the HR value is included in the financial reports of the banks. All the independent variables (BVPS, BEPS & CEPS) have low standard deviation coefficients, which indicate their significant contribution to the "*Salisu HRV Model*".

In order to assess the multicolinearity of the variables considered, the tolerance and VIF values are used. From Table 4.8, the tolerance values of the variables are consistently smaller than 0.7 except for CEPS. This shows that there is complete absence of multicolinearity as inferred by Tobachnick and Fidell (1996) and Musa (2005). The VIF values, moreover, reaffirm the complete absence of multicolinearity among the variables considered since the values are consistently lower than ten (10) as suggested by Neter, et al (1996), Cassey and Anderson (1999) and Musa (2005).

4.3.2 Inferential Statistics

From Table 4.8 above, the inferential statistics variables computed using SPSS are summarised in Table 4.10.

Table 4.10: Regression Results Computed from the Data on Table 4.8

Statistical Variables	Without HR Value	With HR Value	Difference
R	0.914	0.922	+0.008
R Square	0.836	0.850	+0.014
Adjusted R Square	0.775	0.794	+0.019
F Statistics	13.594	15.126	+1.532
t – values:			
BVPS	0.342	2.146	
	0.741	0.064^{***}	
BEPS	3.226	2.629	
	0.012^{**}	0.030^{**}	
CEPS	-2.527	-3.241	
	0.035^{**}	0.012^{**}	
Significant	0.002^{*}	0.001^{*}	

Source: SPSS Regression Result [see Appendix B (2)]
* significant at 1%; ** significant at 5%; *** significant at 10%

The statistical results in table 4.10 above indicate a significant correlation between AMP, (dependent variable) and BVPS, BEPS & CEPS (since computed R > 0.875) in both situations. The adjusted coefficients of determination (R^2) under the two situations are computed as 83.6% and 85.0% respectively, which revealed the overall fitness of the EBO regression Model. This means that 83.6% of the variations in the selected quoted Nigerian banks' market share prices are explained by BVPS, BEPS & CEPS where HR value is not incorporated. Similarly, 85.0% of the variations in the selected Nigerian banks' market share prices are explained by BVPS, BEPS & CEPS where HR value is incorporated. This showed that BVPS, BEPS & CEPS have more significant influence on the share price where the HR value is included into the financial reports of the selected banks.

As it could be recalled, we formulated two regression equations under the premise of EBO Model. The regression equations were stated in chapter three thus:

$$AMP_i = \alpha_i + \beta_{i1}BVPS + \beta_{i2}BEPS + \beta_{i3}CEPS + \varepsilon_i \text{ ----------- } (14)$$

$$AMP_t = \alpha_t + \beta_{t1}BVPS + \beta_{t2}BEPS + \beta_{t3}CEPS + \varepsilon_t \text{ ----------- } (15)$$

Equation (14) considered the variables without the inclusion of HR value; while equation (15) considered the variables after the inclusion of HR value. Substituting the computed values of the variables [see Appendix B (2)] in the equations, we have:

$$AMP_i = 2.183 + 0.088\ BVPS + 0.827\ BEPS - 0.370\ CEPS \text{ ------ } (16)$$

$$AMP_t = -0.750 + 0.532\ BVPS + 0.586\ BEPS - 0.536\ CEPS \text{----- } (17)$$

From equation (16) both BVPS and BEPS are positive values and can influence a positive change in the market price whenever there is an increment in them; while the CEPS has a negative effect on the market price. The same impact applies to equation (17), however, with more degree of effect for BVPS and CEPS; and less for BEPS. This shows that with the inclusion of HR value in the financial reports of the selected quoted banks in Nigeria, the overall quality of the reports would increase thereby impacting more on the market share prices of the banks.

The beta values showed that where the HR value is not included in the financial reports of the selected banks, a one ₦1 increment in the BVPS will result to an increase in the market price by 8.8k. A ₦1 increase in BEPS will increase the market share price by 82.7k. However, a ₦1 increase in the CEPS will decrease the market share price by 37k. On the other hand, when the HR value is included in the financial reports of the selected banks, a ₦1 increase in BVPS and BEPS will increase the market share price by 53.2k and 58.6k respectively. However, a ₦1 increase in CEPS will increase the market share price by 53.6k. The t significant values under the "without HR value" situation for BEPS and CEPS indicate significance at 5% level of significance; no significant relationship could be established in the case of BVPS. But under the "with HR value", all the three variables indicate significance at 10% level of significance with only BVPS falling outside 5% level of significance. These results indicate that reporting HR value would have a significant effect on the quality of quoted service companies financial reporting.

Lastly, the overall significance of BVPS, BEPS & CEPS on the AMP is significant at 1% level of significance under the two situations. However, the overall significance is stronger when the HR value is included (i.e. 0.001) compared to where it is not included (i.e. 0.002). The inference here is that the financial reporting of the selected banks is more qualitative when the HR value is incorporated. Hence, the study rejects the null hypothesis two, which says reporting human resource value may not have a significant effect on the quality of quoted service companies financial reporting.

4.3.3 Generalisation and Comparison with Existing Models

The "*Salisu HRV Model*" has been developed for the application of quoted service companies in Nigeria. The model, however, can be applied by other categories of companies in order to arrive at a monetary value of their human resource. This means that the scope of the application of the "*Salisu HRV Model*" can be extended to other non-service industries with relative ease.

The model was developed combining the existing approaches in the field of HR valuation and reporting. The model is superior to the existing models in the following respects:

a) It is considered superior to human resource model developed based on cost approach. Existing models such as historical cost model and replacement cost model assume a stable value of money which in reality is not totally true. The "*Salisu HRV Model*" therefore takes into consideration the changing value of money thereby incorporating into the model the discounting factor. Thus, continuous investments on the human resource are estimated and discounted using the company's Weighted Average Cost of Capital (WACC), the market return rate or return on equity. This discounting process brings the continuous investments on the human resource into their present values.

b) It recognises the probability of the loss of service period in respect of employees and uses variables to ensure that the reporting entity is not severely affected when certain eventualities occur. This is the motivation of using the mortality age.

c) The amortisation of the human resource value could be achieved with relative ease. This is not the case where only the value approach is used in the modelling of the HR measurement.

4.4 **Accounting Treatment of the Human Resource Value in the Financial Statements of Quoted Service Companies in Nigeria**

The value of the human resource arrived at via the application of the "*Salisu HRV Model*" will not give complete meaning in accounting until the accounting treatment of it is explained. Any expenditure on the human resource, with the exception of employee annual salary and wages, should also pass through the bookkeeping process before recorded finally in the financial reports of the company.

Whenever costs are incurred which are capable of increasing the productivity of the employee, they should be adequately recorded in both the book of prime entry and book of original entry. These are cash book, subsidiary books (where applicable), ledger, and trial balance. For example, when ₦50,000 was paid for advertisement of vacant positions in an organisation, such amount should be credited to the Cash Book under the appropriate column (i.e. Cash or Bank) and debited to Human Resource Value account. This will also be the treatment of any annual expenditure incurred by the company on the human resource during a particular accounting year

Furthermore, the computed HR value using the "*Salisu HRV Model*" should be debited to Human Resource Value (HRV) Account. Another account shall be opened and titled Human Resource Investment Reserve (HRIR). HRIR is a reserve account representing the present value amount of annual continuous expenditure on the human resource for the duration of the service period. Thus, the total value of K_{pv} relative to the human resource shall be credited to this account (HRIR). The HRIR is considered as a reserve account because it represents the future continuous expenditure to be incurred by the company on the human resource over the service period, which is recognised in the financial reports prior to when they will actually be incurred. Therefore, where human resource value is incorporated into the balance sheet, the balance sheet will still balance.

During the course of our interviews, the clear majority of the interviewees support the idea of reporting human resource value in both the balance sheet and notes to the account. They explained that a separate statement might not be necessary as an addition to the contents of the existing components of financial statements. Their arguments also were that additional financial statement would mean revealing more, which might not be healthy to the competitive advantage of the reporting company.

In order to clearly show the application of the "*Salisu HRV Model*" and the accounting treatment of the value computed, refer to Appendix B (6) for an algorithm of HR value computation and presentation in the financial statements.

4.5 Human Resource Value Reporting and the Ability of Users' to Make Informed Decisions

The following table contains the results for the test of hypothesis three which was formulated as: Reporting human resource value in the financial statements of quoted Nigerian service companies may not have a significant effect on the ability of users to make informed decisions.

Table 4.11: Summary of Pearson's Chi-square Test Results

Variable	Symbol	Coefficient
Pearson's Chi-square Statistics	χ^2	90.16
Number of Responses	*N*	7690
Degree of Freedom	DF	12
Probability value	*P*	<0.0001
Chi-square critical value	χ^{2t}	21.03

Source: Computation Results using *MicrosoftExcel+Analyze-It* [See Appendix B (3)]

From the results presented in Table 4.11 above, the Chi-square results computed at 5% (0.05) significance level gives the probability value (p) of <0.0001. This means that the p-value is less than the 0.05 level of significance employed in the analysis. Also, to confirm this result, the Pearson's Chi-square statistics showed the computed value of χ^2 as 90.16, which is greater than the table/critical value of 21.03 under 12 degree of freedom. Therefore, we reject the null hypothesis which says reporting human resource value in the financial statements of quoted service companies in Nigeria may not have a significant effect on the ability of users to make informed decisions. This means that reporting human resource value in the financial statements of quoted service companies in Nigeria may have a significant effect on users' ability to make informed decisions.

4.6 **Research Findings and Discussions**

The various analyses in this chapter and the results of hypotheses testing revealed the following findings:

a) Based on the study's extensive review of literature, the existing models of measuring human resource in monetary terms are surrounded by many weaknesses. The weaknesses limited the rate at which human resource accounting is applied by corporate entities around the globe.

b) The nature of human resource expenditure warrant their capitalisation and inclusion in the financial statements of quoted service companies in Nigeria as asset. This is due to their impact on the productivity of the human resource and the benefit the quoted service company will continue to enjoy from such investment, which will exceed one accounting period.

c) Reporting human resource value in the financial statements of quoted service companies in Nigeria will impact positively on the quality and adequacy of information contents of the reports. This will provide various stakeholders of the companies and users of the financial reports more relevant and truthful information and assist them in making their various analyses for decision making purposes.

d) The model developed by this study is an advanced model for measuring the value of human resource for inclusion in the financial statements of quoted service companies in Nigeria. The model combined multiple approaches to the value of human resource and eliminates some weaknesses identified with the existing models.

e) Human resource value would be better presented in the financial statements of quoted service companies in Nigeria when reported in the balance sheet and notes to the account. This was the inference from the responses of our questionnaire respondents and interviewees.

4.7 Implication of Findings

The implication of the findings from this study is that quoted service companies are invariably undervalued and their financial position as reflected in the balance sheet is not the actual reality. This means that the financial statements of quoted service companies in Nigeria may not be showing the true and fair view of their operations since HR (considered as the major asset) is not reported as asset. As a result of this, users of the financial statements could be making their various decisions not based on the reality of the companies' operations and this could lead to discrepancies in the market prices of the companies' shares and market capitalisation values.

With the development of the HR model quoted service companies in Nigeria can obtain a more reliable monetary value of their human resource with relative ease. The inclusion of the human resource value in the financial statements of the quoted service companies in Nigeria is capable of increasing the quality and adequacy of the information contents of the reports. This will assist the companies in reporting the truest and fairness information concerning their operations. This will impact positively on the quality of analysis on the reports and the decisions to be taken based on such analysis.

The study also made a comprehensive discussion on the concept of human resource accounting. In other words, the findings from the study cemented the necessity for the service companies to recognise value and report human resource as asset in their financial reports. Therefore, the implication of the study on the extant literature is that adequate justification are provided in respect of the benefits derivable by the quoted service companies when they value and report human resource using the model developed. The justifications are scientifically proven in the study.

4.8 Summary

This chapter presented the data collected for this study and showed their detailed analyses. The modelling process for human resource valuation was extensively covered and the details of each step were provided for quick understanding of the reader. The model developed in this study was arrived at following strictly the scientific method of theorising. Also, the primary data collected for this study via the conduct of interviews and the administration of questionnaires were appropriately analysed and interpreted. The chapter also contained the discussions of research findings and their implication. The study was able to develop a model for the valuation of human resource and found that with the inclusion of the human resource value in the financial reports of quoted service companies in Nigeria, the quality and adequacy of the reports' information contents would be enhanced.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Corporate entities communicate to the general public through their financial reports. The reports are mandatory to be prepared and made available to stakeholders every financial year once the corporate entity is quoted on the stock exchange. Accounting being the language of business provides information relative to the operational performance and position of an economic entity so that informed decision could be made therefrom. The financial statements are the combination of both quantitative and qualitative statements regarding to a company's operation at the end of a particular period. These statements, especially the profit and loss account and balance sheet, should be true and fair; and faithfully represent the operations of the company over a certain period. When they possess these qualities together with adequate disclosure of all relevant and material facts and prepared and presented on a timely fashion, they would be very useful and helpful to the various users of the financial statements.

Human resource accounting (HRA) came into the fore of accounting research during the 1960s. Although the concept received satisfactory applause in terms of its novelty and proaction, many questions continue to emanate on it. Accounting theoreticians and those in practice compromisingly concurred to the fact that human resource accounting is necessary and relevant; they however faulted the modality of arriving at the human resource value due to uncertainties surrounding it. In an attempt to invent a more realistic model of computing the value human resource, several accounting scholars came up with quite a number of models based on certain theoretical frameworks. These models when applied do give a value of the human resource but more often they are criticised. This and other reasons led to the conduct of this research in order to produce a model that can soften some of the criticisms on existing human resource models and which can give more realistic human resource value for inclusion in the financial statements of a service-oriented company. The research targeted quoted service companies in Nigeria with a view to generalise the application of the model to other countries of the world.

HRA is relatively a virgin area in accounting and yet to be applied in Nigeria. This research looked at the application of the concept in the financial reporting of quoted service companies in Nigeria. Although some Nigerian researchers attempted to unveil the philosophy and epistemology of Human Resource Accounting, none is yet to bring out the possible ways of applying it in the financial reporting of Nigerian service companies. The few researches in the area of human resource by Nigerians, as discussed in the literature review, were not able to critically look at the issues surrounding the concept and the intricacies of its valuation. However, there are some handful researches in Africa on the concept of human resource especially in South Africa. This research therefore almost solely defended on foreign materials and literatures.

This research is more of survey in nature and the application of mathematical modelling techniques. Data for the research were sourced from the conduct of interviews and administration of questionnaire. Whereas interview responses were analysed descriptively, questionnaire responses were analysed using Kendall's coefficient of Concordance, chi-square, and tables and percentages. The interview questions concentrated on the concept of human resource accounting, its relevance, problems and challenges, respondents' knowledge of human resource existing models and their weaknesses, and possible ways for including human resource value in a service company's financial statements. The questionnaires broadly covered all areas of human resource accounting, both contentious and otherwise, and also require the ranking of some identified human resource expenditure to be capitalised by systematically selected respondents.

The modelling process and the model produced by this study were based on cost theory, expenses theory and discounting theory. The procedures of arriving at the model produced by this research were adequately, comprehensively and elaborately discussed. The stages of the model production were clearly explained and symbolically represented in form of equations. Thus, Greek and Coptic symbols were used to represent the variables and incorporated into the model using mathematical modelling technique. The model developed by this study was based on the underlying assumptions as stated in chapter two. The "*Salisu HRV Model*" was tested and its value relevance on the financial reporting of quoted service companies in Nigeria established. The model developed is considered superior in many respect compared to other existing models because it combined most of the strengths of the existing models and minimised some of their weaknesses.

In addition to the model produced by this research, the findings from this study revealed that quoted service companies in Nigeria are better valued when the values of their human resource are ascertained via the capitalisation of all relevant expenditure. Thus, expenditures on human resource like those relating to recruitment, selection, training, education, welfare, contribution to pension fund, and subsistence allowance are better accounted for when they are capitalised. Therefore, it is a necessity to capitalise them and report them as assets. When this is done, quoted service companies in Nigeria can be better valued and their financial reports more reliable in revealing relevant and material financial information for the use of various users of the reports.

5.2 Conclusions

In a service-oriented company, human resource is adjudged as the major asset. The nature and characteristics of investments on the human resource require them to be capitalised rather than expensed. This is due to their impact on the general productivity of employees, which is expected to exceed more than one accounting period. From the findings of the study, it is concluded that the inclusion of Human Resource as asset in the financial reports makes the reports more relevant for decision making compared to the conventional way of reporting. Thus, expenditures on human resource like those relating to training, education, welfare, recruitment, selection, contribution to pension fund, and subsistence allowance are better accounted for when they are capitalised rather than expensed. Therefore, it is a necessity to capitalise them.

From the findings of this study, it is inferred that most of the models proffered for measuring the value of human resource assets in monetary terms are surrounded by many weaknesses and uncertainties. The models, though scientific in their theorising process, are complex in nature. The tentative assumptions of some of the measures/techniques proffered slow down their acceptance and application. Therefore, looking at the existing models and methods, to obtain a reliable figure of human resource is very difficult if not impossible, which means that the models and methods are not adequate in their contents and assumptions.

Accounting theoreticians always try to make the profession better than it was or used to be. The evidences of applying the concept of HRA in the financial reports of corporate entities show clearly that the concept is adoptable and applicable. This study has succeeded in developing a model, which can provide a more realistic value of human resource for inclusion in the financial statements of quoted service companies in Nigeria. The model proved to be more superior compared with other existing models. This is evidenced in the way the model eliminates some of the weaknesses of other existing models.

Furthermore, the volume of investments on human resources usually made by corporate entities and the impact of such investments on the productivity level of the human resource justify their treatment and recognition as assets rather than expenses. Additionally, the arguments against the concept of HRA and its application are issues that can be solved significantly. The advantages and other benefits accruing to the application of HRA, however, outweigh the demerits. When human resource is quantified and reported as assets in the financial reports of quoted service companies, the multiple users of the reports will be awarded with more qualitative and quantitative information, which will boost their decision making abilities. Reporting HRA will also bring out the truest and fair value of quoted service companies in Nigeria.

5.3 Limitations of the Study

It is the nature of any research effort not to be devoid of some obstacles and difficulties. However, what makes a good research is how well those obstacles and difficulties are properly managed during the course of the research. The only obstacle encountered in this research, which is worthy of mention, was on the issue of data collection. The sensitivity of human resource in service companies made it difficult for the management staff to share with us. We had to redesign our questionnaire in order to retrieve those information we considered relevant to the study problem before we were able to attract adequate response. Additionally, at the initial stage we posted the questionnaire to the internet but the limited response received made us to revert back to the physical questionnaire administration. The empirical test of "*Salisu HRV Model*", as contained in this study, was done using the banks included in the study sample. The idea behind this limitation is to ensure that industry specifics/characteristics were avoided in the testing process in order to find the value relevance of the model.

5.4 Recommendations

Based on the findings from this study, the following recommendations are proffered:

i) Capitalisation of Expenditure/Investment on Human Resource by Quoted Service in Nigeria:

Quoted service companies should imbibe the culture of capitalising and reporting all expenditures/investments on human resource that improve their quality and productivity. This kind of reporting will increase the value relevance of the information content of their financial reports. It will also be beneficial to the reporting company since the study established that reporting human resource as asset in the financial statements enhanced the quality of the information contents of the reports and hence impact positively on the share price of the company.

ii) Development of Accounting Standard on Human Resource Reporting:

The regulatory bodies/agencies in Nigeria and around the globe should try and bring out an accounting standard that will guide quoted service companies in the valuation and reporting of human resource. The standard should provide details on the minimum standard of reporting human resource value in the financial statements of service companies especially in the balance sheet and notes to the accounts. Such minimum requirement should ensure that the various stakeholders access all the relevant and appropriate information on human resource qualities, capabilities and intellectual abilities to boost their decision making needs. The output of this study could be used as an input.

iii) Amendment of Some Sections in Labour Laws:

Some sections of the labour laws should be amended or created relative to the stability of recruits within an organisation without adversely affecting the rights and privileges of the recruits. This will assist the quoted service companies to plan, manage and measure their employees with a certain degree of accuracy, most especially the estimation of the employees' service period or expected length of service.

iv) The Need to Develop Human Resource Accounting Software:

The application of the "*Salisu HRV Model*" would be eased when computer software is developed. The software should be programmed to capture all the necessary variables as contained in the "*Salisu HRV Model*". It should also be flexible in terms of accommodating any changes that could be effected in the "*Salisu HRV Model*". When this is done, the time taken to compute the value of the human resource would be shortened and the accuracy of the computations enhanced.

v) Conduct of More Researches by the Academia and other Researchers:

More researches should be conducted in the area of human resource accounting. The researches should be tailored towards making it easier to measure the human resource and ensure that it is adequately reported in the financial statements of the quoted service companies.

5.5 **Areas for Further Research**

Human resource accounting has been receiving an increasingly wide attention. Significant number of accountants has accepted the rationality behind the concept. The only reservation rests squarely on the process of arriving at the monetary value for the resource. This research has succeeded in proposing a more comprehensive valuation model for the application of quoted service companies in Nigeria. However, there still exists other areas that need the attention of academic accountants as far as the concept or field of human resource accounting is concerned. The areas that need further research are:

a) The estimation of the variables to be incorporated into the "*Salisu HRV Model*" is an area that needs further research. Companies may have numerous ways of estimating these variables. However, a uniform procedure should be unveiled so that the human resource value computed by one company for a certain category of human resource can be compared to that computed for another company.

b) Computer programmers and accountants alike should develop a computer package/software that will simplify and ease the application of the "*Salisu HRV Model*"**.** This will speed up the adoption and application of human resource accounting in the financial reports of corporate entities in general.

c) The "*Salisu HRV Model*" just like any other model works on certain underlying assumptions. These assumptions have been made scientifically from the realities of quoted service companies operations. Although the model could be adaptable to suit some other organisations, a further research could clarify on whether there are certain peculiarities in some industries or sectors that may need the incorporation of another variable or taking another assumption.

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APPENDICES

APPENDIX A (1)

QUESTIONNAIRE

This questionnaire is designed purposely to collect data for a Ph. D. research in accounting and finance. The research is entitled "*Human Resource Accounting and the Quality of Financial Reporting of Quoted Service Companies in Nigeria*". Your cooperation is highly needed in responding adequately and truthfully to the under listed questions. Be assured that your responses would be used exclusively for this research.

Thank you for your anticipated cooperation.

Please tick [√] as applicable and comment where necessary.

Q1. Category of respondents:

a) Staff of Quoted Service Company in Nigeria [ ]

b) Accountants in Practice [ ]

c) Accounting Theoreticians [ ]

d) Members/Staff of Regulatory Bodies/Agencies of Accountancy Profession in Nigeria (FRC, ICAN, ANAN, NAA) [ ]

Q2. Do you consider human resource as the major assets of a quoted service company in Nigeria?

Yes [ ] No [ ] Not sure [ ]

Q3. Do you consider money expended on human resource by quoted Nigerian service companies to have significant impact on the human resource productivity?

Yes [ ] No [ ] Cannot say precisely [ ]

Q4. Do you think human resource expenditure incurred by quoted service companies in Nigeria should better be capitalised and reported as assets?

Yes [ ] No [ ] Cannot say precisely [ ]

APPENDIX A (1) Continued

Q5. Please give reasons to your response above____

____

Q6. Do you think salaries and wages paid to employees should be counted as one of the human resource expenditure to be capitalised?
Yes [ ] No [ ]

Q7. Please give reasons to your response above____

____

Q8. How do you think human resource value be presented in the financial reports?

a) In the balance sheet only [ ]
b) As a note to the accounts only [ ]
c) As a separate statement only [ ]
d) (a) and (b) only [ ]
e) (a) and (c) only [ ]
f) (a), (b) and (c) [ ]

Q9. What other suggestion(s) do you have relative to the inclusion of human resource value in the financial statements of quoted service companies in Nigeria.____

____

Q10. If you have any comment or reservation concerning the valuation of human resource and the application of human resource accounting by quoted service companies in Nigeria, please state them here____

____

APPENDIX A (1) Continued

Q. No.	Questions	Options				
		SA	A	U	D	SD
11	The financial statements of quoted service companies in Nigeria reflect the true and fair view of their assets					
12	Information reported by Nigerian quoted service companies in their annual financial reports is adequate					
13	Annual financial reports of quoted service companies in Nigeria disclose adequate information on the investment in their human resource					
14	Annual financial reports of quoted service companies in Nigeria disclose relevant information on the quality of their workforce					
15	The inclusion of human resource value in the financial statements of quoted service companies in Nigeria can increase the quality of the information contents of the reports					
16	Human resource accounting is relevant to and should be applied by quoted service companies in Nigeria					
17	Existing human resource valuation models can provide a realistic value of human resource for inclusion in the financial statements of quoted service companies in Nigeria					
18	When reliably measured, the inclusion of human resource value in the financial reports of quoted service companies in Nigeria can increase the true and fair view of the reports					
19	Users can find the inclusion of human resource value in the financial reports of quoted service companies in Nigeria useful for their decision making purposes					
20	The inclusion of the value of human resource in the financial reports of quoted service companies in Nigeria would reveal their actual value					

Key: SA=Strongly Agree; A=Agree; U=Undecided; D=Disagree; SD=Strongly Disagree

APPENDIX A (2)

INTERVIEW QUESTIONS

Q1. How important is human resource in the operation of quoted service companies in Nigeria?
Q2. Do you consider human resource as the major asset of a quoted service company in Nigeria?
Q3. Do the financial statements of quoted service companies in Nigeria show the true and fair view without necessarily reporting human resource value?
Q4. Looking at the volume of expenditure on human resource incurred by quoted service companies in Nigeria, do you think it is best to capitalise them rather than charge them as merely running expenses?
Q5. What do you understand by the concept of human resource accounting?
Q6. How do you foresee the application of human resource accounting by quoted service companies in Nigeria?
Q7. When a reliable value of human resource is incorporated as asset in the financial statements of quoted service companies in Nigeria, do you think the quality of the reports would be enhanced?
Q8. How do you think human resource value should be reported in the financial statements of quoted service companies in Nigeria?
Q9. What other comments can you give relative to the concept of human resource accounting and its application in Nigeria?
Q10. How will you rank the following human resource expenditure in terms of their capitalisation as assets? Please use 0 to 9 in the ranking where 0 means absolutely not important and 9 absolutely most important.

Human Resource Expenditure	***Ranking***
Recruitment costs	
Selection costs	
Education costs	
Training & development costs	
Health & safety costs	
Mobility costs	
Pension & provident fund costs	
Welfare costs	
Ex gratia costs	
Subsistence allowance costs	

APPENDIX B (1)

TESTING OF HYPOTHESIS ONE

Ranking of the Human Resource Investments for Capitalisation by the Experts

Judges/ Experts	Recruitment	Selection	Education	Training & Development	Health & Safety	Mobility	Pension & Provident Fund	Welfare	Ex gratia	Subsistence allowance
A	7	8	8	8	4	1	4	6	4	4
B	6	8	6	7	5	2	5	5	3	5
C	8	8	7	7	5	1	5	6	3	4
D	8	7	7	7	4	1	6	6	3	4
E	7	5	7	7	3	3	6	5	4	5
F	7	6	8	8	3	3	5	5	4	5
G	6	6	8	7	3	3	5	5	5	6
H	5	5	7	8	4	4	4	4	2	7
I	6	5	6	8	4	3	5	5	1	4
J	8	7	7	8	6	2	4	6	2	5
K	7	5	7	7	5	2	4	4	4	3
L	6	6	8	7	4	2	4	3	3	6
M	6	7	8	7	4	1	5	5	4	5
N	7	8	7	8	3	1	5	6	5	7
O	8	7	7	8	3	1	6	3	4	6
P	7	7	8	7	3	3	6	4	4	3
Q	6	8	7	6	2	3	7	4	3	2
S	8	7	6	5	3	1	4	3	4	2
T	7	7	8	5	3	3	4	3	4	4
U	7	7	8	6	2	2	4	4	5	3
V	6	5	6	6	4	4	5	5	5	6
Y	6	6	5	7	4	3	7	5	4	5
Z	5	8	7	7	5	2	6	4	3	6
Rj	154	153	163	161	86	51	116	106	83	107
Rj – (∑Rj/N)	36	35	45	43	-32	-67	-2	-12	-35	-11
[Rj – (∑Rj/N)] ²	1296	1225	2025	1849	1024	4489	4	144	1225	121

Source: Survey data, 2009

APPENDIX B (1) Continued

Using the above computed values, the Kendall's Coefficient of Concordance (*W*) is computed thus:

$$W = \frac{13402}{1/12\,(23)^2\,(10^3 - 10)}$$

$$= \frac{13402}{43642.5}$$

$$= 0.31$$

Since the total number of N is more than seven (7), we apply the following formula and find the value accordingly:

$$\chi^2 = k\,(N - 1)W$$

$$= 23(10 - 1)0.31$$

$$= 64.17$$

From the chi-square table, the value of *W* at 95% confidence level at 23 degree of freedom is 35.17.

APPENDIX B (2a)

TESTING OF HYPOTHESIS TWO

SPSS Regression Result without the HR Value

Descriptive Statistics

	Mean	Std. Deviation	N
AMP	24.9867	15.58926	12
BVPS	12.1275	8.20164	12
BEPS	1.8583	1.04214	12
CEPS	.3333	.86950	12

Correlations

		AMP	BVPS	BEPS	CEPS
Pearson Correlation	AMP	1.000	.697	.840	-.217
	BVPS	.697	1.000	.829	.209
	BEPS	.840	.829	1.000	.163
	CEPS	-.217	.209	.163	1.000
Sig. (1-tailed)	AMP	.	.006	.000	.249
	BVPS	.006	.	.000	.258
	BEPS	.000	.000	.	.307
	CEPS	.249	.258	.307	.
N	AMP	12	12	12	12
	BVPS	12	12	12	12
	BEPS	12	12	12	12
	CEPS	12	12	12	12

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.914(a)	.836	.775	7.40264	.836	13.594	3	8	.002	1.631

a Predictors: (Constant), CEPS, BEPS, BVPS
b Dependent Variable: AMP

APPENDIX B (2a) Continued

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2234.882	3	744.961	13.594	.002(a)
	Residual	438.393	8	54.799		
	Total	2673.275	11			

a Predictors: (Constant), CEPS, BEPS, BVPS
b Dependent Variable: AMP

Coefficients(a)

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.183	4.522		.483	.642	-8.246	12.612
	BVPS	.168	.491	.088	.342	.741	-.965	1.301
	BEPS	12.364	3.833	.827	3.226	.012	3.525	21.202
	CEPS	-6.634	2.625	-.370	-2.527	.035	-12.688	-.580

a Dependent Variable: AMP

Coefficients(a)

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	BVPS	.697	.120	.049	.307	3.260
	BEPS	.840	.752	.462	.312	3.203
	CEPS	-.217	-.666	-.362	.956	1.046

APPENDIX B (2a) Continued

Coefficient Correlations(a)

Model			CEPS	BEPS	BVPS
1	Correlations	CEPS	1.000	.019	-.134
		BEPS	.019	1.000	-.824
		BVPS	-.134	-.824	1.000
	Covariances	CEPS	6.892	.191	-.173
		BEPS	.191	14.690	-1.552
		BVPS	-.173	-1.552	.241

a Dependent Variable: AMP

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
		(Constant)	BVPS	BEPS	CEPS	(Constant)	BVPS
1	1	3.016	1.000	.02	.01	.01	.03
	2	.767	1.983	.01	.00	.00	.96
	3	.174	4.166	.83	.14	.03	.01
	4	.042	8.447	.13	.84	.96	.01

a Dependent Variable: AMP

Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	4.5402	45.4044	24.9867	14.25381	12
Residual	-11.90208	10.78613	.00000	6.31299	12
Std. Predicted Value	-1.434	1.432	.000	1.000	12
Std. Residual	-1.608	1.457	.000	.853	12

a Dependent Variable: AMP

APPENDIX B (2b)

TESTING OF HYPOTHESIS TWO

SPSS Regression Output with HR Value

Descriptive Statistics

	Mean	Std. Deviation	N
AMP	24.9867	15.58926	12
BVPS	12.0858	8.23417	12
BEPS	2.0258	.98427	12
CEPS	.4958	.79245	12

Correlations

		AMP	BVPS	BEPS	CEPS
Pearson Correlation	AMP	1.000	.695	.801	-.020
	BVPS	.695	1.000	.786	.554
	BEPS	.801	.786	1.000	.378
	CEPS	-.020	.554	.378	1.000
Sig. (1-tailed)	AMP	.	.006	.001	.475
	BVPS	.006	.	.001	.031
	BEPS	.001	.001	.	.113
	CEPS	.475	.031	.113	.
N	AMP	12	12	12	12
	BVPS	12	12	12	12
	BEPS	12	12	12	12
	CEPS	12	12	12	12

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.922(a)	.850	.794	7.07695	.850	15.126	3	8	.001	1.006

a Predictors: (Constant), CEPS, BEPS, BVPS

b Dependent Variable: AMP

APPENDIX B (2b) Continued

ANOVA(b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2272.609	3	757.536	15.126	.001(a)
	Residual	400.666	8	50.083		
	Total	2673.275	11			

a Predictors: (Constant), CEPS, BEPS, BVPS
b Dependent Variable: AMP

Coefficients(a)

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.750	4.873		-.154	.882	-11.987	10.488
	BVPS	1.007	.469	.532	2.146	.064	-.075	2.089
	BEPS	9.280	3.530	.586	2.629	.030	1.139	17.420
	CEPS	-10.548	3.254	-.536	-3.241	.012	-18.052	-3.044

a Dependent Variable: AMP

Coefficients(a)

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	BVPS	.695	.604	.294	.305	3.278
	BEPS	.801	.681	.360	.377	2.652
	CEPS	-.020	-.753	-.444	.685	1.460

APPENDIX B (2b) Continued

Coefficient Correlations(a)

Model			CEPS	BEPS	BVPS
1	Correlations	CEPS	1.000	.111	-.448
		BEPS	.111	1.000	-.748
		BVPS	-.448	-.748	1.000
	Covariances	CEPS	10.589	1.280	-.685
		BEPS	1.280	12.462	-1.239
		BVPS	-.685	-1.239	.220

a Dependent Variable: AMP

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	BVPS	BEPS	CEPS
1	1	3.307	1.000	.01	.01	.01	.03
	2	.513	2.539	.06	.00	.01	.70
	3	.139	4.880	.63	.25	.03	.20
	4	.041	8.947	.29	.74	.96	.07

a Dependent Variable: AMP

Residuals Statistics(a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.7130	42.0636	24.9867	14.37362	12
Residual	-10.70016	9.19110	.00000	6.03524	12
Std. Predicted Value	-1.550	1.188	.000	1.000	12
Std. Residual	-1.512	1.299	.000	.853	12

a Dependent Variable: AMP

APPENDIX B (3)

TESTING OF HYPOTHESIS THREE

DETAILED CONTINGENCY TABLE

Response	Staff of QSC	Acctants in Practice	Acctg. Theoreticians	Staff of Acctg. Reg. Bodies	Total
Question 11					
SA	42	15	21	18	96
A	111	28	22	25	186
U	14	05	09	04	32
D	143	68	55	44	310
SD	59	17	29	40	145
Total	369	133	136	131	769
Question 12					
SA	53	12	17	28	110
A	79	33	19	57	188
U	36	01	03	00	40
D	166	77	42	38	323
SD	35	10	55	08	108
Total	369	133	136	131	769
Question 13					
SA	67	18	08	36	129
A	92	29	31	28	180
U	34	20	28	11	93
D	99	53	55	41	248
SD	77	13	14	15	119
Total	369	133	136	131	769
Question 14					
SA	33	23	11	32	99
A	58	39	25	39	161
U	44	12	22	07	85
D	112	51	35	26	224
SD	122	08	43	27	200
Total	369	133	136	131	769
Question 15					
SA	51	22	39	13	125
A	107	44	44	52	247
U	40	16	02	04	62
D	66	31	24	39	160
SD	105	20	27	23	175
Total	369	133	136	131	769
Question 16					
SA	57	38	41	36	172

A	101	45	43	39	228
U	55	00	05	07	67
D	67	32	19	25	143
SD	89	18	28	24	159
Total	369	133	136	131	769
Question 17					
SA	22	12	11	09	54
A	33	17	17	13	80
U	57	10	01	22	90
D	127	53	79	55	314
SD	130	41	28	32	231
Total	369	133	136	131	769
Question 18					
SA	155	23	40	49	267
A	110	63	44	52	269
U	16	13	11	06	46
D	63	22	21	16	122
SD	25	12	20	08	65
Total	369	133	136	131	769
Question 19					
SA	123	34	38	33	228
A	167	66	71	43	347
U	25	12	00	11	48
D	45	17	12	19	93
SD	09	04	15	25	53
Total	369	133	136	131	769
Question 20					
SA	87	29	31	28	175
A	99	45	57	33	234
U	43	08	03	15	69
D	55	23	22	29	129
SD	85	28	23	26	162
Total	369	133	136	131	769

SUMMARISED CONTINGENCY TABLE

Response	Staff of QSC	Acctants in Practice	Acctg. Theoreticians	Staff of Acctg. Reg. Bodies	Total
SA	690	226	257	282	1455
A	957	409	373	381	2120
U	364	97	84	87	632
D	943	427	364	332	2066
SD	736	171	282	228	1417
Total	3690	1330	1360	1310	7690

APPENDIX B (3) Continued

Test	**Compare Groups - Proportions - Chi-square test** Test of Hypothesis Three RESPONSE by RESPONDENTS
Performed by	MAL. SALISU

n	7690

RESPONSE	RESPONDENTS Staff of QSC	Acctants in Prac.	Acctg Theoret.	Staff of Acctg. Reg. Bodies	Total
SA	690 (698.2)	226 (251.6)	257 (257.3)	282 (247.9)	1455
A	957 (1017.3)	409 (366.7)	373 (374.9)	381 (361.1)	2120
U	364 (303.3)	97 (109.3)	84 (111.8)	87 (107.7)	632
D	943 (991.4)	427 (357.3)	364 (365.4)	332 (351.9)	2066
SD	736 (679.9)	171 (245.1)	282 (250.6)	228 (241.4)	1417
Total	3690	1330	1360	1310	7690

Pearson's X^2 statistic	90.16
DF	12
p	<0.0001

APPENDIX B (4)

COMPUTATION OF HR VALUE OF THE SELECTED BANKS FOR THE YEARS 2006 – 2008 USING THE DEVELOPED MODEL AND THE ADJUSTMENT OF BVPS, BEPS & CEPS

Bank	Year	Average No. of Employees	Average Additional Employees during the year
Afribank Plc	2005	3181	-----
	2006	3199	18
	2007	3219	20
	2008	3829	610
PlatinumHabib Bank Plc	2005	381	-----
	2006	1006	625
	2007	1336	330
	2008	2214	878
First Bank of Nigeria Plc	2005	6988	-----
	2006	7132	144
	2007	7593	461
	2008	8810	1217
Zenith Bank Plc	2005	2621	-----
	2006	3911	1290
	2007	4966	1055
	2008	7151	2185

$HR_{value} = \sum \quad + \sum$

Or $HR_{value} = \sum (\tau + \iota + \varsigma) + \frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad \ell)(r \quad e)(\quad \omega)}{(\quad)^{(r \quad e)}}$

<u>AFRIBANK PLC</u>

For 2006: HR_{value} = 0 + [’x 18 (0.75) (30) (0.4) / 390]
= ₦467,611

For 2007: HR_{value} = 0 + [’x 20 (0.75) (30) (0.4) / 390]
= ₦611,053

For 2008: HR_{value} = 0 + [’x 610 (0.75) (30) (0.4) / 390]
= ₦22,731,117

APPENDIX B (4) Continued

PLATINUMHABIB BANK (BANK PHB) PLC

For 2006: HR_{value} = 0 + [x 625 (0.75) (30) (0.4) / 390]
= ₦987,823

For 2007: HR_{value} = 0 + [x 330 (0.75) (30) (0.4) / 390]
= ₦453,161

For 2008: HR_{value} = 0 + [x 878 (0.75) (30) (0.4) / 390]
= ₦889,714

FIRST BANK PLC

For 2006: HR_{value} = 0 + [x 144 (0.75) (30) (0.4) / 390]
= ₦93,933

For 2007: HR_{value} = 0 + [x 461 (0.75) (30) (0.4) / 390]
= ₦330,657

For 2008: HR_{value} = 0 + [x 1217 (0.75) (30) (0.4) / 390]
= ₦1,418,576

ZENITH BANK PLC

For 2006: HR_{value} = 0 + [x 1290 (0.75) (30) (0.4) / 390]
= ₦5,368,297

For 2007: HR_{value} = 0 + [x 1055 (0.75) (30) (0.4) / 390]
= ₦5,506,138

For 2008: HR_{value} = 0 + [x 2185 (0.75) (30) (0.4) / 390]
= ₦14,314,449

APPENDIX B (4) Continued

HR VALUE SCHEDULE OF THE BANKS FOR 2006, 2007 & 2008

Details/Particulars	Afribank	Bank PHB	First Bank	Zenith Bank
	₦	₦	₦	₦
Cost	467,611	987,823	93,933	5,368,297
Amortisation for 2006	(116,903)	(246,956)	(23,483)	(1,342,074)
NBV @ end of 2006	350,708	740,867	70,450	4,026,223
Additional cost during 2007	611,053	453,161	330,657	5,506,138
Amortisation for 2007	(269,666)	(360,246)	(106,147)	(2,718,609)
NBV @ end of 2007	692,095	833,782	294,960	6,813,752
Additional cost during 2008	22,731,117	889,714	1,418,576	14,314,449
Amortisation for 2008	(5,952,445)	(582,675)	(460,791)	(6,297,221)
NBV @ end of 2008	**17,470,767**	**1,140,821**	**1,252,745**	**14,830,980**

APPENDIX B (4) Continued

COMPUTATION OF ADJUSTED BVPS AFTER THE INCLUSION OF HR VALUE

Year	Details/Particulars	Afribank	Bank PHB	First Bank	Zenith Bank
		₦'000	₦'000	₦'000	₦'000
2006	Total Net Assets	29,085,000	28,441,562	64,277,000	100,642,511
	Add: NBV of HR	351	741	70	4,026
	New Total Net Assets	**29,085,351**	**28,442,303**	**64,277,070**	**100,646,537**
	No. of shares outstdg.	**5,108,000**	**15,283,138**	**5,912,585**	**6,020,325**
	BVPS	₦5.69	₦1.86	₦10.87	₦16.72
2007	Total Net Assets	30,774,000	36,187,018	83,627,000	114,586,090
	Add: NBV of HR	692	834	295	6,814
	New Total Net Assets	**30,774,692**	**36,187,852**	**83,627,295**	**114,592,904**
	No. of shares outstdg.	**5,108,000**	**6,435,026**	**11,593,258**	**9,265,524**
	BVPS	₦6.02	₦5.62	₦7.21	₦12.37
2008	Total Net Assets	39,526,000	167,665,991	351,854,000	344,348,245
	Add: NBV of HR	17,471	1,141	1,253	14,831
	New Total Net Assets	**39,543,471**	**167,667,132**	**351,855,253**	**344,363,076**
	No. of shares outstdg.	**6,130,000**	**7,895,397**	**13,737,453**	**13,574,997**
	BVPS	₦6.45	₦21.24	₦25.61	₦25.37

APPENDIX B (4) Continued

COMPUTATION OF ADJUSTED BEPS & CEPS AFTER THE INCLUSION OF HR VALUE

Accounting Year	2008	2007	2006
Afribank	₦'000	₦'000	₦'000
Profit After Tax per account	10,033	5,196	2,684
Add back: capitalised staff costs	6,183	4,262	3,601
Less amortisation of HR value	6	----	----
	16,210	9,458	6,285
Less tax component on capitalised staff costs	1,855	1,279	1,080
New Profit After tax	**14,355**	**8,179**	**5,205**
New BEPS (kobo)	234	160	102
New CEPS (kobo)	74	58	46*
Bank PHB			
Profit After Tax per account	19,581	7,750	2,445
Add back: capitalised staff costs	97	80	69
Less amortisation of HR value	1	----	----
	19,677	7,830	2,514
Less tax component on capitalised staff costs	29	24	21
New Profit After tax	**19,648**	**7,806**	**2,493**
New BEPS (kobo)	249	121	16
New CEPS (kobo)	128	105	-1*
First Bank			
Profit After Tax per account	36,679	20,636	17,383
Add back: capitalised staff costs	445	236	202
Less amortisation of HR value	----	----	----
	37,124	20,872	17,585
Less tax component on capitalised staff costs	134	71	61
New Profit After tax	**36,990**	**20,801**	**17,524**
New BEPS (kobo)	269	179	296
New CEPS (kobo)	90	-117	-40*
Zenith Bank			
Profit After Tax per account	51,992	18,780	11,619
Add back: capitalised staff costs	2,030	1,123	705
Less amortisation of HR value	6	3	1
	54,016	19,900	12,323
Less tax component on capitalised staff costs	609	337	212
New Profit After tax	**53,407**	**19,563**	**12,111**
New BEPS (kobo)	393	211	201
New CEPS (kobo)	182	10	60*

Note:Figures with * mark for New CEPS under 2006 are computed based on 2005 figures

APPENDIX B (5)

COMPUTATION OF SAMPLE SIZE

a) Computation of Sample Size of Quoted Service Companies in Nigeria using Israel (1992) sampling technique.

$$n = \left[\frac{Z\alpha_{/2}.\sigma}{\varepsilon} \right]^2$$

i) Step I - Compute the Standard Deviation (σ):

Note: $\bar{x} = \sum x / N$

$= 102/13$

$= 7.85$

S/No.	Service Sectors as Classified by the NSE (N)	No. of Companies (x)	$(\bar{x} - x)$	$(\bar{x} - x)^2$
1	Air Services	2	5.85	34.2225
2	Aviation	2	5.85	34.2225
3	Banking	24	-16.15	260.8225
4	Commercial Services	3	4.85	23.5225
5	Hotel and Tourism	3	4.85	23.5225
6	Insurance	32	-24.15	583.2225
7	Leasing	1	6.85	46.9225
8	Maritime	1	6.85	46.9225
9	Memorandum Quotations	25	-17.85	318.6225
10	Mortgage	2	5.85	34.2225
11	Other Financial Institutions	5	2.85	8.1225
12	Real Estate Investment Trust	1	6.85	46.9225
13	Telecommunications	1	6.85	46.9225
	Total	102		1508.1925

$\sigma = \sqrt{1508.1925/102}$

$= 3.8453$

APPENDIX B (5) Continued

Step II – Compute the marginal/standard error (ε):

$$\varepsilon = \sigma/\sqrt{\sum x}$$

$$= 3.8453/\sqrt{102}$$

$$= 3.8453/10.0995$$

$$= 0.3807$$

Step III – Find the critical value of the Z value at 95% confidence level (i.e. 1.96, which gives a table value of 0.4750) and apply the formula:

$$n = \left[\frac{0.4750 \times 3.8453}{0.3807} \right]^2$$

$$= 23.0188$$

The following number of quoted service companies, from each sector as classified by the NSE, was selected to make up the sample:

1. Airlines: 2/102 x 23 = 0.50 ≈ 1 company.
2. Aviation: 2/102 x 23 = 0.50 ≈ 1 company.
3. Commercial Services: 3/102 x 23 = 0.68 ≈ 1 company.
4. Hotel & Tourism: 3/102 x 23 = 0.68 ≈ 1 company.
5. Leasing: Only one company in the sector and therefore selected into the sample.
6. Maritime: Only one company in the sector and therefore selected into the sample.

APPENDIX B (5) Continued

7. Mortgage: 2/102 x 23 = 0.50 ≈ 1 company.
8. Other Financial Institutions: 5/102 x 23 = 1.13 ≈ 1 company.
9. Real Estate Investment Trust: Only one company in the sector and therefore selected into the sample.
10. Telecommunications: Only one company in the sector and therefore selected into the sample. The computation of the number of companies to be selected in the following three sectors is based on the residue to complete the sample size after the ten (10) companies above are selected (i.e. 23 – 10 = 13). The total number in the three sectors below is 81 (i.e. 24 + 32 + 25 = 81).
11. Banking: 24/81 x 13 = 3.85 ≈ 4 banks.
12. Insurance: 32/81 x 13 = 5.14 ≈ 5 companies.
13. Memorandum Quotations: 25/81 x 13 = 4.01 ≈ 4 companies.

Applying the simple random sampling technique, the twenty three selected quoted service companies are shown below.

1. Nigerian Aviation Handling Company Plc
2. Aviation Development Company Plc
3. Afribank Nigeria Plc
4. First Bank of Nigeria Plc
5. Zenith Bank Plc
6. Platinum Habib Bank Plc
7. Trans-Nationwide Express Plc
8. The Tourist Company of Nigeria Plc
9. AIICO Insurance Plc

APPENDIX B (5) Continued

10. Cornerstone Insurance Company Plc
11. LASACO Assurance Plc
12. N. E. M. Insurance Plc
13. Prestige Assurance Plc
14. SKYE Shelter Fund Plc
15. C & I Leasing Plc
16. Japaul Oil & Maritime Services Plc
17. Deap Capital Management & Trust Fund Plc
18. Starcomms Plc
19. Union Homes Savings & Loans Plc
20. Paramount Equity Fund
21. The Coral Growth Fund
22. The Frontier Fund
23. The IBTC Nigerian Equity Fund

APPENDIX B (5) Continued

b)Computation of Sample size of Respondents from Selected Quoted Service Companies

S/No.	Company Name	No. of Employees
1	Nigerian Aviation Handling Company Plc	1,099
2	Aviation Development Company Plc	144
3	Afribank Nigeria Plc	3,829
4	First Bank of Nigeria Plc	8,810
5	Oceanic Bank Plc	3,743
6	Platinum Habib Bank Plc	1,336
7	Trans-Nationwide Express Plc	139
8	The Tourist Company of Nigeria Plc	344
9	AIICO Insurance Plc	253
10	Cornerstone Insurance Company Plc	145
11	LASACO Assurance Plc	132
12	N. E. M. Insurance Plc	205
13	Prestige Assurance Plc	69
14	SKYE Shelter Fund Plc	88
15	C & I Leasing Plc	330
16	Japaul Oil & Maritime Services Plc	179
17	Deap Capital Management & Trust Fund Plc	64
18	Starcomms Plc	636
19	Union Homes Savings & Loans Plc	638
20	Paramount Equity Fund	103
21	The Coral Growth Fund	97
22	The Frontier Fund	81
23	The IBTC Nigerian Equity Fund	112
	Total	22,755

Source: Annual Reports and Accounts of the companies, NSE Fact Book, 2009 and The Nigerian Stock Exchange (http://www.nigerianstockexchange.com).

Using the Yemane (1967) formula below the sample size was computed thus:

$$n = \frac{N}{1 + N(e)^2}$$

Where: N = Total number of employees

e = Marginal error

n = Sample size

APPENDIX B (5) Continued

Now, computing the sample size at 95% confidence level (i.e. e = 0.05), we have:

$$n = \frac{22{,}755}{1 + 22{,}755\,(0.05)^2}$$

$$= \frac{22{,}755}{1 + 56.8875}$$

$$= \frac{22{,}755}{57.8875}$$

$$= 393.09$$

APPENDIX B (6)

ALGORITHM OF COMPUTING AND PRESENTING HUMAN RESOURCE VALUE IN THE FINANCIAL STATEMENTS USING THE "*Salisu HRV Model*"

Hypothetical Problem

SmylisuTel Nigeria Plc is a computer software company quoted on the Nigerian Stock Exchange. The company was incorporated in 2010 and advertised for the vacant positions that exist in the company. The company incurred ₦ 120,000 on the advertisement. For the recruitment, screening and selection ₦ 250,000 was incurred. After the screening exercise, the company spent ₦200,000 on induction training for the selected recruits. During the exercise, ₦1,000,000 was given to the selected recruits as settlement allowance. These costs are incurred equally on employees.

The estimated annual expenditure on the human resource, excluding salaries, is to be incurred equally on employees and is provided below:

Expenditure Type	Symbol	Amount (₦)
Education, Training & Development	ε	100,000
Health & Safety	λ	50,000
Pension & Provident Fund	б	80,000

The average mortality age in Nigeria (μ) is 47 years and the labour turnover rate in the telecommunication industry (ℓ) is measured as 25%. The retirement age applicable to Nigeria (ɼ) is 60 years. The company's WACC (*i*) is computed as 22%.

The age details of the recruits are given below:

Employee Codename	Employee age (e)
A	30
B	36
C	28
D	24
E	21

Required: Compute the HR value of SmylisuTel Nigeria Plc using the "*Salisu HRV Model*" and show the accounting records.

APPENDIX B (6) [Continued]

Solution

The "*Salisu HRV Model*" is given as:

HR$_{value}$ = $\sum$ +$\sum$

Where C is the total cost of acquisition and is given as:

C = $\sum$ τ + ι + ς , and

K*pv* represents the continuous expenditure on human resource, which is given as:

$K_{pv} = \frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad)(r \quad \Theta)(\quad)}{(\quad)^{(r \quad \Theta}}$.

Therefore, HR$_{value}$ = $\sum$ (τ + ι + ς) + $\frac{\sum \quad \varepsilon \quad \lambda \quad б(\quad)(r \quad \Theta)(\quad)}{(\quad)^{(r \quad \Theta}}$

Substituting the values in the above equation we have:

For Employee A

HR$_{value}$ = $\sum$ (74,000 + 40,000 + 200,000) +

$\frac{\sum \quad , \quad , \quad - \, . \; (\quad) \; \frac{(}{(} \;)}{(\quad .)^{(\quad)}}$

= 314,000 + $\frac{46{,}000\ (0.75)\ (30)\ (0.57)}{(1.22)^{30}}$

= ₦ 315,514

For Employee B

HR$_{value}$ = $\sum$ (74,000 + 40,000 + 200,000) +

$\frac{\sum \quad , \quad , \quad - \, . \; (\quad) \; \frac{(}{(} \;)}{(\quad .)^{(\quad)}}$

= 314,000 + $\frac{46{,}000\ (0.75)\ (24)\ (0.46)}{(1.22)^{24}}$

= ₦ 317,222

APPENDIX B (6) [Continued]

For Employee C

$$HR_{value} = \sum (74{,}000 + 40{,}000 + 200{,}000) +$$

$$\frac{\sum \quad , \quad , \quad - \; . \; (\quad) \; \frac{(\quad)}{(\quad)}}{(\quad .)^{(\quad)}}$$

$$= 314{,}000 + \frac{46{,}000\ (0.75)\ (32)\ (0.59)}{(1.22)^{32}}$$

$= ₦\ 315{,}123$

For Employee D

$$HR_{value} = \sum (74{,}000 + 40{,}000 + 200{,}000) +$$

$$\frac{\sum \quad , \quad , \quad - \; . \; (\quad) \; \frac{(\quad)}{(\quad)}}{(\quad .)^{(\quad)}}$$

$$= 314{,}000 + \frac{46{,}000\ (0.75)\ (36)\ (0.64)}{(1.22)^{36}}$$

$= ₦\ 314{,}619$

For Employee E

$$HR_{value} = \sum (74{,}000 + 40{,}000 + 200{,}000) +$$

$$\frac{\sum \quad , \quad , \quad - \; . \; (\quad) \; \frac{(\quad)}{(\quad)}}{(\quad .)^{(\quad)}}$$

$$= 314{,}000 + \frac{46{,}000\ (0.75)\ (39)\ (0.67)}{(1.22)^{39}}$$

$= ₦\ 314{,}386$

So, the total human resource value for SmylisuTel Nigeria Plc will be:

HR_{value} = ₦ 315,514 + ₦ 317,222 + ₦ 315,123 + ₦ 314,619 + ₦ 314,386

= ₦ 1,576,864

APPENDIX B (6) [Continued]

After the computation of the HR value using the "*Salisu HRV Model*", the value is posted to the balance sheet together with other entries required.

SmylisuTel Nigeria Plc

Balance Sheet Extract

	₦
Represented by:	
Fixed assets:	
Human Resource Value	**1,576,864**
Financed by:	
Capital Reserve:	
Human Resource Investment Reserve	6,864
Short-term liability:	
Bank overdraft	1,570,000
	1,576,864

The costs of acquisition were already incurred and they must have been paid for already. Since we do not have the details of either cash or bank account, the best way to record them is to credit the bank account. This will lead to an overdraft situation and that is why we recorded it under the short term liability. The continuous expenditures on the human resource are not incurred yet, so we recorded them as a special kind of capital reserve.