The Effect of Non Disclosure of Human Capital Investment in the Financial Statement

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ABSTRACT: *Human capital accounting has been found to possess the potential to lead to a profound reconceptualiztion for the management of people any organization. Specifically, it can contribute to organizational culture in which they believe that people are valuable organizational resources are manifested in decision and actions. This study assessed the effect of non-disclosure of human capital accounting in the financial statement of an organization. The objectives of this research work includes: to establish the need to measure the value of human asset and disclose it in the organization's balance sheet; to establish the implication of its non-inclusion in the balance sheet and to establish the importance of human resources accounting to the organization. The source of data was primary data collected from managers and staff of two banks in Anambra State, Nigeria. The result of the analysis found that non-inclusion of human capital in balance sheet has significant material effect on the financial statement; disclosure of human capital will significantly enhance the net worth of the organization; and accounting for human resources significantly enhances the competitive position of an organization. It was deduced from the finding that human capital is an unavoidable concept as far as business transactions are concerned, that it is important for accounting profession and the Accounting Standard Boards to promote and sponsor the legislation of its proper disclosure in the statement of accounting standard.*

Keywords *- Accounting standard, financial statement, management, balance sheet, managers*

1. INTRODUCTION

Human resources accounting has been developed to provide accurate estimations of human capital to organizational entities and useful information to managers in their decision making process. Human resources accounting has the potential to lead to a profound re-conceptualization of the management of people in the organizations. There has been a significant resurgence in this area of human resources accounting and this can invariably contribute to an organizational culture in which the belief that people are valuable organizational resources is upheld. With the tax aspects of human resources valuation we believe that these can lead to a major shift in accounting and financial reporting practices and principles.

Liberation, privatization and globalization, all over the world have created the need for quality product and quality services. This in turn has led to competition amongst organizations, need for improvement of quality and a lot of improved cost reduction devices to bring and sustain cost to barest minimum. This would be optimally achieved only through the development of human capital. Basically human capital refers to the human knowledge, their inner capabilities and creativity.

The role of intangible assets such as brand names intellectual capital and their contribution to increase the amount of wealth in firms can't be ignored. The shift to a knowledge-based economy has created entirely different categories of assets, popularly known as "soft-assets". This is not recognized by the international standard committee [AISC], International Federation of Accountants and other International bodies that influence accounting development. This implies that compliance with SAS will ensure compliance with the identical international accounting. It is pathetic that with the resurgence of interest in this area and increasing level of awareness none of this accounting standard yet has considered a review in order to promote and sponsor legislation of including human asset as a disclosure requirement. It is rather treated as a charge against revenue as it does not create any physical asset.

The practice of treating investment in human resources as expenses rather than asset results in material affect income statement and balance sheet. The net income is understated as all expenditures made to acquire or develop human resources are treated as expenses during the period incurred rather than capitalizing and amortizing them over their expected service life.

In the balance sheet the total assets are understated because it does not include the organization's human asset. The treatment does not seem to be inconsonance with matching concept as the expenditures are made with the intention of providing benefits beyond the current period. Management by investing in human resources to protect or enhance the future earning power of a business will actually produce relatively lower reported current earning. The organization may therefore appear to be doing poorly when it is in fact doing well, consequently creating conflict between the long-run interest of the organization and the short-run interest management.

As a result of the above, management may sometimes make myopic decision regarding investing in people by avoiding or postponing needed investments in human resources especially in times of profit squeeze or when they want a better reported current earnings. This strategy is analogous to postponing preventive maintenance or research and development.

In measuring the firms operating efficiency or d firms earning power the [ROI] Return on Investment ratio is used. This is the product of the net profit margin and investment turnover. The term investment refers to total asset or capital employed. The measuring of the firms earning power will be distorted because of distortion in the components of the balance sheet and income statement are used for ratio analysis and ratio analysis is the most powerful tool of the financial analysis. Analyzing the financial information help to indicate the operating efficiency and the various aspect of the firm's financial position. This invariably affects the competitive position of an organization when it comes to investment decision making by users of financial statement

This practice seems to contravene the matching concept as such expenditure provides benefits beyond one accounting period. This practice also seems to have material affect the perception of financial statement who with the users who with the use of financial ratio try to know the operating efficiency of firm. The firm's management may not have considered the human asset disclosure could enhance their competitive advantage. The professional accountants have not included that in their audit programme as there is no legislature to that effect. Accounting seems to be based on an industrial paradigm in which only physical and tangible properties are accorded much importance considered as asset. Is accounting no longer a dynamic business language that should change in the light of changes in the social, economic and political environment? It seems the capacity of accounting to continue to function as a primary information provider is being compromised. Wouldn't the non disclose have material effect on the financial statement? These are all the concern of the researcher.

2. OBJECTIVE OF THE STUDY

The specific objectives of the study are:

(1) To establish the need to measure the value of human asset and disclose it in the organization's balance sheet.

(2) To establish the implication of its non-inclusion in the balance sheet.

(3) To establish the importance of human resources accounting to the organization.

3. HYPOTHESIS

Non-inclusion of human capital in the balance sheet does materially affect the financial statement

The disclosure of human capital will not enhance the net worth of the organization

Accounting for human resources does not enhance the competitive position of an organization

4. CONCEPT OF HUMAN RESOURCE ACCOUNTING

Various research studies conducted in the field of accounting and finance gave birth to the discussions in the area of Human Resource Accounting. Up to date only few efforts have been made to assign monetary value to human resource in accounting practice. Behavioral scientists were against the conventional accounting practice which fails to value the human resources of an organization along with physical resources and they initiated efforts to developing appropriate methodology for finding out value of human resource to the organization. The conventional accounting concepts treat expenditure on human resources as expenses and therefore charged against revenue as it does not create any physical assets. The present concept which is being propounded by researchers in this area is that investment on human resources be treated as capital expenditure as it yields benefits which can be derived for a long time and could be measured in monetary terms. In the option of this researcher, there is a genuine need for reliable and complete management of human resources and secondly a traditional framework of accounting should include a much broader set of measurement than was possible in the past.

Human beings are the most important assets of an organization but the value does not yet appear in the balance sheet. Human resources accounting is the measurement of the cost and values of the people in the organization. No matter the sophistication and the value of physical assets in an organization if there is no human effort, the organization will fail. The concept of considering human beings as assets is now new.

The early freedom fighters in this field were Shri Motilal Nehir, Mahatma Chardi, Sardar Vallalor Ratel and several others but effort was not made to assign any monetary value to such human resources in the balance sheet. The first attempt to value human beings in monetary terms was made by Williams Ketty in 1691. He opined that labour was the father of wealth and must be included in any estimate of national wealth. Further attempts were made by William far in 1853 and Earnest Engle in 1883. The behavioural scientist started the real work by vehemently criticizing the conventional accounting practice of not recognizing the value of human resources. Amongst them are Shultz,Flamholtz Eric,Lau and Schewartz and Kenneth Sinchare. In 1960s Rensis Likert was the first to research in human resource and emphasized the importance of strong pressures on the human resource's qualitative variables and on its benefits in the long run [1].

History records RG Barry corporation of Columbus in 1967 as the first major systematic effort at evaluation by reporting in their annual report details of human resource accounting procedures developed by the company to enable them to report accurate estimate of the worth of the organization's human assets.

The accounted for formal training and familiarization, recruiting and acquisition cost, informal training and familiarization; experience and development cost. Cost for the expected working lives of individuals were amortized and unamortized cost (example when an individual leaves a company) were written off. Human resources is one of the most valuable assets. It is human being that coordinates the best of machines, men and money. Computers are not even threats because computers are not brains but simply accept human commands. Accounting for such human resource is therefore very essential for the organization.

5. HISTORICAL DEVELOPMENT OF HUMAN RESOURCE ACCOUNTING

Human Resource Accounting (HRA) though it is a relatively new field, its development has already passed through several disaminable stages.

The first stage of development from 1960-1966 was marked by interest in human accounting and the derivation of the basic human resource accounting concepts from related bodies of theory. The initial impetus for the development of human resource accounting came from a variety of sources including; the economic theory of human capital, organizational psychologists' concern or leadership effectiveness and a concern for human assets or components of corporate goodwill.

The second stage of development of human resource account was a period of basic academic research to develop and assess the validity of models for the measurement of human resource cost (both historical and replacement cost) and value (both monetary and non-monetary). It was also a time of research designed to formulate the present and potential uses of Human Resource Cost (HRC) as a tool for human professionals, line managers and external users of corporate financial information. This stage which accrue from 1966-1971 also included a few exploratory experimental applications of Human Resource Accounting (HRA) in actual organizations. One of the earliest study in Human Resource Accounting (HRA) during the second stage was conducted by Roger Hermanson, who was at that time PhD candidate at Michigan state university. He dealt with the problem of how to measure the value of human assets as an element of goodwill when they have not been purchased.

In addition beginning in 1967, a research team that included the late Rensis Likert, Lee Brummet, William C. Pyle and Eng G.Flamhaltz carried out a series of project designed to develop the concepts and methods of accounting for human resources. Under the direction of William Ryle, then Ph.D candidate, research was conducted on the measurement of the historical cost of human resources.

According to [2], human resource is an old field of research in economics, as reflected by accounting treatments, human resource accounting is not a new issue in economics. Economists consider human capital as a production factor and they explore different ways of measuring its investment in education, health and other areas. Accountants have recognized the value of human assets for at least 20 years. Research into true human resources accounting began in the 1960s by Rensis Likert. Likert defends long term planning by strong pressure on human resources qualitative variable, resulting in greater benefits in the long-run.

Looking at different proposal [3], the resource theory considers human resources in a more explicit. This theory considers that the competitive position of a firm depends on its specific and not duplicated assets. The most specific asset that an enterprise has is its personnel. It takes advantage of their interdependence knowledge. That would explain why some firms are more productive than others. With the same technology, a solid human resources team makes all the difference.

The Main Objective of a Human Resource Accounting System are as follows:

1. To furnish cost value information for making proper and effective management decision about acquiring, allocating, developing and maintaining human resources in order to achieve cost effective organizational objectives.

2. To monitor effectively the use of human resources by the management

3. To have an analysis of the human asset, that is, whether such assets are conserved, depleted or appreciated.

4. To aid in the development of management principles and proper decision making for the future by classifying financial consequences, of various practices.

5. In all, it facilitates valuation of human resources, recording the valuation in the books of account and disclosure of information in the financial statement.

6. Further, it is to help the organization in decision making in the following areas:

a) Direct recruitment vs. promotion

b) Retrenchment versus retention

c) Impact on budgetary controls of human relations and organizational behavior

d) Decision on reallocation of plants, closing down existing units and development overseas subsidiaries etc.

5.1 Definition of Human Resources Accounting

The American Accounting society committee on Human Resource Accounting defines it as follows

Human resources accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties.

5.2 Functions of Human Resource Accounting

It helps management understand the implications of its business decisions and provides perspective for analyzing the effects of decisions on human organization and for explaining the consequences to management. Thus, the long range consequences and hidden costs of certain business decisions will be appreciated by management (e.g. lay off decisions).

It can be used as a measure of the cost and value of human resource. Example of cost of lay off which includes the estimated replacement cost. Management then considers the cost and benefits of such practices.

To motivate management to adopt a human resource perspective in their decisions. Management either consciously or unconsciously tend to think of people as expenses to be minimized rather than assets to be optimized.

From the management perspective, the primary role of human resource accounting is to provide the information necessary to perform the functions of acquiring, developing, allocating, conserving, utilizing, evaluating and rewarding human resources. Therefore human resource accounting helps with each of these functions:

Human resource accounting can be useful in budgeting human resource acquisition by providing measurements of the standard costs of recruiting, selecting and hiring people.

It helps management in acquisition and development policy.

Human resource accounting can also assist management in conserving its human organization by providing an early warning system. It can measure and report certain social-psychological indicators of the condition of the human organization and management can assess trends in these variables prior to the actual occurrence.

Optimal utilization of human resource by providing paradigm or conceptual framework which are sets of strategies that can be adopted to change the value of assets and in turn, the value of the organization as a whole. This paradigm involves thinking of human resources acquisition, development, allocation and conservation as strategies designed to influence the value of people. In nutshell human resource accounting provides a framework to help managers utilize human resource effectively and efficiency.

In the evaluation process human resources accounting can be useful developing reliable methods of measuring the value of people to an organization. These include both monetary and non-monetary measurement. Thus, human resource management decision are made on cost value basis.

Human resources accounting will also have impact on the administration of reward system. It permits rewards to be administered in relation on a person's value to an organization. Rewards include compensation, promotion and symbolic recompense such as performance appraisals.

Finally, human resource accounting is used to evaluate the efficiency of personnel management. Standard cost of acquiring and developing people are made available and compared with actual cost. Deviations from the standards may be analyzed to identify inefficiencies in the acquisition and development of the work force.

5.3 Many Unanswered Questions

Despite the functions and good intent of human resources accounting, it has proved extremely difficult, providing adequate and valid information on human resources in statistical terms and within traditional balance sheet.

There are still immense problem to overcome before a coherent and reliable measuring technique is established. Part of the dilemma originates from basic questions such as:

a. Is Human Resources Accounting have a standard format for comparability purpose

b. Should Human Resource Accounting be included in traditional financial statements?

Methodological and technical questions includes:

a. Is it possible to obtain data on human resources which are reliable and comparable across enterprises?

b. Will the cost of gathering and processing this information exceed the benefits of doing so?

c. How to establish a coherent terminology

d. How to link reporting on human resources with improved human resources management

Policy Dimensions Questions includes:

a. Should Human Resource Accounting be mandatory for enterprises alongside financial statements

b. If mandatory, what kind of information should be included in such statements

c. If voluntary, how to secure the interest of the employees at enterprise level

5.4 Limitations of Human Resource Accounting

Some limitations responsible for management reluctant to introduce human resource accounting amongst them includes:

1. There has been no generally accepted model for the measurement of human capital. The system being accepted has certain drawbacks.

2. Human being cannot be owned like other assets, the period of their existence is uncertainty in future seems to be realistic.

3. There is the fear that human resources accounting may dehumanize and manipulate employees

4. The presentation mode has not yet been codified in the accounting profession.

5. The valuation of human capital depends on a large number of abstract factors not measurable imprecise monetary terms. The valuation therefore lacks objectivity and preciseness.

6. Tax laws do not recognize human beings as assets

7. If value is placed on human capital what and how will the amortization rate look like, decreasing, constant increasing. Should it be the same or different for different categories of personnel.

These limitations stated above are based on the fact that human resource accounting is a new concept. The opinion are still being crystallized. Proper techniques are bound to be developed for its valuation and generally accepted formats will be evolved by the accountants for disclosure of this vital information in the financial statement of a firm.

6. APPROACHES TO HUMAN RESOURCE ACCOUNTING

The approaches to human resource accounting can be broadly classified as follows:

6.1 Cost based approaches

a) **Historical Cost Approach**: The basic contributing factor for developing human resources of an organization in this approach can be equated to the actual cost incurred in recruiting, selecting, hiring, training, placing and development of employee. These are then capitalized and amortized over the expected useful life of the human resource concerned. If the asset is liquidated prematurely losses are recorded and written to profit and loss in the year and if human assets has a longer life than estimated, revisions are made in the amortization scheduled. This approach treats the historical costs of human resources very much like the cost of physical fixed assets.

Advantages of the Historical Cost Approach

I. It is quite simple to understand and can be easily worked out

II. Cost is related to revenue

III. It provides a basis for evaluating the company's return on its investment in human resources.

Limitations of the Historical Cost Approach

I. It takes into account only a part of the employees acquisition cost and ignores to aggregate value of their potential services

II. Estimation of the number of year over which the capitalized expenditure is to be amortized is not easy to determine with this method

III. Precise rate of amortization is difficult to determine should it be constant, increasing or decreasing

IV. Capital cost decrease with amortization

b) **Replacement Cost Approach**: This approach was first propounded by Rensis Likert in 1982. Human resources are to be valued on the assumption that a new similar organization has to be created from scratch and the cost to the firm is calculated if the existing resources were required to be replaced with other persons of equivalent talents and experience. Replacement cost takes into account the notional cost that may be require to acquire a new employee to replace the present one. While the historical cost methods takes into account the actual cost incurred on employee. Replacement cost is generally much higher than the historical costs. This approach is more realistic because it incorporate the current value of the organization's human assets in its financial statement prepared at the year end.

Cost incurred by an organization in replacing a terminated employee are defined as replacement cost which are as following:

i. Communication of job ability

ii. Pre-employment administrative functions

iii. Interviews

iv. Testing

v. Staff meeting

vi. Travel cost

vii. Employment medical examination

Replacement cost have the advantage of being present oriented. This method is regarded as a good surrogate for the economic value of the assets in the sense that market considerations are essential in reaching a final figure.

Limitations of Replacement Cost Approach

I. It is against conventional accounting practice

II. There may be no similar replacement for certain existing asset

III. The replacement value is affected by subjective considerations and therefore the value is likely to differ from one another

IV. It is difficult to fit identical replacement of the existing human resources in actual practice

V. replacement cost does not necessarily reflect the knowledge, competence and loyalties concerning an organization that an individual can build overtime.

c) **Opportunity Cost Approach**: This approach is also known as "market value method", first advocated by [4] Wang *et al.* (2006) and is based on the economist's concept of opportunity cost.

The value of an asset when there is an alternative opportunity of using it is the opportunity cost. In this method, there is no opportunity cost for those employee who are not scarce, so only scarce people should form part of the value of human resources. With regards to capital equipment and assets, opportunity can be defined as the most profitable alternative use that is forgone by putting it to present use. The employee is considered as scare only when the employment in or division of a group denies this kind of talent to another division. Therefore the opportunity cost of an employee in one department is calculated on the basis of after made by another department for the employees working in this department in the same organization.

Limitations of Replacement Cost Approach

I. This method does not show the true cost of human resources in organization because it excludes from its purview the employees who are not being bid by other departments of investment centre's.

II. Those staff considered unsacred may have their morale dampened as they are not wanted

III. It will be difficult to identify the alternative use of an employee in the organization

IV. A person may be a valuable person for the department in which he is working and may have a lower price in the bid by other department in which he is working and may have a lower price in the bid by other departments, thereby leading to inaccurate valuation of human resources.

d) **Standard Cost Approach**: David Watson is the advocate of this approach. In the method employees of an organization are categorized into different groups based on their hierarchical positions, standards costs is then fixed for each category and their value is calculated. This approach suggest that standard costs of recruiting, hiring, training and developing per grade of employee are determined year after year. The standard cost arrived at for all human beings employed in the organization are the value of the human resources for accounting purposes.

The limitation of this approach is that it does not take into consideration differences in employees output in the same group.

7. MONETARY VALUE BASED APPROACH

In the monetary value based approach, the value of human resources of an organization is determined according to their present value to the organization. The future earnings of various groups of employees are estimated up to age of their retirement and are discounted at a predetermined rate to obtain the present value of future earnings used in the case of financial assets.

a) **Lev and Schwartz model** (Present value of future earning model)

Under this approach, the value of human resource of an organization is determined according to their present value to the organization. A number of valuation models have been developed to determine the present value.

This model has been developed by [5], where they opined that determination of the total of a firm's labour force is a straightforward extension of the measurement procedure of an individual value to the organization. They have divided the whole labour force into certain homogenous groups such as skilled , unskilled, settle skilled, technical staff, material staff among others and in accordance with different classes and age groups average earnings stream for different classes and age groups are prepared for each group separately and the present value for human capital is calculated. the aggregate present value of different groups represents the capitalized future earnings of the firm as a whole. They have advocated the use of cost of capital rate of the purpose of capitalizing present value of the future earnings of the employees. According to [5], the value of human capital represented by a person of age is the present value of his remaining future earnings from his employment.

However, to [5] there is a fundamental difference between the two types of capital: the ownership of human capital is transferable (not a society of slavery), while human capital is not traded in the market. With regards to certainty, this distinction has no impact in determining the value of capital, since it is understood that there is a perfect knowledge of future income, as well as the discount rate. In a context of uncertainty, it no longer applies. However, for non-human capital (physical capital) one can infer its value by the observation of market values that reflect the present value of future outcomes for the parties dealing in the market. But for the human capital one cannot do the same because it is not traded in the market. Thus, [5] concluded that in a world of uncertainty, there is an important distinction between human and nonhuman capital.

As cited by [6], [5] proposed that the value of human capital is determined as follows:

1. All employees are classified into specific groups according to their age and skills;

2. The average annual compensation is determined for different age groups;

3. The calculation of total compensation that each group mentioned in point 2. will be up to retirement age;

4. The total remuneration will be calculated at a rate discounted cost of capital. The value arrived at will be the value of the asset / human capital; According to this model, the formula to calculate the expected value of human capital of an employee is as follows

According to this model, the formula to calculate the expected value of human capital of an employee is as follows:

$$E(V_{\tau*})=\sum_{t=\tau}^{T} P_{\tau}(t+1)\sum_{i=\tau}^{t}\frac{I_{i*}}{(1+r)^{t-\tau}}$$

Where,

$E(V_{\tau*})$ = The human capital value of a person with τ years old;

I_{i*} = The person's annual earnings up to retirement. These values are plotted through the profiles of income;

r= Discount rate specific to the person;

t= Retirement age;

$P_{\tau}(t)$ = Conditional probability of an elderly person τ to die in year t.

The value of the organization's human capital is no more than the sum of the values of human capital of individuals working in the organization.

According to [5] even though nothing has been done in accounting to include this item in financial reporting, economic theory provides a basis for a practical solution of the problem.

The main disadvantages are:

1. This model implies that the condition for future work the employee does not change with the time of his professional life, but will remain the same in this;

2. The approach does not take into account the possibility of a worker to withdraw from the organization before his death or retirement. As such, it is unrealistic;

3. Ignores the variable of career movement of workers within the organization;

4. It does not take into account the changes in the functions of workers.

On the other hand, this method does not give the correct value of human capital, and not measure their contributions to achieving organizational effectiveness.

b) **Stochastic Model of Eric Flamholz model**:

Flamholz suggested this model in 1972 as an improvement on the present value of future earning as it takes into consideration the fact that an employee can leave earlier than his death or retirement and can also move from one rate to another in his career. This model suggests that the ultimate measure of an individual's value to an organization is his expected realizable value. Expected realizable value is based on the assumption that there is no direct relationship between cost incurred on an individual and his value to the organization at a particular point in time. An individual's value to the organization according to Flamholtz is the present worth of set of future services that he is expected to provide during the period remains in the organization. He further gave the valuables affecting an individual's expected value. Individual conditional values and his likelihood of remaining in the organization. The former is a function of the individual's abilities and activation level, while the later is a function of the such variables as job satisfaction, commitment, motivation and other factors.

According to the Flamholtz model, the ultimate measure of the value of an individual to an organization is its expected value of achievement. The expected value of achievement is based on the assumption that there is no direct relationship between the cost incurred by an individual and its value to the organization at a particular point in time. The value of an individual to the organization can be defined as the present value of all future services that is expected to provide during the period that remains in the organization. According to [7] one cannot predict with certainty the amount of service expected of an individual at a given point in time. Therefore, we resort to probabilities.

So the model is stated as:

$$E(S)=\sum_{i=1}^{n} S_i P(S_i)$$

$$E(S)=S_1P(S_1)+S_2P(S_2)+S_3P(S_3)$$

where S_i represents the amount of service you would expect in each state and $P(S_i)$ is the probability of them being obtained.

Flamholz suggest a five-step approach given as;

1. Determination of the period for which a person is expected to serve the organization

2. Identification of service estates (i.e. rules or posts) that the employee might occupy during his service career including the possibility of his quitting the organization.

3. Estimation of the value derived by the organization when a person occupies a particular position. Such values can be determined either by multiplying the price of the services with the quantity of the services to be rendered or the income expected to be derived from the services to be rendered.

4. The total value of the service derived by the organization by different employees or group of employees is determined. The value thus arrived is discounted at a predetermined rate to get the present value of human resources.

Limitations of the Flamholz model

1. Difficulty in obtaining reliable data for determining the value derived by an organization during the period a person occupies a particular position

2. The model ignores the fact that individuals operating in a group may have a higher value for the organization as compared to individuals working independently.

c) **Morse Model** (Net benefit model)

This model was propounded by [8], according to [8], the value of human resources is equivalent to the present value of net benefit derived by the organization from the service of its employees.

The method involves the following steps:

1. the gross value of services to be rendered in future by the employee in their individual as well as their collective capacity is determined.

2. The value of future payments (both direct and indirect) to the employees is determined.

3. The excess of the value of the future human resource over the value of future payment is ascertained. This represents the net benefit to the organization on account of human resources.

4. The present value of the net benefit is determined by applying a predetermined discount rate. This amount represents the value of human resources to the organization.

d) **Lev and Friedman Model**

According to [9], the value of human resources consist of the value of the discounted stream of wage differences between the market and those charged by the company, where by the difference between what should be paid to employees if the personnel policies were identical to the company in an industry where it operates and what will actually be paid due to the specific policies of the company.

The approach of measurement of investments in the company's human resources proposed by [9] is based on generally accepted concepts of asset valuation, but goes beyond the more usual accounting practices, by incorporating in the process of measuring both the current value as the market value. In terms of accounting records, [9] propose the existence of an account "Investments in Human Resources", where the difference between the external and internal human resource is registered.

e) **Hermanson Model**

Ref [10] was considered to be the first to address the issue of human capital accounting. Hermanson presented the issue of human capital accounting as being something that has to do with the balance.

To [10] there is an appropriate definition of an asset and it is necessary to arrive at a definition of an asset that allows the inclusion of features that are present in the company, but are not necessarily owned by it. However, [10] defines the asset as scarce resources (defined as services but grouped by and relating to agents) operating within the entity, capable of being transferred by the forces in the economy, and expressed in monetary terms that can be acquired as a result of current or past, which apparently has the ability to provide future economic benefits.

The advantages of inclusion of human resources in the financial statements, the author argues that:

1. Its inclusion will increase the comparability and completeness of financial statements, resulting in a more efficient allocation of resources in the economy; 2. A rejuvenation of the financial position;

3. A closer relationship between the financial statements;

4. A helping hand for the analysis of companies in terms of internal.

f) **Non Monetary value -based Approach**

1. Likert Model

2. Ogan Model (certainty equivalent net benefit model)

1. Likert Model

Ref [11] defended the thesis that the human capital accounting would play a vital role in the development of value and, thus, increase the performance of an organization through the introduction and participatory management structure and processes which he called system 4. Likert argues that changes in causal variables such as management style, leadership strategies and organizational structures, not only result in improved productivity, cost, results, or variables of the final results of similar organizations, but also manifest themselves in improved attitudes, loyalties, motivations and objectives of performance, perceptions, skills, among others, between employees.

2. Ogan Model

This approach has been suggested by [12]. It is an extension of "net benefit approach" as suggested by [11]. The model is not intended as a formal system of human capital accounting, but an approach to quantify the value-oriented.

Ref [12] draws attention to the importance of distinguishing between the HCA and quantification of human resources. The latter is a subset of the first. This means that measure and quantify in monetary value of human resources and present them in the financial statements does not make a human resource accounting system. A system of measuring human resources should have more than their mere quantification. It should be a continuous process where human resources are quantified and controlled, i.e., a system that allows users to access information repeated.

8. OTHER WRITERS VIEW ABOUT HUMAN RESOURCES ACCOUNTING

According to [13], accounting has traditionally been the principal supplier of information to enterprises' stakeholders; they felt that accounting has compromised its capacity to continue to function as a primary information provider by not responding more rapidly to the demands of new economy in which intangible resources have emerged as the principal catalysts for growth with consequent radical changes in organizational structure and knowledge flow. They suggested that new accounting concepts and approaches be developed that will be sensitive to novel stake holding and knowledge creating dynamics of the new economy. Ref [1] opined that disclosure of human asset in financial statement is not feasible despite the importance of human resources is such organization. He argued that it's non-inclusion will be healthier to financial theory. Human resources accounting might be more effectively achieved by other means rather than its inclusion in the financial statement.

Ref [14] studied the intellectual capital disclosure in Canadian corporation and stated that, it is clear based on the results of his study that intellectual capital disclosure is still very much an academic discussion. He found that there is no evidence at all that intellectual capital disclosure has not gained attraction for Canadian corporations and that only a small percentage of Canadian Companies even used the terms in their annual reports.

According to [15] human capital accounting involves improving the quality of financial decisions taken both internally and externally on an organization. With regard to internal decisions, human capital accounting data should allow an improvement in decision making when considering a larger set of variables. Usually the internal decision making ignores the impact of human resources in both the short and long term, or at best, sees human resources on a subjective rather than a quantitative basis. The availability of quantitative data on human resources should allow its impact to be easily incorporated in the decision-making. This is particularly relevant when it comes to making decisions on the budget. The development of a human capital accounting system should provide the data needed to convert aspects "quality" of decision making inherent to human resources management tool in a slightly more quantitative. External users, especially investors, could benefit from the human capital accounting through the provision of information about the degree to which the organization's human capital was increased or decreased during the period.

[15] noted that one of the fundamental objectives of the human capital accounting is to develop methods of measuring human resource cost and value. These measurements are intended to provide a means for making decisions involving the recruitment, development, compensation and replacement of human resources on a "value for money." They are intended to enable the management monitor the effective use of human asset management, and assess the extent to which management was appreciated, preserved, or human resources were exhausted. Another key objective of human capital accounting is to develop a theory explaining the nature and determinants of the value of people to organizations. This theory serves a dual purpose. First, it allows to identify the variables that must be considered in the development of measures (monetary and non monetary) value of human resources. Second, the

theory may eventually become the basis for a new paradigm of human resource management.

9. METHODOLOGY AND MATERIALS

9.1 Source of Data Collection

A survey of managers and staff of UBA PLC and Zenith Bank PLC was carried out through field work in Awka, the capital of Anambra State Nigeria. 131 questionnaires were administered to managers and staff with accounting related background but 106 questionnaires were returned.

9.2 The Kruskal – Wallis Rank Sum Test

Most practical data from experience never follow a Gaussian (normal) distribution precisely, because a Gaussian distribution extends infinitely in both directions, so it includes both infinitely low negative numbers and infinitely high positive numbers. Many kinds of data set, however, do follow a bell-shaped distribution that is approximately Gaussian. Because ANOVA works well even if the distribution is only approximately Gaussian (especially with large samples), these tests are used routinely in many fields of science ([17]; [18]).

The Kruskal – Wallis test which is an extension of the Wilcoxon test for location with two independent samples from continuous populations. The null hypothesis is that the k populations are the same, but when we assume the location model this hypothesis can be written in terms of the respective location parameters (or treatment effects) [19].

$H_0 : \theta_1 = \theta_2 = \cdots = \theta_k$ (treatment effects)

H_1: At least two $\theta's$ differs

To perform the test, all $n_1 + n_2 + \cdots + n_k = N$ observations are pooled into a single array and ranked from 1 to N. The test statistic for H given as;

$$H = \frac{12}{N(N+1)} \sum_{i=1}^{k} \frac{R_i^2}{n_i} - 3(N+1)$$

For R_i being the sum of the ranks from the i^{th} sample; the appropriate rejection is the large value of H.

The short fall of this is that it's a non-parametric test statistic and has less power on like its parametric equivalence.

Decision Rule: The decision rule is to reject the null hypothesis when the P-value is less or equal to α=0.05, otherwise, accept the null hypothesis.

10. Data Analysis and Discussion

10.1 Mann-Whitney Test on whether the non-inclusion of human capital in balance sheet has material effect on financial statement

H_{00}: Non-inclusion of human capital in balance sheet does not have material effect on financial statement

H_{01}: Non-inclusion of human capital in balance sheet have material effect on financial statement

Table 1: Ranks

	Option1	N	Mean Rank	Sum of Ranks
Response1	Yes	4	6.50	26.00
	No	4	2.50	10.00
	Total	8		

Table 2: Test Statistics[b]

	Response1
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.337
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029[a]

a. Not corrected for ties.

b. Grouping Variable: Option1

Interpretation

The result of the analysis in Table 1 revealed that majority of the respondents agreed that the non-inclusion of human capital in balance sheet has material effect on the financial statement since option yes has the highest mean rank of 6.50 while option No has a mean rank of 2.50. Result displayed in Table 2 found a Mann-Whitney U test value of 0.00 which is clearly significant(U=P(0.03)<0.05). Hence, the P value of 0.03 is less than 0.05. This result implies the rejection of the null hypothesis and we can conclude that there exist strong evidence of significant difference that non-inclusion of human capital in balance sheet has material effect on the financial statement.

10.2 Mann-Whitney Test on whether the disclosure of human capital will enhance the net worth of the organization

H_{11}: The disclosure of human capital will not enhance the net worth of the organization

H_{02}: The disclosure of human capital will enhance the net worth of the organization

Table 3: Ranks

	Option2	N	Mean Rank	Sum of Ranks
Response2	Yes	4	6.25	25.00
	No	4	2.75	11.00
	Total	8		

Table 4: Test Statistics[b]

	Response2
Mann-Whitney U	1.000
Wilcoxon W	11.000
Z	-2.021
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.050[a]

a. Not corrected for ties.

b. Grouping Variable: Option2

Interpretation

The result of the analysis in Table 3 revealed that majority of the respondents agreed that the disclosure of human capital will enhance the net worth of the organization since option yes has the highest mean rank of 6.25 while option No has a mean rank of 2.75. Result displayed in Table 4 found a Mann-Whitney U test value of 1.00 which is clearly significant(U=P(0.05)=0.05). Hence, the P value of 0.05 is equal to 0.05. This result implies the rejection of the null hypothesis and we can conclude that there exist strong evidence of significant difference that disclosure of human capital will enhance the net worth of the organization.

10.3 Mann-Whitney Test on whether accounting for human resources enhances the competitive position of an organization

H_{22}: Accounting for human resources does not enhance the competitive position of an organization

H_{02}: Accounting for human resources enhances the competitive position of an organization

Table 5: Ranks

	Option3	N	Mean Rank	Sum of Ranks
Response3	Yes	4	6.50	26.00
	No	4	2.50	10.00
	Total	8		

Table 6: Test Statistics[b]

	Response3
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029[a]

a. Not corrected for ties.

b. Grouping Variable: Option1

Interpretation

The result of the analysis in Table 5 revealed that majority of the respondents agreed that the accounting for human resources enhances the competitive position of an organization since option yes has the highest mean rank of 6.50 while option No has a mean rank of 2.50. Result displayed in Table 6 found a Mann-Whitney U test value of 0.00 which is clearly significant(U=P(0.03)<0.05). Hence, the P value of 0.03 is less than 0.05. This result implies the rejection of the null hypothesis and we can conclude that there exist strong evidence of significant difference that accounting for human resources enhances the competitive position of an organization.

11. Conclusion

Human resources accounting has the potential to lead to a profound reconceptualiztion for the management of people in the organization. Specifically, it can contribute to organizational culture in which they believe that people are valuable organizational resources are manifested in decision and actions.

However, in order to estimate and project the worth of the human capital, it is necessary that some methods of quantifying the worth of the knowledge, motivation, skills and contribution of the human elements as well as that of the organizational processes of recruitment selection and training which are used to build and support these human aspects is developed. There are still immense problem to overcome before a coherent and reliable measuring technique is established.

This research work reveled that human capital is an unavoidable concept as far as business transactions are concerned, that it is important for accounting profession and the Accounting Standard Boards to promote and sponsor the legislation of its proper disclosure in the statement of accounting standard. It was found that non-inclusion of human capital in balance sheet has significant material effect on the financial statement. The result revealed that disclosure of human capital will significantly enhance the net worth of the organization. It was also found that accounting for human resources significantly enhances the competitive position of an organization.

References

[1] A. B. Akinsoyin, Human Resource Accounting -The Myth and Reality, *The Nigerian Accounting*, XXV(2), 1992, August.

[2] C. Barcons-Vilardell, et al, Human Resource Accounting, *International Advances in Economic Research*, 5(3), 1999, August.

[3] W.F. Casco, *Costing Human Resource: The Financial Impact of Behaviour in Organizations* (3rd Edition), (Boston; P.W. S. Kent, 1991).

[4] X. Wang, Z. Zhang, & S. Wang, Human Capital Accounting and the system of National Accounts Extensions, *Research and Practice in Human Resource management*, 14(1), 2006.

[5] B. Lev, A. Schwartz, On the use of the economic concept of human capital in financial statements, *The Accounting Review*, Vol. 49, 1971, pp. 103-12.

[6] P. Andrade, & A.M. Sotomayor, A. M., Human Capital Accounting – Measurement Models, *International Journal of Economics and Management Sciences*, 1(3): 78-89, 2011.

[7] E.G. Flamholtz, Toward a theory of human resource value in formal organizations, *The Accounting Review*, 47(4): 666-678, 1972.

[8] W.J. Morse, A Note on the Relationship Between Human Assets and Human Capital, *The Accounting Review*, 589-593, 1973.

[9] A. Friedman, & B. Lev, A surrogate measure for the firm's investment in human resources, *Journal of Accounting Research; Autumn*; pp. 235-250, 1974.

[10] R. H. Hermanson, Accounting for Human Assets, *Occasional Paper, nº.14, Bureau of Business and Economic Research*, Graduate School of Business Administration, Michigan State University, 1964.

[11] R. Likert, *The Human Organization: Its Management and Value*, (International Student Edition, McGraw-Hill, 1967).

[12] P. Ogan, A human resource value model for professional service organizations, *The Accounting Review*, 51(2): 316-20, 1976.

[13] O. Regan, O. Donnell, & O. Regan, Recognition and Measurement of Intellectual Resources: The Accounting - Related Challenged of Intellectual Capital, *Third International Conference on Practical Aspects of Knowledge Management (PAKM 2000), Basel, Switzerland, 30-31, October, 2000.* Available online at http://sunsit.informatik.rwth-aachen.de/Publications/CEUR-WS/Vol-34.

[14] N. Bontis, Intellectual Capital Disclosure in Canadian Corporations, 2002. Available online at www.bontis.com, 10th February, 2007.

[15] American Accounting Association Committee Reports, Report of the Committee on Human Resource Accounting, *The Accounting Review*, Supplement to XLIX, 122, 1974.

[16] E. G. Flamholtz, Human resource accounting: a review of theory and research, *Journal of Management Studies*, 11(1): 41-61, 1974.

[17] D. C. Montogomery, & G. C. Runger, *Applied Statistics and Probability for Engineers (3rd Edition)*, (John Wiley & Sons, Inc. USA, 2003).

[18] N. B. Ijeoma, The Contribution of Fair Value Accounting on Corporate Financial Reporting in Nigeria, *American Journal of Business, Economics and Management,* 2(1): 1-8, 2014.

[19] N. Ijeoma, c. O. Aronu, Effect of Human Resource Accounting (HRA) on Financial Statement of Nigerian Banks. *International Journal of Advancement in Research & Technology*, 2(8): 342-347, 2013.

APPENDIX

Section A

Question	yes	No	Total
1. Do you think that non-inclusion of human value in the balance sheet has material effects in the financial statement?	67	39	106

2. Do you think that treating human resources as only expenses present a false net profit?	71	35	106
3. Do you think that disclosure of Human Assets will enhance better measurement of return on capital employed?	84	22	106
4. An accountant views an asset as anything with value in the balance sheet, do you regard human resource disclosure as important as other assets?	84	22	106
Total	306	118	424

Section B

Question	yes	No	Total
5. Do you think that training and development have future value or benefit to the organization?	106	0	106
6. Do you think the disclosure of human resources will increase the net worth of your organization?	71	35	106
7. Do you believe that its disclosure as expenses creates conflict between the long-run interest of the organization and the short-run interest of the management?	81	25	106
8. Do you believe that human resource accounting will give better market capitalization and actual worth of organization's share price?	95	11	106
Total	310	114	424

Section C

Question	yes	No	Total
9. Do you think that human resources account will contribute towards improved productivity?	70	36	106
10. Do you think that inclusion of personnel cost on the asset side of the balance sheet will improve the competitive position of your organization?	74	32	106
11. Do you think that long-term planning of human resources quantitative variables can lead to greater benefits in the long-run?	91	15	106
12. Do you think that some firms are more productive than others in almost similar condition?	77	29	106
Total	306	118	424