

The Relevance of Human Resource Accounting to Effective Financial Reporting

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Abstract

Human resource Accounting (HRA) involves accounting for expenditure related to human asset in an organisation as opposed to traditional accounting which merely expense these costs and reduces profit which to our mind suboptimise financial reporting. As a result of this agitation and the need for harmonization of human with other resources in financial reporting, this study was carried out.

The work of Ashton(2005) using the Skandia Model of Intellectual Capital of value creation was extensively reviewed to justify the need of evaluating intellectual capital in organisations. This study using Oceanic Bank Plc as a case study adopted the Lev and Schwartz model to determine the value of human resources, simple linear regression was used to analyse the impact of human resource to effective financial reporting using investment in human capital, profitability and capital employed. Secondary data obtained from the annual reports and accounts of Oceanic Bank Plc from 2002-2006 was used.

It was discovered that human resource has a positive effect on the profit and capital employed by the bank, lending credence to the findings of Ashton, that there is association between components of intellectual capital and firm-and market-level financial outcomes. It is also in support of Akintoye(2003) that the published Financial Statements may be incomplete without accounting for human resources. The very hot debates on the adoption of and convergence with International Financial Reporting Standards(IFRS) from 2004 and the eventual break down of assets to components is suggesting the possibility of an exposure draft on this all important asset very soon.

It was recommended that the likely length of time an employee will spend in an organization should be considered during recruitment and such estimated human resource be capitalized and amortized overtime.

Key Words: *human asset, financial statement, amortization, efficiency, profitability, learning curve*

INTRODUCTION

American Accounting Association's (1973) has defined Human Resource Accounting(HRA) as "the process of identifying and measuring data about human resources and communicating this information to interested parties". Eric Flamholtz(1971) offered a similar definition for HRA as "the measurement and reporting of the cost and value of people in organizational resources". Moreover, Stephen Knauf(1983) defined HRA as "the measurement and quantification of human organizational inputs such as recruiting, training, experience and commitment."

Human resources is the set of individuals who make up the workforce of an organization, business sector or an economy. "Human capital" is sometimes used synonymously with human resources(Wikipedia). Financial reporting is presenting financial data of a company's operating performance, position and funds flow for an accounting period while effective Financial reporting has to do with making financial reports clear enough to the understanding of users(Andrew Higson,2008).

Ashton(2005) in his paper on Intellectual Capital and Value Creation observed that while the realization of the potential of a company to creating value is increasingly emphasized, there seem to be a marked shift in emphasis towards the "intangible value drivers" in place today that will position the firm for value realization tomorrow. Dwelling extensively on the Skandia Model of Intellectual Capital, Ashton concluded that the Skandia Navigator and related framework has sometimes served as a foundation for external reporting of nonfinancial information, and that its understanding may be useful for not only the understanding value creation(and research on value creation) but also for communicating value creation activities to interested stakeholders. Akintoye(2005) opined that essential accumulation of goodwill in firms can be a function of a well managed business environment by well experienced managers who have spent enough time to understand organizational policies, politics and ethical values.

From the above assertions, it can be said that human element is one of the most valuable inputs in an organization. A team of competent, devoted and motivated persons can convert a sick concern into a successful one. On the other hand, incompetent and disinclined personnel may waste the existing physical and

financial resources leading the concern to collapse. It is a common knowledge that capital issues of even new undertakings are oversubscribed if they are floated by competent persons. This is because investor in the capital market places high value in the human ability rather than any other in wealth creation. The accounting profession until approximately 1965 largely ignored the obvious importance of people in organizations and as productive resources. Now there appear to be wide spread awakening and growing interest in Human Resource Accounting (HRA) and its incorporation into financial reports.

The treatment of investment in people as assets can be attributed to two major reasons: first, present and potential investors need such information to help assess the value of a business enterprise, and, second investments in people satisfy the criteria for treatment as an asset.

The gap in most accounting researches on human resource accounting is the inconclusiveness of where exactly to place human asset in the balance sheet and the implication of recruitment policies on such assets. This paper studies the integration of human resource into the conventional financial statement as intangible/intermediate asset, the need for consideration of longevity of employees during recruitment and its relevance to effective financial reporting.

THEORETICAL FRAMEWORK

External Financial Reporting Theory

The theories of external financial reporting have been categorized into two broad groups: descriptive and normative. While descriptive theories attempt to set forth and explain what and how financial information is presented to users of accounting data, the normative theories attempt to prescribe what data ought to be communicated and how they ought to be presented (Wolk, et, al,200).

In attempt to explain further the theories upon which financial reporting is based, Morris (1996) came up with the following three classifications: the traditional approach; the information requirements of investors; and failure in the market for financial information. The traditional approach, which is descriptive in nature, represents a time honoured approach which relates various mechanical procedures to the existing regulatory and legal framework. The information requirements to investors concentrate mainly on the information needs or requirements of equity investors, even though, financial statements are used by variety of users for differing purposes. While the failure of market for financial information, on the other hand, proposes that potential users will generally require some information to help them reach decision and will, if necessary, employ intermediaries to obtain it. These theories point to the existence of contention in financial reporting and existence of information asymmetry.

Learning Curve Theory

Learning Curve Theory is concerned with the idea that when a new job, process or activity commences for the first time it is likely that the workforce involved will not achieve maximum efficiency immediately. Repetition of the task is likely to make the people more confident and knowledgeable and will eventually result in a more efficient and rapid operation. Eventually the learning process will stop after continually repeating the job. As a consequence the time to complete a task will initially decline and then stabilise once efficient working is achieved. The cumulative average time per unit is assumed to decrease by a constant percentage every time that output doubles. Cumulative average time refers to the average time per unit for all units produced so far, from and including the first one made. The Model of unit curve is denoted as:

$$Y_x = Kx^{\log_2 b}$$

Where

- K is the number of direct labour hours to produce the first unit
- Y_x is the number of direct labour hours to produce the xth unit
- x is the unit number
- b is the learning percentage

Models on HRA

i. The Lev and Schwartz Model

Lev & Schwartz advocated the estimation of future earnings during the remaining service life of the employee and then arriving at the present value by discounting the estimated earnings at the cost of capital. The assumptions in this method are realistic and scientific. The method has practical applicability when availability of quantifiable and analyzable data is concerned, but this model is unable to give any method to record the value of human resources in the Books of Accounts. (Tiwari & Kodwani, 2007).

According to this model, 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 and can be calculated by using the following formula –

$$E(Vy) = \sum_{t=y}^T \frac{Py(t)}{(1+r)^t} \frac{I(t)}{(1+r)^t}$$

Where, $E(Vy)$ = expected value of a 'y' year old person's human capital

T = the person's retirement age

$Py(t)$ = probability of the person leaving the organization

$I(t)$ = expected earnings of the person in period t

r = discount rate

ii. **Flamholtz's Model (Determinants of Individual Value to Formal Organization)**

According to Flamholtz, the value of an individual is the present worth of the services that he is likely to render to the organization in future. As an individual moves from one position to another, at the same level or at different levels, the profile of the services provided by him is likely to change. The present cumulative value of all the possible services that may be rendered by him during his/her association with the organization is the value of the individual.

Typically, this value is uncertain and has two dimensions. The first is the expected conditional value of the individual. This is the amount that the organization could potentially realize from the services of an individual during his/her productive service life in the organization. It is composed of three factors:

1. Productivity or performance (set of services that an individual is expected to provide in his/her present position);
2. Transferability (set of services that he/she is expected to provide if and when he/ she is in different positions at the same level);
3. Promoability (set of services that are expected when the individual is in higher level positions).

These three factors depend, to a great extent, on individual determinants like activation level of the individual (his motivation and energy level) and organizational determinants like opportunity to use these skills or roles and the reward system.

The second dimension of an individual value is the expected realizable value, which is a function of the expected conditional value, and the probability that the individual will remain in the organization for the duration of his/her productive service life. Since individuals are not owned by the organization and are free to leave, ascertaining the probability of their turnover becomes important.

The interaction between the individual and organizational determinants mentioned above, leads to job satisfaction. The higher is the level of job satisfaction; the lower is the probability of employee turnover. Therefore, higher is the expected realizable value.

Flamholtz proposes three methods for valuation of expense centre groups. In all these measures, the surrogate value is used for estimation. The three methods are:

Capitalization - The capitalization method involves capitalizing a person's salary and using it as a surrogate measure of human value. This value may be ascertained for groups as well as individuals. The value of the group is essentially the aggregate value of the individuals comprising the group. Capitalization of compensation method is not considered an ideal method of group valuation because it ignores the possible effects of synergy. However, this method may be used to arrive at an approximation of a group's value to the firm.

Replacement cost valuation - The replacement cost of a group is defined as the sacrifice that would have to be incurred today to recruit, select, hire, train and develop a substitute group capable of providing a set of services equivalent to that of a group presently employed. This method involves considerable subjective estimates, which reduce its validity and replicability.

Original cost valuation - The original cost valuation method involves estimation of the original cost of recruiting, selecting, hiring, training, and developing a firm's existing human organization. The need for using original costs to value groups arises out of the necessity of estimating the cost of developing an effectively functioning team. Teamwork is essential for effective communication, decision making, coordination and several other critical organizational processes. Yet, when the original costs are used to make an estimation of the value of the expense centre, the costs of generating this teamwork are largely ignored.

iii. **Flamholtz Model (Reward Valuation Method)**

This model has been suggested by Flamholtz (1971). This is an improvement on present value of future earnings model, since it takes into consideration the possibility or probability of an employee's movement from one role to another in his career and also of his leaving the firm earlier than death or retirement.

According to this model, 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 of time. An individual's value to the organization can be defined as the present worth of set of future service that he is expected to provide during the period he remains in the organization.

Flamholtz has given the variables affecting an individual's expected value as 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 latter is a function of such variables as job satisfaction, commitment, motivation and other factors. The roles they will occupy in future will have to be determined probabilistically for each individual.

$$E(R) = \sum_{i=1}^N \frac{\sum_{j=1}^N R_j P(R_j)}{(1+r)^i}$$

Where: E(R) = Expected realizable value,

R_i = the value to be derived by the organization in each possible service state i

P(R_i) = probability that an individual would occupy position i

T = Time of retirement

R = Discount rate

iv. Morse Model (Net Benefit Model)

This approach has been suggested by Morse in 1973. According to this approach, 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 service to be rendered in future by the employees 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 future human resources (as per 1 above) over the value of future payment (as per 2 above) is ascertained. This, as a matter of fact, 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 (generally the cost of capital). This amount represents the value of human resources to the organization.

v. Hekiman and Jones Competitive Bidding Model.

In this method, an internal market for labour is developed and the value of the employees is determined by managers. Managers bid against each other for human resources already available within the organization. The highest bidder "wins" the resource. There is no criteria on which the bids are based. Rather, the managers rely only on this judgement.

Models on Non Monetary Value Based Approaches.

vi. Pekin Ogan (Certainty Equivalent Net Benefit Model).

This approach has been suggested by Pekin Ogan (1976). This as a matter of fact, is an extension of "net benefit approach" as suggested by Morse. According to this approach, the certainty with which the net benefit in future will accrue should also be taken into account, while determining the value of human resource. The approach requires the determination of the following:

1. Net benefit from each employee as explained under "net benefit approach".
2. Certainty factor at which the benefits will be available.
3. The net benefit from all employees multiplied by their certainty factor will give certainty equivalent net benefit. This will be the value of human resources of the organization.

Measurement of Group Value

A). Brummet, Flamholtz, and Pyle's economics value model.

The Brummet, flamholtz, and Pyle model follows the principle that a resource's value is equal to the present worth of the future services it can be expected to provide, and therefore, it can provide a basis of measuring the value of a group a people.

vii. Hermanson's Unpurchased Goodwill Model

According to Hermanson, the unpurchased goodwill notion is based on the premise that the best available evidence of the present existence of un-owned resources is the fact that a given firm earned higher than normal rate of income for the most recent year. Here, Hermanson is proposing that supernormal earning is an indication of resources not shown on the balance sheet, such as human assets. Even through his method of valuing human resource is explicitly intended for use in a company's published financial statements rather than for internal consumption, this would necessarily involve forecasting future earnings and allocating any excess above normal expected earnings to human resources of the organization. However, the assumptions would be subject to the uncertainties involved in any forecast of future.

viii. Likert and Bowers Model

Likert and Bowers propose causal, intervening, and end result variables, which determine the group's value to an organization. Causal variables are those which can be controlled by the organization. These variables include managerial behavior and organizational capabilities and involve group processes, per leadership, organization climate, and the subordinates' satisfaction. Both the causal and the intervening variables determine the end result variables of the organization. The end result variables reflect the achievements of the organization or the total productive efficiency in terms of sales, costs, earnings, market performance, e.t.c. They are dependent on the causal and intervening variables.

LITERATURE REVIEW

Interest in HRA related to reporting has grown in a number of countries across continents. Hansen(2007) notes that two-third of the 250 largest companies in the world now issue sustainable reports along with their financial reports in order to capture the full value of the organization. Global standards for sustainable reporting required the disclosure of workforce data that reflect the potential for future performance and profitability.

Some research included aspects of HRA in studies examining and comparing reporting practices of a number of countries. A study by Subbarao and Zehgal(1997) gave a macro-level perspective to HRA disclosure in financial statements by analyzing the differences across countries in the disclosure in annual reports across six countries. The authors found differences in disclosure of HR information across countries and provided

accounting and financial professionals insight on the HR information areas they need to focus on in their reporting.

In another study, Boedker, Mouritsen and Guthine(2008), examined contemporary trends from Europe, Australia, and the United State in “enhance business reporting”(EBR), which includes aspects of HRA. The authors found a vast diversity in international practices including measurement and reporting models, and suggested the need for further research about the barriers to and consequences of harmonization. Other research has focused more specifically on the authors’ country, but often with implications for the international development of HRA. This study focuses on the consequences of harmonizing HRA to conventional financial reporting in Nigeria.

METHODOLOGY

This study employed secondary data obtained from Oceanic Bank Plc annual reports for a period of five years covering 2002-2006. The Lev and Schwartz model of present value of future earnings method was used to analysis the value of human resource in Oceanic Bank Plc.

The following assumptions were made for the purpose of this study.

It was assumed that employees will stay for five years in the bank with a constant salary.

The cost of capital was assumed to be 10%.

For underemployed staff, an armslength figure was assumed.

An analytical technique was further employed to test the impact of human resource accounting on profit and capital employed by the bank using simple linear regression equation.

DATA PRESENTATION AND ANALYSIS

The data used in this study was obtained from the annual report of Oceanic Bank Plc over a period of time ranging from 2002-2008. The variables used in this research are total asset which includes human asset discounted to present value and amortize over the period of five years, capital employed for the period covered and profit after tax. The total asset represents the independent variable, while profit and capital employed represent the dependent variables.

Simple linear regression was use to study the impact of total asset on the profit and capital employed by the bank, the summary of the regression model from using the simple linear regression analysis is shown in the table below.

Table 1 Model Summary on Profit

R	0.998
R ²	0.997
Adjusted R	0.996
Standard Error of Estimate	20236.789
Durbin Watson	2.354
F. value	897.695
DF	4

Source: Oceanic Bank Plc annual report

From the above the co-efficient of correlation R and co-efficient of determination R² measures the explanatory power of the simple linear regression model. From the result, there is a high co-efficient of correlation (99.8%) between the total asset and the profit earned after tax. This implies that the variables are useful in explaining the impact of total asset (human asset inclusive) on profit. There is also a high significant co-efficient of determination (99%). The standard error estimate has a value of 20236.789 and the f-value is significant at 5%level. The Durbin Watson (DW) Statistic of 2.354 indicates that there is no problem of serial correlation in the regression model.

Table 2 Model summary on Capital Employed

R	0.968
R ²	0.937
Adjusted R	0.916
Standard Error of Estimate	4261080.818
Durbin Watson	2.587
F. value	44.669
DF	4

Source: Oceanic Bank Plc annual report.

There is high co-efficient of correlation (96.8%) from the above model between the total asset and the capital employed. This implies that the variables are useful in determining the impact of total asset on capital employed. There is also high significant co-efficient of determination (93.7%). The standard error estimates has a value of 4261080.818, the f-value value is found to be 44.669 and f-value is significant at 5% level. The Durbin Watson (DW) statistic of 2.587 indicates that there is no problem of serial correlation in the regression model. Furthermore, the rate of return was used to analysis the differences of return on asset when human resource accounting was adopted to return on asset when it was not adopted.

$$\text{Return on assets} = \frac{\text{Net Profit after Taxes}}{\text{Total Assets}}$$

Table 3 Return on Assets

Year	With HRA	Without HRA
2006	2.67%	2.57%
2005	2.86%	2.71%
2004	4.07%	3.78%
2003	4.59%	4.34%
2002	4.34%	4.10%

Source: Oceanic Bank Plc annual report

From the above table, the rate of return when human resource value was inputted in the financial report was greater than the rate of return when human resource value was not inputted in the financial report from 2002-2006. This implies that the use of human resource accounting in the financial report results in effective and efficient use of the bank available assets to generate sufficient earnings which ensures the survival and continuity of the bank.

CONCLUSION

The practice of accounting for investments in human resources as expenses rather than assets results in distorted income statements and balance sheets. In the income statement, the figure designated 'net income' is distorted because accountants treat all expenditures made to acquire or develop human resources as expenses during the period incurred, rather than capitalizing and amortizing them over their expected service life. A balance sheet is distorted because the figure labeled 'total asset' does not include the organization's human assets. There is, therefore, no indication of the organization's actual investment in its human assets. We should also recognize that the potential for manipulation of earnings exist not only if we capitalize investments in people, but also if we fail to capitalize them. From the study carried out, it can be deduced that the total asset including human asset of firm goes a long way in determining the profit and capital employed by the firm. The valuation of human resources in any firm has impact on the production of such firm and the presentation of the value of human asset in the financial report tends to increase investment in such firm, as investors have the assurance that their resources are in good hands which will be effectively and efficiently managed overtime to create wealth.

From the very hot debate going on the adoption of IFRS since 2004 in many countries, it thus appear to us that the issue of human resource accounting may soon find a prominent place in international reporting, as the failure of so many enterprises is now pin down to human behaviour/failure rather than failure of known traditional /conventional assets. The Enron's case is still fresh in our minds.

Therefore, human resource accounting is essential to every organization so as to earn profit over a long period of time. In the absence of human resource accounting, the management may not realize the negative effects of certain programmes aimed at improving profits in the short run. Such programmes may result in decreased value of human assets due to fall in the productivity levels, high labour turnover and low morale.

The learning curve theory which postulates that whenever a repetitive task is being performed the average time spent in producing a unit falls by a specific percentage whenever the activity is doubled. This will lead to increase in productivity, efficiency, profitability and value of the firm. So the financial statement without HRA can be said to be incomplete if it does not show the total value of firm with the inclusion of human assets.

RECOMMENDATION

Human resource value should be ascertained and introduced to the balance sheet as intangible or intermediate asset as it has the following benefits:

HRA increases the asset of organizations thus enhancing more profit.

With human resource accounting, management are well equipped to make effective and efficient decision to move the organization forward.

HRA increases investment in organization because investors have the assurance of adequate use of their resources as a result of the value of human resource. Most importantly, human resource accounting gives shareholders and stakeholders adequate and sufficient information on the position of the organization which can also be used to determine the profitability and stability of such organization.

It gives organization information on whether to employ more staff or reduce the workforce.

The employees that are thus valued will see themselves as an asset which will lead to more commitment on their part towards the achievement of the organization goals and objectives. However, organization should avoid undervaluation of employees as it has negative effect on the morale of the employees, which can affect their productivity.

The longevity of employees should be considered by management during the recruitment processes and staff training and welfare which will guarantee long stay of employees should be taken into the policies of the organization..

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