CONCEPTUAL STUDY ON VALUATION OF HUMAN RESOURCE ACCOUNTING

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ABSTRACT

The 21st century has been referred as the century of the service sector. All major expansion scope is occurring in the service sector and expansion of manufacturing sector has become minimal. Now most of the researchers do lots of study on understanding the concepts and thoughts and fundamentals of human resource accounting as the part of their research work. Many countries are lacking the analysis part as the follow up of such human resource accounting process is very minimal in the industries of many economies. The corporate are considering as the high risk taking concept if the human resource expenses and returns are accounted in the financial statements.

Key Words: human capital, human assets, human resources, physical assets

INTRODUCTION

Human Resource Accounting is the process of identifying and measuring data about Human Resources and communicating this information to the interested parties. This is an attempt to identify and report the investments made in human resources of an organizations that are

currently not accounted for in the conventional accounting practices. Thus the Human Resources Accounting is a term applied by the Accountancy profession to quantify the cost and value of employees of their employing organizations.

The purpose of human resource accounting is to depict the potential of the employees in monetary terms. This can be done in two forms such as: (1) cost calculation which will include the expenditure incurred for recruiting, staffing and training the quality of the employees and (2) value based calculation includes the return which the above investment can yield in future.

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The companies categorized as manufacturing sector, its core assets are machinery and fixed assets but companies classified as service sector, its core assets are its employees which are again falls under the category of non tangible assets. Moreover in service sector the returns or earnings and the profitability performance are measured or derived by individual employee's expertise and skill on the particular service. The profitability of such services purely linked with the value added services by the workforce. The concept Human Resource Accounting was originated and introduced primarily for the service sector industries but now days the companies from all sectors have started applying the human resource accounting concept. The stakeholders are also giving a good weightage on these reports when making a company analysis.

METHODS OF HR ACCOUNTING

The chart below exhibits the different methods of valuating human resource accounting. The whole HR process is accounted under the system. It clearly indicates that the human value or

physical asset of any oprganization can valuated using two different methods such as cost based or value based depending on the nature and soze of the human assets of the organizations.
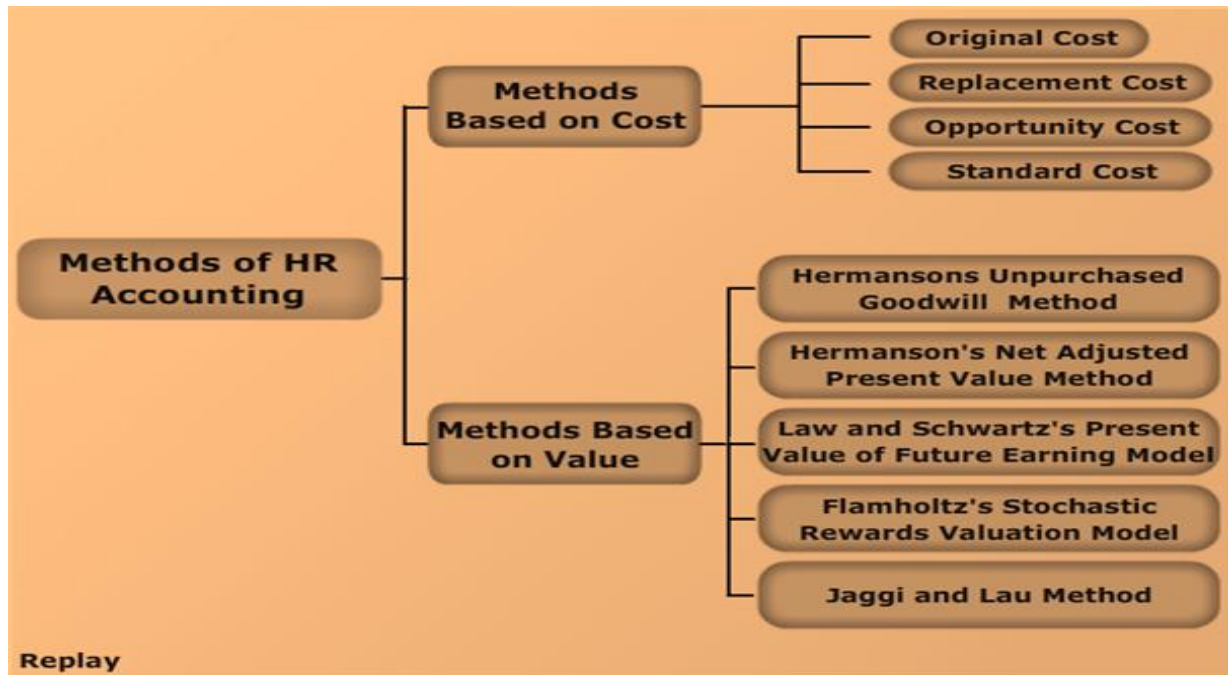
HISTORICAL COST APPROACH

This method is very simple to understand and comfortable to work out. It resembles the traditional accounting concept of matching concept where in the companies match cost with revenue. It provides a basis of calculating a company's return on its investment in human resources.

This approach was developed by William C. Pyle (and assisted by R. Lee Brummet & Eric G. Flamholtz) and R.G. Barry corporation, a leisure footwear manufacturer based on Columbus, Ohio (USA) in 1967. Here, actual cost incurred on recruiting, hiring, training and development of human resources of the companies are capitalized and amortized above the anticipated useful life of the human resources. The historical cost of human resources is same to the book value of the other physical assets. The process of valuation of human resource accounting is similar to the valuation of fixed assets done under conventional method of accounting wherein the companies calculate the return on the investment of fixed assets similarly the employees are recruited by the

firm and expect that the returns from the employee should exceed the cost of selecting, developing and.. The unexpired value is investment in human assets.

As every method this method also has some limitations:

- This approach considers only the part of the employees acquisition costs and ignores the aggregate value of their potential services.
- The method has no calculative method for estimating the number of years over which the capitalized expenditure is to be amortized.
- Determination of the rate of amortization becomes difficult as to analyze whether it should be increasing, constant or decreasing one?
- The economic value of human resources increases over time as the people gain experience. But in this approach, the capital cost decreases through amortization.

REPLACEMENT COST APPROACH

The method is more realistic as it incorporates the current value of company's human resources in its financial statements finalized at the end of the year. This approach is more representative and logical.

This method was first suggested by Rensis Likert, and was developed by Eric G. Flamholtz on the basis of concept of replacement cost. This method values the human resource accounting on an assumption model. Here the model explains that Human resources of an organisation are to be valued on the assumption that a new similar organisation has to be created from scratch and what would be the cost to the firm if the existing resources were required to be replaced with other persons of equivalent talents and experience. It takes into consideration all cost involved in recruiting, hiring, training and developing the replacement to the present level of proficiency and familiarity with the organisation.

This approach also has some difficulties to be practically adopted for valuation:

- The approach is different from the conventional accounting practice of valuing assets.

- It is difficult to calculate and find replacement for the existing physical assets as every human's talent is not similar and difficult to find similar replacement of the existing human resource in actual practice.
- The determination of a replacement value is affected by the subjective considerations to a marked extent and therefore, the value is likely to differ from man to man.

OPPORTUNITY COST

This method was first advocated by Hc Kiman and Jones for a company with several divisional heads bidding for the services of various people they need among themselves and then include the bid price in the investment cost. Opportunity cost is the value of an asset when there is an alternative use of it. There is no opportunity cost for those employees that are not scarce and also those at the top will not be available for auction. As such, only scarce people should comprise the value of human resources.

This method can work for some of the people at shop floor and middle order management. Moreover, the authors of this approach believe that a bidding process such as this is a promising approach towards more optional allocation or personnel and a quantitative base for planning, evaluating and developing human assets of the firm. But this approach suffers from the following limitations:

- The model ignores the specific part of the employees force which results in lowering the morale and productivity of the employees who are not covered by the competitive process.
- It has specifically excluded from its preview the employees scarce or not being 'bid' by the other departments.
- The total valuation of human resources on the competitive bid price may be misleading or inaccurate.
- The expertise of the employees chosen for the various departments are based on the skill set required for such departments. The employee expertise in production may not be skilled in administrative floor, when such employees are in bid they will have high command and price for the department where they belong and have very low price in other departments.

- Valuation on the basis of opportunity cost is restricted to alternative use within the organisation.

MODELS USED FOR ESTIMATING THE VALUE OF HUMAN RESOURCES

HERMANSON'S UNPURCHASED GOODWILL MODEL

According to Hermanson (Roger H.), the value of human resource of an organisation may be assessed by capitalizing earnings in excess of normal earnings for the industry or group of companies of which the firm is a part.

For example, the average return on owned assets is 10 percent and the firm has enjoyed an 18 per cent return over the last five years on its owned assets of Rs. 20, 00,000.

Then, un-owned' assets (human resources) are: Rs. 16, 00,000[since the profit of Rs 3 60 000 (i.e., 20,00,000 x 18%) is assumed to 10% of total owned and un-owned assets of Rs. 36,00,000. (This gives the value of un-owned assets of Rs. 16, 00,000, i.e., 36, 00,000 minus 20, 00,000)].

The approach is historically based and thus of limited use as a predictor, it assumes human resources to be the total of all un-owned assets' , making no allowance for un-owned assets other than human resources or for the various bases used for stating owned assets on the organizations books and it implicitly assumes a zero value for all human resources in competitive situations since a positive value requires above average earnings.

HERMANSON'S ADJUSTED DISCOUNTED FUTURE WAGES MODEL

Hermanson has suggested the 'adjusted discounted future wages model whereby the discounting of future compensations with an adjustment is made with the use of 'efficiency ratio' to determine the value of an individual. He suggested a five year period and applied an adjustment which is calculated ratio of the average earnings rate on owned assets of the employing firms to the average rate on owned assets of all firms in the economy. This model is criticized on the ground that future compensation is a much a measure of the liability of the firm employing the individual as it is an asset.

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LEV AND SCHWARTZ'S PRESENT VALUE OF FUTURE EARNINGS MODEL

Baruch Lev and Aba Schwartz used the economic concept of human capital propagated by Irving Fisher and contend that "capital is defined as a source of income stream and its worth is the present value of future income discounted by a rate specific to the owner of the source…" This approach suggests that the estimated human capital value of a person 'y' years old is:

$$E(V_y) = \sum_{t=y}^{T} P_y(t+1) \sum_{i=y}^{t} \frac{I_i}{(1+r)^{t-y}}$$

E (V_Y) = Expected values of the human capital value of a person years old

T= Person's retirement age

P_y (t) = probability of the person dying (dying includes the probability for an
            employee to leave the organisation, i.e., retirement resignation, etc.)

I = expected earning of the person in period

r = discount rate specific to the person

This model provides a reasonable measure of human capital which could be useful for aggregation in macro statistics and in assessing the dynamics and mobility of such capital. Undoubtedly, this model furnishes useful information for the management as well as potential investors in organisation.

Wayne J. Morse, recognizing this distinction between the concepts of human capital in the firm and the human capital of the firm, has suggested two separate components of the subject known as human asset accounting and human capital accounting. According to Morse "Human asset accounting is concerned with determining the value of human resources employed in an organisation to the organisation. Human capital accounting is concerned with determining the value of human resources in an organisation to the employees of that organisation.

FLAMHOLTZ'S STOCASTIC REWARDS VALUATION MODEL

In the Flamoltzs recent model, he visualized the movement of individuals through different roles or positions in the organisation as a stochastic process depending on prior roles or services states

held by the individual in the system. Here, a person's expected realizable value is to be calculated systematically by following the steps:

(a) Define the mutually exclusive set of 'states' an individual may occupy in the system (organisation);

(b) Determine the value of each state to the organisation;

(c) Estimate a person's expected tenure in an organisation; and

(d) Find the probability that a person will occupy each possible state at specified future times.

A person's expected realizable value E (RV) may be expressed as:

$$E(V) = \sum_{i=1}^{n} \left[\sum_{i=1}^{m} \frac{R_i - P(R_i)}{(1+r)^t} \right]$$

Where, R. = value, ft to be derived by the organisation in each possible service

state,

I; = probability that a person will occupy state i:

t – Time

m = state of exit;

r = appropriate discount rate

This model has a considerable merit since it will provide results that are responsive to perceived probabilities of tenure and promo ability which are generally indicative of the time over which the organisation will enjoy the services of the individual and the magnitude of these periodic services respectively.

Some variation in this model has been proposed by Jaggi and Lau who applied it to homogeneous groups of employees using a Markov chain representation of potential movement within the firm or exiting the firm before death or retirement based on historical data. Bikki Jaggi and Hin-shaing Lau claim that, with some intuitive justification the procedure is likely to provide greater reliability and accuracy.

MYERS AND FLOWER'S FIVE DIMENSIONAL MODELS

M. Scott Myers and Vincent S. Flowers in their 'Framework for Measuring Human Assets', have proposed a procedure for assessing the workforce of an organisation and estimating the costs of various inputs to improve the effectiveness of human organisation.

The five dimensions listed out by them include:

(a) Knowledge,

(b) Skills,

(c) Health,

(d) Availability, and

(e) Attitudes.

The attitude scores are weighted based on positions and tenure to determine the attitude. The five dimensions are considered to be factorial rather than additive. According to Myers and Flowers, 'if one is lacking, the others are rendered correspondingly ineffective". Before deciding to improve one dimension, consideration must be given to the level of others.

It may not be cost effective to improve the knowledge-of an employee if his attitude is poor." Attitudes, including both personal values and job attitudes, constitute a readiness to respond to various life situations and, as such, give direction to knowledge, skills, health, and availability. The attitude scores are weighted based on positions and tenure to determine the attitude index. Thus, the attitude scores are connected into financial returns on payroll investments expressed in term of gain, break-even, or deficit.

ORGAN'S DISCOUNTED CERTAINTY EQUIVALENT NET BENEFITS MODEL

Yet another model of human resource valuation is developed by Pekin Organ through his doctoral dissertation, wherein Organ considers both cost and benefit aspects of the value of human resources to an organisation. Expressed in general terms, his model is

$$K_{kj} = \sum_{j=1}^{n} \sum_{k=t}^{L-1} \frac{1}{(1+r)^k} V_{aj}$$

Where, L = end of estimated useful life of the employee for the organisation;

j = jth individual, j = 1, 2, 3, 4,... n;

r = a discount rate external to the organisation (risk free):

V_a. = certainty-equivalent net benefits generated by human resources
t = sometime period from 1 to L which is a point in the useful life of employee to which the certainty-equivalent net benefits that occur after t are discounted;

k_{kj} = adjusted total net present values of human resources in a professional service organisation.
a = k + t.

However, the use of the model proposed by Organ would present serious problems in several situations where benefits to the organisation attributable to specific individuals are difficult to determine and quantify. Further, this model does not include any explicit recognition of the importance of interaction among individuals to group or organizational performance.

The growing trend towards the measurement and reporting of human assets in corporate annual reports is particularly noticeable among public sector enterprises. The few Indian public sector companies which are reporting human asset valuation are the following:

1. Bharat Heavy Electricals Limited (BHEL)

2. Steel Authority of India Limited (SAIL)

3. Cement Corporation of India Limited (CCI)

4. Oil and Natural Gas Commission (ONGC)

5. Electronics India Limited

6. Engineers India Limited

7. Hindustan Shipyard

8. National Thermal Power Corporation Limited (NTPC)

Dr. M. Singh (2008) has given his contribution in calculating present value of human resources for Indian companies are as follows:

$$PV (r) = \frac{RC+FC+DC+IC+P(Le+Og)}{ESP}$$

Where, PV (r) = present value of human asset. RC = recruitment cost. FC = familiarization cost. DC = development cost. JC = job cost. ESP = expected service period. P(Le+Og) = probability for loss of efficiency of human resources and for outgoing of the employees.

CONCLUSION

Human resource accounting helps the company to ascertain the investment made on its employees and how much return can be expected from this investment. The ratio of human capital is calculated as per accounting concept which indicated the degree of labout intensity of an organization. The human resources accounting provides the base for decision making and planning of physical assets of an organization. This system of accounting also provides valuable information to all the stakeholders and the investors who are planning for long term relationships with the concerned organizations.

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