

ROLE OF HUMAN RESOURCE ACCOUNTING IN INDIA

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Abstract

HRA in present scenario is highly complex in the market to find well knowledge, coached, and highly motivated people. Human resource is one of the most important back office operations of any organization or business. Human resource accounting involves in accounting for expenditures related to human resources as assets as opposed to traditional accounting which treats these costs as expenses that reduce profit. Interest and contributions to growth in HRA have been evident in a number of countries.

HRA also provides the HR professionals and management with information for managing the human resources efficiently and effectively. Such information is essential for performing the critical HR functions of acquiring, developing, allocating, conserving, utilizing, evaluating and rewarding in a proper way. These functions are the key transformational processes that convert human resources from 'raw' inputs (in the form of individuals, groups and the total human organization) to outputs in the form of goods and services. HRA indicates whether these processes are adding value or enhancing unnecessary costs. Industry like advertising and direct marketing for instance human talent is more valuable among other else. No machine can ever come up with a unique advertising idea without the human input.

The basic objective of the paper is to study the Human Resources Accounting practices, to identify the issues and challenges, to examine these issues and challenges

and lastly, to give suggestions based on the findings of the study.

Keywords: *Human Resource Accounting Model, Measurements of HRA, Methods of Valuation of Human Assets, Advantages, Problems*

1. Introduction

Human Resource Accounting (HRA) is a new branch of accounting. It is based on the traditional concept that all expenditure of human capital formation is treated as a charge against the revenue of the period as it does not create any physical asset. But now a day this concept has changed and the cost incurred on any asset (as human resources) should be capitalized as it yields benefits measurable in monetary terms. Human Resource Accounting means accounting for people as the organizational resources. It is the measurement of the cost and value of people to organizations. It involves measuring costs incurred by private firms and public sectors to recruit, select, hire, train and develop employees and judge their economic value to the organization. HRA is a sophisticated way to measure in financial terms the effectiveness of the personal manager activities and the use of people in an organization. It is process of accounting people as an organization resource. It tries to place a value on the organizational human resources as assets and not as expenses. This method shows the investment the organization makes in the people and how the value of

these people change over a time. The acquisition of employee is compared with the replacement cost from time to time. In brief, in this method the employees' performance is evaluated in terms of costs and contributions of employees.

Human resource accounting ensure growth and development of any organization, the efficiency of people must be improved in the right perspective. Without human resources, the other resources cannot be operationally effective. The original health of the organization is indicated by the human behavior variables, like group loyalty, skill, motivation and capacity for effective interaction, communication and decision making. Men, Materials, Machines, Money and methods are the resources required for an organization. These resources are broadly classified into two categories, viz., animate and inanimate (human and physical) resources. Men, otherwise known as the human resources, are considered to be animate resources. Human Resource Accounting involves the dimension of cost incurred by the organization for all the personnel function. Hence the challenge is how to measure the economic value of the people to the organization and various cost based measures to be taken for human resources. The two main components of Human Resources Accounting were investment related to employees and the value generated by them.

2.1 Objectives of Human Resource Accounting

The objective of HRA is to inform general public how far enterprises are successful in fulfilling the human contributions also come to light through HRA.

To provide cost-value data for managerial decision regarding acquiring, developing, allocating, and maintaining human resources so as to attain cost-effective organizational objectives.

To provide information for determining the status of human asset whether it is conserved properly; it is appreciating or depleting.

To evaluate the return on investment on human capital

To know whether the human resources are properly utilized and allocated

2.2 History of Human resource accounting

Since the 1960's, research, in this subject has primarily developed based on the human resources school of personnel management. Flamholtz has specified five stages in the development of HRA, which are :

a. From 1960 - 1966, this was marked by the derivation of HRA concepts from the economic theory of human capital, then the new human resources school and organizational psychologists' focus on leadership effectiveness.

b. Between 1966-1971 , this was identified as a period of basic academic research, measurement of models and identification of potential user as well as some experimental applications in actual organizations.

c. From 1971-1976, this was a period of growing interest in HRA, exhibited by both researchers and organizations. The applications of HRA were mostly attempted by small entrepreneurial organizations. Assessments were also made on the potential impact of HRA information to line manager and investor decisions.

d. Between 1976-1980, this was identified as a period of declining interest among accounting researchers and business organizations. Flamholtz has attributed that interest in HRA has waned, possibly because the public accounting standards- were too stringent to allow the direct reporting of human asset value in financial statements, the preoccupation of business with other concerns and the lack of organizations preparation to sponsor HRA applications research and expenditure.

e. Since 1980 and up to present, there has been a period of growing interest in HRA. This has been shown by demonstration of new research studies and some attempts by major organizations to apply HRA. In United States, interest has been accelerated by a focus on employee productivity. Some of Japanese Corporates have shown interest in applying a new approach to their human resources. In Western economies itself, there was a change of primarily industrial manufacturing to high technology service economies for which human capital is a critical source.

2.3 HRA - Measurements

Approaches to human resource accounting (HRA) were first developed in 1691. The next approach was developed from 1691-1960, and the third phase was post-1960. There are two approaches to HRA. Under the cost approach, also called the "human resource cost accounting method" or model, there is an acquisition cost model and a replacement cost model. Under the value approach, there is a present value of future earnings method, a discounted future wage model, and a competitive bidding model

Traditional accounting system treats human resources as current cost and charges such cost as of revenue nature. On the basis of contractual obligation, the organization, pays only salaries, wages and related fringe benefits for human resources, i.e. what the organization pays in under normal methods of accounting chargeable to revenue only and no human resource is carried over as asset in the balance sheet.

The latest thinking on HRA considers such resources as capital items. The following are relevant:

- ◆ They render future service that have economic value.
- ◆ The value would depend upon how the resource are utilized. Various management actions such as training, development and technological advances have the effect of conserving, enhancing and depleting the value of human resources. Like the accounting for any other asset, HRA involves:
 - a) Capitalizing the human resources-recording them as investments.
 - b) Recording the routine expiration of the resources on the basis of amortization.
 - c) Record the loss of resources due to obsolescence or labor and staff turnover.
 - d) Valuation of the human resources after adjustments.

From time to time many models have been suggested for the valuation of human resources. These models can broadly be classified into cost models and economic valuation models.

2.3.1 Cost Models

The following HRA models based upon costs involve in computation of cost of human resources to the organization:

2.3.1.1 Historical or Acquisition Cost Model:

This model of accounting of human resources was first initiated by Rinses Likert at R.G.Bary Corporation in Ohio Columbia (USA) in 1967. This model involves capitalization of the actual cost incurred on recruiting, selecting, hiring, training and developing the human resources of the organization. The sum of such costs for all the employees of the organization represents the value of the human resources of the organization. This value is amortized over the expected length of service of individual employees. The unexpired cost is considered to be the investment in human resources. If an employee leaves the organization due to resignation, death, dismissal etc., whole of the amount not written off is charged to the current revenue.

The total cost of the investment includes those quantifiable expenditures associated with recruitment, selection, hiring, training, placement, familiarization and development. This method simply capitalizes human resource costs and does not seek to value people. It is similar to the approach followed when valuing fixed assets and writing off their cost over their useful life. The cost is capitalized, not being charged against current income and a deferred taxation charge is made on the notional increase in profit. This method is simple and meets the test of traditional principle of accounting i.e. matching of cost with revenue.

2.3.1.2. Replacement Cost Model:

This method of valuation of human resources was developed by Eric G. Flamholty on the basis of concept of replacement cost suggested by Rensis Likert. Replacement cost refers to the sacrifice that would have to be incurred to replace resources presently owned or employed. This method is based on current value or replacement cost. Under this system, an organization values an employee at the estimated cost of replacement with a new employee of equivalent ability. The application of such a method, however, is made difficult by the problems of defining and measuring replacement costs. In the

contest of human resources, it refers to the cost that would have to be incurred to replace human resources presently employed. Flamholty has referred to two different concepts of replacement cost viz., individual replacement cost and positional replacement cost.

A) Individual Replacement Cost: The replacement cost of individuals in an organization as conceptualized by Flamholty comprises of:

i) The present estimated cost of hiring, training and developing individuals upto the normal level of productivity of the existing individuals, i.e. it includes the basic cost elements like:

- a) Recruiting outlay cost
- b) Acquisition cost
- c) Formal training and orientation cost
- d) Informal training cost
- e) Efficiency recovery cost
- f) Familiarization cost
- g) Cost of lost productivity during training
- h) Investment building experience cost
- i) Development cost
- j) Others

ii) Costs associated with moving the existing position holders either out of the organization or to new positions within the organization, i.e.

- a) The cost of carrying a vacancy until a suitable replacement can fill it i.e. likely loss of contribution during the period when vacancies remain unfilled.
- b) Cost of moving and displacement
- c) Loss of productivity of the employees and their coworkers prior to their separation.
- d) The effect of a vacant position on other employees.

B) Positional Replacement Cost: Besides the assessment of replacement cost of individuals, such a cost item may be estimated with reference to different positions in an organisation rather than specific individuals to be referred to as positional replacement cost.

3. Opportunity Cost Model

This model of HRA seeks to measure the value of human resources on the basis of common concept of opportunity cost. This model was proposed by Hekimian and Jones to overcome the limitations of replacement cost model. It attempts to estimate the value of human resources by establishing an internal labour market in an organisation through the process of competitive bidding. Under this model all managers of profit centres are encouraged to bid for any scarce employee they want. This is largely artificial method involving the concept of the competitive bidding process. Under this system, profit-centre managers are encouraged to bid for scarce employees, the successful bid being included in the organisation's human investment calculations.

Employee abilities are related to profit generation, and may lead to a more efficient allocation of human resources. The employee is allotted to the highest bidder among the divisional managers and the bid price is included in that division's investment base. The authors of this approach claim that this bidding process is helpful in:

- ◆ more optimal allocation of human resource and
- ◆ planning, developing and evaluating human resources of a business as it provides a quantitative base for decision making.

The following are the limitations of Opportunity Cost Model

- a) Firstly, it excludes the value of employees who can be readily hired.
- b) Secondly, circumstances in which the manager would like to bid will be very rare. Moreover no employee would like to be treated as a saleable commodity.

2 Present Value Models: Under this method, established capital budgeting techniques are applied to people, the argument being that the value of firm's employees is their discounted future earnings. Present value methods try to measure economic value rather than simply record investment in human resources at historic or replacement cost. An alternative approach to value measurement is that of estimating the contribution of human resources to the economic value of the firm. Valuation is determined by allocating to human resources a portion of the firm's present value (this being defined as discounted future earnings). Present value models seeks to measure the value of human resources on the basis of present value of the services to be generated by the employees of an

organisation in future. Two approaches have been suggested for this purpose:

a) By discounting the future salaries and employee related capital costs (such as cost incurred on recruiting, training and developing employees) by a certain rate of discount, and

b) By discounting the future earnings of an organisation at a certain date by a suitable rate and allocating a part of such present value to human resources.

Based upon these premises the following HRA models have been developed:

3.1. Lev and Schwartz Model:

Based upon the economic concept of value this model was suggested by Baruch Lev and Abaa Schwartz. According to them, the value of human capital embodied in a person of age X is the present value of his remaining earnings from employments. They have given the following formula for calculating the value of an individual:

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

Where V_x = the value of an individual X years old.

$I(t)$ = the individuals annual earnings upto retirement.

r = a discount rate specific to a person.

T = retirement age.

The model of HRA given by Lev and Schwartz ignored the possibility of death prior to retirement age. The model given by Lev and Schwartz can be considered as an improvement over the cost models as it seeks to value the human resources of an organisation on the basis of the economic value of employees of total organisation.

3. 2. Hermanson’s Models:

Roger H. Hermanson has suggested two models for the measurement of human resources; one is unpurchased goodwill model and the other is adjusted discounted future wages model. Under the first model it is argued that super normal profits in a firm are the indicators of presence of human resources. The model requires

computation of the ratio of net income after taxes (EAT) to total assets (excluding human assets) of each firm. This in turn is compared with the ratio for the industry as a whole. The value of human resources of a firm is then measured with the help of differential rates.

The second model uses compensation as a surrogate measure of persons’s value to the firm. Compensation means the present value of future stream of wages and salaries to employees of the firm. The discounted future wages stream is adjusted by an ‘efficiency ratio’ which is weighted average of the ratio of the return on investment of the given firm to all the firms in the economy for a specified period, usually the current year and the preceding four years. The weights are assigned in the reverse order i.e., 5 to the current year and 1 to the preceding fourth year. The following formula is used:

Efficiency Ratio =

$$\frac{RF(0) RF(1) RF(2) RF(3) RF(4)}{RE(0) RE(1) RE(2) RE(3) RE(4)}$$

Where

$RF(0)$ is the rate of accounting income on owned assets for the firm for the current year.

$RE(0)$ is the rate of accounting income on owned assets for all the firms in the economy for the current year.

$RF(4)$ is the rate of accounting income on owned assets for the firm for the fourth previous year.

$RE(4)$ is the rate of accounting income on owned assets for all the firms in the economy for the fourth previous year.

The efficiency ratio measures the rate of effectiveness of the human resources operating in the given entity over a five year period. A ratio greater than one implies that the rate of return of the firm is above the average ratio of return for all firms in the economy. The efficiency ratio has been criticised by certain authors as subjective because of arbitrary weighting scheme and restricting the valuation period to five years only.

3.3 Stochastic Rewards Valuation Model:

The Flamholtz’s stochastic rewards valuation model identifies the major variables which determine the

value of an individual to the organization. The model advocates that a person generates value for an organization as he occupies and plays different roles and renders services to the organization. The movement of people from one organizational role to another is a stochastic process. As people move and occupy different organizational roles they render service (rewards) to the organization. Based upon the above concept, a person's expected realizable value of an organization can be measured as the discounted mathematical expectation of the monetary worth of the future rewards (services) a person is expected to render to the organization in future roles he is expected to occupy, taking into consideration the probability of his remaining in the organization.

The model suggests a five step approach to assess the value of an individual to the organization.

- ◆ Forecasting the period a person will remain in the organization i.e., his expected service life.

- ◆ Identification of service states i.e. the roles he might occupy and the time at which he will quit the organization.

- ◆ Estimating the value derived by the organization when a person occupies a particular position (service state) for specified time period.

- ◆ Estimating the probability of occupying each possible mutually exclusive service state at specified future times.

- ◆ Discounting (at a specified predetermined rate) the expected service rewards to their present value.

Flamholtz clarifies that an individual's expected realizable value is determined by two factors

- (i) the individual's conditional value and
- (ii) the probability that the individual shall maintain his expected service life.

The product of these two variables is the present worth of potential services that are expected to be rendered to the organization. This value in turn consists of three factors; productivity, transferability and promo ability. Productivity refers to the services an individual provides while occupying the present position. Transferability refers to the set of service an individual is expected to provide if he is transferred to a same position level in a different department of the organization. Promo ability is a set of services an individual is expected to provide after his promotion to higher positions.

Further an individual's conditional value is determined by his skill (currently developed potential to provide services to the organization) and activation level (the extent to which that person is affected by motivation). In addition to the personal factors the

organization factors also influence the conditional value of an individual. These are; (i) the role occupied/performed by the individual within the organization and (ii) organizational rewards.

Theoretically the model suggested by Flamholtz is the most scientific model as it provides a future oriented economic value of human assets. However its practical use is very difficult as the collection of reliable data regarding the value of a service state, a person's expected tenure and the probabilities of occupying various service states at specific times is not an easy job.

3.4 Jaggi & Lau Model:

The model suggested by Jaggi and Lau is based on valuation of groups rather than individuals. A group implies homogeneous employees who may or may not belong to the same department or division. It might be difficult to predict an individual's expected service tenure in the organization or at a particular level or position, but on a group basis it is easier to ascertain the percentage of people in a particular group likely either to leave the firm during each of the forthcoming period, or to be promoted to higher levels. In order to consider the role movements of employees within the organization a Markov Chain representation can be used. The model required the determination of Rank Transitional Matrix and the expected quantities of services for each rank of service. The matrix can be prepared from the historical personnel records of the employees available in the organization. For the purpose of measurement of quantities of services, a certain service or performance criteria is used. The value of the services an organization's current employee render in a future period is computed by multiplying the estimated number of current employees that will be in each service state in that period, by the value of the service an employee in each state (i.e. rank) renders to the organization. The equation for the computation of value of human resources of an organization using

Jaggi & Lau models is given below.

$$TV = (N) m (T)n(V)$$

Where TV = Column vector indicating the current value of all current employees in each rank.

(N) = Column Vector indicating the number of employees currently in each rank.

n = time period

r = Discount rate

(T) = Rank transitional matrix indicating the probability that an employee will be in each rank within the organization or terminated in the next period given his current rank.

(V) = Column vector indicating the economic value of an employee of rank 1 during each period. The model given by Jaggi & Lau tries to simplify the calculations of the value of human resources by taking groups of employees as valuation base. However this method is also difficult to apply in practice because of difficult in obtaining reliable data

4. HRA in India

Indian companies act 1956, does not provide any scope for showing any information about human resources in financial statement. Due to the development of business and industries, some of the Indian companies, both public and private, value their human resources and report this information in their annual report. The companies, who are presently reporting human assets valuation, includes

1. Bharat heavy Electrical Ltd (BHEL).
2. Steel Authority of India Ltd (SAIL).
3. Oil and Natural Gas Commissioning (ONGC).
4. Oil India Ltd
5. Project and Equipment corporation of India.(PEC).
6. Engineers India limited
7. Mineral and Metal trading Corporation of India.(MMTC).
8. Electrical India Ltd.
9. Hindustan Shipyard Ltd.
10. Cement corporation of India. (CCI).
11. Infosys Technologies Ltd.
12. Tata Engineering and Locomotive Works
13. Southern Petrochemicals Industries Corporation Ltd SPIC).
14. Associated Cement Company Ltd ACC).
15. National Thermal Power Corporation Ltd (NTPC).

5. Five benefits of HRA

Human resource accounting helps in knowing whether human asset is being built up in the business or not. An executive may show good result in producing well, and so on but he might not have built the human resources properly. A good manager keeps the morale of his

subordinates high so that they contribute the maximum in achieving the organizational objectives.

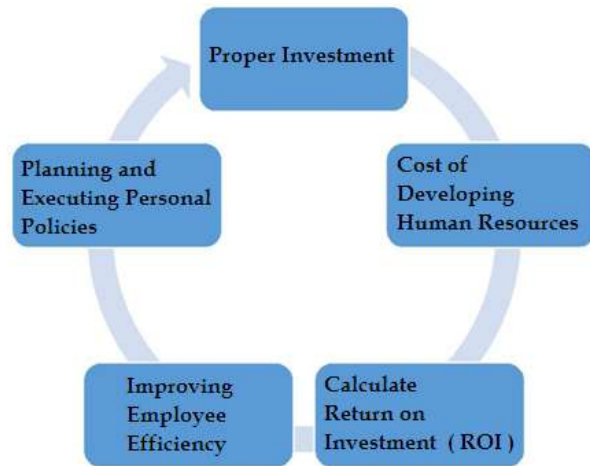


Figure 1 : Benefits of HRA

Cost of developing human resources: HRA will give the cost of developing human resources in the business. This will enable the management to ascertain the cost of labor turnover also.

Proper investment: It can be seen whether the business has made proper investment in human resources in terms of money or not. If the investment is in excess, efforts should be made to control it.

Planning and executing personal policies: It will help the management in planning and executing personal policies. The management also makes use of its help in taking decisions regarding transfers, promotions, training, retirement and retrenchment of human resources.

Improving employee efficiency: It helps in improving the efficiency of employees. The employees come to know of the cost incurred on them and the return given by them in the form of output, and so on, which will motivate them to increase their worth.

Calculate Return on Investment (ROI): The return on investment can realistically be calculated only when the investment on human resources also is taken into account. The ROI is may be good because there is an investment on human beings.

6. Conclusions

Overall, even valuing human resources appear to be important to Indian organizations, most organizations do not value their human resources and plans to implement valuation of human resources are at a very early stage. Despite the interest in valuation there will be little or moderate progress in the area over the next five to ten years. In order to show greater progress, more needs to be done at both the theoretical and practical level. More search into valuation methods and models, and the practical implication of these, is needed together with the engagement of both human resource and accounting professionals in the debate on valuation and its implementation in practice.

Therefore whatever the tool or approach to HRA, much of the potential for developing human resource accounting capability and gaining its advantage depending upon the availability of and accessing to the required data. In those organizations, where the data is not readily available or routinely maintained, the first step towards human resource accounting (HRA) will have to be Human Resource Information System (HRIS).

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