

# HUMAN RESOURCE ACCOUNTING: CHALLENGES AND IMPLICATIONS FOR MEASUREMENT

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## Abstract

*'Human Resource Accounting' (HRA) is one of the latest concepts adopted by Indian companies in recent times. Success of commercial undertakings purely depends upon the quality of human resources. It has been noticed that the human element is the most important input in any corporate enterprise. The investments directed to raise knowledge; skills and aptitude of the workforce of the organization are the investments in human resources. In this context, it is worthwhile to examine the Human Resource Accounting practices in corporate sector in India. Human Resource Accounting is of recent origin here and is struggling for acceptance.*

Basically, the concept of HRA can be observed from two facets:

1. The investment in human resources
2. The value of human resources

The expenditure incurred for recruitment, selection, placement, training and development on human resources is known as investment in human resources, which results in the generation of higher income and higher productivity for the organisation. This increased income and productivity due to investment in human resources is known as value of human resources.

But present accounting system overlooks the importance of 'Human Resource Value' because managers lack information about the effectiveness and efficiency of 'Human Resource Investment'. Human resource accounting also known as 'Human Asset Accounting' is a method by which the cost is assigned to every employee when recruited and the value that the employee would generate in the future. Human Resource Accounting reflects the potential of the Human Resource of an organization in monetary terms, in its financial statements.

The need of the hour is to shift the importance of capital from financial capital to intellectual capital as human capital is hard to imitate and cannot be duplicated in a short time. My paper will focus on the role of Human resource accounting through different approaches.

## Introduction

Everyone agrees that the only real long lasting asset which an organisation, nay, any society or nation, possesses is the quality and calibre of the people working in it. Human Resources play the most important part in every organisation as it helps in achieving the organisational goals and objectives. Without human resources, the other resources cannot be operationally effective, as physical and monetary resources by themselves cannot contribute to an increased rate of return on investment. The original health of the organization is indicated by the human behaviour variables, like group loyalty, skill, motivation and capacity for effective interaction, communication and decision making. It is, however, unfortunate that so far there is no agreed and generally accepted method of putting a value on this vital asset and showing it as a part of financial

statements. However, work has been done in the western countries to develop a suitable method but a validated method of Human resource accounting is still not available in the Indian context.

According to recent reports on “Generally Accepted Accounting Principles” (GAAP), with the emergence of service based economies, complex methods of measurement are being adopted as opposed to 'Traditional Historical Cost Approach' methods of asset measurement.

The American Accounting Association defines HRA as, “**the process of identifying and measuring data about human resources and communicating this information to interested parties**”. In other words, Human Resource Accounting means measuring of costs incurred for recruitment, selection, placement, training and development of the employees as well as the quantification of their economic value in the organisation.

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The US Financial Accounting Standard Board (FASB), in 'Exposure Draft on Business Combinations and Intangibles' mentions Human Resources as, “broad-based intangibles – workforce-based assets, i.e., intangible assets that relate to the value of the established employees or workforce of a company.”

It summarizes as:

1. Skilled and Trained Workforce

2. Monetary and Non-monetary Incentives
3. Training and Development Programs
4. Relationships among Employees and Management

#### **Objectives of the Study**

1. To get acquainted with the concept of HRA.
2. To know the reasons for its gaining importance in recent times.
3. To study the methods of measurement of HR.

#### **Historical Development of Human Resource Accounting**

The first research in Human Resource Accounting was conducted by Renis Likert, founder of the University of Michigan Institute of Social Research during 1960s. Many works and researches have been conducted by various thinkers, scholars and economists in the field of HRA but the development of HRA is meticulously and precisely divided into five stages by Eric G. Flamholtz. The stages are explained as under:

**First Stage:** The first stage marked the period of 1961-66. During this period, many thinkers/scholars took interest in Human Resource Accounting and they primarily focused on deriving the concepts of HRA from other theories like 'emerging concepts of personnel relations', 'measurement of corporate goodwill', etc.

**Second Stage:** The second stage marked the period of 1966-71. During this period, different models were developed containing monetary and non-monetary value of human resources to validate HRA. This period aimed at development of such tools and methodology which further helped in assessment of value of human resources in realistic manner.

**Third Stage:** The third stage marked the period of 1971-76. This period lead to the new findings in the field of HRA. It mainly focused on the subject matter of appliance of HRA in corporate sector. Significant contributions were made by R.G.Barry through his various experiments during this stage.

**Fourth Stage:** The fourth stage marked the period of 1976-80. This period had shown a lack of interest in the area of HRA because it required deeper pragmatic research on complex issues to validate HRA as a branch of accounting, which in turn, required a lot of financial resources on research work. Though the idea of HRA appeared interesting but it lacked support of investing time and energy on research.

**Fifth Stage:** The fifth stage marks the period of 1980s onwards. The interest in the field of HRA restored with the emergence of amenities (service) based industries. Since the existence, development and profits of the organisation were determined by the value of human resources of the business organisation rather than on the physical assets, like plant, machinery, building, land, etc., the need of having more suitable methods of measurement of costs, investment and value of human resources was felt.

This resulted in greater application of HRA in business organisation, development of different models containing both tangible and intangible aspects and use of HRA as a part of financial accounting practices by various companies.

Today, strategic importance has been given to the quantification of human resource capital with the increasing demand of transparent accounting system in the corporate protocol.

### **HUMAN RESOURCE ACCOUNTING IN INDIAN CONTEXT**

Human Resource Accounting has not yet been established as a method of valuing human resources in India but many public as well as private companies have adopted HRA. **The Institute of Chartered Accountant of India has not yet given any absolute paradigm in the valuation of human resources. As far as the statutory requirements are concerned, the Companies Act, 1956, has also not made it mandatory to disclose the human assets in the financial statements of the companies.** But recognizing the value of human resources and the advantages derived from recording

human assets, many companies voluntarily furnishes the relevant information in their books of accounts or annual reports. In India, such companies are: Infosys, Bharat Heavy Electricals Ltd. (BHEL), the Southern Petrochemicals Industries Corporation of India (SPIC), the Hindustan Zinc Ltd., the Steel Authority of India Ltd. (SAIL), the Associated Cement Companies Ltd., the Minerals and Metals Trading Corporation of India Ltd. (MMTC), etc.

An Infosys Employee sitting in Bangalore providing service to a US Client may be happy earning Rs. 5 Lakhs p.a. but he rarely comes to know that his value has been estimated by the company at a whopping Rs. 1.03 Crore. And these figures are not mere predictions by some analysts; these are the official figures which have been released by Infosys.

Infosys while officially releasing these figures said that the management believes that a company's annual report only shows the financial parameters. It only looks at the tangible assets but the major strength of Infosys is not its tangible assets but its intangible assets which mainly comprise of its employee base and that is why Infosys lays huge relevance on Human Resource Accounting.

This value is computed and evaluated on the basis of 'Present Value of Future Earnings of Employees' and a few other factors like the age of the employee, future economic conditions etc. This value has been computed for the purpose of Human Resource Accounting and helps a Company to be valued at its true potential.

In India, Human Resource reporting generally consists of record of human assets, their remuneration pattern, training and development, their value, productivity and total wealth of the company.

### **MAJOR ISSUES AND CHALLENGES OF HUMAN RESOURCE ACCOUNTING**

The major issues and challenges faced by human resource accounting are as follows:

1. An acceptable model for the purpose of valuation of human resources has not evolved

yet as different firms may be using different methods.

2. Installing a human resource accounting package involves heavy costs and is an expensive process, therefore, it is not suitable to small business units.
3. The concept of HRA is of theoretical use only as it is not acknowledged by tax authorities.
4. The physical assets can be owned, sold and purchased by an organisation but human resources can only be employed and utilized.
5. The physical assets are at its highest at the time of its purchase and may have some scrap value at the end of its life but human resources do not have. At the time of recruitment of human resources, their value is at its minimum and it increases slowly and gradually and at its highest at the time of their retirement. The company has to make payments even after retirement such as gratuity, pension, PF, etc.
6. HRA has a subjective approach which makes it less reliable for the procedure of selection as various factors are to be considered to fulfil specific objectives of the organisation.
7. Very little information with no empirical evidence is available regarding HRA as a tool which facilitates better and effective management of human resources.
8. The idea of HRA may not get favourable response from employees and trade unions because HRA may create division among the employees. Human resources when converted into mere Human Resource Data could have a devastating effect on the attitudes of employees.
9. Methods of amortization of human assets have not yet been developed.
10. Human Assets does not come in the traditional definition of an asset, therefore, it is always criticized and argued that HRA lacks symmetry with traditional resources as traditional methods were considered to be free from any bias.

### **ROLE OF HUMAN RESOURCE ACCOUNTING**

The role of Human Resource Accounting in an

organisation is as follows:

1. It helps in the process of decision making about acquiring, allocating, developing and maintaining human resources so as to attain cost effectiveness.
2. It provides comprehensive and accurate information about an organisation's total worth to the investors.
3. It allows the management to examine and control the use of human resources.
4. Measurement of human resources helps in assessing the value of human assets, whether they should be appreciated, depreciated or conserved.
5. HRA helps in assessing whether acquiring, developing, and utilizing and rewarding of human resources is adding value to the organisation or increasing unnecessary costs.
6. It helps to improve human resource management.
7. It provides information regarding the returns on investment in training and development of human resources.
8. It helps to retain qualified workforce.

### **ROLE OF HRA IN INFORMATION TECHNOLOGY INDUSTRY**

In the information technology (IT) industry, if we examine the issues relating to the human resources of an organization, we will find that if people hold the key to prosperity anywhere, it is more so in the IT industry which employs knowledge workers. Here, **human capital (resources) is not merely one component of capital, it is the critical component that forms the basis for other forms of capital. People with their expertise are the sole creators of value to the customer and people through their effort are the key to the optimization of its process efficiency.**

Perhaps the natural corollary to this is the high attrition rate in the IT industry. So IT organizations have a critical need to know the value they would forego when they are about to lose a person. This knowledge is important in taking appropriate action,

in making counter-offers, in keeping up a constant preventive effort to hone the compensation structure. All these should always be in line with the value being provided by the employees.

### **APPROACHES TO HUMAN RESOURCE ACCOUNTING**

Allocation of monetary values to different aspects of human resource costs and investments are the major challenge in Human Resource Accounting. A number of approaches or models have been promulgated for the quantification or measurement of human resources. These approaches are explained below:

1. Cost Approach
2. Value Approach

#### **Methods of Measurement of Human Resources**

Before suggesting an approach to HR valuation, let us look into the various methods available for HR valuation:

#### **Cost Approach**

Cost is the foregone monetary value to earn some anticipated profit. Costs can be classified into two: (a) costs as expense and (b) costs as expenditure. Costs as expense is of revenue nature and the benefit is derived within one accounting year whereas costs as expenditure is the investment on capital assets and the benefit is likely to rise with the number of years. From the perspective of valuation of human resources, the cost would comprise:

1. Amount spent on the processes till selection and placement.
2. Amount spent on formal training imparted to the selected employee.
3. Amount spent on informal training, loss due to mistakes committed by the new employees and time taken by them to reach the normal level of efficiency.

Thus, the Human Resource Cost Approach may be defined as the measurement of costs incurred to obtain and foster people as organisational resources. There are various methods to measure cost under

Cost approach and are explained as:

#### *Acquisition Costs*

This represents the traditional or original cost of human resources and includes costs incurred on acquisition, training and developing human resources, which is capitalised and written off against profits of the year over the expected life of the employees in the organisation. In case, the employee leaves the organisation before the anticipated period of his tenure in the organisation then the unamortised value of the cost will be charged in profit and loss account of that year only. Under this method, determination of training costs is difficult in case of in-house training, because expenses related to dedication of trainers, space occupied for training, staff welfare expenses, general expenses, etc. are not quantifiable.

#### *Substitution Costs*

Substitution costs are explained through an extreme situation by Likert. According to Likert, "Suppose that tomorrow all the jobs are empty, but you still have available all the rest of the resources: buildings, factories, industrial plants, patents, stock, money, and so on, except, of course, for the personnel. How much time would it take you to recruit the necessary personnel, train it until they are able to assume all the existing functions at the present competitive level and integrate it in the organisation in the same way they now are?" This extreme situation has drawn the attention of thinkers, researchers to valuation of human resources. This implies putting of human resource valuation under substitution cost criteria. To calculate the substitution cost, business organisation has to consider the replacement cost of an employee, which includes costs of the leaving employee and recruiting and training of new employee.

#### *Opportunity Costs*

Hekimian and Jones considered opportunity costs as, "an asset value when [they are] the target of an alternative use". In other words, if the financial resources spent on human resources would have been

invested on physical assets or something else, then what would have been the returns, are calculated under opportunity costs method. The use of this method is restricted to internal usage and not used for external reporting.

#### *Replacement Costs*

It is the replacement value of existing employees of the organisation. Replacement costs have two aspects: (a) *Positional Replacement Costs*, which refer to the sacrifice that would have to be incurred if a person presently working in a specified position were to be replaced today with a substitute capable of providing an equivalent set of services in that given position. Positional replacement costs comprises of (i) acquisition and learning costs and (ii) separation costs. (b) *Personal Replacement Costs*, which refers to the sacrifice to be incurred to replace a person today with a substitute capable of providing an equivalent set of services in all the positions that the former might occupy.

Generally, replacement cost has the reference only to the replacement of people in relation to specified positions (positional replacement) rather than with reference to the replacement of persons (personal replacement).

#### **Value Approach**

The economic value of an object is the present value of future earnings. Similarly, the **economic value of a firm is expected future earnings that the firm is likely to earn with the services rendered by its existing employees.** A number of valuation models have been developed and these models, for the valuation of human resources, can be classified into two: (a) monetary and (b) non-monetary methods.

#### **Monetary Measures**

Assignment of monetary values to different dimensions of HR costs, investments and the worth of employees are known as monetary measures. Different monetary measures (models) by various researchers are explained below:

#### *Flamholtz's Model*

According to Flamholtz, "the value of an individual is the present worth of the services that he is likely to render to the organisation in future". Accordingly, the present value of an individual is the cumulative value of all the possible services that may be rendered by him during his total tenure or association with the organisation. It is not only difficult to determine the present value of an individual but it is uncertain also, as it largely depends on two aspects: (a) *Expected conditional value of an individual*, which further depends upon the productivity, transferability and advancement (promotion) of an individual. Employees' skills and organizational determinants play a vital role in valuing an individual through expected conditional value approach. (b) *Expected realizable value of an individual*, refers to the probability that the individual will remain in the organisation during his entire working life. As human resources cannot be owned by the organisations, therefore it becomes necessary to ascertain the probability of their turnover.

#### *Flamholtz's Stochastic Rewards Valuation Model*

"The Stochastic Rewards Valuation Model is a direct way of measuring a person's expected conditional value and expected realizable value". This model is based on the assumption that an individual will generate value in all the roles performed by him in the organisation. This model assumes that an individual will advance or move from one position to another within the organisation after completing a specified time period in one position. For this purpose, the information required to use this model is as follow:

- a) The value of each position to the organisation.
- b) Estimate of individual's expected tenancy in the organisation.
- c) Probability that an individual will not leave the organisation and will assume the positions at a specified time.
- d) It also assumes that ROI of the organisation is the result of the efforts of the employees and executives and not based on any external factors.
- e) The discount rate of future earnings.

The above model can emerge as the most sophisticated method of valuation of human resources, if the above information is made available and the assumptions are considered carefully. In favourable condition, an individual's expected conditional value and expected realizable value will be equal.

#### *The Lev and Schwartz Model*

Lev and Schwartz advocate the estimation of future earnings of an individual considering the remaining working life of the employees and arriving at the present value by discounting the estimated earnings from the firm's cost of capital. Future earnings can be calculated by using the following formula:

$$E(V_x) = \sum \frac{I(T)(t)}{(1+r)^{t-x}}$$

Where,  $V_x$  = the human capital value of a person who is 'x' years old.

(t) = the person's expected future annual earnings up to retirement.

r = discount rate specific to the person.

T = retirement age.

Under this model, the present value of future payments to employees is calculated for the measurement of human resources, which includes pattern of remuneration, career growth and reward for efficiency. As the accepted and validated method of valuation is not available, therefore, the companies use this model by making necessary alterations according to their practical situation and requirements. For example, use of different discount

rates by different companies as the standard rate is not provided in Accounting Standards.

This method is very popular among Indian companies as it measures the value of employee's gain from the organisation rather than the employer's gain from the employee. It helps in studying the productivity pattern with the changes in payment patterns in an organisation. It was explained by Prabhakara Rao in 1993, that, "the value of human resources will be more or less increasing, even if the organisations continuously incur losses or decrease in profitability". The use of Lev and Schwartz Model by different companies in tabular form with its calculated value is given in Table 1 below.

Each model has its own negatives and positives when it comes to practical application. In an Indian context, the Lev and Schwartz model has an edge over the other models. Since the method has been widely adopted by Indian companies such as Infosys, DSQ Software Ltd., Satyam Computers, BHEL and SPIC, it enables the company to benchmark the performance and the efficiency of their human resources with others. The assumptions in this model are realistic and scientific. The method has practical applicability when availability of quantifiable and analysable data is concerned.

#### **Non-Monetary Measures**

It refers to the assessment of skills and capabilities of employees by using some behavioural measurement technique to know the benefits gained

**1. Table showing the value of Human Resources by Lev and Schwartz Model:**

Years	SAIL		BHEL		MMTC	
	Number	Value	Number	Value	Number	Value
1984-85	74464	1216	206414	9581	3638	96
1985-86	75915	1358	206198	9589	3760	121
1986-87	74918	1588	203292	10828	3830	140
1987-88	74813	1827	197296	12013	3862	158
1988-89	75116	2183	194872	12725	3825	174
1989-90	74436	2673	193223	15790	3825	196

Note: Adapted from Prabhakar Rao (1993)

from the human resource of an organisation. They are judged on various indices or ratings and rankings. Different non-monetary measures are explained below:

#### *Skills and Capability Inventory*

This is the listing of qualification, experience and skills of all the employees of an organisation.

#### *Performance Evaluation*

This is based on the ratings and rankings. Ratings refers to the employee's performance when judged and compared by the set benchmarks whereas ranking is given by the superiors to their subordinates on one or more aspects, like, interpersonal skills, judgement of situation, intelligence, etc.

#### *Traits Approach*

An employee's ability for promotion and development and his competency is determined to assess his potential for a particular position in the organisation.

#### *Attitude Measurement*

Employee's attitude towards their job, package, working conditions, etc. is measured with the aim of ascertaining their satisfaction and dissatisfaction.

#### *Suggested Approach*

This approach is based on the assumption that most of the human beings are generally endowed with intelligence and same willpower to work. Now, if an organisation is claiming that it enjoys good and special human resources then it must prove the claims through actual performance. Here actual

performance means changes in output due to changes in input (human resources) only and not by any other external factor. If this results in increased ROI as compared to the results of previous years and also of other companies, then a value can be put on these extra or special human resources. This is known as Goodwill Approach.

#### **Conclusion**

In this era of globalisation and service based economies, human resources have taken the key position in the capital structure of the companies in place of physical assets; therefore, Human Resource Accounting will be able to provide a better and correct vision to the organisation. Though the concept of HRA has been appreciated by various thinkers, scholars, and accounting professors but it has not been institutionalized yet.

Keeping the financial objectives of the organisation in mind, three levels in the process of valuation of human resources must be considered: (a) individual level, (b) group level and (c) organisational level. Unfortunately, no model for HRA, to measure human resources at all the three levels, currently exists. Not only a valid and reliable model for measurement of human resources but an accounting standards in this regard must be developed, which should be helpful in decision making, free from subjective bias and quantifiable in accounting terms.

Hence, appropriate steps should be taken by the Government as well as Professional Bodies at national and international levels with regard to the formulation of specific accounting standard for HRA.

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