Measurement of Human Resources in Academic Institutions and Their Appraisal

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Abstract

Employees are the most important assets of any educational institution and its success or failure depends on their qualifications and performance. The current accounting system is not able to provide the actual value of employee capabilities and knowledge. This indirectly affects future performance of any educational institutions, as each year the cost on human resource development and recruitment increases. Human resource accounting is a direct part of the social accounting and aims to provide information on the evaluation of one of the most important components of the organization, namely human capital. Intellectual capital has become to be an accounting component since a decade and more now. Here is an attempt to quantify the investment in the intellectual and knowledge resources and evaluate their future value, thereby giving a fair understanding of the total worth of an organization.

Key words: Human Resource Accounting, Intellectual Capital

Introduction

"Human resources are the greatest assets of any company. You can raise tariffs or prevent MNCs from entering, but one can't stop the employees from leaving if they are dissatisfied". – Narayana Murthy, Founder of Infosys Technologies. This quotation signifies the extent to which leading corporations value their human resources. They treat them as the most powerful assets and find good reason to work towards their satisfaction. The best companies in the world are those that realize the worth of their employees and continue to invest in them towards their growth and development. This is a conscious resource that shall fuel the growth of the company from within. In recent years Academic Institutions have become the major source of any country's workforce which in turn defines the economic potential. Behind this workforce lies the effectiveness of the academic institutions that generate them. These academic institutions have been doing a commendable job in times immemorial. Of late competition has also reached academic institutions as it has the corporations. Academic institutions have also begun to have mechanisms to evaluate their profitability and decide methods for their sustenance. This makes it imperative that the capacities of the schools and colleges are evaluated appropriately. The most obvious evaluation is through financial statements. Recent developments have included human capital under the social capital head. The human assets for an academic institution are scattered between the teaching and non teaching employees. This accounts for the intangible assets of the institution. Apart from this infrastructure and facilities account for the tangible assets.

Tangible assets have common methods of evaluation and accounting like historical cost method where the original prices of assets is reduced every year by charging depreciation. The most questionable part of evaluation is among the intangible assets. As common knowledge goes the most crucial asset for an academic institution is its intellectual capacity. This has also been concurred by analysis which includes the various factors that could affect student satisfaction. We have considered student satisfaction as the core to the analysis because this factor defines the success of any academic institution. Our study is based on higher education institutions.

Need for HRA

There appear to be two major reasons why human resource accounting has been receiving so much attention in recent years.
1. Developments in modern organization theory have made it apparent that there is a genuine need for reliable and complete information which can be used in improving and evaluating the management of human resources.
2. The traditional framework of accounting is in the process of being expanded to include a much broader set of measurement than was thought possible or desirable in the past.

Objectives of the Study

1. To understand the concept behind quantifying and accounting for Human Assets in Academic Institutions.
2. To examine the various methods of HRA in respect to educational institution.
3. To analyze the pros and cons of each of these methods for educational institutions.

Research Methodology

To study the methods of human resource accounting on the Academic institutions the theoretical framework has been studied in application with educational institutions. This study is a descriptive study where the various methods of measuring human resources have been applied to various educational institutions at the higher level especially to the Post Graduate level.

Literature Review

The concept of human resource accounting was first developed by Sir. William Petty in the year 1691.But research into true human resource accounting began in the year 1960 by Renris Likert. As per the American Accounting Association's committee (1973) HRA is the process of identifying and measuring data about human resources and communicating this information to interested parties. HRA, thus, not only involves measurement of all the costs/ investments associated with the recruitment, placement, training and development of employees, but also the quantification of the economic value of the people in an organization.

Eric Flamholtz(1971) explained human resource accounting as accounting for people as organizational resources. Sackman et al.,(1989) define HRA as the measurement of the cost and value of people for the organization. Boudreau and Berger (1985) noted that HRA made significant contribution in solving numerous personnel selection problems. During this period, numerous experiments dealing with the influence of Human Resource Accounting information on decision-making were carried out. In 1995, European Commission (EC) prepared guidelines for the disclosure of Human Resource Accountings Information. Also, in Denmark the European Centre for the Development of Vocational Training (CEDEFOP) provided guidelines on Human Resources Accounting. Outline (2001) stated that one aspect of accounting that has received significant attention is the area of human capital. The money that enterprises spend of human resources had traditionally been reported in the account as a cost rather than as investment. More precisely, organizations do invest on training and development of their employees to get the best of them.

Characteristics of Human Resource Accounting

The following characteristics of HRA have been identified
- It is a system of accounting in which identification of human resources is made.
- Investment made in human resources is recorded.
- Measurement of costs and values are made.
- Changes occurring in human resources over a period of time are also recorded.
- Communicates information through financial statements to interested parties.

Objective of Human Resource Accounting

The following objectives of HRA have been identified:
- Identification of "human resource value"
- Measurement of the cost and value of people to organization.
- Investigation of the cognitive and behavior impact of such information
- To reflect fairness in presentation, distribution and disclosure of all material facts of the business enterprise

Measurement of Human Resources and their Appraisal

The issue on human resource accounting has focused on two basic issues:
1. How human resource assets should be valued, i.e., should historical cost or replacement value or present value methods be used?
2. The implications of capitalized human resources, once they are recorded, i.e., how should human resources be amortized? What are the tax implications of human resource amortization? What are the implications of human resource accounting on internal and external auditing?

Once it is accepted that human resources are an asset, the question of measuring the cost of this asset arises specifically in academic institution where the employees are highly qualified and do not stay in the organization for a long time.

There are two methods of valuing the human resources in any organization. They are as follows
1. The cost approach and
2. The value approach

Cost Approach

The cost approaches involve computation of the cost of human resources to the organization. The costs are capitalized and amortized over the useful life of the asset. Let us analyze the cost approaches. The methods under the cost approach are:
1. The Historical Cost Approach
2. The Replacement Cost Approach

3. The Opportunity Cost Approach

The Historical Cost Approach

According to this approach the actual cost of recruiting, selecting, hiring, training, placing and developing the employees of an organization are capitalized and amortized over the expected useful life of the asset concerned. In case of human resources in educational institutions the cost of training will not be there. Because for the teaching fraternity that too in higher education will not be given in most of the colleges. In academic institutions development is nothing but the scope for further higher studies like PhD. But many of the institutions will not spend for this. On the personal interest of the faculty and on their own expenditure they go for higher studies. Based on these facts the cost should be calculated.
It is easy to develop and operate these systems. It simply involves an extension of the concept of proper matching of costs with revenue. It will be treated very much like the cost of fixed assets. The same principles of capitalization and amortization are applied.
It suffers from various limitations like;
1. Unlike fixed assets, the economic value of human assets in academic institutions increases over period of time with knowledge and experience. But as a result of conventional accounting treatment, the capital cost decreases through amortization.
2. This approach in not suitable for academic institution.

Replacement Cost Approach

This method consists of estimating the costs of replacing the existing human resources. It is nothing but the cost of parallel grooming. This approach takes into account the fluctuations in the job market and the general rise in the price level.
The major disadvantage of this method is that while calculating the replacement value we may not get the same quality of the human resource. Because in relation to the educational institution the knowledge, the way of teaching, the interaction with the students and adaptability changes. Qualification wise the institution may get the same. But regarding the qualitative aspect which has been mentioned in the above lines may be varied. Thus it will not suit for academic institution.

The Opportunity Cost Approach

Hekimian and Jones proposed this method to overcome the limitations of the replacement cost method. According to them human resource values are measured through a competitive bidding process within the firm. Let us understand this concept with an example. How it may work in academic institution. If an academic institution has a capital base of 30, 00,000 and its revenue is around 3, 00,000. The return on investment (ROI) of the same industry is 15%. If the services of a particular faculty are acquired, it is expected that the revenue will increase by 90,000 over and above the target profit. If we capitalize Rs. 90,000 at 15% rate of return, it works to Rs. 6, 00,000 the institution may bid up to Rs.6, 00,000 for the faculty.

But this approach narrows the concept of opportunity cost by restricting the next base use only to the organization. The inclusion of scarce employees in the asset base may be interpreted as discriminatory by other employees. This may result in lowering the employee morale.

The above mentioned methods which are based on historical cost approach are not suitable for present day situation. And that too for the academic institution where most of the things based on the human capital and it is not constant, the cost approaches are not suitable.

Value Approach

The economic and current value approaches using the present value of expected future benefits have strong theoretical appeal. From practical point of view the measurement problems associated with these approaches are insurmountable. Quantification of future economic benefits is difficult. Several approaches have been suggested as substitute measure of economic value. Those various approaches are as follows:

1. Lev and Schwartz Present Value of Future Earnings Model
2. Stochastic Rewards Valuation Model
3. Jaggi and Lau Model for Human Resource Valuation

Lev and Schwartz Present Value of Future Earnings Model

This model is also known as compensation model. According to this approach individual employee's future compensation will be used to find out the value of human capital for an organization. The method could be explained with the help of a hypothetical example in Academic Institution. In our case it relates to only the higher education;

The teaching career for higher education starts at the age of 22 or 23 years. The designation which will be occupied by the faculty will be Assistant Professor. Certain assumptions are required to study the example. They are as under;

1. At the age of 23 the teaching career starts as a Assistant Professor
2. The discount rate is assumed to be 10%

Based on these assumptions let us work out how the present value could be got. Following is the table which shows the average earnings of the employee per annum in the career of teaching

Age (Years)	**Average annual earnings (per Employee)**
23 – 32	96000
33 – 42	120000
43 – 52	150000
53 – 62	120000

The present value of this table has been shown below:

96000 X 6.145 * (1 to 10 years) = 589920
120000 X 2.369 # (11 to 20 Years) = 284280
150000 X 0.913 ♣ (21 to 30 years) = 136950
120000 X 0.352 ☼ (31 to 40 Years) = 42240
Total PV for an employee = 1053390
(see P.V. of annuity of Re. 1 table)
*from the table at 10 years and 10% rate = 6.145

8.514 – 6.145 = 0.913
♣ 9.427 – 8.514 = 0.532
The limitations of this model are as follows:
1. It ignores the possibility that a person may quit the organization before death or retirement.
2. It ignores the possibility of persons changing the positions during their careers like from Assistant Professor to Professor.
3. There is subjectivity being associated with the determination of the level of future salary, the length of expected employment within the organization, and the discount rate.

Stochastic Rewards Valuation Model

This model is an improvement over the present value of future earnings model. This model is developed by Eric Flamholtz. It is based on estimates of expected future services which was a major constraint of the earlier model. This model focuses on measurement of a person's value to a specified institution. It is recognized that an academician generates value for an institution as he occupies and plays different roles and renders services to the institution.

Based on the above concept, an academician's expected realizable value to an organization could be measured as the discounted mathematical expectation of the monetary worth of the future rewards an academician is expected to render to the institution in the future roles he is expected to occupy, taking into consideration the probability of his remaining in the institution.

According to Flamholtz model, the value is determined by multiplying the expected quantities of services of an employee in each service state with the respective probability of a person occupying these service states in the forthcoming period of time. The value of human resources of the institution is ascertained by aggregating the present value of expected future services of all employees for the period of time.
The limitations of this model are

1. Obtaining valid data regarding the value of a service state in academic institution is very difficult.
2. A person's expected tenure, and the probabilities of occupying various service states at specific times like the position of Associate Professor and Professor is not properly available.

Jaggi and Lau Model for Human Resource Valuation:

The valuation of Human Resources on a group basis was suggested by the authors of this model. According to this model group means the team of homogeneous employees. In the case of academic institution it may be the group of faculty members, who are in the same designation. It might be difficult to predict an individual's expected service tenure in the institution 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 periods, or be promoted to higher levels.

This model is suitable to some extent for academic institution. But getting the information about the monetary data is a challenge.

Conclusion and Suggestion

Human Resource Accounting has been receiving much attention now-a-days. Though people are the most important asset for an educational institution, the value of assets does not appear in the financial statement. The accountants contend that human beings working in an academic institution are not owned by it; hence they cannot be treated as assets. But the fact is that, it is the investment on people and not the people themselves, which are an institution's human assets.

It is difficult to measure the human resources in an academic institution, that too with higher education because most of the faculty will not stay in the same institution for more than 3 years. And the knowledge base will be very vast.

The efforts have been made to evaluate the human resources in companies and to some extent they have been proved to be successful. But none of academic institution has valued their Human Resources and shown it in the annual report. Still lot of research has to take place for Human Resource Accounting in the field of educational institutions.

As of now the method which could be applied to calculate the value of human resources for educational institution is Net present value method.

References

- L S Porwal, "Accounting Theory - An Introduction", III Edition, Tata McGraw-Hill Publishing Company Limited, 2001, PP 474 – 491.
- American Accounting Association Committee of Accounting for Human Resources, Report of the Committee on Human Resource Accounting, 1973.
- Eric G. Flamholtz: *A Model for Human Resource Valuation: A Stochastic Process with Service Rewards, 1971.*
- Boudreau, J. & Berger, C. (1985). Decision - theoretic utility analysis applied to employee separation and acquisition. *Journal of Applied Psychology* (70)581-612.
- European Commission (1995). Teaching and learning: Towards the learning society *of the European Communities,* Luxembourg
- Sackman, S.A. Flamholtz, E.G & Bullen, M.L. (1989). Human resource accounting: A state-of-the-Art Review. *Journal of Accounting Literature,* (8), 235-264
- Dr. Anubha Gupta and Vidya Mahesh, "Human Resource Accounting in Educational Institutions", ABHINAV – National Monthly Refereed Journal of Research in Arts & Education, ISSN 2277 – 1182, Vol No.1. Issue No.12, PP 18 – 22.