

# HUMAN RESOURCE ACCOUNTING PRACTICES IN INFOSYS TECHNOLOGIES LTD. - AN EVALUATION

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## ABSTRACT

***In the era of knowledge and technology, only those organisations can survive and succeed which have adequate information about the cost, value and performance of their human resources. These information are the basis of effective management of human elements in any organisation. With a view to provide significant information about effective human resource management, a new and specialized branch of accounting has been deliberately developed by the scholars popularity known as human resource accounting (HRA) HRA is an accounting technology of identifying, measuring, classifying, summarising and reporting the data about human resources to the stakeholders for effective decision-making regarding the human resources of an organisation. An attempt has been made in this paper to evaluate the HRA practices of Infosys technology limited (ITL) as well as its usefulness in HR decision. Some useful suggestions have also been provided to improve the HRA practices of ITL, which will ultimately contribute to ensure the bright future of HRA in India.***

## INTRODUCTION

In the present age of knowledge driven economy the most important asset of an organisation are its human resources. Human resources are the key players in the process of production. An organisation having vast physical and financial resources may find itself unable to achieve organisational objectives if it is not utilising its human resources effectively and efficiently. For this purpose, it is necessary to keep proper record and information about human resources. Financial statements are the main source of information about the performance and position of the resources held by an organisation. Traditional accounting system provides these information about the physical and financial resources only and not about the human elements of an organisation, which resulted into he false

and unfair presentation of financial statements. This serious limitation of traditional accounting system was noticed in the late 1950s by behavioural scientists, economists and various scholars in the area of accountancy. The collective efforts of these scholars has evolved a new branch of accounting popularly known as human resource accounting (HRA).

Human Resource Accounting (HRA) has been defined by the Committee on Human Resource Accounting of the American Accounting Association as “the process of identifying and measuring data about human resources and communicating this information to interested parties”<sup>1</sup> In the words of Eric G. Flamholtz, “Human Resource Accounting involves measuring the cost incurred by business firms and other organizations to recruit, select, hire, train and develop

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human assets. It also involves measuring the economic value of people to organizations. In brief, it involves accounting for people as organizational resources for managerial as well as financial accounting purposes.”<sup>2</sup>

The first attempt to value human beings in monetary terms was made by Sir William Petty (1623-1687).<sup>3</sup> He treated human being as an element of Wealth. Dr. D.R. Scott stated that, “A trained force of technical operatives is always a valuable asset.”<sup>4</sup> Theodore Schultz who received Nobel Prize for his work, published a paper “Investment in Human capital” in 1961.<sup>5</sup> he stated that “From a macro economic view point, the services which are provided by people can potentially constitute a form of capital.”<sup>6</sup> In the year 1962, William Paton opined that “In a business enterprise a well organized and loyal personnel may be a much more important asset than a stock of merchandise.”<sup>7</sup> However, origin of human resource accounting is found in the work of Rensis Likert who was the first person to use the term ‘human asset’ in the late 1950s. This term was replaced by the term human resources by the scholars.

For the first time HRA was implemented by R.G. Barry Corporation, Ohio (USA) in 1967 under the guidance of Dr. Rensis Likert and Pyle. Some notable efforts for the development of HRA were made by Schultz (1960), William C Pyle (1967), Flamholtz (1971, 1972 and 1975), Morse (1973), Lev and Schwartz (1971), Jaggi and Lau (1974), Kenneth Sinclair (1978) etc.<sup>8</sup> Various methods and models developed by these scholars are broadly classified as monetary measurement methods (cost based and value based methods), non-monetary measurement methods and statistical methods.

In India also, several research studies have been conducted by various scholars.

Notably among these are Chakravarty, S.K. (1977), Ranga Rao, y. (1979), Rajeshwar, N. (1981), Rao, D.P. (1981).<sup>9</sup> HRA has not been introduced so far as a system in India The Indian Companies Act 1956, which governs the preparation of financial statements of companies in India, is silent about the incorporation of human resources accounting in such statements and annual reports. Moreover, the ASB of the ICAI neither formulated nor made mandatory any standard regarding HRA. However, few enlightened companies in India have voluntarily begun to include a statement of HRA in their annual reports. A leading public enterprise Bharat Heavy Electricals Ltd. had introduced HRA in its annual reports of the financial year 1974-75 for the first time in India.<sup>10</sup> In the subsequent years, some public enterprises such as ONGC, NTPC, MMT, SAIL, EIL, PEC, HSL, MECON, OIL etc. and private companies like TELCO, ACC, SPIC and IITL adopted HRA practice. Recently, HPCL and GAIL had adopted this practice. In Indian context present value of future earnings models (the Lev and Schwartz model) has an edge over the other models. This model has been widely adopted by Indian Companies, such as Infosys, DSR software Ltd., Satyam Computers, BHEL and SPIC.<sup>11</sup> Some companies such as SAIL and CCI had adopted Lev and Schwartz model with refinement as suggested by Flamholtz and Jaggi and Lau.

For the computation of the value of human resource of an organization brauch Lev and Aba Schwartz suggested the following formula:<sup>12</sup>

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

where  $V_T$  = human capital value of a person T years old

$I(t)$  = person's annual earnings upto retirement

$r$  = discount rate specific to person

$T$  = retirement age

As per this formula the value of a person can be computed only after his retirement. Moreover, it ignores the possibility of death, occurring prior to retirement age. They refined their formula taking these aspects and presented in the following form:<sup>13</sup>

$$E(V_T) = \sum_{t=T}^T P_T(t+1) \sum_{i=T}^t \frac{I_i}{(1+r)^{t-T}}$$

where  $E(V_T)$  is the expected value of a person human capital and  $P_T(t)$  is the probability of a person's dying at age  $t$  and  $I_i$  = value of a person's each possible service state or future annual earnings.

Before applying this formula, all the employees of an organization are divided in accordance with the age group into homogenous groups of employees such as unskilled, semi-skilled and skilled, engineers, managerial staff etc. Average earning stream for different age group and classes are then found out for each group separately and present value for the human capital is ascertained. An assumption that employees will not make role changes during their service in the enterprise is also followed in this model.<sup>14</sup>

The merit of this model is its objectivity in valuing HR value because it depends upon the present value of future earning capacity of an employee. The main limitations of this model is its unrealistic assumption that employees will not change their role. Besides, it does not consider the fact that the value of an employee is not only based on his skills and ability but also

on the role of the organization to which he belong. Moreover, it also ignores the possibility that employees may leave the organization for reasons other than retirement and death.

**OBJECTIVES OF THE STUDY :**

This paper is an attempt to achieve the following objectives :

1. To evaluate the HRA practices adopted by Infosys Technologies Limited (ITL).
2. To make analysis of the HRA data provided by ITL for evaluating its usefulness in HR decision.

**RESEARCH METHODOLOGY**

With a view to achieve the aforesaid objectives the scope of the present study is restricted to the analysis of the HRA practices of ITL for the last six years under four heads namely method of valuation, disclosure of HRA, form of presentation and usefulness in human resource decision. Computation of the value of human resources in ITL has not been enquired into. This study is based on the secondary data collected from the annual reports and websites of ITL for the accounting year 2002-03 to 2007-08. The findings of the analysis have been abstracted with the help of various mathematical and statistical tools like correlation. Finally some suggestions have been made to improve the HRA practices of ITL. The present study will be helpful to develop the insight of HRA in various interest groups as well as to improve the HRA practices of ITL. The major limitation of this study is the lack of adequate corporate disclosure practices in India.

**INFOSYS TECHNOLOGIES LIMITED**

Infosys was established in 1981 by seven people with US \$ 250. In the journey



of over 25 years, it has catalyzed some of the major changes that have led to India's emergence as the global destination for software service talent. It pioneered the Global Delivery Model and became the first IT company from India to be listed on NASDAQ. Its employee stock options program created some of India's first salaried millionaires. Infosys is a US \$ 4 billion company with a market capitalization of over US \$ 27 billion.<sup>15</sup>

Infosys service offering span business and technology consulting, application services, system integration, product engineering, custom software development, maintenance, re-engineering, independent testing and valuation services, IT infrastructure services and business process outsourcing. Infosys has a global footprint with offices in 23 countries and development centres in India, China, Australia, the U.K., Canada and Japan.<sup>16</sup> It has employed 91,187 highly educated and skilled employees that is why, the HRA has the importance in ITL.

#### FINDINGS OF THE STUDY

With a view to evaluate the HRA practices of ITL the data collected from the website and annual reports for the last six years have been analysed under four major heads namely method of valuation, disclosure of HRA, form of presentation and usefulness in human resource decision-making. A summary of the findings of each head is as under :

**(a) Method of valuation :**

ITL has adopted Lev and Schwartz Present Value of Future Earnings Model for valuing its human resources on the following assumption :

- (a) employee compensation includes all direct and indirect benefit earned in India and abroad.

- (b) the incremental earning based on group/age have been considered
- (c) future earnings have been discounted at the cost of capital of 16.99%, 14.09%, 13.63%, 12.96%, 14.97% and 13.32% in the accounting year 2002-03, 2003-04, 2004-05, 2005-06, 2006-07 and 2007-08 respectively.

The Lev and Schwartz model adopted by ITL has the merit of objectivity in the valuation of human resources. However, the limitations of this model adversely affect the correct valuation of HR in ITL. Moreover, the rate of discounting future earnings of employees is changing year to year. It is a mathematically proved fact that high rate of discount tends to decrease the value of HR while low discount rate present the increased valuation of HR. This change in discount rate in each year makes the HR data incompatible and presents misleading valuation of HR in ITL.

**(b) Disclosure of HRA :**

It was found that the valuation of HR has been disclosed by ITL for all the six years continuously without gap. ITL has disclosed HR valuation in its annual report in the form of supplementary statement as well as a part of 'balance sheet including intangible assets'. However, ITL has not got HRA data audited from the auditors.

**(c) Form of Presentation :**

It was found that ITL has presented HRA information alongwith comparative figures of previous year. Further, the number and value of human resources have been shown categorywise only and not agewise. Some useful HR ratio have also been shown but the depreciation or appreciation in the HR value has not been reported.

**(d) Usefulness in Human Resource Decision :**

The HRA data provided by ITL include the information regarding the number, cost

and value of human resources. Besides, some HR ratios have also been provided. An analysis of the information is as under :

1. It was found that in the year 2002-03 the total number of employees was 15356 which increased to 91,187 in 2007-08 i.e. an increase of 493.82% during the last six years. The number of software professional and support staff has increased by 497.63% and 445.88% respectively. It is clear that the number of HR in ITL is continuously increasing (See Exhibit)
2. Total employee cost has increased from Rs. 1677 crore in 2002-03 to Rs. 8878 crore in 2007-08 while the cost per employee was found Rs. .109 crore, Rs. 0.095 crore, Rs. .096 crore, Rs. .091 crore, Rs. .098 crore and Rs. .097 crore in the accounting years 2002-03, 2003-04, 2004-05, 2005-06, 2006-07 and 2007-08 respectively. It is obvious that though total employee cost has increased by 429.39% during the last six years, cost per employee has decreasing trend. There is a decrease of about 11% in cost per employee in the period of study.
3. As far as total human resource value is concerned, it has increased from Rs. 10,417 crore to Rs. 98,821 crore during the year 2002-03 to 2007-08 i.e. an increase of 848.65%. Similarly the value of software professional and support staff has increased by 841.48% and 963.93% respectively. The value of human resources in each category shows continuous increase. However, this increase in HR value, to a large extent, due to decrease in discount rate used for valuation of HR under Lev and Schwartz model
4. Some human resource ratios have also been disclosed by ITL. In the analysis of

these ratios, it was found that the value of human resources per employee has increased from Rs. .68 crore to Rs. 1.08 crore i.e. an increase of about 58.82% during the period of study. Percentage of employee cost to human resource value has decreased from 16.10% to 9.0%. These two ratios indicate that the efficiency of human resources of ITL has improved because of producing higher value at lower cost. (See Exhibit). Total income to human resource value ratio has decreased from .35 to .17 during the year 2002-03 to 2007-08 while value added to human resource value ratio has decreased from .29 to .15 during the same period. Similarly, return on human resource value has also decreased from 9.20% to 4.7% in the period of study (See Exhibit). The reason of too much favourable condition of value of human resource per employee and percentage of employee cost to human resource value and unfavourable condition of total income to human resource value ratio, value added to human resource value ratio and return on human resource value is decrease in the discount rate used for HR valuation in the year 2007-08 under Lev and Schwartz model resulting into increased HR value (see Exhibit).

5. There is a positive high correlation of .999 between total income and total employee cost of ITL. It indicates that the performance of human resources in ITL is very good.

In short ITL provides some useful HRA data regarding the number and cost of its human resources but the change in discount rate in each year makes HR value and HR ratio data incompatible and misleading which affect the HR decision adversely.

**EXHIBIT : Analysis of HRA Practices of ITL**

<b>As at March 31</b>	<b>2007-08</b>	<b>2006-07</b>	<b>2005-06</b>	<b>2004-05</b>	<b>2003-04</b>	<b>2002-03</b>
<b>Employees (No.)</b>						
Software Professional	85,013	68,156	49,495	34,747	24,110	14,225
Support	6,174	4,085	3,220	2,003	1,524	1,131
<b>Total</b>	<b>91,187</b>	<b>72,241</b>	<b>52,715</b>	<b>36,750</b>	<b>25,634</b>	15,356
<b>Value of human resources</b>						
Software Professional	92,331	53,592	43,336	26,550	19,740	9,807
Support	6,490	3,860	3,301	1,784	1,400	610
<b>Total</b>	<b>98,821</b>	<b>52,452</b>	<b>46,637</b>	<b>28,334</b>	<b>21,140</b>	10,417
Rate of discounting future earnings of employees	13.32%	14.97%	12.96%	13.63%	14.09%	16.99%
Total income	16,692	13,893	9,521	7,130	4,853	3,623
Total employee cost	8,878	7,112	4,801	3,539	2,451	1,677
Value added	14,820	11,879	8,027	6,053	4,185	3,043
Net profit excluding exceptional items	4,659	3,861	2,479	1,846	1,244	958
<b>HR Ratios</b>						
Value of HR per employee	1.08	.80	.88	.77	.82	.68
Employee Cost/HR value (%)	9.0%	12.4%	10.29%	12.49%	11.59%	16.10%
Total income/ HR value (ratio)	0.17	.24	.20	.25	.23	.35
Value added/HR value (ratio)	.15	.21	.17	.21	.20	.29
Return on HR value (%)	4.7%	6.7%	5.32%	6.52%	5.88%	9.20%

**Compiled from the Annual Reports of ITL of 2002-03 to 2007-08.**

**SUGGESTIONS**

Some useful suggestions to improve the disclosure of HRA practices of ITL and its usefulness in HR decision are as under :

1. ITL has not disclosed the elements of employees cost such as training and development cost, induction cost etc. The elements of employee cost should be disclosed separately in various tables.
2. ITL should disclose the information regarding the inclusion of variables like amortisation of human resources, idle time, lock outs, loyalty of employees

etc. In the valuation of human resources.

3. As far as possible the rate of discounting future earnings of employees is concerned, it should be kept constant. Besides, if the change in discount rate is necessary, the valuation of HR should be shown at the new rate for the last five year so as to make the HR data compatible, correct and more useful for HR decision.
4. ITL should get HRA information audited so that the trustworthiness of HR data can be ensured.

5. The number and valuation of human resources in various age-groups should also be disclosed by ITL.
6. Some more HR ratios in relation to total resources, sales, PBT, PAT, gross profit, operating profit should also be disclosed to improve HR decision in ITL.
7. The ASB of the ICAI should devise and the standards for the valuation, accounting and disclosure of human resources. Besides, the disclosure of HRA practices should be made mandatory by the Indian companies Act 1956.
8. Initiatives should be taken by the government, professional bodies and scholars to develop an objective model for the valuation of human resources.

To conclude, it can be said that the HRA practices of ITL is satisfactory. In India, Indian companies Act 1956 has not developed any legal framework about HRA. Besides, the ASB of the ICAI neither formulated nor made mandatory any standard regarding HRA. Despite of these facts, ITL has voluntarily adopted HRA practices and disclosing HR information regularly in its annual reports. However, ITL need some more work in the reporting of compatible data about the human resource value and HR ratios so as to make HR decision more effective. If the abovementioned suggestions are taken into account, ITL may become a role model in the area of HRA practices and contribute to ensure the bright future of HRA In India.

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