7.1 INTRODUCTION

Human is the buzzword in the modern knowledge based society. It is the most vital input on which success and failure of the organization very much depend upon.

Starting from the classical economist to modern human capital economist such development is considered to be a continuous process.

It is one of the most important ‘M’ associated, which is considered while taken care of 4 m’s associated with any organizations and they are money, machines, materials and men.

The transformation process of human input into output is the main function of human resource system, the inputs consists of individuals or smaller groups of individuals or the total human organization of an undertaking.

In spite of its existence as a concept, the human resource accounting is still in its infancy and there is a need to study the theoretical underpinnings of propounds method of valuation of human resources as also the problems encountered by the corporate in generating and disclosing the information with respect to human assets.

Besides the serious efforts by the researcher and professionals the world over for almost half a century and for about thirty five years of its commencement in India, very few public enterprises are following human resource valuation and accounting practices.

A few forward looking organizations of the globe, have reported the value of human resources and changes there in over period of time to permit informed decisions by investors and lenders.
In India, the first initiative in this direction came from the public sector giant BHEL, which started the human resource valuation and reporting practice from the financial year 1974-75.

Currently only 5 Public enterprises ONGC, HPCL, CCI, KRL & OIL are following HRA practices.

No regulatory body or accounting standards formulating body have ever prescribed a reasonably acceptable mode of valuation and reporting of human resources.

The main objective of this research endeavor is to carry out a systematic study of various important aspects related to human resource accounting in India with a view to integrate both, qualitative as well as quantitative measures and understanding the human resource accounting practices.

This research endeavor has been presented in seven chapters. The major findings and conclusions derived from the research work are disclosed in the following portion.
7.2 FINDINGS

The present study was undertaken on the topic “An Analytical study of Human Resource Accounting Practices in Selected Public Enterprises in India”, for the types of investigation. For this purpose the various aspects of human resource accounting practices in public enterprises in India were studied in detailed during the period from 2001-02 to 2008-09.

The results of this study have been discussed along with appropriate suggestions.

1. The Franciscan monk, Luca Pacioli, is considered the father of modern accounting. He invented the double entry book-keeping in 1494. Which is the base for traditional accounting all over the world.

2. In the 19th century, due to Industrial revolution, the growth of joint stock companies and economic events, there was development of a system of double entry book keeping accounting.

3. One of the first attempts to estimate the value of human resource in monetary terms was made around 1691 by Sir William Petty.

4. The fact remains that, however that it was Likert (1967) who first used the term “Human Asset Accounting” (a term since replaced by Human Resource Accounting).

5. In 1974, the first edition of Flamholtz’s book H R Accounting (Flamholtz, 1974, 1985, 1999) was published, presenting the state-of-the-art of HRA.
6. In India, the first initiative in the direction of human resource accounting and valuation came from the public sector giant BHEL from the financial year 1974-75.

7. According to public enterprises survey 2008-09 there were 246 central public enterprises (excluding 6 insurance companies and 2 financial institutions) as on 31.3.2009 in India.

8. The present study indicates that only 23 public enterprises were found to have accepted HRA valuation and reporting practices in past. At present only 5 public enterprises ONGC, HPCL, CCI, KRL & OIL are found practicing HRA.

9. It was found that, public sector giant BHEL, SAIL, NTPC and others who were following HRA practices since last 30 to 35 years had discontinued the same.

10. Comparatively it was found that in India Human Resource Accounting is not followed in its true sense by public enterprises.

   It was observed that CCI stands first in reporting human resource value and social balance sheet for all the year eight years of the study. Than ONGC & HPCL stood second in HRV disclosure. HPCL only had disclosed ratios.

   KRL & OIL stood third as very few information is disclosed by these enterprises.

   So, the analysis makes it clear that Indian public enterprises under the study do not follow a uniform policy regarding valuation and reporting of HRA.

   It is also shocking to know that public sector giant BHEL who has taken initiation in valuing human resource had stopped HRA practices.
11. It was observed that public enterprise ONGC and HPCL had more number of employees that is 33035 employees in ONGC and 11246 employees in HPCL up to March 2009, while CCI and OIL had 1159 and 8387 number of employees respectively. It was further observed that number of employees and overall performance of the public enterprise had direct relationship 

ONGC with 33035 number of employees had earned a profit of 16126.41 crores during the year 2008-09, while HPCL with 11246 employees is able to earn only 574.98 crores profit during the year and OIL with 8387 number of employees had earned 2161.68 crores profit.

This proves the extraordinary efficiency and human resource value of the employees to the public enterprises.

12. It was observed that, ONGC - divides its total staff into two main groups technical – executive & non- executive and non-technical – executive & non- executive. HPCL- divides its total staff into two main groups – management and non-management employees. CCI- divides its total staff into six groups: executives, supervisors, skilled workers, semi-skilled workers, clerical & other supporting staff and unskilled workers. KRL- has not divided its total staff into groups. OIL- divides its total staff into two main groups technical- executive & workmen and administrative- executive & workmen.

So, it clearly shows that all the public enterprises under the study are valuing and reporting HRA had classified or
grouped their employees differently. There is no uniformity in grouping of staff or employees in all these public enterprises.

13. It was found that ONGC and OIL had not disclosed average age of employees. HPCL – average age for 2002 & 2003 is 42 years, 2004 & 2005 is 43 years, 2006 is 44 years and for 2009 it is 44 years. At, CCI – average age for the year 2004 is 47 years, 2006 is 48 years, 2008 is 50 years and 2009 is 51 years. At KRL – average age for 1999 is 36 years, 2000 is 36.5 years, 2001 is 37 years, 2002 is 38 years and 2003 is 39 years.

It is found that average age at KRL is between 36 to 38 years as compared to other sample public enterprise HPCL which is between 42 to 44 years and at CCI it is between 47 to 51 years. The lower average age indicates higher future expected service life of employees and thereby the higher future expected return of employees. Increase in future expected return would accelerate increase in HRV.

Public enterprises maintaining almost same level of employee age throughout and due to this, the enterprise could avoid the negative and substantial impact of average age on its human resource value.

14. It was observed that majority of public enterprises under the study had catalogue the employees group wise, total and group wise HRV and total. Further, the study indicates that 4 public enterprises ONGC, HPCL, CCI & KRL following HRA practices at present, had distributed human resources and their value category wise. While OIL had categorized human resource group wise but failed to report group wise HRV.
15. The biggest challenge in HRA is that of assigning monetary values to different dimensions of HR Costs. It was observed that mainly there are two approaches of HRA. Monetary Measures and Non-Monetary Measures. In monetary measures there are three valuation methods Cost, Economic & Behavioral Method. Cost Based Approach contains 4 different types of approaches i.e. historical cost approach, replacement cost approach, opportunity cost approach and standard cost approach. Economic Valuation Approach contains 12 Valuation Models i.e. goodwill model, hermenson adjusted discounted future wage model, lev & schwartz present value of future earning model, flamholtz normative economic model, jaggi & lau model, human asset multiplier, stochastic model, friedmen & lev model, myres & flowers model, morse model, penkin ogan model and chakraborty model. In Behavioral Method only 1 likert model. In the present study it was observed that all the five public enterprises had adopted Economic Value Approach.

16. There are several approaches or models for valuation of human resources. All these models have different backgrounds and different theoretical foundations. It was observed that 4 public enterprises ONGC, HPCL, KRL & OIL have adopted the Lev & Schwartz Model (1971) of economic value and have used an employee’s anticipated future earnings as a surrogate of his value. While, CCI had adopted economic valuation concept and accepted the model suggested by Lev & Schwartz with refinements suggested by Eric Flamholtz, Jaggi & Lau.
17. Comparatively it was observed that ONGC & HPCL had variable discount rate 7%, 8%, 11% & 12%, while KRL had used constant discount rate of 15%. Any of the Indian public enterprises had not disclosed the appropriate reason for considering specific discount rate for human resource valuation.

18. Comparatively it was observed under the study that, overall increase in Human Resource Value in ONGC and HPCL during the period from 2001-02 to 2008-09 is 1.49 times and 2.09 times. In CCI it was found that there was 1.5 times decrease in HRV during the period from 2001-02 to 2006-07. There was increase in HRV in CCI from Rs. 160.3 crores to Rs. 202.9 crores during the period from 2007-08 to 2008-09. In KRL HRV increased by 2.28 times during the period from 1998-99 to 2002-03. In OIL HRV decreased by 0.13 times during the period from 2002-03 to 2005-06.

From the above it is clear that only CCI had reported HRV for all the 8 years of the study. HRV of ONGC is highest for the year 2009 Rs. 38516.92 crores, than HRV of HPCL for 2009 Rs. 13147 crores and HRV of CCI for 2009 Rs. 202.85 crores.

19. It is concluded that human resource value totally depends upon the variables. So, individual variables total number of employees, discount rate, average age of employees, manpower cost, turnover, valued added, profit after tax and return on HRV do equally affect the valuation of human resources.
20. Out of 18 variables, HPCL reported 10 variables, ONGC reported 9 variables, CCI reported 7 variables, and OIL had reported 4 variables while KRL had reported only 2 variables. This indicates the poor reporting of variables by public enterprises following HRA at present.

21. It was observed that among 11 ratios identified, HPCL had reported 3 ratios, while ONGC had reported 2 ratios and CCI had reported only 1 ratio. KRL & OIL had not reported a single ratio.

It is surprising and shocking to note that from 5 samples public enterprises following HRA under the study, only HPCL is presently disclosing ratios.

The ratios disclosed by HPCL are:

- Employee cost to Human resources
- Human resource to Total resources
- PBT to Human resource

22. It was also seen that big size public enterprises like ONGC, HPCL give more information in their annual report with compared to medium size and small size public enterprises like CCI, OIL & KRL during the period of the study.

23. It was observed that human resource value is influenced by mainly two types of variables, they are financial variable - manpower cost per employee, turnover per employee, value added per employee and return on HRV per employee and predictor variables - total number of employees, discount rate and average age of employees.
24. It is further found that, the results of correlation analysis suggest that HRV influences efficiency and profitability positively at all public sector enterprises.

25. It was observed that among 7 variables identified for the study, total number of employees' variable is found highly variable in all the 5 sample public enterprises. At ONGC it was (2288.500), HPCL (325.025), CCI (623.147), KRL (107.120) and OIL (430.99). While, manpower cost per employee variable is found least variable at ONGC (0.017), HPCL (0.009) and KRL (0.011). Human Resource Value per employee variable is found least variable at CCI (0.004) and OIL (0.088).

26. More stability or volatility was shown by the variable total number of employees at ONGC (0.063) and OIL (0.048). While, average age of employee variable show more stability at HPCL (0.020), CCI (0.015) and KRL (0.032). Low stability was shown by the variables, value added per employee at ONGC (0.439) and OIL (0.352). While, turnover per employee at HPCL (0.230), return on HRV per employee at CCI (8.759) and KRL (0.728).

27. The variables which are highly correlated are, return on HRV per employee (0.999**) at ONGC, return on HRV per employee (1.000**) at HPCL, turnover per employee (0.702) at CCI, average age of employee (0.986**) at KRL and total number of employees (0.699) at OIL.

28. The variables which are highly negatively correlated are: total number of employees at ONGC (-0.890*), HPCL (-0.770) and CCI (-0.925*). While, return on HRV per employee at KRL (-0.380) and OIL (-0.100).
29. The results of correlation between HRV per employee and financial variables (turnover per employee, manpower cost per employee, value added per employee and return on HRV per employee) is found positive in all the 5 public enterprises and it indicates that the increase in the value of human resource positively influence the efficiency and profitability of all public enterprises.

30. The result of correlation between HRV per employee and predictor variables (total number of employees and average age of employee) is found in HPCL, KRL & OIL. Average Age of employee variable at HPCL (0.931*) and KRL (0.986**), While, total number of employees variable at KRL (0.641) and OIL (0.699).

31. The value of regression coefficient with manpower cost per employee (4.667) at ONGC, average age of employee (0.810) at HPCL, return on HRV per employee (2.85 E-06) at CCI, manpower cost per employee (4.731) at KRL and total number of employees (1.432E-04) at OIL is highly positively correlated.

32. The result of regression coefficient with total number of employees at ONGC (-3.5E-05), HPCL (-3.86E-04) and CCI (-6.63E-06) is highly negative. While, return on HRV per employee at KRL (-0.001) and OIL (-0.003) is also highly negative. This negative impact will decrease HRV per employee.

33. It was found from the group statistic HPCL & ONGC that mean value of total number of employees (37063.67), value added per employee (0.9350) and profit after tax (0.3150) is higher in ONGC as compared to HPCL. While, mean value of manpower cost per employee (0.583), HRV per employee (0.7280),
turnover per employee (6.0517) and return on HRV per employee (0.7280) is higher in HPCL as compared to ONGC. It was further seen that there is significant difference in mean value of total number of employees (0.000*), value added per employee (0.043*) and profit after tax per employee (0.003*) between HPCL & ONGC. The p-values for these variables are less than 0.05. The difference of other variables, HRV per employee (0.886) and return on HRV per employee (0.977) are not significant.

34. It was found that mean value of total number of employees (37063.67), turnover per employee (1.1133), value added per employee (0.9350) and profit after tax (0.3150) is higher in ONGC. While, mean value of HRV per employee (1.3383) and return on HRV per employee (9.5477) is higher in OIL as compared to ONGC. It was further seen that, there is significant difference in mean value of total number of employees (0.000*), HRV per employee (0.000*), turnover per employee (0.003*), value added per employee (0.014*), return on HRV per employee (0.000*) and profit after tax per employee (0.004*) between OIL and ONGC. The p-value of these variables are less than 0.05. The differences of other variables are not significant.

35. It was found from the group statistics CCI & KRL, that mean value of total number of employees (2024.71), manpower cost per employee (0.0400), HRV per employee (0.2520), turnover per employee (4.3800), value added per employee (0.4500), return on HRV per employee (51.9314) and profit after tax (0.1843) is higher in KRL as compared to CCI.
It was further seen that there is significant difference in mean value of HRV per employee (0.000*), turnover per employee (0.000*) and value added per employee (0.033*) between CCI & KRL. The difference of other variable total number of employees (0.8445), manpower cost per employee (0.083), return on HRV per employee (0.921) & profit after tax per employee (0.193) are not significant.

36. It was found from the group statistics HPCL & OIL, that mean of total number of employees (10981.33), turnover per employee (6.0517) and value added per employee (0.4900) is higher in HPCL as compared to OIL. While, mean value of HRV per employee (1.3383), return on HRV per employee (9.5477) and profit after tax (0.1277) is higher in OIL as compared to HPCL. It was further seen that, there is significant difference in the mean value of total number of employees (0.000*), HRV per employee (0.000*), turnover per employee (0.000*), value added per employee (0.032*) and return on HRV per employee (0.000*) between HPCL & OIL. The difference of other variables profit after tax (0.567) is not significant.

37. It is found under the study that there is significant difference in HRA reporting practices in selected 5 public enterprises ONGC, HPCL, CCI, KRL & OIL in India.

38. It is found that existing human resource accounting system has helped the public enterprises in improving and achieving organizational objectives, but the HRA system is not implemented in its true sense and spirit. Lot of work is to be done in this regards.
39. It was found that the mean value of total number of employees of ONGC is highest (37063.67), HPCL (10981.33), OIL (8925.75), KRL (2024.71) and CCI (1982.00) with lowest mean value compared to public enterprises under the study. It was seen that there is significant difference in the mean value of total number of employees among public enterprises under the study during the period from 2001-02 to 2008-09.

40. It was found that the mean value of manpower cost per employee of HPCL (0.006) is highest, ONGC (0.04), KRL (0.04) and CCI (0.03) with lowest mean value. There is significance difference in the mean value of manpower cost per employee among public enterprises under the study during the period from 2001-02 to 2008-09.

41. It was found that the mean value of human resource value per employee of OIL (1.34) is highest, ONGC (0.72), KRL (0.25), HPCL (0.08) and CCI (0.08) with lowest mean. There is significance difference in the mean value of human resource value per employee among public enterprises under the study during the period from 2001-02 to 2008-09.

42. It was found that the mean value of turnover per employee of HPCL (6.05) is highest, KRL (4.38), ONGC (1.11), OIL (0.44) and CCI (0.08) with lowest mean. There is significance difference in the mean value of turnover per employee among sample public enterprises under the study during the period from 2001-02 to 2008-09.
It was found that the mean value of value added per employee of ONGC (0.94) is highest, HPCL (0.49), KRL (0.45), OIL (0.36) and CCI (0.13) with lowest mean. There is significance difference in the mean value of value added per employee among public enterprises under the study during the period from 2001-02 to 2008-09.

It was found that the mean value of return on HRV per employee of KRL (51.93) is highest, CCI (40.00), OIL (9.55), ONGC (0.73) and HPCL (0.73) with lowest mean. There is no significance difference in the mean value of return on HRV per employee among public enterprise under the study during the period from 2001-02 to 2008-09. It was found that the mean value of profit after tax per employee of ONGC (0.32) is highest, KRL (0.18), OIL (0.13), HPCL (0.11) and CCI (0.03) with lowest mean. There is no significance difference in the mean value of profit after tax per employee among public enterprises under the study during the period from 2001-02 to 2008-09.

It is observed from the present study that the overall performance of public enterprises can be improved through a system of HR accounting. The public enterprise has to set up a separate cell for the practical design and application of HR accounting.
7.3 SUGGESTIONS

1. This study suggests that the seriousness in valuation and reporting of human resources is needed to be enhanced public enterprises in India.

2. Initiation should be taken by professional bodies in respect of formulation of specific accounting standards and suitable valuation models on the measurement and reporting of value of human resources.

3. Human Resource Accounting and Reporting must be made mandatory by companies act and this information must be audited.

4. In India most of the public enterprises had used Lev & Schwartz Model for valuation of human resources. Serious efforts must be taken to improve and modify this model for proper valuation of human resource in India. Proper procedure and guidelines must be prescribed for proper valuation and implementation of the model.

5. What our organizations practice today in the realm of HRA may not be adequate. Perhaps, we need to measure the dimension of the services rendered by the HR in relation to the cost incurred on them to account for their value.

6. At this juncture it is necessary to formulate International Accounting Standards for Human Resource Accounting and Valuation.

7. A separate review committee should be appointed to review the standards form time to time.
8. There is the issue of lack of proper institutional guidelines, authoritative mandate and appropriate accounting tools. These are required to be developed further.

9. The process of assigning numeric figures to human resources depends upon the approach adopted for valuation. It is strongly suggested that, before selecting the valuation model every enterprise should take into consideration the advantage and disadvantages of all models, because every public enterprise is a separate entity and it has different levels of intelligence, background, interest and mobility.

10. The human resource accounting has probably attempted to go too far and too quickly, given the available methodologies and lack of widespread acceptance within management and the accounting enthusiasts have tried to get management to do four things at once:

1. Pay more attention to personnel variables.
2. Place rupee value on human resources and implement human asset depreciation.
3. Break with the accountant’s traditional reliance on historical cost data and
4. Develop internal and external reporting procedures using human resource accounting data.

Any of these objectives alone would be difficult to achieve but the attainment of all simultaneously is virtually impossible.

The full responsibility of operating the proposed cell may be entrusted to an experienced executive from accounting area. Besides, two more executives, one each from personnel and
production areas are to be directed to advise him on the respective areas. The personnel executive is expected to guide the cell on the cost aspects of recruitment, selection, training and turnover of employees, while the production executive has to furnish factual information regarding the human resource utilization in terms of person-wise manday’s and the standard as well as actual output. The information thus obtained, from personnel and production areas, is to be processed in such a way so that the person-wise contribution per rupee of human resource investment can be unlocked periodically. The enterprise computer system may be attuned to handle the data processing operations. The continuous monitoring of the human contribution per rupee of human investment would enable the yard to develop/revise performance standards. (Always, the minimum standard contribution (output) of the employee should not be less than the expenditure (input) incurred on him. Thereafter, the productivity can be geared up through a system of incentives).

The enterprise has to show a devoted attention to observe the behavioral implications through the conduct of an attitude survey, from time to time to evaluate the functioning of the system. In addition, some scientific job evaluation acceptable to the people is a perquisite for the development of shop floor performance standards. Thus, the applications of HR Accounting in public enterprises may be viewed as an input-output control mechanism to optimize the human output for a given human input.
What our public enterprises practice today in the realm of HRA may not be adequate. Perhaps, we need to measure the dimension of the service rendered by the human resource in relation to the cost incurred on them to account for their value.

7.4 FULFILLMENT OF RESEARCH OBJECTIVES

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7.5 CONCLUSION

In the present study, an attempt has been made to evaluate the Human Resource Accounting practices in selected public enterprises in India with special reference to five selected public enterprises in India. Human resource valuation is the most confusing and critical problem for public enterprises in India. Accounting bodies, professionals, experts and Government should take steps to frame the guidelines for the effective and proper valuation of human resources.

After study, it can be concluded that to show True and Fair view in the financial statements human resource value must be calculated and included in the financial statements of public enterprises. Proper valuation model, variables to be considered, discount rate to be applied and the main thing guidelines must be issued to have uniformity in disclosure practices of public enterprises.

I had compared five selected public enterprises in terms of human resource accounting practices in public enterprises in India.

A comparative study of public enterprise practicising human resource accounting shows that interest in HRA practices had to be developed among the public enterprises by making it mandatory. HRA practices had showed improvement in the performance of the public enterprises during the period from 2001-02 to 2008-09. If public enterprises will apply suggestions given in the thesis, than performance of public enterprises as well of employees will increase.