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    RESULTS & DISCUSSION
    FINDINGS
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- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

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- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

IMPLEMENTATION OF HUMAN RESOURCE ACCOUNTING PRACTICE IN CCI: CEMENT CORPORATION OF INDIA LIMITED

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ABSTRACT

In the emerging economic scenario, one of the important ingredients in the field of accounting and finance is Human Resource Accounting. The economic growth of any nation depends upon the harnessing and exploitation of human resources as well as non-human resources along with their blending in a proper ratio. The concept of "investment" in employees: the human capital of the enterprise, push forward a view that one is looking for a profit to be gained from the investment and therefore the focus is on the development of employees for a specific purpose to gain. Investment in professional training is often treated as an industrial relation activity, and not as an essential investment decision like for the plant or knowhow. To ensure growth and development of any organization, the efficiency of employees must be accounted in the right perspective. Human resource accounting is one of the latest concepts adopted by Indian enterprises in recent times. Most of the enterpriser which follow HRA spare separate section in their annual reports for a detailed account of their human resource. In view of the growing importance of HRA, many public and private enterprises in India are voluntarily disclosing information about their human resources. Hence, an attempt is made to analyze the Human Resource Accounting disclosure in CCI. An analytical study was conducted among different variable which affect on human resource valuation in CCI.

KEYWORDS

Annual Report, Human Resource Accounting, Investment, Voluntary Disclosure.

INTRODUCTION

Human Resource (HR) is the most valuable asset in an enterprise. Human resource accounting gives information regarding inner strength of organization and helps in making decisions regarding long-term investment in that organization. HRA is the identification and measuring process of HR and its communication to the interested parties. It is an extension of the basic functions of accounting and communications of information to the internal and external parties.

The concept of HRA was first pioneered by Public sector giant BHEL in India during the year 1974-75. Likert (1967), Johnson & Kaplan (1987) said that absence of human resource as an asset in the balance sheet, violates the accrual principles of disclosure, underrates the firms net worth and current income and thereby not reflect the true and fair view of the organization.

The importance of human resource as asset was felt back by Likert. But there is no scope for showing any significant information about human resources in financial statements except the remuneration paid to them and the number of employees getting compensation beyond certain amount per annum.

In India Human Resource Accounting Practices was initiated by the public sector giant BHEL and SAIL back in the 1970's. The importance of the contribution of Human Resources was recognized by other service, technology and other knowledge based sectors and as a result many other public and private sector enterprises are reporting HRA information in their financial statements. They are (MMTC), (ONGC), (NTPC), (EIL), (OIL), (HSL), (HZL)and (INFOSYS) etc.

Recently, many enterprises in India had made an attempt to quantify the value of human assets and report them in financial position statement (Balance sheet).

OBJECTIVES OF THE STUDY

1. To examine the prevailing HRA reporting practices in CCI.
2. To enlist the items of human resource information to be disclosed in the annual reports.
3. To examine model used for the valuation of human resources in CCI.
4. To derive conclusions and suggest measures for improvement of HRA practices in CCI.

SCOPE OF THE STUDY

In the present study, HRA practices followed by CCI have been examined for the period from the financial year 2001-02 to 2008-09.

PERIOD OF THE STUDY

The period of the study is selected eight consecutive years which are from the financial year from 2001-02 to 2008-09. The study is mainly based on published annual reports of CCI.

RESEARCH METHODOLOGY

The study is mainly based on the secondary data's. The secondary data are extracted from the sources like annual reports, different books of management accounting, journals, research papers, previous research findings and website of CCI.

To investigate the efficiency of the HRA model adopted by CCI, the study is carried out by analyzing the behaviour of all the important variables indicating efficiency and profitability and also the components used for the valuation of human resources.

THESE VARIABLES ARE:

1. Total Number of Employees
2. Average Age of Employees
3. Manpower Cost per Employee
4. Discount Rate
5. Human Resource Value per Employee
6. Turnover per Employee
7. Value Added per Employee
8. Return on HRV
9. Profit After Tax

The collected data is further analyzed and then the qualitative analysis is done.

DISCLOSURE RELATING TO HUMAN RESOURCE ACCOUNTING BY CCI

The information disclosed by the companies are useful to companies to attract capital from the external investors. In recent years, the studies conducted are concerned with disclosure research and is taking a user approach. Very few authors carried out disclosure studies taking a company approach.

To understand the process and issues underlying the disclosure practices followed by CCI and to understand the different variables and their frequency of use, the data analysis is undertaken.

TABLE – 1.1: HRA PRACTICES IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09

Public Enterprise	HRA Introduced	Valuation Model Used	Discount Rate (%)
CCI	1979-80	Lev & Schwartz Model with Refinement Suggested by Flamholtz, Jaggi and Lau	Not Reported

Source: Annual Reports of CCI up to March 2009

Table 1.1 shows HRA practices in CCI in India during the period from 2001-02 to 2008-09. CCI had started reporting HRA since 1979-80. CCI is continuously valuing and reporting HRA information during the period from 2001-02 to 2008-09.

For Human Resource Valuation, It had adopted Lev & Schwartz Model with refinement suggested by Flamholtz, Jaggi and Lau. The discount rate for valuation is not reported by CCI.

BEHAVIOURAL ANALYSIS: This section studies the behaviour of individual variables over the period of our study. The present analysis uses the Index number analysis.

TOTAL NUMBER OF EMPLOYEES: The number of employees under CCI is classified among executives, supervisors, skilled workers, semi – skilled workers, clerical and other supporting staff and unskilled workers.

TABLE - 1.2: TOTAL NUMBER OF EMPLOYEES IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Executives	303	237	188	182	173	165	150	134
Supervisors	445	335	206	204	199	187	176	178
Skilled Workers	1089	762	552	577	577	580	534	388
Semi-Skilled Workers	404	293	202	238	237	223	233	184
Clerical & Other Supporting Staff	426	289	250	212	212	201	209	150
Unskilled Workers	346	218	209	173	172	167	158	125
Total	3013	2134	1607	1586	1570	1523	1460	1159
(Index)	100	70.83	53.33	52.64	52.11	50.55	48.46	38.47

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table – 1.2 shows total number of employees in CCI during the period from 2001-02 to 2008-09. In the last eight years, number of employees decreased from 3013 in 2001-02 to 1159 in 2008-09, which is 61.53%.

AVERAGE AGE OF EMPLOYEES: CCI had reported average age of employees for some of the years.

TABLE – 1.3: AVERAGE AGE OF EMPLOYEES IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Average Age	NR	NR	47	NR	48	NR	50	51
(Index)			100		102.13		106.38	108.5

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.3 shows average age of employees in CCI during the period from 2001-02 to 2008-09. From eight years of study period it discloses average for four years only. During six years from 2003-04 to 2008-09, the average age of employees increased by four years only that is 47 year to 51 years only.

TOTAL MANPOWER COST: CCI reports salaries, wages, ex- gratia etc. contribution to provident and other funds, provisions for gratuity, provision for leave encashment and staff welfare expenses as the manpower cost.

TABLE – 1.4: TOTAL MANPOWER COST IN CCI DURING THE PERIOD FROM 2001 -02 TO 2008-09 (Rs. In Crores)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Total Manpower Cost	67.91	49.8	34.56	26.54	69.43	35.95	36.9	57.24
(Index)	100	73.33	50.89	39.08	102.24	52.94	54.34	84.29
Total Manpower Cost Per Employee	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.05
(Index)	100	100	100	100	200	100	100	250

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.4 shows total manpower cost and total manpower cost per employee in CCI during the period from 2001-02 to 2008-09. Above table clearly indicates that there is decrease in manpower cost by 0.16 times and increase in manpower cost per employee by 2.5 times in eight years. This is due to decrease in number of employees in eight years by 0.61 times.

DISCOUNT RATE: HRV has very strong inverse relationship with the discount rate. CCI had not disclosed discount rate in their annual reports during the period from 2001-02 to 2008-09. No specific reason is given for the same.

HUMAN RESOURCE VALUE: The concept of Human value is derived from general economic value theory. The human value as a whole is the present worth of its expected future services to an enterprise.

TABLE – 1.5: HUMAN RESOURCE VALUE IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (Rs. In Crores)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Human Resource Value	228.45	164.79	124.1	121.13	119.59	115.37	160.3	202.9
(Index)	100	72.13	54.32	53.02	52.35	50.5	70.17	88.79
HRV per Employee	0.07	0.08	0.08	0.08	0.08	0.07	0.11	0.17
(Index)	100	114.28	114.28	114.28	114.28	100	157.14	242.9

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.5 shows human resource value and human resource value per employee in CCI during the period from 2001-02 to 2008-09. It is clear from the above table, that in last five years there is constant decrease in the value of HRV and suddenly it increased in 2007-08 and 2008-09. In last eight years it decreased by 0.11 times.

Comparatively, it was observed that during last eight years there is overall decrease in total manpower cost and constant decrease in total number of employees, then also total manpower cost per employee remains same for last seven year and it increased in eighth year.

TOTAL TURNOVER: The turnover of the organization reflects the performance of resources. Therefore to have an idea about the performance of the employees, we have also calculated the turnover per employees.

TABLE 1.6: TOTAL TURNOVER IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (Rs. In Crores)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Total Turnover	137.02	120.69	131.33	148.89	195.22	289.03	292.1	319.5
(Index)	100	88.08	95.85	108.66	142.47	210.94	213.18	233.2
Turnover per Employee	0.04	0.06	0.08	0.09	0.12	0.19	0.2	0.27
(Index)	100	150	200	225	300	475	500	675

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.6 shows total turnover and turnover per employee in CCI during the period from 2001-02 to 2008-09. Turnover of the CCI increase from Rs. 137.02 crores in 2001-02 to Rs. 319.5 crores for the year 2008-09. This increase in total turnover increased by 2.33 times over the period of eight years. Turnover per Employee increased by 6.75 times during the same period. Increase in turnover per employee may be due to decrease in number of employee and increase turnover of the enterprise.

TURNOVER & COST RELATIONSHIP: To know, what proportion of profit is shared by company with employee payments, turnover and cost relationship is studied.

TABLE – 1.7: TURNOVER & COST RELATIONSHIP IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (In Percentage)

Year	Total Turnover	Total Manpower Cost	Manpower Cost as a % age of Total Turnover
2002	137.02	67.91	49.56
2003	120.69	49.8	41.26
2004	131.33	34.56	26.31
2005	148.89	26.54	17.82
2006	195.22	69.43	35.56
2007	289.03	35.95	12.44
2008	292.1	36.9	12.63
2009	319.47	57.24	17.92

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.7 shows turnover and cost relationship in CCI during the period from 2001-02 to 2008-09. It is clear from the above table that compared to turnover payments were made at higher rate in previous years then in later years it is too low compared to previous years this may due to change in company policy or management.

VALUE ADDED: CCI calculates the total value added by deducting the raw materials, power and fuel cost, other manufacturing expenses and miscellaneous expenses from the total revenue earned during the year. The amount of value added is before deducting or charging employee cost other operational cost, financial expenses, tax liability and depreciation. Therefore, the value added indicates the earning power of all the resource of an enterprise.

TABLE – 1.8: VALUE ADDED IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (Rs. In Crores)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Value Added	2701	2930	4145	5383	6670	13181	19751	18969
(Index)	100	108.48	153.46	199.3	246.94	488	731.25	702.3
Value Added per Employee	0.9	1.37	2.58	3.39	4.25	8.65	13.53	16.37
(Index)	100	152.22	286.67	376.67	472.22	961.11	1503.33	1819

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.8 shows value added and value added per employee in CCI during the period from 2001-02 to 2008-09. Overall increase in value added at CCI in eight years is 7.02 times and value added per employee constantly increased from 0.9 crore in 2001-02 to 16.37 crore in 2008-09.

RETURN ON HRV: CCI does not report the information about the return on HRV in the annual report. Here it is calculated as profit after tax divided by the human resource value.

TABLE – 1.9: RETURN ON HRV IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (In Percentage)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Return on HRV	-94.26	-130.69	-65.23	-180.75	695.58	144.4	25.51	25.9
(Index)					100	20.76	3.37	3.72

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.9 shows return on HRV in CCI during the period from 2001-02 to 2008-09. Return on HRV for the year 2001-02 to 2004-05 is negative due to losses in respective years. In the year 2005-06 the return on HRV is 695.58% then it drastically decrease to 144.4% in 2006-07, 25.51% in 2007-08 and reached to 25.9% in 2008-09.Overall decrease in return on HRV in four years is 96.28%.

TABLE - 1.10: RETURN ON HRV PER EMPLOYEE IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (In Percentage)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Return on HRV	-100	-125	-62.5	-175	662.5	157	27.3	23.53
(Index)					100	23.7	4.12	3.55

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.10 shows return on HRV per Employee in CCI during the period from 2001-02 to 2008-09. Return on HRV per Employee for the year 2001-02 to 2004-05 is negative due to losses in respective years. In the year 2005-06 the return on HRV is 662.5% then it drastically decrease to 157% in 2006-07, 27.3% in 2007-08 and reached to 23.53% in 2008-09.Overall decrease in return on HRV in four years is 96.45%. No explanation or reasons is disclosed by CCI for the losses and huge profits in the year 2005-06.

PROFIT AFTER TAX

TABLE – 1.11: PROFIT AFTER TAX IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (Rs. In Crores)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
Profit After Tax	-215.31	-215.36	-80.95	-218.94	831.84	**166.6**	40.89	**52.54**
(Index)					100	20.03	4.91	6.32

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.11 shows profit after tax in CCI during the period from 2001-02 to 2008-09. In the previous four years 2001-02, 2002-03, 2003-04 and 2004-05 CCI had made huge losses of - 215.31 crores,- 215.36 crores, - 80.95 crores and - 218.94 crores respectively. In the year 2005-06 it made a profit of 831.84 crores, which was decreased to 166.6 crores in 2006-07 to 40.89 crores in 2007-08 and finally reached to 52.54 crores in the year 2008-09. Overall profit decrease by 93.68% or 0.94 times in last four years. The reason for such losses and huge profit is not disclosed by CCI.

TABLE – 1.12: PROFIT AFTER TAX PER EMPLOYEE IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09 (Rs. In Crores)

Particulars	2002	2003	2004	2005	2006	2007	2008	2009
PAT per Employee	-0.07	-0.1	-0.05	-0.14	0.53	0.11	0.03	0.04
(Index)					100	20.75	5.66	7.55

Source: Annual Reports of CCI during the period from 2001-02 to 2008-09

Table 1.12 shows profit after tax per employee in CCI during the period from 2001-02 to 2008-09. In the previous four years 2001-02, 2002-03, 2003-04 and 2004-05 CCI had made huge losses of - 215.31 crores, - 215.36 crores, - 80.95 crores and - 218.94 crores respectively. Due huge losses profit after tax per employee in CCI is negative in previous four yerars. During the period from 2005-06 to 2008-09, profit after tax was 0.53 crore, 0.11 crore, 0.03 crore and 0.04 crore respectively due to profits in respective years.

So, Return on HRV of CCI reflects that there is no efficient use of resources, HRV per employee is higher than PAT per employee.

DESCRIPTIVE SUMMARY

CCI had experienced changes in almost all the variables. Therefore, to check the nature of change, the volatility analysis has been carried out using standard deviation (SD) and volatility coefficient.

HRV is a result of multiparty impact of variables like total number of employees, average age of employees, discount rate, turnover, value added, profit after tax and return on HRV etc.

As human resources are the only active asset of the organization it is important resource of the business. Therefore, in the first section the behaviour and in second section volatility of variables are studied individually. In both the studies and analysis relationship of HRV with of these variables was carried out.

Now question arises: **How closely is the HRV related to each of these variables?**

To answer this question, the present section undertakes two important bivariate analyses as under:

(1)	Simple Correlation Analysis
(2)	Simple Regression Analysis

(1) SIMPLE CORRELATION ANALYSIS: The HRV is result of multiparty impact. It depends on a number of factors. For this purpose, all the variables influencing the HR value as well as the variables that are the pointer of present business profitability and efficiency are considered.

These variables are:

PREDICTOR VARIABLES
- Total Number of Employees
- Average Age of Employee
- Discount Rate

FINANCIAL VARIABLES
- Manpower Cost per Employee
- Turnover per Employee
- Value Added per Employee
- Return on HRV per Employee

(2) SIMPLE REGRESSION ANALYSIS: The simple regression analysis reveals the direction and numerical strength of relationship but does not expound the relative importance of different variables forming the congregate that influence the degree of relationship. This analysis enables us to find the answer to the question, How HRV does respond to the movement in an individual variable? The ordinary least square (OLS) method has been used for the regression analysis.

To get actual results the data for analysis purpose is taken for five years only, as there is no uniformity in disclosing data by the CCI under the study.

TABLE – 1.13: DESCRIPTIVE SUMMARY IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09

Particulars	N	Average	Std. Deviation	Volatility
HRV per Employee	5	0.078	0.004	0.057
Total No. of Employees	5	1,982.000	623.147	0.314
Average Age of Employees	2	47.500	0.707	0.015
Manpower Cost per Employee	5	0.026	0.013	0.516
Turnover per Employee	5	0.082	0.033	0.408
Value Added per Employee	5	0.130	0.263	2.021
Return on HRV per Employee	5	40.000	350.379	8.759

Table 1.13 shows descriptive summary in CCI during the period from 2001-02 to 2008-09.

CCI has experienced changes in almost all the variables.

The following observations are made from the above table:

(i)	Total Number of Employees is highly variable among all as it shows maximum S.D. value 623.147 and HRV per employee shows very low variability as it shows low S.D. value 0.004.

(ii)	In case of volatility, average age of employees shows more stability as it has low volatility value 0.015 among all the variables, while return on HRV per employee shows low stability as its volatility is 8.759 among all variables.

(iii)	Discount Rate is not disclosed by CCI.

TABLE – 1.14: CORRELATION BETWEEN HRV PER EMPLOYEES AND OTHER VARIABLES IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09

	Total No. of Employees	Average Age of Employees	Manpower Cost per Employee	Turnover per Employee	Value Added per Employee	Return on HRV per Employee
HRV per Employee	-.925(*)	.(a)	.250	.702	.255	.223

* Correlation is significant at the 0.05 level (2-tailed).

a cannot be computed because at least one of the variables is constant.

Table 1.14 shows correlation between HRV per employee and other variables in CCI during the period from 2001-02 to 2008-09.

The following observations are made from the above table:

(i)	HRV per Employee is poor and positively correlated with manpower cost per employee, turnover per employee, value added per employee and return on HRV per employee.

(ii)	There is highly negative correlation between HRV per employee and total number of employees.

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(iii)   Turnover per Employee shows the highest degree of correlation (0.702), while total number of employees shows highly negative correlation (-0.925) with HRV per employee.

(iv)   The correlation coefficient with respect to all the financial variables is positive, signifying relationship between HRV per employee and the efficiency and profitability at CCI.

(v)   Out of predictor variables, total number of employees is highly negatively correlated with HRV per employee and average age of employee per employee cannot be computed because at least one of the variables is constant.

TABLE – 1.15: REGRESSION COEFFICIENTS FOR VARIABLES IN CCI DURING THE PERIOD FROM 2001-02 TO 2008-09

	Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
X1	(Constant)	0.091	0.003		28.103	**0.000**
	Total No. of Employees	-6.63 E -06	1.57 E -06	-0.925	-4.213	**0.024**
X2	(Constant)	0.076	0.005		14.212	**0.001**
	Manpower Cost per Employee	0.083	0.186	0.250	0.447	0.685
X3	(Constant)	0.070	0.005		14.651	**0.001**
	Turnover per Employee	0.094	0.055	0.702	1.705	0.187
X4	(Constant)	0.077	0.003		30.347	**0.000**
	Value Added per Employee	0.004	0.010	0.255	0.457	0.679
X5	(Constant)	0.078	0.002		34.321	**0.000**
	Return on HRV per Employee	2.85 E -06	7.18 E -06	0.223	0.397	0.718

Dependent variable: HRV per employee, Independent variables: All others

Table 1.15 shows regression coefficients for variables in CCI during the period from 2001-02 to 2008-09. The following inferences may be derived from the above regression results:

(1) $\text{HRV per Employee} = 0.091 - 6.63E - 06 \text{ Total Number of Employees}$

In the above regression equation, 0.091 is the estimated mean value of HRV per employee when total number of employees is zero. And the slope -6.63 E -06 indicates that for each one unit change in total number of employees, HRV per employee is decreased by 6.63 E -06 units on average.

(2) $\text{HRV per Employee} = 0.076 + 0.083 \text{ Manpower Cost per Employee}$

In the above regression equation, 0.076 is the estimated mean value of HRV per employee when manpower cost per employee is zero. And the slope 0.083 indicates that for each one unit change in manpower cost per employee, HRV per employee is increased by 0.083 units on average.

(3) $\text{HRV per Employee} = 0.070 + 0.094 \text{ Turnover per Employee}$

In the above regression equation, 0.070 is the estimated mean value of HRV per employee when turnover per employees is zero. And the slope 0.094 indicates that for each one unit change in turnover per employee, HRV per employee is increased by 0.094 units on average.

(4) $\text{HRV per Employee} = 0.077 + 0.004 \text{ Value Added per Employee}$

In the above regression equation, 0.077 is the estimated mean value of HRV per employee when value added per employee is zero. And the slope 0.004 indicates that for each one unit change in value added per employee, HRV per employee is increased by 0.004 units on average.

(5) $\text{HRV per Employee} = 0.078 + 2.85 E - 06 \text{ Return on HRV per Employee}$

In the above regression equation, 0.078 is the estimated mean value of HRV per employee when return on HRV per employee is zero. And the slope 2.85 E -06 indicates that for each one unit change in return on HRV per employee, HRV per employee is increased by 2.85 E -0.6 units on average.

(6)   The value of coefficients with respect to manpower cost per employee (0.083), turnover per employee (0.094), value added per employee (0.004) and return on HRV per employee (2.85 E -06) is positive. The increase in the value of these variables would enhance the HRV at CCI.

(7)   It implies that a one unit change in each of these variables would lead to (0.083, 0.094, 0.004 and 2.85 E-06) unit change in the HRV per employee respectively at CCI, assuming other factors to be constant.

(8)   The value of coefficient with respect to total number of employees is highly negative (-6.63 E -06). It implies that for each one unit change in the total number of employees, HRV per employee will decrease by 6.63 units on average.

FINDINGS

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

2.   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.

3.   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.

4.   There are several approaches or models for valuation of human resources. All these models have different backgrounds and different theoretical foundations. CCI had adopted economic valuation concept and accepted the model suggested by Lev & Schwartz with refinements suggested by Eric Flamholtz, Jaggi & Lau. Further, the study indicates that CCI had distributed human resources and their value category wise

5.   CCI divides its total staff into six groups: executives, supervisors, skilled workers, semi-skilled workers, clerical & other supporting staff and unskilled workers.

6.   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.

7.   At, CCI – average age for the year 2004 is 47 years, 2006 is 48 years, 2008 is 50 years and 2009 is 51 years

8.   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.

9.   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.

10.   It was observed that among 7 variables identified for the study, total number of employees' variable is found highly variable in CCI. While, human resource value per employee variable is found least variable at CCI (0.004) and OIL (0.088).

11.   More stability or volatility was shown by the variable total number of employees at CCI (0.015). Low stability was shown by the variable, return on HRV per employee at CCI (8.759).

12.   The variable which are highly correlated is, turnover per employee (0.702) at CCI and the variable which is highly negatively correlated is total number of employees at CCI (-0.925*).).

13.   The value of regression coefficient with return on HRV per employee (2.85 E-06) at CCI is highly positively correlated.

14.   The result of regression coefficient with total number of employees at CCI (-6.63E-06) is highly negative.

15.   It is observed from the present study that the overall performance of CCI can be improved through a system of HR accounting.

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LIMITATIONS OF THE STUDY

1. The study is limited to only one public enterprise in India.
2. The present study is limited for a specified period of eight years from 2001-02 to 2008-09.
3. This study is mainly based on secondary data from published annual reports, websites and literature. The limitations of secondary data influence the study.
4. Large number of human resource valuation models being practiced the world over. However, in India most of the public enterprises have accepted the Lev & Schwartz model for the valuation of human resources.

CCI had adopted the model suggested by Lev & Schwartz with refinements suggested by Eric Flamholtz, Jaggi & Lau. The conclusion might be more fruitful, if inter model comparison was performed.

SUGGESTIONS

1. This study suggests that the seriousness in valuation and reporting of human resources is needed to be enhanced at enterprises in India.
2. At this juncture formulation of generally accepted human accounting standard is essential.
3. Human Resource Accounting and Reporting must be made mandatory by companies act and this information must be audited.
4. CCI had adopted the model suggested by Lev & Schwartz with refinements suggested by Eric Flamholtz, Jaggi & Lau. Serious efforts must be taken to improve, modify and provide more detailed information regarding proper valuation of human resource in India.
5. At this juncture it is necessary to formulate International Accounting Standards for Human Resource Accounting and Valuation.

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