

HUMAN RESOURCE ACCOUNTING DISCLOSURE PRACTICES: A COMPARATIVE ANALYSIS OF BHEL, HPCL, AND BPCL

***Ardra Gopan, **Prof (Dr.) Anitha S**

Abstract

This study performs a comparative analysis of Human Resource Accounting (HRA) disclosure practices in three major Indian public sector companies BHEL (Bharat Heavy Electricals Limited), HPCL (Hindustan Petroleum Corporation Limited), and Bharat Petroleum Corporation Ltd. (BPCL). This study examines the frameworks and methods employed by these companies for Human Resource Accounting (HRA), as well as the factors that impact their reporting practices. The factors encompass organizational age, profitability, capital structure, enterprise value, and turnover. The study utilizes both descriptive and comparative research techniques to get insight into the present condition of HRA disclosures in these companies. The comparative aspect focuses on conducting an in-depth analysis of the differences in HRA reporting between BHEL, HPCL, and BPCL. The findings show notable differences in HRA methodologies and the transparency of disclosures among the companies. This comparative analysis deepens the understanding of HRA practices in the Indian corporate sector and provides valuable insights for investors, stakeholders, and academics aiming to improve the effectiveness of HRA reporting.

Keywords:- Human Resource Accounting (HRA), Disclosure Frameworks, Reporting Practices, Determinants of HRA, Corporate Reporting.

Human Resource Accounting (HRA) originated in the 1960s, recognizing the crucial role that human resources play in organizational performance. As developed countries

shift towards service-based economies, Human Resource Accounting (HRA) has once again regained its prominence in the corporate sector.

HRA leverages the core skills, knowledge, intelligence, and competencies

**Ardra Gopan, Corresponding author, Research Scholar, Department of Commerce, Government College Attingal, University of Kerala, Trivandrum, Indiaardragopan@gmail.com*

Orcid id : <https://orcid.org/0009-0008-5241-4666>

***Prof (Dr.) Anitha S, Professor of Commerce, Government College, Attingal, University of Kerala, Trivandrum, India.*

of human resources, thereby generating value that significantly influences financial performance and investor decisions. In the accounting domain, reporting models have been a focal point, with various theories and methodologies suggested for valuing human resources. The ongoing research in HRA Disclosure Practices (HRADP) seeks to provide innovative frameworks and approaches that may effectively harness the full potential of human resources in the corporate context. Nevertheless, there is still a disparity between theoretical notions and real implementation, which requires more scrutiny of valuation and disclosure methods, particularly within the Indian business sector.

Traditional accounting practices have largely focused on tangible and monetary assets, often overlooking the inherent value of human capital. However, recognizing the significance and benefits of HRA has prompted calls for a fundamental shift in the traditional accounting practices of Indian companies. HRA offers a systematic approach to assessing and quantifying the value of an organization's human resources, aiding managerial decision-making. Human Resource Accounting Disclosure Practices (HRADP) also play a critical role in investment decisions by integrating HRA information into financial reports, providing valuable insights into company performance. Despite its potential, HRA faces challenges in adoption and implementation due to the lack of standardized methodologies and empirical research. Nonetheless, with the increasing significance of human resource in today's knowledge-driven economy,

HRA is poised to become an essential tool for strategic decision-making and enhanced organizational performance. As organizations navigate the complexities of the business environment, incorporating HRADP into financial reporting methods is crucial. Organizations that adopt HRA as a strategic priority can maximize their human resources' potential, leading to sustained growth and a competitive edge.

II. Statement of the Problem

The lack of standardized methods for Human Resource Accounting (HRA) and the growth of a knowledge-driven economy have increased the importance of HRA, leading to inconsistent HRA reporting in the Indian corporate sector. Additionally, the lack of comprehensive research on Human Resource Accounting Disclosure Practices (HRADP) in Indian public sector companies highlights the need to analyse their HRADP. This gap between theoretical HRA concepts and practical application hinders the development of standardized and transparent methodologies. This study aims to address these issues, enhance HRA practices, and improve transparency in human resource disclosures.

III. Scope of the Study

The scope of this research involves a comparative analysis of Human Resource Accounting (HRA) disclosure practices in three major Indian public sector companies: BHEL, HPCL, and BPCL. It examines the frameworks, techniques, and specific HRA practices these organizations follow, as well as factors influencing their HRA reporting, such as organizational age, profitability, capital structure, enterprise value, turnover. Through a

detailed comparative analysis of HRA techniques and disclosure transparency, consistency and comprehensiveness, the research provides deeper understanding regarding current scenario of HRA practices followed and valuable insights for investors, stakeholders, and academics aiming to enhance the effectiveness of HRA reporting within the Indian corporate sector.

IV. Research Objectives

This section details the methodology designed to achieve the research objectives:

1. Identify the Human Resource Accounting methods and discounting rate followed by the selected Indian companies.
2. Analysing the disclosure frameworks and practices of Human Resource Accounting (HRA) by selected Indian companies.
3. To explore the determinants of Human Resource Accounting reporting practices of BHEL, HPCL, and BPCL.

V. Significance of the Study

The rationale of undertaking this study is due to the limited published research work on human resource accounting disclosure practices [HRADP] followed by Indian Public sector companies. The study aims to investigate the Human Resource Accounting (HRA) practices among selected Indian public sector companies, namely BHEL, HPCL, and BPCL. It focuses on identifying specific HRA methods and discounting rates used by these companies, analysing their disclosure frameworks, and exploring

factors influencing their HRA reporting. By addressing these objectives, the research intends to bridge the gap between theoretical HRA concepts and their practical application in the Indian corporate sector, thereby providing valuable insights into enhancing HRA methodologies and promoting transparency in human resource disclosures.

VI. Research Methodology

The present study employs a descriptive methodology to analyse and evaluate data related to human resources and firm valuation. A purposive sampling approach is utilized to select the sample units, consisting of companies listed on the NSE-500 Index in India. Three publicly traded companies, namely BHEL, HPCL and BPCL, are chosen for the study based on their adoption of human resource accounting in financial reporting. The study spans over ten consecutive financial reporting years, from 2013 to 2022, during which the selected organizations are expected to provide measurable data in their financial reports. Data collection is conducted directly from the companies' websites, with direct contact established if information is unavailable online. Annual reports serve as the primary source for understanding disclosures related to the valuation of human assets. Additionally, other financial records are utilized to ascertain the market valuation of the companies' stocks. The study develops a Human Resource Accounting Disclosure Index (HRADI) comprising 23 variables and utilizes Multiple Regression Analysis to examine reporting determinants.

VII. Discussions and Findings

1. The first objective of this research is to identify the Human Resource Accounting Methods and discounting rate followed by the selected Indian companies:

To achieve this objective, the annual reports of these companies were analysed, and a disclosure index was calculated. Both HPCL and BHEL have adopted the Lev and Schwartz Model for Human Resource Accounting (HRA), implemented in fiscal years 1981-82 and 1974-75, respectively. This model assesses the economic value of human capital by estimating the present value of future earnings. In contrast, BPCL lacks a specific HRA framework, suggesting a less organized approach to reporting. The discounting rates differ significantly: HPCL employs 8.50 per cent, BHEL uses 11.54 per cent, and BPCL applies 12 per cent. These variations imply differing levels of thoroughness and transparency in HRA reporting. HPCL and BHEL's adoption of a structured model could enhance the reliability and comparability of their HRA data, while BPCL's absence

of a defined model and higher discounting rate may indicate potential inconsistencies in human resource valuation.

2. The second objective of the research is to analysing the disclosure frameworks and practices of Human Resource Accounting (HRA) by Selected Indian companies:

To achieve this objective, the annual reports of the selected companies were analysed, and a Human Resource Accounting Disclosure Index was calculated.

The analysis of Human Resource Accounting Disclosure Index (HRADI) variables for HPCL, BHEL, and BPCL reveals significant disparities in their HRA practices and reporting. The analysis of Human Resource Accounting Disclosure Index (HRADI) variables across HPCL, BHEL, and BPCL indicates significant disparities in their HRA practices and reporting. HPCL emerges as the leader with the highest overall score of 98, resulting in an HRADI of 60.9, showcasing transparency and detailed reporting. BHEL follows closely behind

Table 1

Human Resource Accounting Methods followed by the Selected Indian Companies

No	Name of Corporate	HRA Introduced in The Year	Model	Discounting rate
1	Hindustan Petroleum Corporation Limited (HPCL)	1981-82	Lev and Schwartz Model	8.50%
2	Bharat Heavy Electronics limited (BHEL)	1974-75	Lev and Schwartz Model	11.54%
3	Bharat Petroleum Corporation Ltd. (BPCL)	1991-92	Not Reported	12%

Source: Compiled by the Author from Annual Reports

Table 2
Human Resource Accounting Disclosure Index Score

NO	HRADI Variables	HPCL	BHEL	BPCL
1	Employee Value Added	7	7	7
2	Group Wise Distribution	0	0	0
3	Number of Employees in The Organization	7	7	7
4	Distribution of Employees by Age and Category	7	7	7
5	Professional Profiles of Employees	0	7	0
6	Average Employee Experience	0	7	0
7	Expenditure on Employee Recruitment, Training and Development	7	7	7
8	Expenditure on Employee Welfare, Incentives, Salaries, Bonuses, And Increments	7	7	0
9	Employment Policies and Reports	7	0	0
10	Human Resource Engagement and Management Activities	0	0	0
11	Intellectual Capital Management	0	0	5
12	Human Resource Policies	7	0	0
13	Total Value of Human Resources	7	7	7
14	Turnover Rate per Employee	7	0	0
15	Return on Human Resource	7	7	0
16	Performance Recognition and Evaluation	0	0	0
17	Expenses on Employee Benefits	7	0	0
18	Compensation for Executive Personnel	7	7	0
19	Retirement Benefits	0	0	0
20	Health, Safety, and Environmental Practices	0	0	0
21	Human Rights and Labour Practices	0	0	0
22	Average Age of Employees	7	7	0
23	Industrial Relations	0	7	0
	TOTAL SCORE	98	84	40
	HRADI	60.9	52.1	24.8

Source: Compiled by the Author from Annual Reports

with a score of 84 and an HRADI of 52.1, demonstrating a moderate level of detail. In contrast, BPCL lags significantly with the lowest score of 40 and an HRADI of 24.8, indicating minimal adherence to comprehensive HRA practices. These findings highlight the importance of implementing standardized guidelines and mandatory disclosure requirements to ensure consistency,

transparency, and completeness in HRA reporting. Enhancing the reliability of HRA information can facilitate better-informed strategic decision-making in Indian companies.

3. The third objective of research to explore the determinants of Human Resource Accounting reporting practices of BHEL, HPCL, and BPCL.

After conducting tests, the researcher identified various determinants that affect HRA and human resource disclosure separately. The determinants of HRA practices include the firm's age, sales revenue, overall profitability, and company value.

The descriptive analysis of Bharat Heavy Electronics Limited (BHEL) over a 10-year period from 2013 to 2022 reveals insights into various key variables. The average disclosure of Human Resource variables is 31.31 per cent, with minimal and maximal disclosures of 29 per cent and 36.34 per cent, respectively, indicating a relatively consistent level of disclosure over time. Other key financial metrics include an average Return on Equity (ROE) of 0.1590, Return on Capital Employed (ROCE) of 22.087, Return on Net Worth (RONW) of 14.598, and Earnings Per Share (EPS) of Rs. 35.12. The average Human Resource

value is Rs. 13,757.2 Crores, with fluctuations indicated by a standard deviation of Rs. 4,066.714 Crores. The company's average number of employees is 44,846, with an average Return on Human Capital (HCROI) of 1.9624, indicating a positive return on investment from employees. Additionally, the firm's average turnover and Profit After Tax (PAT) stand at Rs. 35,965.2 Crores and Rs. 3,259.8 Crores, respectively.

The descriptive analysis of Bharat Petroleum Corporation Limited (BPCL) over a 10-year period from 2013 to 2022 reveals several key insights. The company's average disclosure of Human Resource variables stands at 27.91 per cent, with minimal fluctuations and a standard deviation of 2.0378, indicating consistency in HR variable disclosure over time. Other key financial metrics include an average Return on Equity (ROE) of 0.088, Return on Capital Employed (ROCE) of 14.911,

Table 3

Descriptive Analysis of Bharat Heavy Electronics Limited (BHEL)

Variables	Mean	SD	Median	Min	Max	Skew	Kurt
HRADI	31.32	2.933	29.334	29	36.34	0.5808	-1.592
ROA	0.1590	0.1394	0.1667	-0.022	0.331	-0.022	-1.972
ROCE	22.087	18.4147	22.216	-2.49	44.74	-0.022	-1.952
RONW	14.598	12.5093	16.104	-2.3	29.81	-0.063	-1.946
EPS	35.12	42.7195	20.586	-3.37	122.9	0.8735	-0.800
PAT	3259.8	2730.068	3299.4	-710	7041	0.0458	-1.660
TURNOVER	35965.2	9154.614	32550.4	26586	50157	0.4499	-1.625
HR VALUE	13757.2	4066.714	12577	8382	19461	0.2558	-1.675
EMPLOYEE COST	5248	876.0995	5425	2985	6027	-1.613	1.594
FIRM VALUE	50803.4	29659.75	43354	17883	107110	0.6304	-1.026
CAPITAL EMPLOYED	27010.64	7832.508	31440.35	13088.19	34145.6	-0.667	-1.382
EMPLOYEE NO	44846.7	3835.83	45971	37541	49391	-0.652	-1.064
AGE	49.6	3.0278	49.5	45	54	0	-1.517
HCROI	1.9624	0.7729	2.1243	0.7837	2.8883	-0.204	-1.899

Source: Created by the author using e-views from annual reports of BHEL

Table 4

Descriptive Analysis of Bharat Petroleum Corporation Limited (BPCL)

Variables	Mean	SD	Median	Min	Max	Skew	Kurt
HRADI	27.91	2.0378	27	25.34	30	-0.045	-1.946
ROA	0.088	0.0706	0.0706	0.0153	0.1975	0.2607	-1.823
ROCE	14.912	8.6013	14.694	4.13	27.54	0.0677	-1.864
RONW	17.458	7.7735	18.36	6.05	27.36	-0.0776	-1.754
EPS	19.7	14.8074	15.45	3.38	40.86	0.3802	-1.717
PAT	3993.4	2867.368	3352	735	8039	0.3009	-1.765
TURNOVER	206782.6	54527.13	225031	122275	277162	-0.328	-1.609
HR VALUE	18632.5	6517.643	19103.4	10084	28310	0.0446	-1.656
EMPLOYEE COST	2653.2	544.7195	2766.5	1883	3431	0.0794	-1.547
FIRM VALUE	61904.1	26977.54	50826.4	34347	106935	0.6593	-1.268
CAPITAL EMPLOYED	29546.64	12021.28	28267.45	15886.56	48911	0.2471	-1.642
EMPLOYEE NO	13133.6	670.1464	13213.5	12018	140160	-0.1281	-1.499
AGE	36.3	3.0277	0.1091	0.0699	0.2254	0.3595	-1.808
HCROI	3.0511	1.2563	2.7559	1.5305	4.6994	0.1442	-1.926

Source: Created by the author using e-views from annual reports of BPCL

Return on Net Worth (RONW) of 17.458, and Earnings Per Share (EPS) of Rs. 19.5. The average HR value is Rs. 18,645.5 crores, with a standard deviation of Rs. 6,517.643 crores, suggesting fluctuations in employee value over the study period. The company employs an average of 13,133 employees, with a Return on Human Capital (HCROI) of 3.0511. Additionally, the average turnover and Profit After Tax (PAT) are Rs. 206,782.6 crores and Rs. 3,993.4 crores, respectively.

The 10-year analysis of Hindustan Petroleum Corporation Limited (HPCL) from 2013 to 2022 shows that the average disclosure of Human Resource variables is 34.85 per cent, with minor variations and a standard deviation of 3.94 per cent. Key financial metrics reveal an average Return on Equity (ROE) of 0.0356, Return on Capital Employed (ROCE) of 9.186, Return on Net Worth (RONW) of

14.90, and Earnings Per Share (EPS) of Rs. 48.294. The average HR value stands at Rs. 23,268 Crores, with a standard deviation of Rs. 6,814.87 Crores. The company has an average workforce of 10,884 employees, achieving a Return on Human Capital (HCROI) of 2.6223. Furthermore, the average turnover is Rs. 189,660 Crores, and the Profit After Tax (PAT) averages Rs. 2,612.8 Crores.

Statistical Result of Multiple Regression Analysis

The regression analysis findings indicate that approximately 58.29 per cent of the variations in Human Resource Value can be explained by factors such as age, profitability, capital structure, enterprise value, turnover within Indian enterprises. After adjustment, the corrected R-squared value increases to 62.06 per cent, suggesting a significant collective contribution of these factors to

Table 5
Descriptive Analysis of Hindustan Petroleum Corporation Limited

Variables	Mean	SD	Median	Min	Max	Skew	Kurt
HRADI	34.85	3.9435	35	28.666	40	-0.4156	-1.501
ROA	0.0356	0.0252	0.0253	0.0117	0.0792	0.6121	-1.364
ROCE	9.186	9.6501	5.48	1.8	29.21	1.1867	-0.385
RONW	14.906	8.6712	11.9	5.36	30.52	0.5452	-1.292
EPS	48.294	28.8602	41.23	16.97	114.08	1.1086	0.060
PAT	2612.8	2163.87	1636.4	574	6358	0.775	-1.152
TURNOVER	189660	44613.36	205616.6	114890	243226	-0.4893	-1.476
HR VALUE	23268	6814.877	23328	13148	34882	0.2090	-1.211
EMPLOYEE COST	2144.4	581.0582	2172.4	1137	2947	-0.1990	-1.325
FIRM VALUE	44228.3	14472.54	40105.4	31280	70854	1.0624	-0.624
CAPITAL EMPLOYED	26321.77	5173.059	27806.54	17964.83	32778	-0.3466	-1.585
NO OF EMPLOYEES	10884.3	372.0755	10943.6	10353	11293	-0.197	-1.850
AGE	61.5	3.0277	61.4	57	66	0	-1.562
HCROI	2.6223	0.9765	2.3001	1.5839	4.2187	0.5148	-1.451

Source: Created by the author using e-views from annual reports of HPCL

HR Value. The results indicate a positive and statistically significant relationship between profitability and Human Resource value, with p-values of 0.0013 and 0.0029 (both less than 0.05), suggesting that more profitable companies tend to have higher HR values. Similarly, sales demonstrate a positive and significant association with HR value, with a p-value of 0.037 (less than 0.05), indicating that higher sales correlate with higher HR values. However, the analysis reveals that capital structure exhibits a positive but insignificant relationship with HR value, as the p-value is 0.2937 (greater than 0.05), suggesting no significant impact of capital structure on HR value. The analysis demonstrated that the firm's sales and leverage do not have a substantial impact on HR disclosure practices. This implies that the HR disclosure practices of Indian companies are more significantly influenced by factors such as the firm's

age, profitability, value, and ownership structure.

VIII. Suggestions

Based on the above findings, here are some suggestions for further action:

- **Standardize guidelines:** Implement standardized guidelines and mandatory disclosure requirements for Human Resource Accounting (HRA) reporting across both public and private sector organizations. This will ensure consistency, transparency, and completeness in HRA reporting, thereby enhancing the reliability of HRA information.
- **Promote robust HRA models:** Encourage the broader adoption of robust HRA models like the Lev and Schwartz Model within Indian enterprises. These models offer a systematic method for valuing

human resources, thereby improving the reliability and usefulness of HRA information.

- **Address regulatory gaps:** Address the absence of uniform accounting standards and mandatory HRA disclosure regulations in India. By implementing regulations and standards, organizations will be encouraged to adopt consistent and transparent HRA practices.
- **Prioritize key determinants:** Focus on understanding and addressing key determinants influencing HRA practices, including organizational age, sales revenue, overall profitability, and firm value. This knowledge will enable companies to better deploy their resources to strengthen their human capital and raise HR value.
- **Improve HR disclosure practices:** Improve Human Resource (HR) reporting practices by considering elements such as the company's age, scale, profitability, value, and ownership structure. By factoring in these aspects, organizations can refine the transparency and

effectiveness of their HR reporting practices.

IX. Conclusion

Addressing the gaps in Human Resource Accounting (HRA) practices in Indian corporate sector is crucial for enhancing transparency and reliability in reporting. Findings of the current study emphasize on the importance of standardizing guidelines and implementing mandatory disclosure requirements can ensure consistency and completeness in HRA reporting, thereby improving the reliability of HRA information. Encouraging the adoption of robust HRA models such as the Lev and Schwartz Model provides a structured approach to valuing human resources, further enhancing the dependability of HRA data. Additionally, tackling regulatory gaps and prioritizing key determinants influencing HRA practices are essential steps toward strengthening human capital and increasing HR value. By enhancing HR disclosure practices and considering various organizational factors, companies can improve transparency and effectiveness in their HR reporting, ultimately leading to better decision-making and organizational performance.

References

1. Kaur, S., Raman, A. V., & Singhania, M. (2014). Human resource accounting disclosure practices in Indian companies. *Vision*, 18(3), 217-235.
2. Sahari, S., Tinggi, M., Cheuk, S., & Nordin, N. A. (2018). A review of Delphi technique in developing human capital disclosure index. *Academy of Accounting and Financial Studies Journal*, 22(4), 1-9.
3. K. Shyam Kumar. " Perception of Human Resource Accounting Practices in Bhel." *IOSR Journal of Business and Management (IOSR-JBM)*, 22(1), 2020, pp. 15-22.

4. Hariono, J., Orbaningsih, D., & Lisa, O. *Determinants of Human Resources Accounting Disclosure and their Impact on Financial Performance as Intervening Variables.*
5. Shreelatha, H. R., & Sinha, R. (2018). *Measuring personnel through human resource accounting reports-A case study of Hindustan Petroleum Corporation Ltd. International Journal of Recent Scientific Research, 9(3-1), 25241-25244.*
6. Puspitawati, L., & Virginia, M. (2022). *Human Resources Competency in The Successful of Financial Digitization and Its Impact on The Financial Statement Performance in society 5.0. In Proceeding of International Conference on Business, Economics, Social Sciences, and Humanities (Vol. 5, pp. 746-757).*
7. Bhagat, M., Dutta, B. K., & Dutta, M. (2011). *Human Resource Accounting-The New Perspective. Asia Pacific Journal of Research in Business Management, 2(9), 81-92.*
8. Cherian, J., & Farouq, S. (2013). *A review of human resource accounting and organizational performance. International Journal of Economics and Finance, 5(8), 74-83.*

LECTURES ON BHAGAWAD GITA AND MANAGEMENT

Dr. C.V. Jayamani

Explains the application of our traditional management concepts described in Bhagawad Gita in solving modern management problems

Bhagawad Gita and Management * Bhagawad Gita - a Behavioural Approach
 * Towards Effective Communication * Managerial Excellence -
 Gita Perspective * Executive's Health * Personality and Excellence
 * Globalization - Impact on Executive Health and Efficiency * Health
 Management - Gita Perspective * Healthy Lifestyle for Prospective
 Executives * Managing Social Organizations - Traditional Way * Alternative
 Initiative for Eco-friendly Living

**Bharatiya Institute for Advanced Studies and Research
 Samskriti Bhavan, GPO Lane, Thiruvananthapuram**

Published in 2007

Pages 117

Priced Rs. 75

Paperback