



The impact of human resource accounting on manufacturing company performance in India: A study on NTPC

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Abstract

The article examined NTPC data related to Human Resource Accounting (HRA). It specifically analyzed key metrics, including value added, the total number of employees, and the value added per employee. To investigate the relationships among these factors, the author formulated two distinct hypotheses. The first hypothesis explored the connection between the total value added and the number of employees. The second hypothesis looked into the relationship between the number of employees and the value added per employee. The results of the analysis supported the first hypothesis while rejecting the second. This indicates that as the number of employees increases, the total value added by the company also tends to rise. However, the data did not show a significant connection between the total number of employees and the value added per employee. A correlation method was utilized to assess the strength and direction of these relationships, providing a clearer understanding of the data. The article concluded that both the company and its employees must take steps to implement HRA effectively. Additionally, it suggested that support from legal bodies and accounting boards is essential in this process. This collaborative effort could enhance transparency and better reflect the true value of human resources within the organization.

Keywords: Human resources, accounting practices, companies, NTPC, HRM, organizations, regulatory bodies.

Introduction

Numerous authors have urged companies, accounting organizations, and regulatory bodies to adopt Human Resource Accounting (HRA) as a standard practice. Despite these repeated calls, no country or accounting institution has taken significant steps to make HRA a mandatory part of financial reporting. This absence of action raises the question: why has HRA not been implemented? The lack of a valid reason for this oversight is striking. Human resources play a crucial role in the creation and sustainability of various assets such as furniture, patents, buildings, and machinery. These physical and intellectual assets are routinely included in the balance sheets of companies, reflecting their value and contribution to business operations. However, the same recognition is not afforded to human resources. This exclusion highlights a gap in accounting practices and represents a significant shortcoming in the field of accounting literature.

In India, a small number of public sector companies have begun to acknowledge the importance of human resources in their financial documents. One notable example is the National Thermal Power Corporation (NTPC). Established in 1975, NTPC has grown to become India's largest power producer, with a total installed capacity of 76,442.78 MW. For several years, NTPC has included metrics of value added per employee in its annual reports. This practice not only showcases the contribution of its workforce but also sets a precedent for recognizing human resources in financial statements. In summary, while some progress has been made by individual companies like NTPC, the broader issue of integrating Human Resource Accounting into standard accounting practices remains unresolved. The lack of attention to this area leaves a gap that needs addressing for a complete understanding of a company's assets.

Human resources represent a critical element in production, essential for the successful operation of any business,

regardless of the availability of other resources such as materials, machinery, and capital. This domain is interconnected with all other components of a business, including M' and P'. Human resources accounting is a technique used to assess the value and costs associated with human resources within an organization. This process involves identifying and quantifying expenses related to recruitment, selection, hiring, training, and development, and subsequently presenting this information to relevant stakeholders. In the early 1691, William Petty, a trailblazer in this field, made the pioneering effort to assign a monetary value to human beings, recognizing them as vital contributors to every sector and considering them part of the national wealth. Over the years, this concept has inspired the establishment of various methods and procedures for evaluating the worth and cost of individuals to an organization. Numerous scholars have contributed to this area, including Shultz (1960), William C. Pyle (1967), Flam Holtz (1971-1975), and Morse (1973), among others. The notion that 'employee satisfaction leads to customer satisfaction, which in turn drives profitability' underscores the importance of human resource skills, quality, creativity, intelligence, and overall contentment as key factors in the success of any informed organization.

Literature Review

Murugesan Selvam *et al.* (2019) ^[1] conducted study on "Intellectual Capital Performance and its impact on Indian Commercial Banking Industry". To quantify the influence of IC on Indian commercial banks, the study offers to analyse and estimate the VAIC. The influence of the Indian banking sector's human and physical capital on the bank's value-based performance was investigated. Over the research period, the general performance of sample banks improved, according to the study. The report demonstrates the disproportionate expansion of a few segments of the

Indian banking industry. The study attempted to examine the implications of the Indian banking sector's business performance from the standpoint of intellectual capital, and discovered that there is a strong link between IC and financial success of chosen enterprises.

Murugesan Selvam *et al.* (2019) ^[1] conducted a study titled "Intellectual Capital Performance and its Impact on the Indian Commercial Banking Industry." This research aimed to quantify the effect of intellectual capital (IC) on Indian commercial banks by analyzing and estimating the Value Added Intellectual Coefficient (VAIC). The study explored how human and physical capital within the Indian banking sector influences value-based performance. Findings indicated an overall improvement in the performance of the sampled banks throughout the research period. The report highlights the uneven growth across various segments of the Indian banking industry. Additionally, the study sought to assess the implications of business performance in the Indian banking sector from an intellectual capital perspective, revealing a significant correlation between IC and the financial success of the selected institutions. C C Christian (2022) ^[2] conducted a study titled "Artificial Intelligence In Human Resources Management And Human Resource Accounting In Nigerian Public Sector," which explored the integration of artificial intelligence in human resources management and emphasized the necessity of representing this critical asset in financial statements as part of government financial performance. The research utilized a descriptive design, making it exploratory in nature, supported by a comprehensive review of relevant literature on artificial intelligence, human resources management, and human resources accounting. The findings indicated that artificial intelligence is progressively influencing various aspects of human resources management, yet many organizations have not adequately acknowledged these changes in their financial statements as required. Consequently, the paper recommended that human resources in the public sector should be accurately evaluated and further enhanced through motivational training and development, as well as an understanding of the organization's needs. This approach will aid in assessing the government's financial performance, as it will be reflected in the financial statements. Additionally, the impact of artificial intelligence on human capital within organizations suggests that the costs associated with acquiring both artificial intelligence and human capital will also be evident in the organization's financial statements. Future empirical research is encouraged to further investigate the relationship between these variables. D. Johar *et al.* (2022) conducted a research study titled "Study of Human Resource Accounting Practices—An Overview," which outlines the concept of Human Resource Accounting (HRA) that emerged in the 1980s. HRA involves the identification, communication, and measurement of data related to human resources. In today's competitive market, it is increasingly challenging to locate individuals who are both knowledgeable and highly motivated. Nevertheless, human resources remain a critical component of any organization or business. The absence of human involvement can significantly diminish operational efficiency, as human performance is essential across all business functions and levels, complementing machine efficiency. Therefore, it is imperative for companies to acknowledge and value their employees as vital assets and investments. This paper aims to explore human resource

accounting practices, identify associated challenges and issues, and provide recommendations based on the study's findings. ShreeLatha H R and colleagues conducted a study in 2018 titled "Measuring Personnel Through Human Resource Accounting Reports – A Case Study Of Hindustan Petroleum Corporation Ltd." This research highlights the critical role of human capital in determining the success of an organization. Effective and efficient use of human resources is essential for any business looking to thrive. When employees are motivated and dedicated, the machinery and technology within the organization operate at their best. This leads to higher quality outputs and, ultimately, increases profits. The value of human contribution to an organization's growth can be captured in the words of Vedavyas from the epic 'Mahabharath', which emphasizes that "nothing is superior to man." This perspective underlines the necessity of recognizing human beings as the most important asset in any company. With this foundation, the study aims to define Human Resource Accounting (HRA) and explore how human capital is measured for financial reporting. The paper also discusses the specific HRA practices adopted by Hindustan Petroleum Corporation Limited (HPCL). These practices help organizations understand the worth of their employees and make informed decisions that promote growth and success. A study conducted by Venugopal and colleagues in 2019 explored the value of human resource accounting in strategic planning and decision-making. The research highlighted the importance of both human resources (HR) and accounting in organizations. Despite their significance, these two areas often function separately, with limited collaboration. This separation has led many businesses to overlook how intertwined employee performance is with financial outcomes. Traditionally, companies viewed employees primarily as costs. Expenses like salaries, benefits, recruitment, and termination received far more focus than the positive contributions that employees made to the business. This mindset is shifting. Businesses are beginning to recognize that employees are not just expenses but essential assets that drive success.

Today, companies are starting to value employee contributions more deeply. Factors such as productivity, expertise, creativity, and problem-solving skills are now seen as vital for generating revenue and increasing profits. This change in perspective is significant. As organizations adopt this new viewpoint, they can enhance strategic planning and make better-informed decisions that take into account the full value of their workforce. Understanding human resources as critical to financial success allows companies to harness the true potential of their employees, creating a more integrated approach to managing people and finances.

Scope and limitations of the study

This research focused exclusively on a single company. The data analyzed in this study is limited to a period of ten years. This specific timeframe provides a clear snapshot of the company's performance and trends over the last decade. By concentrating on just one organization, the findings may reflect unique circumstances and factors that could differ from broader industry trends or other companies. This approach allows for an in-depth analysis of that company's history, strategies, and results. However, it also means that the conclusions drawn may not apply universally across

different businesses or sectors. The limited scope can restrict the generalization of results, as they are tied to the specific context of this single entity.

Objectives of the study

1. To examine the correlation between the value added by the company and the value added per employee.
2. To investigate the connection between the number of employees and the value added per employee.

Hypothesis

H01: There is no significant correlation between the value added by the company and the value added per employee.

H02: There is no significant correlation between the number of employees and the value added per employee.

Research methodology

The author employed a descriptive research design for this study. This method allowed for a comprehensive examination of the subject matter without manipulation of variables. To analyze the data and test the hypotheses, the Pearson correlation method was applied. This statistical technique measures the strength and direction of the relationship between two variables. The analysis was performed using MS Excel, a widely used software that provides powerful tools for statistical computations. All the data utilized in this research came exclusively from secondary sources. The author relied on existing information rather than collecting new data. Specifically, the data consisted of annual reports from NTPC, a major player in the power sector. These reports were sourced from the National Stock Exchange (NSE) website, ensuring the information was both reliable and accessible. The study covered a significant time frame of ten years, from the financial year 2013-14 to 2022-23. This period allowed for a detailed assessment of trends and patterns in the data. By analyzing a decade's worth of information, the author aimed to draw meaningful conclusions about the subject, contributing valuable insights to the existing body of knowledge.

Analysis of data

The table included below provides crucial information about two important factors: the total number of employees in the organization and the value added for each employee. This data is essential for understanding the productivity and efficiency of the workforce. By examining these figures, one can gain insight into how effectively the organization utilizes its human resources to generate value. The number of employees indicates the size of the workforce, while the value added per employee reflects the economic contribution made by each individual. Together, these metrics help assess overall performance and guide future decision-making. The following table clearly summarizes this important data for review and analysis.

Table 1: Correlations

		Number of employees	Value added per employee
Number of employees	Pearson Correlation	1	-.928**
	Sig. (2-tailed)		.000
	N	10	10
Value Added Per Employee	Pearson Correlation	-.928**	1
	Sig. (2-tailed)	.000	
	N	10	10

** . Correlation is significant at the 0.01 level (2-tailed).

The data presented in the table indicates that there is no significant positive relationship between the number of employees and the value added per employee when evaluating at a 5% significance level. This suggests that changes in the number of employees do not lead to corresponding changes in the value each employee adds. As a result, the hypothesis, labeled H02, which assumes there is no relationship, is accepted. This outcome implies that increasing the workforce does not necessarily enhance productivity or value creation on a per-employee basis. Understanding this relationship is crucial for decision-making in workforce management and organizational efficiency.

Table 2: Correlations

		Value added	Value added per employee
Value added	Pearson Correlation	1	.999**
	Sig. (2-tailed)		.000
	N	10	10
Value added per employee	Pearson Correlation	.999**	1
	Sig. (2-tailed)	.000	
	N	10	10

** . Correlation is significant at the 0.01 level (2-tailed).

The table presented offers clear evidence of a positive and significant relationship between value added and value added per employee. This relationship is statistically significant at the 5% significance level. As a result, we reject the null hypothesis denoted as H01. The analysis indicates that as value added increases, there is a corresponding increase in the value added per employee. This finding suggests a strong link between overall productivity and individual employee contribution within the organization. Such insights are essential for understanding how efficiency and productivity are interconnected in a business setting. The rejection of the null hypothesis confirms that the data supports the notion of enhanced employee performance as value added rises.

Findings and Discussions

Analysis revealed that there is no clear connection between the number of employees and the value added per employee within the company. As the workforce shrinks, the value added per employee also tends to decline. This finding contrast sharply with another observation: a positive relationship exists between total value added and value added per employee. In other words, when total value added grows, the value created by each employee increases as well. This shows that while having fewer employees may lead to lower individual productivity, increasing the overall output of the company leads to enhanced productivity per employee. Thus, the dynamics between these two sets of data highlight important trends in employee efficiency and overall company performance.

Conclusion

Over the years, the importance of Human Rights Assessment (HRA) has been growing significantly, prompting companies and employees alike to take notice. There has been a widespread push for the integration of HRA into annual reports, underscoring the need for a proactive approach towards social responsibility. Despite being a topic of discussion for many years, the practical implementation of HRA has fallen short in many instances. However, it is heartening to observe that some companies

have begun taking the necessary steps to include detailed HRA information in their annual reports, demonstrating a genuine commitment to transparency and accountability. As such, stakeholders are encouraged to familiarize themselves with HRA practices and actively participate in its effective implementation to drive positive change within their organizations and beyond. Efforts in this direction not only promote ethical business conduct but also contribute to a more sustainable and socially-conscious global business landscape.

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