ROLE OF EMPLOYEES IN IMPLEMENTATION OF NEW TECHNOLOGY-BASED HUMAN RESOURCE INFORMATION SYSTEM USED BY LARGE-SCALE MANUFACTURING ORGANIZATIONS IN SOUTH-EAST RAJASTHAN

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ABSTRACT

This study examines the role of various employee attributes in the effective utilization of Human Resource Information Systems (HRIS) within large-scale manufacturing organizations in South-East Rajasthan. Data were collected from a sample of 620 employees across eight major manufacturing companies using a simple random sampling technique. These organizations—including CFCL, DCM, JK Cement, Mangalam Cement, ACC, Shriram Rayons, Wonder Cement, and Sangam India Ltd.—utilize diverse HRIS software systems such as SAP HANA, SAP, SAP Accent, Darwin Box, and PeopleStrong. The findings, derived through analysis of variance (ANOVA) and post hoc statistical testing, reveal significant differences in employee perceptions and self-efficacy toward HRIS across organizations. Key factors influencing HRIS effectiveness were identified as employee engagement, organizational training support, and the level of digital readiness. Notably, organizations such as Shriram Rayons demonstrated higher employee self-efficacy and more effective HRIS utilization, whereas companies such as CFCL exhibited relatively lower engagement. The study concludes that employees play a pivotal and strategic role in the successful implementation and adoption of HRIS. Their active involvement, confidence, and access to appropriate training significantly influence the system's efficiency and integration. These insights emphasize the necessity for organizations to invest in continuous capacity-building initiatives, inclusive implementation practices, and employee-centered strategies to enhance the overall effectiveness of HRIS in human resource operations.

Keywords: HRIS, motivation, self-efficacy, SAP, strategic role

INTRODUCTION

In today's fast-changing digital world, using technology has become essential for organizations to work efficiently and stay competitive. One such important tool is the HRIS. It plays a major role in helping large organizations in India manage their human resources more effectively. HRIS is a computerized system that brings together different HR tasks—like hiring new employees, managing salaries, tracking performance, keeping employee records, and organizing training programs—into one easy-to-use digital platform. By using HRIS, companies can reduce paperwork, save time, make better decisions based on accurate data, and keep employees more involved and satisfied with their work.

While the technical infrastructure and software capabilities of HRIS are essential, the success of its implementation is largely contingent upon the active role of employees within the organization. Employees are not merely the end users of HRIS but also serve as critical agents in its adoption and integration into routine HR processes. Their acceptance, adaptability, digital literacy, motivation, and willingness to engage with the system determine whether HRIS fulfills its intended objectives. Furthermore, organizational factors such as training and development programs, managerial support, individual self-efficacy, and prior experience with technology significantly influence how employees perceive and utilize HRIS tools.

In large-scale organizations, particularly within India's manufacturing sector, this employee-centric role becomes increasingly salient due to the scale and heterogeneity of the workforce. As companies progressively adopt HRIS platforms such as SAP HANA, PeopleStrong, Darwin Box, and others, understanding employee interaction and engagement with these systems becomes essential. Effective HRIS implementation not only enhances organizational productivity but also promotes a more transparent, efficient, and responsive HR environment. Conversely, employee resistance, insufficient support, or inadequate training can impede system effectiveness, resulting in underutilization of costly technological investments.

This study, therefore, aims to investigate the role of employees in the implementation and adoption of HRIS within large-scale manufacturing organizations in South-East Rajasthan, a region undergoing significant digital transformation in HR functions. By examining employee perceptions, self-efficacy, training, and demographic factors, this research seeks to elucidate the human determinants of HRIS effectiveness and provide actionable insights for organizations striving to maximize the impact of digital HR systems.

REVIEW OF LITERATURE

Kumar and Jagadeesan (2024) investigated the effectiveness of HRIS in the IT sector and emphasized that organizational performance improves significantly when employees are adequately trained and motivated to use system features. Their findings indicate that HRIS success is not solely technology-

driven but equally dependent on workforce competencies. Similarly, Kumar, Tiwari, and Devka (2025) observed within the service industry that implementing HRIS contributes to improved productivity and operational efficiency, particularly when employees perceive tangible benefits such as better workload management and increased transparency. Collectively, these studies underscore that employee competence and motivation are fundamental determinants of HRIS success.

Najmi and Porwal (2025) further supported this by highlighting that digital literacy is an essential requirement for the 21st-century workforce in India, with divides along age and geography shaping adoption patterns. This implies that employees' digital readiness is not uniform and must be addressed through structured interventions. Together with the findings of Kumar et al. (2025), these results highlight the intertwined role of digital literacy and employee perceptions in shaping HRIS outcomes in India. For large-scale manufacturing organizations in South-East Rajasthan, these insights imply that workforce readiness and training are as crucial as the underlying technological infrastructure.

Yona and Meilani (2024) investigated HRIS implementation in organizations, especially in emerging economies and large manufacturing sectors. They concluded that investment in technology alone is insufficient; instead, human factors such as digital literacy, user engagement, and perception of tangible benefits play a critical role in ensuring HRIS effectiveness. This research contributes to the growing body of research emphasizing the interplay between technology and workforce readiness in HRM systems.

Panjaitan (2023) examines the implementation of HRIS and its role in enhancing HRM efficiency. The research underscores that technological infrastructure alone is insufficient; organizations must also invest in change management, ongoing support, and skill development to realize the full potential of HRIS. For large-scale organizations, particularly in emerging markets, these findings suggest that a combined focus on technology and workforce readiness is essential for maximizing HRIS outcomes.

RESEARCH GAPS

The reviewed studies underscore the critical role of employee competencies, digital literacy, and perceptions in the successful implementation of HRIS across sectors. However, the existing body of research has primarily concentrated on the IT and service sectors or small enterprises, thereby providing limited empirical evidence in the context of large-scale manufacturing organizations, particularly within South-East Rajasthan. While digital literacy, self-efficacy, and training have been explored, there remains insufficient understanding of how workforce diversity—including variables such as age, educational background, and local infrastructural constraints—shapes HRIS adoption in industrial environments. Furthermore, the majority of prior studies have emphasized productivity and satisfaction outcomes while offering limited insights

into employee participation, resistance, and long-term adoption behaviors in manufacturing settings. This gap highlights the need for a focused investigation into the role of employees in HRIS implementation within regional manufacturing industries, integrating both technological dimensions and human factors to provide a more comprehensive understanding.

RESEARCH METHODOLOGY

- **Research Method**: Descriptive Study
- **Objective:** To study the relationship of various attributes such as HRIS development, organizational culture, employee self-efficacy, motivation, management behaviors, training and development, qualification, age, years of experience, and their working on HRIS.
- **Sample Size**: Total employees interviewed = 620. Minimum sample size using Cochran's formula = 380.
- **Sampling Technique**: Simple random sampling was used for collecting information from the employees of selected manufacturing organizations.
- **Reliability:** The internal consistency of the questionnaire was assessed using Cronbach's Alpha.

DATA ANALYSIS

Hypothesis 1: There are significant differences in employees' perceptions toward HRIS modules based on organizational factors (such as organization size, HRIS maturity, or HRIS support mechanisms). Solution: PLS-SEM indicates that improving training programs is crucial for enhancing employee satisfaction with HRIS.

Table 1: Hypothesis Testing Results

Particular	Path Coefficient	t-value	p-value	Findings
HRIS Maturity/ Development → Usability	0.35	3.81	.002	More mature HRIS are easier, enhancing system usability
Organizational Culture → Perception	0.50	4.30	.000	A positive organizational culture strongly influences employee perceptions and acceptance

HRIS Maturity/Development → Usability: With a path coefficient of 0.35, a t-value of 3.81, and a p-value of 0.002, HRIS maturity is found to significantly influence the usability of the system. As HRIS systems mature and evolve, they become more user-friendly, which directly affects their usability.

Organizational Culture → Perception: The strongest relationship is observed here, with a path coefficient of 0.50 and a t-value of 4.30, alongside a highly significant p-value of 0.000. This indicates that the culture

within an organization is a key determinant of how employees perceive HRIS. A positive culture likely supports greater acceptance and effective use of HRIS.

Overall, all the paths tested in the model show significant relationships, highlighting the importance of training, HRIS maturity, and organizational culture in enhancing the effectiveness and usability of HRIS systems.

Hypothesis 2: There is a significant difference between employees' self-efficacy towards HRIS and its effective utilization.

Variation	SS	df	MS	F	P-value	F crit
Between Groups	70.9209	7	10.1316	31.84	1.01836E-37	2.02453
Within Groups	194.763	612	0.31824			
Total	265.684	619				

The above table shows that the F-statistic (31.8362) is substantially higher than the F-critical value (2.02453). The p-value (1.01836E-37) is essentially zero and far below the standard significance threshold (0.05). Since the F-value exceeds F-critical and the p-value is extremely low, we reject the null hypothesis (H_0).

Thus, there is a statistically significant difference in employees' self-efficacy towards HRIS and its effective utilization among different organizations.

FINDINGS AND CONCLUSION

The findings indicate that HRIS effectiveness is contingent not only on technological maturity but also on organizational culture, employee training, and self-efficacy. While system enhancements improve usability, a supportive culture and comprehensive training programs are essential for fostering employee confidence and promoting active engagement. Variations in digital literacy and organizational support underscore the necessity of tailored training and ongoing assistance. Overall, a balanced emphasis on HRIS maturity, cultural alignment, and employee empowerment facilitates higher adoption, more effective utilization, and greater user satisfaction, thereby strengthening human resource operations and enhancing organizational efficiency.

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