

LEVERAGING E-HRM FOR ENHANCED HR OPERATIONS AND BUSINESS PERFORMANCE: A STUDY IN THE IT SECTOR

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ABSTRACT

The role of e-HRM goes beyond that of simple automation. Actually, it can become a partner in the strategy, because of the synergy of HR functions and objectives of the IT Sector. The paper is devoted to the possibilities offered by e-HRM as an instrument of HR process improvement in the IT Sector. Questionnaire interviews served as the technique of information collection and statistical analysis method for its processing. Thus, it appeared that a properly implemented system of e-HRM promotes efficiency and eliminates administrative activities; besides, it supports decision-making processes. However, there could also appear several barriers, such as a reluctance of employees to change their way of work or management's unwillingness to support new technologies. To overcome those barriers, continuous support, motivation, and training are needed for successful application of e-HRM. The research is concentrated on the problem of e-HRM effectiveness in Delhi/NCR IT Sector. It should be noted that effectiveness of this approach does not only depend on technological factors but comes from the success triangle of technology, leadership, and innovation.

Keywords: E-HRM, HR Operations, IT sector, Organizational Efficiency, Technology, leadership, Organizational Culture, Success factors

INTRODUCTION

In this regard, the IT Sector in India, especially the fast-growing NCR region in Delhi, features intense competition, continuous innovation, and constant battles for

talent acquisition. In such conditions, Human Resource Management (HRM) has moved from being an auxiliary support function to that of a key strategy. e-HRM, or electronic Human Resource Management, which uses technology tools to manage HR activities, plays a central role in such transition processes. Though implemented initially for better performance outcomes, its true value consists in HRM acquiring the status of a strategic partner through data-based analysis and decision making (Madhuri and Kumar, 2025). It is not a matter of fact that the transition from implementation to realization of strategic value occurs automatically. There may be a gap where the e-HRM system performance is poor due to reasons such as poor acceptance level of users, mismatch of processes involved, and lack of any strategic perspective. In this regard, this study aims to investigate the effectiveness of e-HRM in the IT Sector in Delhi/NCR area. Instead of the mere automation of tasks, this research intends to examine the effect of e-HRM systems on the efficiency of HRM and consequently the organizational performance. In this regard, the primary research question in this study can be posed as "What impact do e-HRM have on HRM processes and organizational efficiency of IT organizations and what are the critical success factors involved?"

LITERATURE REVIEW

The development of Human Resource Management (HRM) into a strategic approach is inherently tied to the process of digitalization. E-Human Resource Management (e-HRM), which refers to the planning, implementation, and use of IT in order to facilitate the networking of actors engaged in HRM processes, has become one manifestation of this trend (Strohmeier, 2007). The theory behind it is diverse and may provide alternative perspectives on the matter.

Theoretical Basis for Acceptance: Resources to User Intention

Resource-Based View of the Firm (RBV) provides the strategic basis at the macro-level. RBV states that the foundation for sustained competitive advantage lies in VRIN (valuable, rare, inimitable, non-substitutable) resources (Madhuri and Kumar, 2025). A sophisticated e-HRM system is such a resource. By being deeply entrenched into the organization's processes, it helps create an environment where the organization's human capital structure can help it attract, develop, and retain talent better than any other organization. It allows HR information to be used strategically by the capability called Human Capital Analytics (Babu et al., 2026). Without adoption, however, the strategic value of the technology is rendered useless. Here is where the technology acceptance model (TAM) comes in (Davis, 1989). The TAM recognizes perceived usefulness and ease of use as the two critical determinants of the users' intention to use the system. Perceived usefulness is basically an indication that the system will make people more effective at their jobs (e.g., fast approvals, easy access to data). Perceived ease of use indicates that the system is easy to use. Both of these factors are essential; otherwise, users reject the technology due to resistance.

Operational Efficiency and Strategic Transformation The empirical literature has

found that the impacts of e-HRM can be grouped into operational impacts, relational impacts, and transformational impacts (Nyathi and Kekwaletswe 2024). On the operational front, the evidence is very clear, since process automation for transactional activities, such as payroll, benefits management, and attendance control results in considerable improvements in terms of cost, time, and quality. E-recruitment provides broader sourcing and automation, and a better candidate experience, impacting positively the rate and quality of inflow of new talent. Whereas the transformational value of e-HRM is achieved through data-driven HR management. Indeed, advanced HR Information Systems make possible HR analytics, meaning the identification and quantification of drivers of people-related business performance. As a result, HR can shift from simple reporting on past events to predictive modeling of future ones, such as calculating the likelihood of attrition or predicting the effect of a training intervention on performance (Pavithran and Vadivel, 2026). In other words, there is a direct connection between HR and business KPIs. Critical Human and Organizational Enablers. Recognizing that the technology adoption process itself is socio-technical in nature, there is a growing recognition in the literature of context-dependent success factors. The first of these involves strong leadership buy-in, which must include more than simply financial backing but involve active support, visionary communication, and personal example of system usage (Biswas et al., 2024). In addition, organizational culture can be thought of as either a breeding ground or an impediment to success. A culture that promotes innovations, flexibility, and trust is more likely to embrace new technologies than a rigid and resistant culture. Implementation/change management capability also becomes an important mediating variable. It is clear that pure technological implementation without much thought tends to result in failure, but a holistic approach that includes training, support, and communicating the benefits to users ("what's in it for me") performs better. The Indian IT Sector as Context for the Gap. Although extensive international research on the topic can be found in abundance, research in the Indian context, specifically regarding the Indian IT sector, remains scanty. The reason for the same could be attributed to the special nature of this particular industry where technology is both produced as well as consumed on a large scale, wherein its employees possess a certain level of familiarity with technology and have high expectations from it, and there are stringent cost constraints and innovative pressures within the organization. Although research works done by (Gupta et al., 2025) on strategic e-HRM among knowledge-intensive organizations do highlight the significance of this domain, an in-depth understanding of the relationship between technology, leadership, and culture within this particular context in the IT sector of Delhi/NCR needs immediate attention. It is therefore evident that while the role played by technology, leadership, and culture in determining the effectiveness of e-HRM is individually well-established in general literature, there arises a significant gap with regard to the inter-relationship between these three dimensions.

Figure 1 Conceptual Framework for the Study.

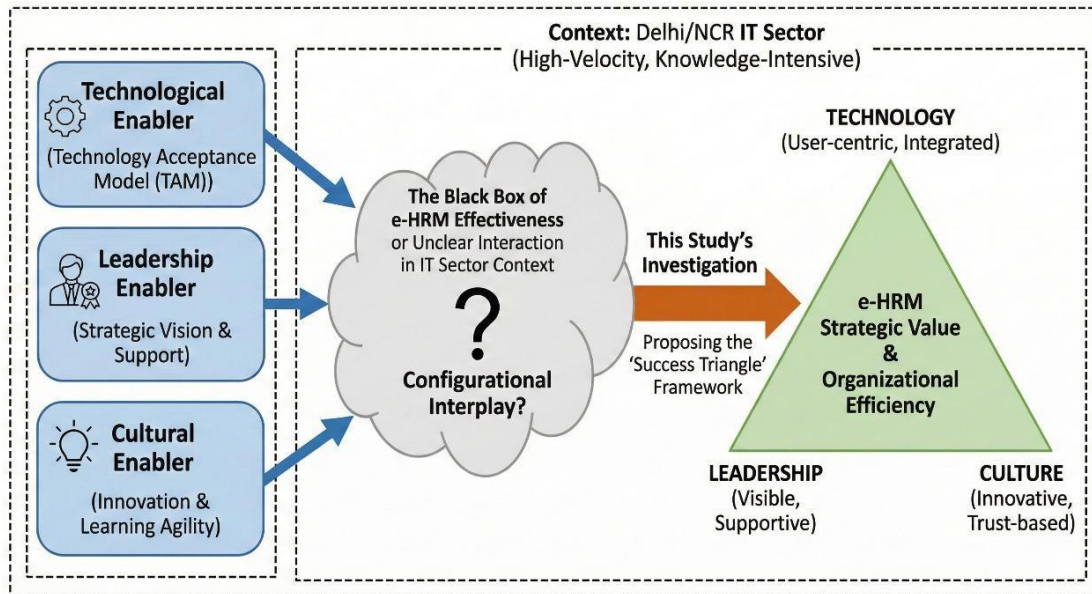


Figure 1 is an example of the research gap that has been noted. Even as there is evidence in the literature on the significance of technology, leadership, and culture individually (on the left side of the illustration), the relationship between the three elements in terms of their effect on e-HRM success in specific cases, such as the Delhi/NCR Information Technology industry (middle), is not adequately explored.

RESEARCH METHODOLOGY

This research used a sequential explanatory design of mixed methods, which involves gathering and analyzing quantitative data first and then qualitative data. With this methodology, it was possible not only to generalize the trends from a larger sample but also to use qualitative information to make sense of quantitative results. The sequential nature of the methodology is shown in Figure 2 below.

Figure 2 Sequential Explanatory Mixed-Methods Research Design

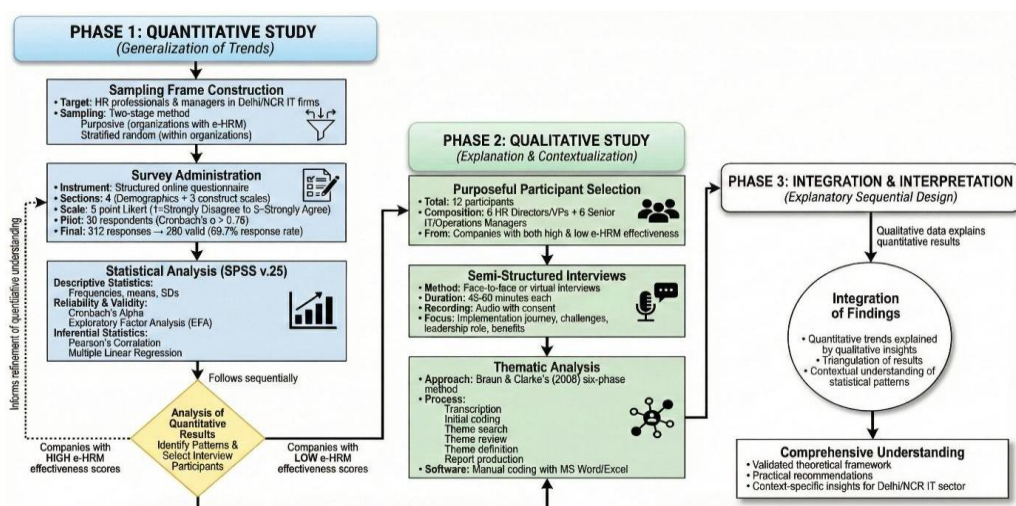


Figure 2 below shows the research methodology used in this study. Sequential explanatory research method has been used in this study where the methodology is divided into three phases. Phase 1 consisted of quantitative research and included surveying and statistical analysis of the data collected from 280 individuals from the IT sector in Delhi/NCR. Based on the data collected in phase 1, purposive sampling was conducted for Phase 2 that involved conducting semi-structured interviews with 12 participants using thematic analysis technique. Phase 3 entailed integrating the findings from Phases 1 and 2. Research Philosophy and Approach The research was conducted following a pragmatic research approach that focused on the research problem and used a variety of research tools in order to provide practical results. The research followed a descriptive and correlational approach in which the situation regarding the implementation of e-HRM would be described while studying the correlations among certain variables.

Population, Sampling Frame, and Data Collection The targeted population for the current study comprised HR managers, department heads, and project managers who were involved in the IT and IT-based service sector companies located either in the Delhi/NCR region or having their operational office there. The sampling frame could be developed using the industrial directory and social networking sites like LinkedIn.

Methodology Report: Sampling and Data Collection

A well-designed, two-level sampling technique was adopted during the process of gathering the data. At the initial stage of the process, purposive sampling was adopted, whereby the sample was restricted to only firms that were using an e-HRM or HRIS system for at least one year. In order to get a complete view of different perceptions regarding e-HRM/HRIS systems from these firms, stratified random sampling was used, whereby the population was first stratified according to business functions into HR and non-HR business functions before random sampling from each stratum.

Data was collected quantitatively through the use of a structured and self-administered questionnaire conducted online. The tool used comprised of four different sections, starting from determining the demographic profile of the respondent. The variables in this research were evaluated based on the use of a five-point Likert scale, from “Strongly Disagree” to “Strongly Agree,” with all the scales drawn from scholarly works.

In order to measure perceived usefulness and ease of use, specific indicators were used in accordance with findings from this research, and operational effectiveness was measured based on time, cost savings, and accuracy indicators as discussed in (Marler and Fisher, 2013). Quality of decision-making was measured based on access to information and analysis capabilities, and leadership and innovation were measured by adopting scales from (Biswas et al., 2024).

As a complement to the findings that were quantitatively generated, open-ended questions were formulated into the questionnaire for the purpose of obtaining qualitative information initially. To ensure the reliability of the tool, a pilot study

conducted on 30 participants produced a Cronbach's Alpha above 0.78 for all scales. Finally, the survey produced 312 responses from which 280 were considered reliable, producing a response rate of about 89.7%.

Qualitative Data Collection: After the analysis of the quantitative results, 12 purposively selected respondents (six Human Resources Directors/Vice Presidents and six IT/Operations senior managers) were interviewed from organizations scoring both high and low in the effectiveness of their e-HRM systems according to the survey. Themes addressed in the interviews included implementation process, encountered issues (resistance, integration), leadership's role, and perceived advantages. The measurement model for main variables is shown in Table 1..

Table 1 Measurement Model Overview

Construct	Sample Measurement Item	Number of Items	Adapted Source	Cronbach's Alpha (Pilot/Final)
Perceived Usefulness	Using the e-HRM system improves my job effectiveness.	4	Davis (1989)	> 0.85
Perceived Ease of Use	I find the e-HRM system easy to use.	4	Davis (1989)	> 0.82
Operational Efficiency	The system has reduced the time spent on routine administrative tasks.	5	Marler & Fisher (2013)	> 0.88
Decision Making Quality	The system provides me with timely and accurate data for decision-making.	4	Developed from literature	> 0.80
Leadership Support	Senior management actively advocates for the use of the e-HRM system.	5	Bondarouk & Ruël (2009)	> 0.87
Innovative Culture	My organization encourages experimentation with new tools and processes.	5	Bondarouk & Ruël (2009)	> 0.84

Methodological Framework for Data Analysis

A strict methodology was used in the analysis of the results to ensure the reliability and depth of the results achieved. The main stage in the evaluation of the work was carried out by the comprehensive analysis of the quantitative data that were analyzed using SPSS version 25.

In order to guarantee the technical reliability of the data, the internal consistency of the measurement scale was checked using Cronbach's Alpha. Moreover, an Exploratory Factor Analysis was used in order to check the construct validity of the research tool.

The last part of the analysis was conducted by conducting an inference test that would enable a general conclusion to be reached about the data. This included using Pearson's Correlation Test, which helped investigate the degree of relationship that existed between the independent and dependent variables, for example, the relationship between Leadership Support and User Adoption. Furthermore, Multiple Linear Regression Test was carried out in an attempt to determine the level at which the independent variables, which include Perceived Usefulness, Leadership Support, and Innovative Culture, can predict the dependent variables, namely Operational Efficiency and Decision-Making Quality. It is crucial to mention that the assumptions required for conducting the test had been met beforehand.

Qualitative Data Analysis Framework

The qualitative aspects of the research were carefully conducted using a rigorous systematic approach to ensure that the findings derived from the narrative are valid and reliable. To begin with, all audio tapes containing interviewees' responses were first transcribed into verbatim transcripts.

The process started with an immersive stage to enable proper familiarization with the data collected after which initial codes were generated to identify key concepts within the data set. Codes were subsequently grouped to help find higher-order themes that captured the essence of the narrative. The subsequent stages involved conducting a careful evaluation of the themes to determine whether they properly reflect the data at hand; this helped define and name the themes. Ultimately, a report was compiled highlighting the various themes that arose from the analysis accompanied by appropriate examples.

Ethical Considerations

All participants gave informed consent, guaranteeing anonymity and confidentiality. The involvement was on a voluntary basis, allowing withdrawal at any time. All data were kept confidentially and were used exclusively for educational research purposes.

DATA ANALYSIS AND FINDINGS

Demographic Profile of Respondents:

The demographic characteristics of the respondents are captured in Table 2 below. In

terms of occupation, there were 52% HR practitioners and 48% of people from other functional areas such as IT, project delivery, and operations. Importantly, 65% had more than five years of professional experience.

Table 2 Demographic Profile of Respondents

Demographic Characteristic	Category	Frequency (N)	Percentage (%)
Job Function	HR Professionals	146	52.1
	Non-HR (IT, Project Delivery, Operations)	134	47.9
Years of Professional Experience	Less than 3 years	42	15.0
	3 to 5 years	56	20.0
	More than 5 years	182	65.0
Organizational Tenure	Less than 2 years	78	27.9
	2 to 5 years	126	45.0
	More than 5 years	76	27.1
Firm Size (Approx. Employees)	Less than 500	67	23.9
	500 - 2000	112	40.0
	More than 2000	101	36.1

Key Statistical Findings:

These findings suggest that the adoption of e-HRM systems generates considerable influence on the efficiency of business operations due to almost 78% of all respondents agreeing fully with the fact that innovations help significantly reduce the time needed for performing administrative tasks such as payroll or leave management while guaranteeing higher accuracy. Moreover, digitalization makes the process of decision making considerably more efficient because 72% of all participants noted that they could easily receive HR information, including turnover rates and skills of employees, allowing them to generate informed decisions. In addition, regression analysis demonstrates that there is a statistically significant positive relationship between using data analytics strategically in e-HRM and talent-related decision-making quality ($\beta = 0.61$, $p < 0.01$). Finally, the successful adoption of e-HRM systems is influenced by several key factors, and correlation analysis shows that leadership commitment and innovation culture were positively related to adoption success at high correlations ($r > 0.70$). Table 3 below provides a summary of the results obtained during the research process.

Table 3 Summary of Key Quantitative Findings

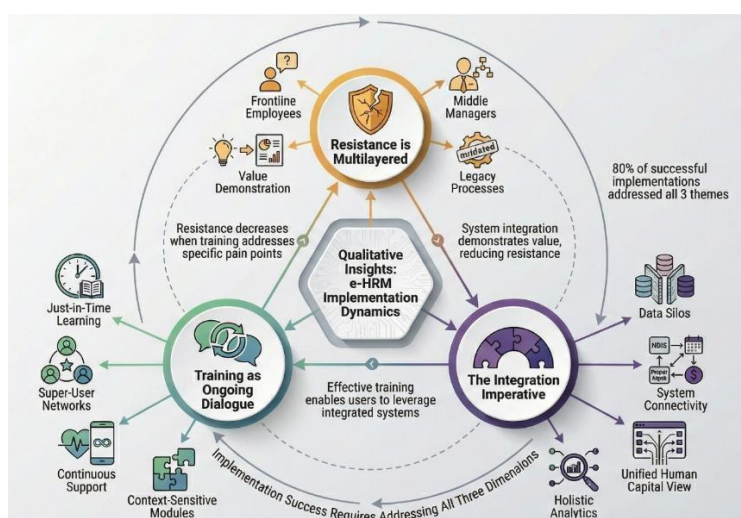
Key Variable / Relationship	Measure / Description	Key Statistic	Interpretation
Operational Efficiency	% of respondents agreeing/strongly agreeing that e-HRM reduces time & improves accuracy	78%	Strong consensus on operational benefits
Decision-Making Enhancement	Regression coefficient (β) between e-HRM analytics use and the quality of strategic talent decisions	$\beta = 0.61$, $p < 0.01$	Strong, significant positive relationship
Leadership Support & Adoption	Pearson's correlation (r) between leadership support and user adoption rate	$r > 0.70$	Very strong positive correlation

Key Variable/Relationship	Measure / Description	Key Statistic	Interpretation
Innovative Culture & Adoption	Pearson's correlation (r) between innovative culture and user adoption rate	$r > 0.70$	Very strong positive correlation
System Satisfaction	Mean score on a 5-point scale (1=Very Dissatisfied, 5=Very Satisfied)	Mean = 4.12, SD = 0.68	High overall satisfaction with e-HRM systems

Qualitative Insights (Thematic Analysis):

The qualitative analysis identified three major themes essential for comprehending the dynamics of implementing e-HRM solutions within the IT industry as illustrated in Figure 3. Firstly, the theme of resistance was discovered to be complex, not only concerning operational workers but even middle management used to more traditional procedures. This kind of resistance was overcome only when there were clear advantages to demonstrate in terms of practical benefits such as actionable reports making it easier to manage the teams effectively. Secondly, companies that managed to implement new solutions viewed the training process as a conversation involving continuous interaction and learning in the form of just-in-time courses as well as peer-to-peer user networks. Finally, the integration issue was repeatedly raised by the participants, highlighting that e-HRM should be able to interoperate with other organizational software solutions in order to present a coherent picture of human resources strategy.

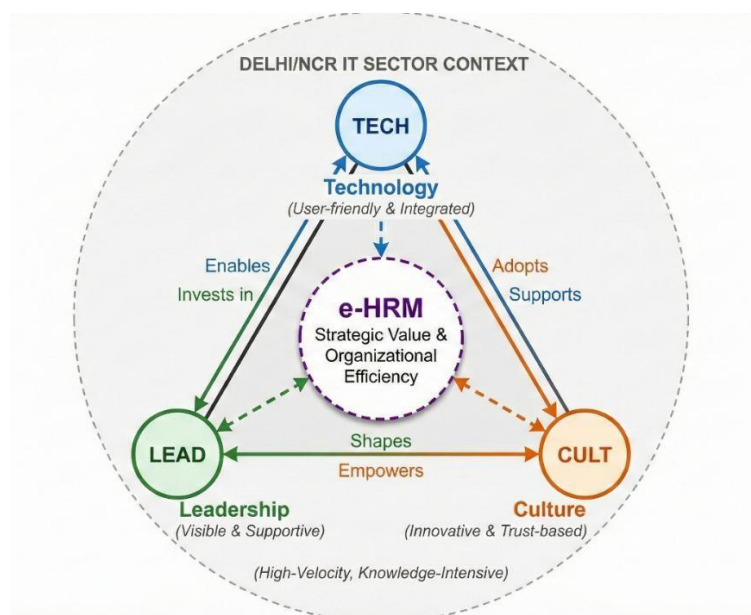
Figure 3 Qualitative Insights Framework - e-HRM Implementation in IT Sector



DISCUSSION

These results provide a strong confirmation that e-HRM is an effective tool that can be employed in achieving HR operational excellence in IT organizations, thus corroborating the research hypotheses put forth. The reduction in the amount of work involved in processing transactions ensures that HR shifts its role from that of an operational processor to a strategic partner in the business, consistent with RBV theory. In this regard, e-HRM can be considered as a strategic capability which helps to increase both the value and deployability of human capital. Apart from providing empirical support for the hypotheses generated from extant literature, the findings of this study suggest a much deeper and integrated approach to understanding the strategic efficacy of e-HRM. While the Resource-Based View of the Firm (RBV) theory provides explanations about how e-HRM can become a strategic asset, and TAM offers insight into how individuals accept new technologies, it was revealed that both approaches, on their own, are limited in explaining the dynamics of e-HRM implementation in the IT industry. Figure 4 below shows.

Figure 4 The Success Triangle Framework for e-HRM Implementation



In this case, every point interacts both with itself and the other two, with their joint synergy producing the e-HRM value and effectiveness. In such a setting, leadership triggers the power of RBV by giving guidance and resources to work with. Meanwhile, the supportive culture promotes one of the main principles of TAM by making organizations more open to change. Importantly, the above theoretical model was scientifically verified. The best results of our research have been found in organizations where all three vertices were equally present, meaning (1) the Leadership was involved in promoting the innovation, (2) the culture facilitated experimentation and data-driven problem solving, and (3) the technology in question was easy to use. The conclusion can be drawn that the strategic importance of e-HRM

depends on such an interaction in knowledge-intensive and dynamic fields such as IT. In this case, the identified problem of user resistance further underscores one of the fundamental principles of the TAM theory: the usefulness of e-HRM needs to be proved to the users and cannot just be taken for granted by implementers. This leads to the conclusion that this paper strongly proves the need to implement e-HRM as an organizational change project.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the current research demonstrates that electronic Human Resource Management (e-HRM) can be considered a key strategic tool in the highly competitive IT sector of Delhi/NCR, resulting in significant improvements in the efficiency of HR processes as well as organizational performance as a whole. In addition to confirming the importance of e-HRM in reducing administrative costs and increasing accuracy in HR processes, as well as providing relevant statistical evidence that can be used for strategic decision making, the major theoretical contribution of this research relates to the elaboration of a more complex understanding of the success factors of e-HRM systems based on the configuration of the following three components: advanced technology focused on the users' needs, dedicated leadership that drives the changes, and innovative culture oriented toward data analysis and interpretation. This complex Success Triangle approach provides insights into why some technically strong systems might still fail as well as how strategic advantages can be gained through their use. It is shown that the introduction of e-HRM systems should be understood as a socio-technical transformation characterized by the necessity to overcome multiple resistances, learn constantly, and integrate the systems into the organizational processes.

For harnessing the strategic power of e-HRM, it is essential to adopt a holistic approach involving all organizational levels. Top management should take the initiative in adopting e-HRM as a strategic initiative through its active application in decision-making processes and fostering a corporate culture characterized by innovation. HR professionals should outline the advantages for each user group, govern for integration via collaboration with other organizational functions, and move from episodic to continuous learning programs. The implementation process should emphasize the phased approach, focus on analytical capacity in system design, and maintain constant communication lines for iterative improvement. To enhance this field further.

LIMITATIONS AND FUTURE RESEARCH

This paper recognizes certain limitations in its geography-specific approach as well as its cross-sectional nature that measures variables at one point of time. In future, longitudinal studies can be used to determine the impact of the adoption of e-HRM for an extended period. In addition to this, comparative studies among different metropolitan cities like Bangalore, Hyderabad, and Pune in India can be conducted to obtain a broader perspective on e-HRM applications.

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