Factors Affecting the Implementation Success of Human Resources Management Information System (HRMIS) in the organization: A Literature Review Study

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Abstract
This comprehensive literature review delves into the factors affecting the implementation success of the Human Resources Management Information System (HRMIS) in the organization: A Literature Review Study in all kinds of organizations, the human resource management department is regarded as one of the most important departments since it is highly regarded for its intellectual abilities. Considerable efforts have been directed towards implementing electronic transformation initiatives in several organizations aimed at enhancing service delivery. These efforts often involve the installation of various systems, including HRMIS. In a virtual setting, information and communication technology enables creative and efficient ways to carry out standard organizational tasks. Integrating the electronic way of operations with human resource management. Since e-commerce began to take over the business sector in the 1990s, when the phrase "e-HR" first appeared. With the advent of recent technology advancements, "business at the speed of a thought" and "paperless offices" are becoming realities, with real-time information guiding every decision. The term "e-HR" describes managing human resources. Some academics refer to it as web-based HR, HR intranet, or computer-based HRM (CHRIS). This review meticulously analyzes the factors influencing the successful implementation of HRMIS systems (employee behavior, organizational structure, and technology). The synthesis of insights from diverse sources highlights the intricate interplay of elements such as employee behavior, organizational structure, and technology. In the organizational change process, three main factors are typically involved: employee behavior, organizational structure, and technology.
Keywords: Human Resource Management Information Systems (HRMIS), Employee Behavior, Organizational Structure, Technology.

Introduction

The human resource management information system (HRMIS) facilitates the strategic, tactical, and operational utilization of an organization's human resources (HR). It empowers the HR department to offer round-the-clock services to its staff and organization, while also providing individuals with the ability to track all representatives and their associated data (Sanjeev, 2017). The implementation of HRMIS has resulted in enhanced operational efficiency and expedited workflow, thus leading to a reduction in bureaucratic processes (Arifin & Tajudeen, 2020). HRMIS is a cutting-edge business solution with the capacity to manage all activities, information, and data required for effective HR management. Consequently, this might be used for all HRM tasks, increasing organizational effectiveness (Rawashdeh et al., 2021). The primary success factor for any firm operating in the twenty-first century is its human resources (HR). Throughout history, HR has played a critical role in enhancing businesses' competitive capabilities, enabling them to outperform their competitors and gain a competitive advantage. Therefore, the intensified market competition and increased employee empowerment in today's corporate environment make it more challenging to maintain a competitive edge. Businesses have used information technology to manage human resources more effectively. HR professionals need to have a comprehensive understanding of the historical evolution of HRM and the increasingly significant role that information technology has played in this evolution (Bhuiyan et al., 2014).

Information systems (IS) are crucial for assisting organizations in managing their operations in the contemporary global environment. It is crucial for organizations to have a robust information system because of the interconnected global nature of operations. Without a reliable system, achieving smooth operations becomes challenging. An information system is essential as it facilitates the execution of organizational functions. Nowadays, information systems have become a critical requirement for the operation of organizations (Harryanto et al., 2018; Rehman et al., 2020).

Management Information Systems (MIS) are the most fascinating topic in business due to the dynamic nature of technology, the innovative ways in which management utilizes it, and the significant impact it has on the success of enterprises. Managers frequently use online collaboration and social technologies to enhance and speed up decision-making (Laudon & Laudon, 2010).

Therefore, the fusion of HRM and MIS is referred to as HRMIS. In essence, HRMIS is an integrated system designed to assist in the planning and supervision of personnel by seamlessly integrating them into the company to enhance their effectiveness. Essentially, an HRMIS should have the capability to gather, store, analyze, and disseminate data containing valuable insights that can be utilized for decision-making, benefiting both individuals and the company, including predictive analytics and forecasting (Esangbedo et al., 2021).

The implementation of HRMIS has become a crucial tool for enhancing the scientific and modernization aspects of HRM (Zhai & Wang, 2022). The Chartered Institute of Personnel and Development (CIPD) has reported that HRMIS reduces administrative tasks while improving the quality and speed of available information, as per their findings in 2007 and 2019. They also mention that HRMIS offers flexibility with information to aid in corporate planning and enhance the quality of employee care. In addition to improved applicant sourcing and rating during the hiring process, development purposes were noted (Chartered Institute of Personnel and Development, n.d.).

Objectives of the Study

1.   Examine the particular difficulties that arose during the HRMIS implementation process, such as employee resistance, a lack of support from upper management, a lack of accurate information, inadequate technical support, poor communication channels, a lack of drive from senior management, a lack of understanding about the significance of HRMIS, and challenges with system integration.

2.   Analyze the effects that technological integration, organizational structure, and employee behavior have on the deployment of HRMIS.

3.   Promote HRMIS adoption, and guarantee ongoing improvement in internal human resource management.

Review of Literature

A review of the literature offers a critical synthesis of previous studies on the subject. It has been carried out to produce theoretical and scientific understanding about a specific phenomenon, leading to a synthesis of the phenomenon's known and unknown aspects. The main goal of a literature review is to acquire a comprehensive understanding of the issues surrounding research conduct. Numerous national and international studies have been undertaken on a regular basis to investigate the various facets of e-HRM, HR practices, and the development of HRIS, HRMS, E-HRM, and sophisticated e-HRM tools.

The Role of Employee Behavior in HRMIS Studies

The satisfaction of users plays a crucial role in influencing their attitude towards (HRMIS) and the adoption of technological innovations. A strong positive correlation has been widely recognized between user satisfaction and favorable attitudes towards (HRMIS). When users are highly satisfied, it often leads to positive behavioral intentions. Conversely, low satisfaction levels are linked to negative behavioral intention. It is therefore essential to clearly communicate the objectives of (HRMIS) to end-users in order to avoid inadvertent misuse of the technology. Utilizing technology in a manner that encourages appropriate user behavior is imperative for its effective implementation (Ma & Ye, 2015).

Anjum and Islam (2020) highlight the positive impact of (HRMIS) on employees' personal initiative behavior within the HRMIS context. The research emphasizes (HRMIS) as a catalyst, stimulating personal initiative behavior among employees. Additionally, the study sheds light on the beneficial moderating function of employees' self-development motivation. This motivation is identified as instrumental in guiding self-oriented job crafting, thereby amplifying the overall positive influence of (HRMIS) on employee behavior within the HRMIS framework. In essence, the study elucidates how (HRMIS), when effectively implemented, not only triggers personal initiative but also benefits from the positive influence of self-development motivation and job crafting, contributing to a proactive and initiative-driven workforce.

Zhou et al (2021) highlight the crucial impact of employee behavior on (HRMIS), revealing that (HRMIS) serves as a catalyst for stimulating employees' initiative and positive behavior. Employees' job crafting is identified as a significant mediating factor, shaping the impact of (HRMIS), while their self-development motivation plays a regulatory role in guiding job crafting towards organizational expectations. The study emphasizes the positive contribution of (HRMIS) to employees' proactive behavior, urging enterprises to integrate technical and organizational perspectives in designing (HRMIS) modes. It highlights the necessity of considering enterprise-level factors, management processes, and knowledge

management for effective implementation. Furthermore, the study underscores the importance of aligning management modes with employees' development needs, acknowledging the positive moderating effect of employees' self-development motivation. Overall, the findings support a comprehensive approach that combines technological advancements with organizational considerations to effectively utilize HRMIS and influence employee behavior in alignment with strategic goals.

Organizations are obligated to enhance the adaptability of their resources in order to facilitate their utilization across diverse contexts. Flexibility in the context of human resources encompasses two key aspects: employee skill flexibility and employee behavior flexibility. The concept of employee skill flexibility pertains to an individual's capacity to swiftly acquire new abilities relevant to their job responsibilities. On the other hand, employee behavior flexibility denotes an individual's aptitude to adjust to novel work settings. Skill flexibility refers to the extent to which an employee's skills can be applied across various settings, while behavior flexibility denotes an employee's capacity to effectively manage diverse explicit job expectations (Al-Alwan et al., 2022). There is a positive correlation between perceived usefulness and the intention to use knowledge management systems, as well as a positive correlation between perceived ease of use and the intention to use knowledge management systems (Legowo & Firmansyah, 2019).

The Role of Organizational structure in HRMIS Studies

Organizational structure has a positive and significant influence on the successful implementation of (HRMIS) systems. The adoption of Human Resource Management Information Systems (HRMIS) is impacting organizational effectiveness. The success of HRMIS system adoption and usage is influenced by organizational leadership, structure, and employees' technological capabilities. In addition, the organizational structure plays a crucial role, contributing positively to the success of (HRMIS). Moreover, organizational structure plays a crucial role in ensuring the effective implementation and utilization of Human Resource Management Information Systems (HRMIS). The organizational structure contributes to the success of HRMIS adoption in the context of electronic HRM (Amoako et al., 2022).

The process of radically changing conventional organizational structures with a long history is a complex and demanding endeavor. Managers' reluctance to manage information in information-based organizations is related to their ability to handle information. The information management infrastructure and information processing processes are crucial, and transitioning to an information-based organizational structure would enhance organizational skills and effectiveness (Athambawa, 2020; Maxwell & Yadav, 2019).

The concept of technology-induced HRM practices is grounded in the belief that the integration of information technology has the potential to impact the structure of organizations. The acceptance and diffusion of new technologies and innovation are significantly influenced by the organizational structure. The leadership style of a specific organization is influenced by its organizational structure, whether organic or mechanistic. Furthermore, the organizational structure serves as a framework that delineates the hierarchical dynamics and interactions between personnel and leadership (Matikiti et al., 2018). The implementation of adaptive and transformational leadership within an organization can facilitate the enhancement of its innovation process and provide opportunities to acquire new and improved technologies that can significantly influence the overall success of the organization. The fundamental basis for the use of technology in HRM

processes and practices is its capacity to automate administrative tasks, hence exerting a substantial impact on decision-making (Buil et al., 2019).

The impact of organizational structure on the adoption of innovation has been observed to either enable or impede the innovation process. Organizational characteristics can be discerned by examining many indicators, including the level of centralization, the extent of formalization in distinct operations, and the degree of staff specialization. The acceptance of new technology is often linked to a range of characteristics, with employee specialization playing a significant role in the adoption of IT standards. The concept of organizational centralization is frequently employed as a criterion for evaluating the overall structure of an organization, with a greater concentration of decision-making authority being linked to a more centralized organizational structure (Beleda, 2023).

Jamdade (2019) highlight the importance of organizational structure as a fundamental factor in the successful implementation of (HRMIS) in hospitals. Respondents widely recognize the significance of having an appropriate organizational structure, with the study suggesting that it plays a crucial role in facilitating the effective integration and utilization of (HRMIS) initiatives. While specific statistical details are not provided, the overall emphasis is on the perceived importance of organizational structure in contributing to the success of (HRMIS) implementation, potentially impacting the seamless integration of HRMIS within hospital contexts.

Use of Technology in HRM

The integration of technology into HRM is driven by several pivotal factors that fundamentally reshape how businesses oversee their employees. One of the primary motivators is the pursuit of efficiency gains and automation, which plays a crucial role in optimizing various organizational functions such as recruitment, payroll processing, and performance management. Improve the English clarity of the following text: Technology, especially through data analytics, enables well-informed decision-making across different HRM aspects, including talent acquisition, performance assessment, and fostering employee engagement. Moreover, technological tools facilitate the adaptation to the changing landscape of work, supporting remote work arrangements and overcoming geographical barriers in a globalized context. E-learning platforms, customized skill development, and secure data handling protocols contribute to learning and development initiatives while ensuring compliance. Human resources metrics, guided by technology, offer valuable insights that inform strategic decision-making, and technology is integral in managing effective organizational change during transitional phases (Khyat, 2023).

The implementation of technology has significantly transformed the processes involved in gathering, retaining, utilizing, and distributing employee information and data. The integration of technology has had a profound impact on the recruitment, hiring, and selection procedures within organizations, as well as on the structure and implementation of training and career development initiatives. Organizations have strategically adapted their business trends and practices in response to the dynamic evolution of technological trends in order to maintain competitiveness and relevance. The integration of technology enables companies to effectively streamline their operations. Furthermore, the integration of technology has exerted a significant impact on virtually every aspect of both the business sector and society as a whole. Technology has significantly transformed the methods by which the acquisition and utilization of goods and services take place. The organizational environment has had a significant impact on various aspects of business operations, including financial management,

marketing strategies, production, and operations, as well as human resource management (Amoako et al., 2022; Stone et al., 2015).

The effectiveness of (HRMIS) technology can be deemed robust when it exhibits user-friendliness and when the tools contain HR data that aligns with the HR practices specific to a business (Bondarouk et al., 2017; Davis, 1989; Voermans & Van Veldhoven, 2007). Both the notions of HRM strength and (HRMIS) strength are characterized by a crucial element: the presence of a procedure that facilitates the transmission of clear and consistent messages between employees and/or (HRMIS) consumers. The achievement of clear and unequivocal human resource (HR) message can be facilitated by the distinctiveness, consistency, and unanimity of the HR management (HRM) procedures. The utilization of (HRMIS) technology has the capacity to guarantee clear, pertinent, and user-friendly communication for individuals utilizing the system (Bondarouk et al., 2017).

HRMIS Conceptual framework

The conceptual framework of the study from the above literature reviews, the following conceptual framework is developed for the current study: The success Factors included in the conceptual framework are employee behavior, organizational structure, and technology. (Fig. 1)
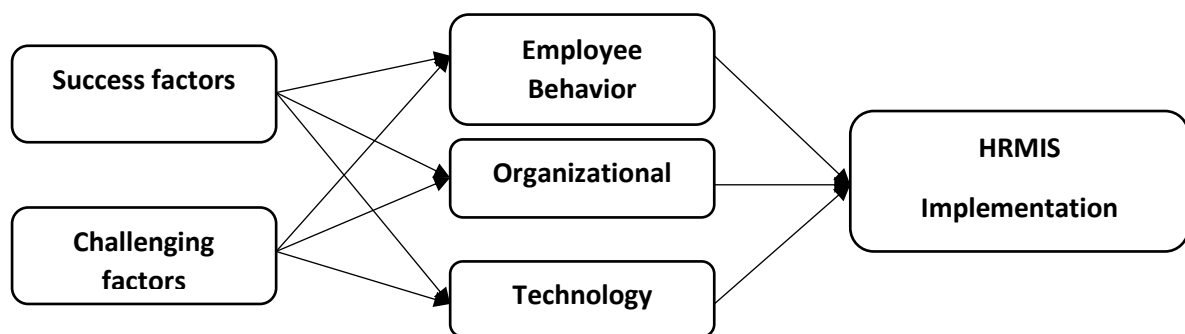

Figure 1 Conceptual framework
Source: Researcher, 2024

Methodology

The literature review paper employed a methodological approach centered on conducting a systematic and thorough exploration of relevant academic literature to investigate the success factors associated with implementing HRMIS. The methodology encompassed a comprehensive search across reputable databases such as PubMed, Scopus, Web of Science, and Google Scholar, utilizing carefully selected keywords and search terms pertinent to the success of HRMIS implementation. To ensure relevance and currency, the inclusion criteria were limited to peer-reviewed journal articles and academic publications within a specified timeframe.

The data extracted from the identified studies underwent synthesis to discern common themes and trends pertinent to HRMIS implementation. Through a critical evaluation of source quality and credibility, potential limitations and biases were acknowledged. The literature review culminated in the identification of gaps in existing research, providing a nuanced understanding of the success factors associated with HRMIS implementation in the MOF and its affiliated departments in Jordan. Moreover, the review offered insights for future research directions and practical implications.

Conclusions

The main advantage of adopting HRMIS practices is that it releases HR professionals from intermediary roles, which will cause the typical HR professional's responsibilities to change from administrative to strategy development. Currently, HR professionals spend the majority of their time as administrative experts. Businesses that are thinking about putting these new HRM techniques into practice should also assess if the results are superior to those of earlier HR practices. The results imply that adjustments to HR's position as a strategic partner could make it easier for HR to concentrate on becoming an employee champion. Seldom are online resources utilized for training and other human resource-related tasks like learning. E-HR instruments are mostly employed in the hiring and appraisal procedures. In light of the analysis section of the research's findings, the researcher would like to provide the following few recommendations. Since HRMIS affects how HR professionals carry out their duties, companies ought to invest more in it and strive to purchase the newest versions. By leveraging new technology and developing administrative effectiveness, organizations should focus more on strategic HRM concerns and on accomplishing strategic HR objectives. Senior management in the companies should ensure that sufficient funds are allocated for educational initiatives aimed at raising awareness of the meaning of "HRMIS" and the importance of E-HR tools. Future research in this field should address a range of concerns, and this study lays the groundwork for further research. Above all, more comprehensive studies including a bigger sample size has to be carried out to look into the function of HRMIS in businesses. They also suggest that future scholars include quantitative techniques in their studies.

Theoretical and Contextual Contribution

This research contributes both theoretically and contextually to the understanding of HRMIS implementation. Theoretically, it provides a complete framework that relates employee behavior, organizational structure, and technology by integrating multidisciplinary viewpoints from human resource management, information systems, and organizational behavior. By emphasizing technology as a catalyst for organizational change and investigating the effects of human behavior and organizational structure on HRMIS adoption, this framework expands on current theories of change management. Furthermore, the research offers significant behavioral perspectives on the adoption of technology by examining elements like reluctance to modify and the efficiency of assistance and instruction. The research provides particular insights into the opportunities and challenges of implementing HRMIS in the public sector, with a particular focus on the understudied public sector. The results will be useful for HR professionals and legislators, providing suggestions for implementing HRMIS successfully and improving service delivery in businesses. Through in-depth interviews, the research is grounded in real-world experiences, ensuring relevance and applicability. Additionally, it advances knowledge of technology adoption by illuminating particular.

References

Al-Alwan, M., Bader, D., Al-Qatawneh, M., Alneimat, S., & Al-Hawary, S. (2022). E-HRM and employee flexibility in Islamic banks in Jordan. *International Journal of Data and Network Science, 6*(3), 703–710. https://doi.org/10.5267/j.ijdns.2022.4.002

Amoako, R., Jiang, Y., Frempong, M. F., Tetteh, S., & Adu-Yeboah, S. S. (2022). Examining the effect of organizational leadership, organizational structure, and employee technological capability on the success of electronic human resource management. *SAGE Open, 12*(2). https://doi.org/10.1177/21582440221088852

Anjum, N., & Islam, M. A. (2020). Employees' behavioral intention to adopt E-HRM system: An approach to extend technology acceptance model. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 10*(3), 544–561. https://doi.org/10.6007/ijarafms/v10-i3/8140

Arifin, M. A., & Tajudeen, F. P. (2020). Impact of human resources information systems in the military environment. *Asia Pacific Management Review, 25*(4), 198–206. https://doi.org/10.1016/j.apmrv.2020.02.001

Athambawa, S. (2020). Does HRIS increase the organizational efficiency through employees' performance: Theoretical perspective. *SEU Journal of Information Systems and Innovative Technology, 5*(2). https://www.seu.ac.lk/jisit/publication/v5n2/JISIT-5221.pdf

Beleda, M. (2023). An assessment on the practices and challenges of human resource information system (HRIS) in Commercial Bank Ethiopia. *Journal of Business and Management, 4*(1).

Bhuiyan, F., Chowdhury, M. M., & Ferdous, F. (2014). Historical evolution of human resource information system (HRIS): An interface between HR and computer technology. *Human Resource Management Research, 4*(4), 75–80. https://doi.org/10.5923/j.hrmr.20140404.01

Bondarouk, T., Harms, R., & Lepak, D. (2017). Does e-HRM lead to better HRM service? *International Journal of Human Resource Management, 28*(9), 1332–1362. https://doi.org/10.1080/09585192.2015.1118139

Buil, I., Martínez, E., & Matute, J. (2019). Transformational leadership and employee performance: The role of identification, engagement and proactive personality. *International Journal of Hospitality Management, 77*, 64–75. https://doi.org/10.1016/j.ijhm.2018.06.014

Chartered Institute of Personnel and Development. (n.d.). Retrieved September 17, 2023, from https://www.cipd.org/ae#gref

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340.

Esangbedo, M. O., Bai, S., Mirjalili, S., & Wang, Z. (2021). Evaluation of human resource information systems using grey ordinal pairwise comparison MCDM methods. *Expert Systems with Applications, 182*, 115151. https://doi.org/10.1016/j.eswa.2021.115151

Harryanto, Muchran, M., & Ahmar, A. S. (2018). Application of TAM model to the use of information technology. *International Journal of Engineering and Technology (UAE), 7*(2.9 Special Issue 9), 37–40.

Jamdade, P. M. (2019). A study of factors for successful implementation of e-HRM in hospitals, Pune. *International Journal of Innovative Knowledge Concepts, 1*(1), 17–21.

Khyat, J. (2023). Impact of electronic human resource management on information technology. *International Journal of Advanced Research, 3*(3), 123–130.

Laudon, K. C., & Laudon, J. P. (2010). *Management information systems: Managing the digital firm*. New Jersey: Prentice Hall.

Legowo, N., & Firmansyah, D. (2019). Evaluation of the knowledge management system in Bank CN using method of technology acceptance model. In *Proceedings of 2019 International Conference on Information Management and Technology, ICIMTech 2019, 1*(August), 569–574. https://doi.org/10.1109/ICIMTech.2019.8843834

Ma, L., & Ye, M. (2015). The role of electronic human resource management in contemporary human resource management. *SA Journal of Human Resource Management, 17*, 71–78. https://doi.org/10.4102/sajhrm.v17i0.1118

Matikiti, R., Mpinganjira, M., & Roberts-Lombard, M. (2018). Application of the technology acceptance model and the technology–organisation–environment model to examine social media marketing use in the South African tourism industry. *SA Journal of Information Management, 20*(1), 1–12. https://doi.org/10.4102/sajim.v20i1.790

Maxwell, S., & Yadav, M. S. (2019). Effectiveness of HRIS on organizational performance. *International Journal of Research in Business Studies, 4*(1), 173.

Rawashdeh, A. M., Elayan, M. B., Alhyasat, W., & Shamout, M. D. (2021). Electronic human resources management perceived usefulness, perceived ease of use and continuance usage intention: The mediating role of user satisfaction in Jordanian hotels sector. *International Journal for Quality Research, 15*(2), 679–696. https://doi.org/10.24874/IJQR15.02-20

Rehman, N., Razaq, S., Farooq, A., Zohaib, N. M., & Nazri, M. (2020). Information technology and firm performance: Mediation role of absorptive capacity and corporate entrepreneurship in manufacturing SMEs. *Technology Analysis and Strategic Management, 32*(9), 1049–1065. https://doi.org/10.1080/09537325.2020.1740192

Sanjeev, R. (2017). Determining employees' perception through effective HRIS: An empirical study. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2762089

Stone, D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human Resource Management Review, 25*(2), 216–231. https://doi.org/10.1016/j.hrmr.2015.01.002

Voermans, M., & Van Veldhoven, M. (2007). Attitude towards E-HRM: An empirical study at Philips. *Personnel Review, 36*(6), 887–902.
https://doi.org/10.1108/00483480710822418

Zhai, L., & Wang, B. (2022). A study on the application of HRMIS for enterprises in Tibet. *Studies in Social Science & Humanities, 1*(3), 23–26.
https://doi.org/10.56397/sssh.2022.10.03

Zhou, L., Chen, Z., Li, J., Zhang, X., & Tian, F. (2021). The influence of electronic human resource management on employees proactive behavior: Based on the job crafting perspective. *Journal of Management and Organization*.
https://doi.org/10.1017/jmo.2021.33