



DOI: <https://doi.org/10.31933/dijms>.

Received: 11 October 2023, Revised: 20 October 2023, Publish: 28 October 2023

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Factors Affecting Human Resource Information System: IT Infrastructure, Management Support, and Market Competition

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Abstract: The effect of Infrastruktur Teknologi Informasi, Dukungan Manajemen and Kompetisi Pasar on Sistem Informasi Sumber Daya Manusia is a scientific article in the literature study within the scope of the field of science. The purpose of this article is to build a hypothesis of the influence between variables that will be used in further research. Research objects in online libraries, Google Scholar, Mendeley and other academic online media. The research method with the research library comes from e-books and open access e-journals. The results of this article: 1) Infrastruktur Teknologi Informasi has an effect on Sistem Informasi Sumber Daya Manusia; 2) Dukungan Manajemen has an effect on Sistem Informasi Sumber Daya Manusia; and 3) Kompetisi Pasar has an effect on Sistem Informasi Sumber Daya Manusia.

Keyword: Human Resources Information Systems, Information Technology Infrastructure, Management Support, Market Competition

INTRODUCTION

Human Resource Information System (HRIS) is an approach that focuses on managing information related to human resources within an organization. HRIS plays a crucial role in supporting the success and operational efficiency of a company. However, the success of HRIS implementation is not only determined by internal organizational factors but is also influenced by external factors in its surroundings.

This article will discuss the factors that affect HRIS, namely information technology infrastructure, management support, and market competition. These three factors have a significant role in shaping and influencing the successful implementation of HRIS in an organization.

Information technology infrastructure is a key factor in the development and management of HRIS. A good information technology infrastructure provides the necessary support for collecting, storing, managing, and processing data related to human resources. With adequate infrastructure, organizations can enhance operational efficiency, optimize data

utilization, and generate accurate and relevant information for decision-making related to human resources.

Management support is also a crucial factor in the success of HRIS. Strong management support and high commitment to HRIS implementation will help ensure that the system is accepted and used effectively by all members of the organization. Supportive management provides sufficient resources, adequate training, and facilitates effective communication between the human resources department and other parts of the organization.

Market competition also has a significant impact on HRIS implementation. In a competitive business environment, organizations need to optimize the use of their human resources to achieve a competitive advantage. HRIS can assist organizations in managing and effectively developing their human resources potential. With a good system in place, organizations can better plan their workforce, identify training needs, and manage employee performance more efficiently.

In this context, some research questions that can be posed are: (1) How does information technology infrastructure affect the implementation of HRIS? (2) How does management support influence the implementation of HRIS? (3) How does market competition affect HRIS?

METHOD

The writing of this article utilizes the research library method, which involves the search, review, and analysis of relevant literature from various library sources. This method is employed because it allows the author to gain a deep understanding of the factors influencing the Human Resource Information System (HRIS), such as information technology infrastructure, management support, and market competition. By conducting literature searches from diverse and credible sources, the research library method enables the author to present arguments grounded in theory and previous research. This strengthens the article's validity and ensures that the information presented is supported by reliable evidence.

RESULTS AND DISCUSSION

Results

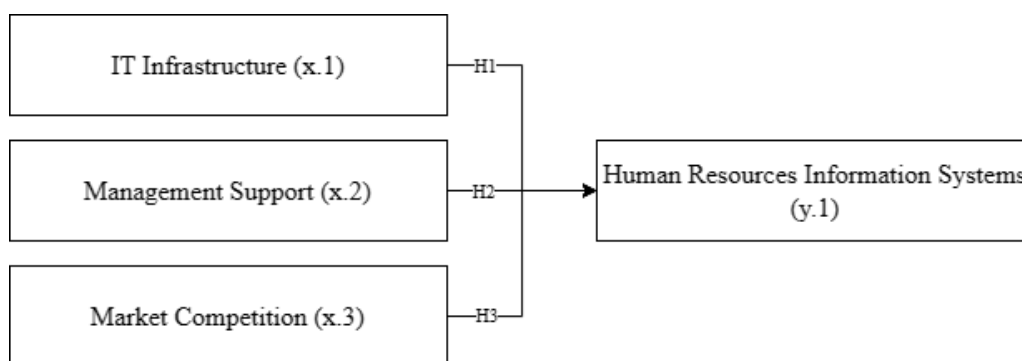
Reviewing relevant articles as a foundation for establishing research hypotheses by explaining the results of previous studies, describing similarities and differences with the research plan, from relevant previous research as shown in Table 1 below

Table 1. Research Relevant Findings

No	Author (Year)	Previous Research Findings	Similarities with This Article	Differences with This Article	Hypothesis
1	Harsith, N. Jayadeva, S. M., Shikhare, R. R., & Verma, S. (2022)	This study concludes that IT infrastructure influences the effectiveness of HRIS (Human Resource Information System).	Research Variables Used	Research Method Used	H1
2	Khan, A. R., Hasan, N., & Rubel, M. (2015)	Technology is found to have the most significant impact on HRIS adoption by organizations. This research indicates that HRIS practices have a positive effect on organizational performance.	Research Variables Used	Research Method Used	H1

No	Author (Year)	Previous Research Findings	Similarities with This Article	Differences with This Article	Hypothesis
3	Noutsu, F. A., Kala Kamdjoug, J. R., & Fosso Wamba, S. (2017)	Organization significantly influences HRIS practices.	Research Variables Used	Research Method Used	H2
4	Rahman, M. A., Qi, X., & Jinnah, M. S. (2016)	Market competition is found to have a significant impact on the intention to adopt HRIS.	Research Variables Used	Research Method Used	H2
5	Wijethilaka, R. M. D. M. (2016)	It is concluded that five influencing factors (including market competition) affecting the adoption rate must be considered to enhance HRIS adoption rates.	Research Variables Used	Research Method Used	H3
6	Al-Dmour, R. H., Love, S., & Al-Zu'bi, Z. (2013)	Internal and external environmental factors (including market factors) contradict the findings.	Research Variables Used	Research Method Used	H3

Based on the problem statement, relevant discussions, and research, the conceptual framework of this article is obtained as shown in Figure 1 below.



Source: Research Results

Figure 1. Conceptual Framework

Discussions

a) IT Infrastructure to HRIS

Based on the theoretical study, the discussion in this literature review article is to review relevant articles, analyze the influence between variables, and create a conceptual research plan. Based on the research findings, the discussion in this article is to review relevant articles, analyze the influence between variables, and create a conceptual research plan.

Based on the research findings that the researcher has conducted, the factor of information technology infrastructure has a significant impact on the implementation of Human Resource Information Systems (HRIS). The study conducted indicates that factors such as relative advantage, complexity, top management support, organizational size, and market competition influence the adoption rate of HRIS.

Research conducted by Wijethilaka (2016) found that these factors affect the adoption rate of HRIS in the banking sector in Sri Lanka. However, multiple regression analysis revealed that only organizational size has a significant impact on the adoption rate. Another study conducted by Hatshith et al. (2022) emphasized that information technology

infrastructure is one of the factors affecting the effectiveness of HRIS. Proper implementation of HRIS helps companies achieve their goals and gain a competitive advantage in the market.

A study conducted by Noutsu (2017) examined the factors that enable the acceptance and usage of HRIS in companies/organizations in Cameroon. This research found that information technology infrastructure is one of the key factors influencing better acceptance and usage of HRIS, which, in turn, enhances user satisfaction.

Another study by Khan et al. (2015) emphasized that technology and the environment have a positive impact on the successful adoption of HRIS. Furthermore, the importance of establishing a quality information technology team and preparing automated performance indicators to interact effectively with HRIS was also highlighted.

Overall, these studies demonstrate that robust information technology infrastructure is crucial for the successful implementation and adoption of HRIS. Information technology infrastructure plays a significant role in the implementation of Human Resource Information Systems (HRIS) based on existing theories. Several relevant theories and concepts can be used to explain how information technology infrastructure affects the implementation of HRIS.

In this context, a robust information technology infrastructure enables organizations to provide the necessary technology resources to support the implementation of HRIS. Good infrastructure encompasses aspects such as hardware, software, networks, databases, and information security. With adequate infrastructure, organizations can enhance the accessibility, reliability, and performance of HRIS systems. This allows users to easily access and utilize HRIS, improving HR processes, decision-making, and overall human resource management efficiency.

To maximize the impact of information technology infrastructure on HRIS implementation, organizations need to identify and meet the technology infrastructure needs that align with their goals and characteristics. This involves allocating adequate resources, effective planning, and strong management support. Thus, organizations can harness the full potential of HRIS in managing their human resources and achieving a competitive advantage in the market.

b) Management Support to HRIS

Management support plays a crucial role in facilitating the implementation of Human Resource Information Systems (HRIS). In this context, management support refers to the efforts and policies undertaken by top-level management to encourage the adoption and usage of HRIS within the organization. This factor has been the focus of research aimed at understanding the impact of management support on HRIS implementation.

A study conducted by Wijethilaka (2016) found that top-level management support has a positive impact on the adoption rate of HRIS in the banking sector in Sri Lanka. In this research, top-level management support was measured through management commitment, resource allocation, and management participation in the HRIS implementation project. The results showed that the higher the level of top-level management support, the higher the adoption rate of HRIS. However, in multiple regression analysis, top-level management support did not prove to be a significant factor in the adoption rate of HRIS. This finding aligns with the research by Teo et al. (2007), which also did not find a significant impact of top-level management support on HRIS adoption.

According to Hatshith et al. (2022), management support is one of the factors that influence the effectiveness of HRIS. Management support includes management's understanding of the importance of adopting information technology, observations of the steps taken by competitors and market leaders in adopting information technology, and the provision of resources needed for HRIS implementation. Rapid HRIS adoption can provide a

competitive advantage for organizations, and therefore, management needs to provide appropriate support for the adoption and implementation of HRIS to achieve organizational goals.

In the research by Noutsa (2017), management support was also identified as a crucial factor in the acceptance and usage of HRIS. Managers play a significant role in engaging users and maintaining their satisfaction with the system. Management support can create an environment conducive to the adoption and use of HRIS by employees. Through effective communication, adequate training, and sufficient technical support, management can ensure that employees feel supported in using HRIS and see its benefits in their work.

Based on the research by Khan et al. (2015), management support was also found to have a positive impact on HRIS adoption. Organizations need to provide strong management support in the form of a skilled and qualified IT team and performance indicators that enable effective interaction between employees and HRIS. This management support can include the allocation of adequate resources, support in project planning and management, and continuous monitoring and feedback on HRIS usage.

These findings indicate that management support is a crucial factor in facilitating HRIS implementation. Proper support from top-level management and managers within the organization can create a conducive environment, ensure adequate resource allocation, and engage users in the adoption and usage of HRIS. With strong management support, HRIS implementation has a greater chance of success and can provide significant benefits to the organization.

c) Management Support to HRIS

The study by Rahman et al. (2016) found that competition in the banking and financial sector in Bangladesh is one of the drivers of SISDM adoption. Market competition pushes industry members to remain efficient and offer innovative services to stay competitive. The social influence of market leaders or benchmark companies indirectly affects the intention to use SISDM. For competitors, the adoption of SISDM becomes a question of sustainability or remaining competitive.

Intense market competition also drives organizations to adopt SISDM as an effort to enhance efficiency and effectiveness in managing human resources. In a competitive business environment, SISDM can provide a competitive advantage by allowing companies to manage employee data more efficiently, improve data-driven decision-making, and enhance overall organizational performance.

In the face of increasingly fierce market competition, organizations need to adopt SISDM as part of their strategy to improve performance and competitiveness. By leveraging SISDM, organizations can optimize human resource management, improve operational efficiency, and respond to market needs more swiftly.

Research by Hatshith et al. (2022) in the banking and financial sector shows that SISDM adoption can provide competitive advantages to organizations. In a competitive business environment, SISDM enables organizations to enhance efficiency, optimize the use of human resources, and respond to market changes more quickly. Thus, SISDM adoption can help organizations remain competitive and achieve a competitive edge in the market.

A study by Wijethilaka (2016) in the banking sector in Sri Lanka found that market competition has a significant positive impact on SISDM adoption. Competitors in the banking sector are striving to improve their operational efficiency and effectiveness. In this context, SISDM adoption becomes crucial to optimize human resource management and respond to market competition more effectively.

Research by Khan et al. (2015) in the context of the human resources department suggests that market competition can be a driver of SISDM adoption. In an effort to remain

competitive, organizations need to optimize their human resource management. SISDM can assist organizations in planning, administration, decision-making, and human resource control, enabling them to respond to market competition more effectively.

CONCLUSION

Based on the objectives, results, and discussion, the conclusion of this article is to formulate hypotheses for further research, namely: (1) Information Technology Infrastructure affects Human Resource Information Systems; (2) Management Support affects Human Resource Information Systems, and (3) Market Competition affects Human Resource Information Systems.

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