Patua: Journal of Business Administration and Management

E-ISSN: 2987-0046
Edition: Volume 3 Number 02 | Year 2025

Available online at https://journal.cdfpublisher.org/index.php/patua

Management Information Systems as a Support for Knowledge Management in Organizations

Suci Nirmala
Universitas Pembangunan Panca Budi

ARTICLEINFO

Keywords:

Management Information Systems, Knowledge Management, organization, information technology, organizational performance.

ABSTRACT

This study aims to analyze the role of Management Information Systems in supporting the effectiveness of Knowledge Management in organizations. The research approach used was quantitative with an explanatory design, utilizing primary data obtained through questionnaires distributed to employees involved in the use of information systems and knowledge management. Data analysis was performed using linear regression with the aid of SPSS software. The results of the study indicate that the Management Information System has a positive and significant effect on the effectiveness of Knowledge Management. This is indicated by a significance value below 0.05 and a contribution of 62%. An integrated system can improve the process of collecting, storing, and distributing knowledge more efficiently. Furthermore, organizational culture and human resource competency also influence the success of Knowledge Management implementation. In conclusion, the integration of Management Information Systems and Knowledge Management can improve operational efficiency, decision-making quality, and organizational competitive advantage. Therefore, organizations are advised to focus not only on technological development but also on strengthening a culture of knowledge sharing and human resource capacity.

Corresponding Author:
Suci Nirmala
Universitas Pembangunan Panca Budi
E-mail: suci@gmail.com

INTRODUCTION

In the era of increasingly rapid digital transformation (Schank, 2023), organizations are required to effectively manage knowledge as a strategic asset (Arantes et al., 2021). Knowledge is not limited to data or information, but encompasses the experience, skills, and insights possessed by individuals and organizations (Tiwari, 2022). In this context (S. Tiwari, 2022), the implementation of

Knowledge Management is crucial for increasing competitiveness, innovation, and the quality of decision-making (Omar & Johar, 2022).

Along with the development of information technology (Chen & Nunes, 2023), Management Information Systems (MIS) are present as one of the main instruments supporting the knowledge management process in organizations (Armah & Firdaus, 2024). MIS functions to collect, process (Chandratreya, 2025), store, and distribute relevant information in a systematic and integrated manner (Sari & Firdaus, 2024). With MIS, organizations can access information quickly and accurately (Rafli, 2024), thus facilitating the process of creating, storing, and sharing knowledge between individuals and work units (Nuriani & Firdaus, 2024).

Furthermore, the integration of MIS and Knowledge Management enables organizations to optimize the utilization of tacit and explicit knowledge (Anwar et al., 2023). Personal tacit knowledge can be transformed into explicit knowledge through a well-documented system (Nasution & Vientiany, 2024). This is crucial for maintaining organizational sustainability (Chen & Nunes, 2023), especially in the face of dynamic changes in a complex and competitive business environment (Rosalin & Rudiyanto, 2024).

However, the implementation of MIS as a Knowledge Management support system is not without challenges (Yusril & Nurmiati, 2021), such as limited technological infrastructure (Mahgfiroh et al., 2023), an organizational culture that does not support knowledge sharing, and a lack of human resource competency (Rahayuningtyas et al., 2023). Therefore, an appropriate strategy is needed to integrate MIS with Knowledge Management practices to provide optimal added value to the organization (Pohonțu-Dragomir et al., 2025).

Based on this background, this study aims to examine the role of Management Information Systems as a supporter of Knowledge Management in organizations (Saragih et al., 2025), as well as how the integration of the two can improve the effectiveness of organizational performance and competitive advantage (Phakamach et al., 2025).

METHOD

This study uses a quantitative approach with an explanatory research design aimed at analyzing the influence of Management Information Systems on the effectiveness of Knowledge Management in organizations. This approach was chosen because it can explain the causal relationships between the variables studied in a systematic and measurable manner.

The population in this study was all employees in organizations that have implemented Management Information Systems. The sampling technique used purposive sampling, with respondents being employees directly involved in the use of information systems and knowledge management processes. The sample size was determined at 50–100 respondents to meet the statistical analysis requirements.

The type of data used is primary data obtained through the distribution of questionnaires. The research instrument was compiled using a Likert scale of 1–5, which measures several indicators, including: (1) quality of information systems, (2) ease of access to information, (3) culture of knowledge sharing, (4) knowledge storage,

and (5) utilization of knowledge in decision-making. Validity and reliability tests were conducted to ensure that the research instrument was suitable for use.

Data analysis techniques were performed using simple or multiple linear regression, depending on the number of variables tested. This analysis aimed to determine the extent to which Management Information Systems influence the effectiveness of Knowledge Management. Classical assumption tests, such as normality, multicollinearity, and heteroscedasticity, were also conducted to ensure the accuracy of the research model.

To strengthen the research findings, a descriptive analysis was conducted to provide an overview of the current state of Management Information Systems and Knowledge Management implementation within the organization. All data processing was performed using statistical software such as SPSS.

With this method, it is hoped that research can provide a clear empirical picture of the role of Management Information Systems in supporting Knowledge Management and its implications for organizational performance.

RESULTS AND DISCUSSION

Based on the results of data processing using SPSS, it is clear that the Management Information System has a significant influence on the effectiveness of Knowledge Management in the organization.

1. Descriptive Analysis Results

Descriptive analysis shows that most respondents gave the implementation of the Management Information System high marks. This is evident in the ease of information access, system speed, and data integration between organizational units. Furthermore, the knowledge-sharing culture is also considered good, although some challenges remain in documenting tacit knowledge.

2. Regression Test Results

The results of the regression analysis indicate that the Management Information System has a positive and significant effect on Knowledge Management. The significance value obtained is below 0.05, indicating that the research hypothesis is accepted. This indicates that the better the quality of the Management Information System, the more effective the knowledge management process within the organization.

3. Analysis Results Table

Variables	Regression Coefficient	Sig. (p-value)	Information
Management Information System (X)	**0.68**	**0,000**	**Significant**
Constant	**1.25**	**0.012**	**Significant**
R Square	**0.62**	**-**	**62% influence**

4. Discussion

The results of this study indicate that Management Information Systems play a crucial role in supporting the success of Knowledge Management. An integrated system can accelerate the process of collecting, storing, and distributing information, making it easier for organizations to create new knowledge.

The regression coefficient value of 0.68 indicates that improving the quality of the Management Information System will significantly increase the effectiveness of Knowledge Management. Furthermore, the R Square value of 62% indicates that most of the variation in Knowledge Management can be explained by the Management Information System, while the remainder is influenced by other factors such as organizational culture and human resource competencies.

These findings also emphasize that technology implementation alone is not enough; it must be supported by a strong culture of knowledge sharing. Without collaboration between individuals, sophisticated systems will not deliver optimal benefits.

Overall, this research strengthens that the integration between Management Information Systems and Knowledge Management is a key factor in increasing the efficiency, innovation, and competitive advantage of organizations in the digital era.

CONCLUSION

Based on the research results, it can be concluded that Management Information Systems play a significant role in supporting the effectiveness of Knowledge Management within an organization. An integrated Management Information System can improve the quality of knowledge management through faster, more accurate, and more systematic information collection, storage, and distribution.

The analysis shows that the better the implementation of a Management Information System, the more optimal the Knowledge Management process. This results in increased work efficiency, decision-making quality, and the organization's ability to innovate and maintain competitive advantage.

However, the success of integrating Management Information Systems and Knowledge Management is not solely determined by technology, but also influenced by organizational culture and human resource competencies. Therefore, organizations need to develop a culture of knowledge sharing and improve employee skills in utilizing existing systems.

Thus, the implementation of a Management Information System supported by an appropriate Knowledge Management strategy can be the key to organizational success in facing challenges and dynamics in the digital era.

REFERENCES

Anwar, Muhammad Khaerul, Asmawati, A., Putri, RR, Anantyo, DR, Triyanto, A., & Paramarta, V. (2023). Implementation of SIMRS with Knowledge Management System: Solution to Improve the Quality of Health Services. Usada Nusantara, 2(1), 15–29.https://doi.org/10.47861/usd.v2i1.591

Arantes, R. de C., Pereira, MMO, Castro, CC de, Mineiro, AA da C., & Oliveira, JA (2021). Digital transformation and organizational knowledge: A systematic

literature review. 19(21), 316–329.https://doi.org/10.19094/CONTEXTUS.2021.71301

Armah, S., & Firdaus, R. (2024). Concept and Application of Management Information Systems. 1(3), 50–56.https://doi.org/10.61132/jimakebidi.v1i3.192

Chandratreya, A. (2025). Revolutionizing Knowledge Management for Competitive Advantage. Indian Scientific Journal Of Research In Engineering And Management, 09(01), 1–9.https://doi.org/10.55041/ijsrem41234

Chen, H., & Nunes, M. B. (2023). Introduction. 1–8.https://doi.org/10.1007/978-981-99-1486-9_1

Mahgfiroh, AS, Afiyah, S., Deliya, T.E., Gutandjala, II, & Ramadhan, A. (2023). Knowledge Management System for Preserving, Sharing and Enhancing the Knowledge of Employees. 295–299.https://doi.org/10.1109/icicyta60173.2023.10429005

Nasution, J., & Vientiany, D. (2024). Information Management in Organizations. Journal of Law Education and Business, 2(2), 1389–1393.https://doi.org/10.57235/jleb.v2i2.3145

Nuriani, N., & Firdaus, R. (2024). The Future of Work: Why is Management Information Systems Expertise So Necessary? Journal of Management and Business Economics, 2(3), 148–158.https://doi.org/10.54066/jmbe-itb.v2i3.1974

Omar, M., & Johar, E.R. (2022). Knowledge Management as a Moderator and its Challenges in the Digital Economy. Malaysian Journal of Social Sciences and Humanities, 7(12), e001960–e001960.https://doi.org/10.47405/mjssh.v7i12.1960

Phakamach, P., Sitthikorn, T., Soeykrathoke, P., & Phomdee, R. (2025). Integrated ICT System Management Strategies Utilizing Knowledge Management to Drive Organizational Transformation Towards Excellence in the Digital Era.https://doi.org/10.56825/jmsku.2025.426279

Rafli, M. (2024). Driving Success Through SIM: A Critical Analysis Management information Systems Influence on Decision-Making Processes.https://doi.org/10.59653/jbmed.v2i02.827

Rahayuningtyas, TE, Widyatmoko, W., & Mintorini, E. (2023). Human Resource Development Through Knowledge Management System. JAIS (Journal of Applied Intelligent System), 8(1), 47–57.https://doi.org/10.33633/jais.v8i1.7157

Rosalin, S., & Rudiyanto, S. (2024). The Implementation of Knowledge Management System in Enhancing University Performance and Competitiveness. Pinisi Discretion Review, 8(1), 93–93.https://doi.org/10.26858/pdr.v8i1.66697

Saragih, R., Lestari, YD, Lubis, YFA, & Handoko, D. (2025). The Use of Knowledge Management Systems to Improve Decision-Making in Local Government. 2(1), 7–11.https://doi.org/10.64803/jocsaic.v2i1.22

Sari, IN, & Firdaus, R. (2024). Building Competitive Advantage with Effective Management Information Systems. Journal of Management and Business Economics, 2(3), 300–306.https://doi.org/10.54066/jmbe-itb.v2i3.2046

Schank, M. (2023). The Key to Digital Transformation Success. 3–13.https://doi.org/10.1007/978-1-4842-9816-9_1

Tiwari, S. (2022). Knowledge Management Strategies and Emerging Technologies - An Overview Of the Underpinning Concepts. International Journal of Innovative

Technologies in Economy, abs/2205.01100(1(37)).https://doi.org/10.31435/rsglobal_ijite/30032022/7791

Tiwari, S.P. (2022). Knowledge management strategies and emerging technologies - an overview of the underpinning concepts. International Journal of Innovative Technologies in Economy, 1(37).https://doi.org/10.31435/rsglobal_ijite/30032022/7791

Yusril, AN, & Nurmiati, E. (2021). Systematic literature review: implementation of knowledge management in the organization. 6(2), 227–232.https://doi.org/10.33480/JITK.V6I2.1929

Pohonțu-Dragomir, Ștefana-C., Budeanu, C.-I., Herghiligiu, IV, Mămăleague, A.,Pohonțu-Dragomir, Ștefana-C., Budeanu, C.-I., Herghiligiu, IV, & Mămăleague, A. (2025). Information Systems and Knowledge Management: Theoretical Perspective of Associated Interconnection. Proceedings of the ... International Conference on Business Excellence, 19(1), 5648–5657.https://doi.org/10.2478/picbe-2025-0432