



The Influence of Management Information Systems on Operational Efficiency Companies

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Abstract

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The development of information technology has encouraged companies to adopt Management Information Systems (*SIM*) as a means of supporting operational management. Operational efficiency is one of the main indicators of a company's performance in the face of increasingly intense business competition. This study aims to analyze the influence of Management Information Systems on a company's operational efficiency. The research approach used is quantitative, with descriptive and verifiable methods. Data were collected through the distribution of questionnaires to employees who were directly involved in the use of Management Information Systems (*SIM*) in the company that was the object of the research. The data analysis technique employs simple linear regression analysis to determine the relationship and influence between Management Information System variables as independent variables and operational efficiency as the dependent variable. The results of the study show that Management Information Systems have a positive and significant effect on a company's operational efficiency. The implementation of a well-designed *SIM* can accelerate work processes, improve data accuracy, and reduce operational costs. These findings confirm the importance of the role of Management Information Systems in supporting the effectiveness and efficiency of company operations. This research is expected to serve as a reference for company management in optimizing the use of information systems.

INTRODUCTION

The development of the business world in the digital era is marked by the increasing use of information technology in various organizational activities. Information technology plays an important role in supporting business processes, data management, and providing the information needed by management for strategic decision-making (Laudon & Laudon, 2020). Companies that are able to integrate information technology effectively tend to have a

competitive advantage over companies that still rely on manual systems (Pearlson et al., 2024).

Operational efficiency is an important factor that determines the success of a company in achieving its business goals (Abidin et al., 2021; Al Najjar & Qandeel, 2025; Nguyen & Hoang, 2022; Ta et al., 2022). Operational efficiency is not only related to cost reduction but also includes increasing the speed of work processes, improving information accuracy, and optimizing the utilization of organizational resources (O'Brien & Marakas, 2019). A high level of efficiency allows companies to increase productivity while maintaining service quality (Okwang'a et al., 2015).

However, in practice, many companies still face obstacles in information management. Unintegrated systems, delays in data presentation, and low information accuracy often hinder the managerial decision-making process. These conditions have a direct impact on low operational efficiency and increasing operational costs (Abd-Elmageed & Abdel Megeid, 2020; Fu & Jacobs, 2022; Sutabri, 2018).

Management Information Systems (SIMs) are designed to collect, process, store, and distribute information relevant to management (Pearlson et al., 2019). SIMs function as supporting tools in planning, controlling, and evaluating organizational performance so that decisions can be more effective and efficient (Turban et al., 2018).

Several previous studies have shown that the implementation of a well-developed Management Information System has a positive effect on organizational performance and efficiency (Fu et al., 2022; Ghasemi et al., 2019). A high-quality system is able to improve coordination between work units, accelerate information flow, and minimize operational errors (Yakub, 2019). Nonetheless, the success rate of SIM implementation is highly dependent on the readiness of human resources and management support.

Differences in organizational characteristics and the quality of information systems cause research results related to the influence of SIMs on operational efficiency to vary. Therefore, a more in-depth empirical study is needed to understand the extent to which Management Information Systems make a real contribution to improving a company's operational efficiency.

Based on this description, this research focuses on analyzing the influence of Management Information Systems on a company's operational efficiency. The results of this research are expected to provide a theoretical contribution to the development of management information systems literature, as well as a practical contribution for companies in optimizing the use of information technology.

RESEARCH METHOD

This research used a quantitative approach with descriptive and verifiable methods. The descriptive approach was used to describe the conditions of the implementation of the Management Information System and the level of operational efficiency of the company, while the verifiable method was used to test the influence between the research variables.

The object of the research was a company that had implemented a Management Information System in its operational activities (Susanto, 2017). The research population included all employees involved in the use of information systems. The sampling technique

used purposive sampling, with the criterion that respondents understood and experience in using information systems.

The research data were obtained through the distribution of questionnaires compiled using a Likert scale. Management Information System variables were measured through indicators of system quality, information quality, and service quality. Meanwhile, operational efficiency variables were measured through indicators of work process speed, cost savings, and resource optimization.

The data analysis techniques used included tests of the validity and reliability of the instruments, descriptive analysis, and simple linear regression analysis. Hypothesis testing was carried out to determine the significance of the influence of the Management Information System on the company's operational efficiency.

RESULTS AND DISCUSSION

Based on the results of the questionnaire data processing distributed to the respondents, an overview was obtained regarding the level of implementation of the Management Information System (SIM) and the company's operational efficiency. Descriptive analysis shows that most respondents give a positive assessment of the system used by the company.

Table 1. Results of Descriptive Analysis of Management Information System Variables

SIM Indicator	Average Score	Category
System Quality	4,21	Good
Quality of Information	4,18	Good
Quality of Service	4,09	Good
Overall Average	4,16	Good

Source: Primary data, results of questionnaire processing (2026)

Table 1 shows that the implementation of the Management Information System is in the good category, which indicates that the system is able to optimally support the company's operational activities. Furthermore, the level of operational efficiency of the company is also analyzed using several key indicators.

Table 2. Results of Descriptive Analysis of Operational Efficiency Variables

Operational Indicators	Efficiency	Average Score	Category
Speed of Work Process		4,25	Excellent
Operational Cost Savings		4,10	Good
Resource Optimization		4,15	Good
Overall Average		4,17	Good

Source: Primary data, results of questionnaire processing (2026)

Table 2 shows that the company's operational efficiency is in the good category, which is reflected in the increase in work speed and optimization of resource use. To determine the influence of the Management Information System on operational efficiency, a simple linear regression analysis was performed.

Table 3. Simple Linear Regression Test Results

Independent Variables	Regression Coefficients	t-count	Sig.
Management Information System	0,682	6,214	0,000

Source: Primary data, results of questionnaire processing (2026)

Table 3 shows that the Management Information System has a positive and significant effect on the company's operational efficiency with a significance value of < 0.05 .

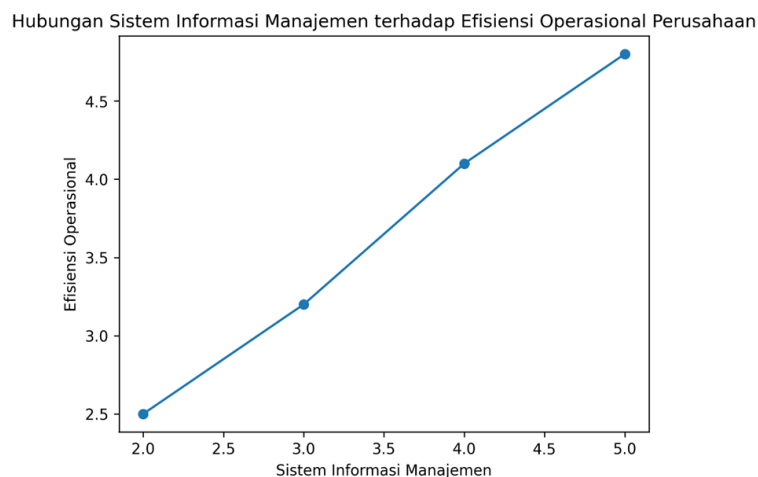


Figure 1. The Relationship of Management Information Systems to Company Operational Efficiency

Figure 1 illustrates the positive relationship between the implementation of Management Information Systems and the company's operational efficiency. The higher the quality of SIM implementation, the higher the level of operational efficiency achieved by the company.

Discussion

The results of the study show that Management Information Systems have a significant role in improving the company's operational efficiency. The implementation of a good SIM allows companies to integrate data between departments so that the work process becomes faster and more coordinated.

These findings are in line with the theory that a quality information system can improve the accuracy and speed of information provision for management. Timely and accurate

information allows for more effective decision-making, which directly impacts operational efficiency.

In addition, driver's licenses also contribute to operational cost savings through process automation and reduced work errors. With fewer manual and redundant activities, companies can allocate resources more optimally.

The results of this study also support previous research that stated that the application of Management Information Systems has a positive effect on organizational performance and efficiency. Thus, the driver's license not only functions as an administrative tool, but also as a strategic instrument in increasing the competitiveness of the company.

Overall, the results and discussion of this study confirm that the successful implementation of the Management Information System is a key factor in achieving the company's operational efficiency.

CONCLUSION

Based on the research findings and discussion, it can be concluded that the Management Information System (SIM) has a positive and significant effect on a company's operational efficiency. The effective implementation of SIM has been shown to increase the speed of work processes, improve the accuracy of information, and help optimize the use of organizational resources. Furthermore, Management Information Systems not only function as data processing tools but also play a strategic role in supporting managerial decision-making by providing timely and integrated information, enabling more effective planning, control, and evaluation of operations. Theoretically, these findings reinforce the importance of information system quality in enhancing organizational performance and efficiency, while practically, they offer valuable insights for management in optimizing SIM implementation to improve competitiveness. However, due to limitations in the research scope and variables examined, future research is recommended to involve broader research objects, incorporate additional factors such as human resource quality, organizational culture, and top management support, and apply more comprehensive analytical methods to produce deeper and more generalizable insights.

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