



Management Information Systems Development for Sustaining Organizational Competitiveness

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Abstract

The development of System Information Management (SIM) has become a strategic necessity for organizations striving to remain competitive in the digital era. As technology advances rapidly, organizations are required to manage information more efficiently to support decision making, strengthen coordination, and enhance overall performance. This study examines the development of SIM as a foundation for building agile, innovative, and competitive organizations. SIM functions not only as a tool for collecting and processing data but also as an integrated system that connects people, processes, and technology to create value. Through a qualitative approach and literature based analysis, the study highlights how well designed SIM improves operational efficiency, supports real time information flow, and accelerates managerial responses to changing environments. Furthermore, SIM enables organizations to optimize resource allocation, anticipate market trends, and meet customer expectations more effectively. The findings also emphasize that the success of SIM development depends on technological readiness, user competence, and a supportive organizational culture.

Keywords: *Information Management Systems; Organizational Competitiveness;*

Abstract: Pengembangan System Information Management (SIM) telah menjadi kebutuhan strategis bagi organisasi yang berupaya untuk tetap kompetitif di era digital. Seiring kemajuan teknologi yang pesat, organisasi diharuskan untuk mengelola informasi secara lebih efisien untuk mendukung pengambilan keputusan, memperkuat koordinasi, dan meningkatkan kinerja secara keseluruhan. Penelitian ini mengkaji perkembangan SIM sebagai fondasi untuk membangun organisasi yang gesit, inovatif, dan kompetitif. SIM berfungsi tidak hanya sebagai alat untuk mengumpulkan dan mengolah data tetapi juga sebagai sistem terintegrasi yang menghubungkan orang, proses, dan teknologi untuk menciptakan nilai. Melalui pendekatan kualitatif dan analisis berbasis literatur, studi ini menyoroti bagaimana SIM yang dirancang dengan baik meningkatkan efisiensi operasional, mendukung aliran informasi waktu nyata, dan mempercepat respons manajerial terhadap lingkungan yang berubah. Selain itu, SIM memungkinkan organisasi untuk mengoptimalkan alokasi sumber daya, mengantisipasi tren pasar, dan memenuhi harapan pelanggan dengan lebih efektif. Temuan ini juga menekankan bahwa keberhasilan pengembangan SIM bergantung pada kesiapan teknologi, kompetensi pengguna, dan budaya organisasi yang mendukung.

Kata kunci: *Sistem Manajemen Informasi; Daya Saing Organisasi*



INTRODUCTION

In the current era of rapid technological advancement, organizations are increasingly challenged to operate efficiently, respond quickly to market dynamics, and maintain long term competitiveness. Information has become one of the most valuable organizational assets, shaping strategic decisions, influencing innovation, and determining the capacity of an organization to adapt to change. As a result, the development of System Information Management (SIM) has emerged as a critical foundation for modern organizational growth. SIM is not merely a technological tool used to store or process data; it is a strategic system that integrates technology, people, and workflows to ensure that information is available, accurate, and meaningful for decision making.(Ali Mohamad et al., 2023)

The importance of SIM development lies in its ability to transform raw data into actionable insights. Organizations today operate in environments where information flows rapidly from consumer behavior and market trends to internal performance metrics. Without a well developed SIM, this information remains fragmented, difficult to analyze, and unable to support strategic planning. Therefore, the need to build a robust SIM is driven by the increasing complexity of organizational activities and the demand for real time information that can guide managerial decisions.(Abusaimh et al., 2023)

The title of this study was chosen based on several key considerations. First, many organizations are still in the early stages of digital transformation and struggle to develop SIM that aligns with their strategic goals. Second, competitiveness is no longer determined solely by tangible resources such as capital or physical assets; instead, it is shaped by an organization's ability to manage, interpret, and utilize information. By focusing on the development of SIM, this study seeks to explore how organizations can strengthen their competitive advantage through improved information management. Third, while prior studies have examined the role of information systems in general, research that specifically addresses the development process of SIM to enhance competitiveness remains limited. Therefore, this topic holds significant academic and practical relevance.

At its core, SIM functions as the backbone of organizational operations. It supports communication between departments, coordinates activities, and ensures that all organizational units work with the same set of reliable information. A well developed SIM helps reduce duplication of work, eliminate errors caused by manual processes, and streamline information flows. As organizations grow larger and more complex, the need for integrated systems becomes even more critical. Without such integration, information silos form, leading to inefficiencies and delays that can hinder competitiveness.(Alfani et al., 2024)

Furthermore, the development of SIM also plays a central role in fostering innovation. Innovation is now widely recognized as a key

determinant of organizational survival. Whether organizations aim to create new products, improve customer service, or optimize internal operations, innovation requires access to accurate and timely information. SIM provides the data infrastructure that supports creative thinking, experimentation, and strategic reforms. When decision makers have access to high quality information, they are better equipped to identify opportunities, evaluate alternatives, and design innovative solutions that meet evolving market demands.(Ubaid, 2024)

Another reason this topic is significant is the increasing pressure organizations face from global competition. Markets are no longer limited by geographic boundaries, and organizations must compete not only with local firms but also with global players who often have more advanced technological capabilities. In such a competitive landscape, the ability to manage information effectively becomes a distinguishing factor. Organizations with a strong SIM can analyze competitors, predict market trends, and adjust strategies more quickly than those relying on outdated or fragmented systems.

The development of SIM also requires organizations to consider human factors. Technology alone cannot guarantee success; it must be supported by competent users who understand how to operate systems and interpret the information produced. Therefore, digital literacy and continuous training become essential components in the development process. Employees must be encouraged to adopt new technologies, collaborate across departments, and utilize information systems as part of their daily tasks. An organizational culture that supports learning and innovation will significantly enhance the effectiveness of SIM.(Hardiansyah Putra, 2023)

METHOD

This study adopts a qualitative research approach to explore the development of System Information Management (SIM) as a strategic tool for enhancing organizational competitiveness. A qualitative method is considered appropriate because the focus of this research is to understand concepts, perspectives, and organizational practices rather than measure variables numerically. This approach allows for a deeper examination of how SIM is designed, implemented, and utilized within different organizational contexts. The research relies on a literature based methodology, using secondary data gathered from reputable academic sources such as international journals, scholarly books, conference papers, and authoritative reports related to information systems, digital transformation, and competitive strategy. The selection of sources follows a purposive sampling technique, ensuring that all materials used are relevant, credible, and aligned with the study's objectives.(Stefia et al., 2024)

To analyze the collected data, the study employs thematic analysis. This technique is used to identify recurring themes, patterns, and insights

regarding the role of SIM in supporting organizational effectiveness and competitiveness. Themes such as system integration, decision making processes, innovation support, and technological challenges were examined in depth. The analysis also considers the theoretical frameworks introduced by leading scholars in information systems, providing a strong foundation for interpreting findings and drawing meaningful conclusions. Through this method, the study aims to produce a comprehensive understanding of SIM development and its strategic implications for modern organizations. (Adisel, 2019)

RESULTS AND DISCUSSION

A management information system (MIS) is a system designed to collect, store, process, and disseminate information needed to support decision making, operational management, and performance analysis within an organization. In this discussion, we will explore the basic concepts that form the basis for a better understanding of MIS. (Barrionuevo Torres et al., 2021) MIS plays a crucial role in supporting decision making processes at all levels within an organization. By providing accurate, relevant, and timely information, MIS assists managers in planning, organizing, directing, and controlling an organization's operational activities. The importance of MIS also lies in its ability to improve an organization's efficiency, productivity, and competitiveness in a competitive marketplace. MIS development follows a multi step cycle, including requirements analysis, system design, implementation, testing, and maintenance. This cycle ensures that MIS can adapt to evolving business needs and ensures that the system remains operational effectively in the long term.

While MIS offers numerous benefits to organizations, it also faces various challenges. These challenges include data availability and quality, information security, technological complexity, implementation costs, change management, and regulatory compliance. However, by addressing these challenges, organizations can leverage MIS to create opportunities for innovation, increased efficiency, and competitive advantage. (Rohayati, 2021)

Competitive Advantage

Competitive advantage refers to a company's ability to achieve superior performance compared to competitors in the same sector and market. This concept was introduced by Michael Porter in his book " *Competitive Advantage* " in 1985 as a response to the theory of comparative advantage first proposed by Ricardo. It is important to remember that, in addition to physical assets, companies can also achieve competitive advantage by utilizing virtual resources, especially in the context of information systems, where the use of information can improve the company's position in the market. When we understand competition in depth, we realize that organizations compete with

companies, professionals, and workers from other countries who often engage in similar work to the company's employees. Multinational companies often implement an *outsourcing model* to achieve economic advantage. (Irlan & Martinus, 2022)

Achieving competitive advantage can involve managing physical resources, but virtual resources also play a significant role. Michael E. Porter, a leading expert on the concept of competitive advantage, has contributed ideas around value chains and value systems, which help view the company as a larger, interconnected system in its context. Here are some of the advantages of management information systems in maintaining an organization's competitive advantage: (Bris et al., 2021)

1. Improvement Efficiency Business

MIS automates various business processes previously performed manually and increases business efficiency. Previously, compiling and obtaining data was time consuming and involved a lengthy data collection process, and organizations often experienced material and non material losses in presenting this data. By implementing MIS, undesirable things like the above will no longer occur.

2. Personalization and Customer Service

This system allows companies to collect customer data and behavior to provide more personalized service. An organization will be able to more easily identify new trends and personalize consumer preferences, thereby maintaining or further enhancing its competitive advantage.

3. Innovation Product

Data from MIS provides valuable insights for developing new products in response to market needs. The increasing diversity of consumer trends and needs necessitates organizations' continuous innovation in their product offerings. Product innovation involves introducing and developing better products for the target market, but successful innovation also requires strong collaboration within the organization. (Silaban, 2023)

Roles and Challenges

In management, there are a series of stages involved, including planning, organizing, directing, and monitoring, as well as many other steps in realizing collaboration to create a quality organization. On the other hand, organizations themselves have patterns, information that leads to data that has been processed in such a way that it has important and crucial value within the company. The information system itself has three keywords: system, information, and management itself.

Management information systems are essentially divided into several parts, including those used for decision making, service improvement and innovation, and business efficiency. Management is the science and art of planning, organizing, directing, and supervising the efforts of organizational

members and the use of organizational resources to achieve predetermined goals. In this context, these three elements harmonize in creating an information system that can assist individuals or organizations in *managing* their businesses. While each of these elements alone will undoubtedly bring convenience, combining them will create greater time efficiency and maximize data utilization by harmonizing these three fundamental elements. While MIS offers numerous benefits, management also faces numerous challenges, including: (Silaban, 2023)

1. Digitizing a company requires a complete change in mental attitude.
Digital companies require new management processes and organizational design to successfully use the internet and other digital technologies for coordination, collaboration, and e commerce. Companies must thoroughly examine and redesign entire business processes, not simply seek to acquire and embed new technologies into existing ones.
2. Determining a successful internet business model
Companies have been racing to use websites in hopes of increasing revenue through e commerce. However, some *e commerce sites* haven't been fully successful. Profitable sales and marketing require diligent implementation and ongoing outreach through a sound approach. Besides cultural issues, the next challenge is determining the system and server model to use.
3. There is crime and misuse of SIM via the internet
Marketers send mass emails to recipients who didn't request the information. Hackers exploit website security vulnerabilities to gain access to proprietary data such as user information and passwords. (Rabiah, 2023)

Development

The digital era brings significant challenges and opportunities for the development of Management Information Systems (MIS). One of the main impacts of digitalization is the increasing need for systems that can manage vast amounts of data quickly and with high accuracy. MIS serves not only as a means of data collection but also as an analytical tool and support for strategic decision making. Several sources emphasize that modern MIS plays a crucial role in the digital transformation process within organizations. (Rahayu, 2023)

However, not all organizations are equally prepared to implement a digital MIS. Many companies, particularly small and medium sized enterprises (SMEs), still face resource constraints, both financial and technical. This results in a suboptimal MIS development process and can lead to operational disruptions if not managed properly. Furthermore, organizational culture plays a crucial role in the success of MIS implementation. A work culture that is reluctant to embrace technological change, a lack of understanding of the benefits of MIS, and a fear of losing roles due to automation are often barriers.

The impact of MIS on organizational performance has also been extensively investigated in the literature. Several studies have shown that effective MIS implementation can improve operational efficiency, enhance decision making quality, and create competitive advantage. However, a major challenge facing organizations is adapting their MIS to address rapid technological changes, including the use of *big* data, predictive analytics, and artificial intelligence.

Furthermore, it is also crucial to understand the strategic role of MIS in supporting organizational goals in the context of digitalization. With the increasing adoption of technology, MIS is not only an operational tool but also a key to understanding market trends, identifying new business opportunities, and creating superior customer experiences. (SETIAWATI, 2024)

Strategy to Increase Excellence

Amidst rapid technological developments, the need for fast and accurate data has become crucial. Data is no longer merely considered an organizational asset, but rather a key foundation for creating added value. MIS empowers organizations to manage data efficiently, enabling more evidence based decision making. This is particularly relevant in a dynamic business environment, where the speed and accuracy of decisions often determine an organization's success or failure.

In the modern business world, competitive advantage is not only determined by an organization's ability (Lestiowati et al., 2021a) to respond quickly to change. MIS enables organizations to streamline business processes, improve cross departmental collaboration, and create greater synergy. Thus, MIS is not only an operational tool but also a strategic pillar in achieving an organization's long term goals.

In addition to supporting operational efficiency, MIS also plays a crucial role in strengthening the relationship between an organization and its customers. This system enables organizations to collect customer data in a more structured manner, enabling them to provide more personalized and relevant services. In the long term, strong customer relationships will help organizations build loyalty and increase market share. Digital transformation through MIS also impacts the way organizations carry out their management functions. (Lestiowati et al., 2021b) Digital transformation has become a top priority for organizations. In this process, Management Information Systems (MIS) serve as a key element enabling the integration of technology with daily business activities. Based on a literature review, the role of MIS goes beyond data processing to support better strategic decision making. Management Information Systems are also recognized as an essential tool in resource management.

The role of MIS in decision making has also been a major focus in various studies. According to MIS provides accurate and relevant data to support

strategic decisions. With organized information, managers can make faster, evidence based decisions, ultimately improving overall organizational effectiveness. (Patimah et al., 2025) This research shows that organizations that optimally utilize MIS tend to be more successful in facing market challenges. Overall, the existing literature confirms that MIS is not just a technological tool, but also an essential strategy for achieving competitive advantage in the digital age. By leveraging MIS, organizations can increase efficiency, strengthen customer relationships, and create innovations relevant to market needs. Furthermore, challenges in MIS implementation must be addressed through a comprehensive approach, including workforce training, infrastructure development, and risk management. With the right approach, MIS can be a key driver of digital transformation and long term organizational success. (Puspita Sari, 2025)

In addition to supporting operational efficiency, MIS also serves as a critical foundation for evidence based strategic decision making. By leveraging technologies such as data analytics and artificial intelligence, organizations can predict market trends, understand customer preferences, and create competitive products and services. This provides organizations with a sustainable competitive advantage amidst increasingly intense competition. (Hossin et al., 2025)

However, successful MIS implementation is not without challenges such as resistance to change, limitations, digital and workforce skills, and data security issues. Therefore, an MIS implementation strategy must be designed holistically, encompassing workforce training, technological infrastructure development, and adequate data security policies . By addressing these barriers, organizations can optimally utilize MIS to achieve long term goals and business sustainability. (Puspita Sari, 2025)

CONCLUSION

Management information systems (MIS) are a crucial component in managing modern organizations, as they collect, process, and present accurate and relevant information to support decision making. MIS not only plays a role in improving operational efficiency but also serves as a strategic tool for achieving competitive advantage amidst increasingly fierce global competition. Through the implementation of MIS, organizations can improve business efficiency, strengthen customer relationships through more personalized service, and drive product innovation based on accurate data analysis. However, the success of MIS implementation also depends on the organization's readiness to face challenges such as changing work culture, resource constraints, and information security threats. With the right strategy, including developing technology infrastructure, enhancing the digital skills of the workforce, and managing risks effectively, MIS can become a key foundation for supporting digital transformation, strengthening

competitiveness, and ensuring the sustainability and success of organizations in the future.

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