

Analysis of Management Information Systems for Performance and Achievement in the World of Work Competition

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Abstract

Management information systems (MIS) play a vital role in ensuring that an organization can direct and utilize its resources efficiently. This study explores how optimizing resources through well-designed information systems can strengthen an organization's competitive position. MIS are considered the central engine of organizational activities because they facilitate ongoing improvement, support decision making, and encourage sustainable development. This research employs an information system analysis approach that examines system advantages, stages of system development, efforts to enhance resource quality, and key dimensions that shape the performance of information systems. In today's rapidly evolving technological landscape, the ability to manage data accurately and systematically has become essential for producing outputs and outcomes that are not only reliable but also strategically valuable for organizational growth. The results of the study show that effective optimization of information system technology provides substantial benefits for users, enhances organizational resilience, and supports long-term sustainability. MIS also functions as a critical component within operational procedures, enabling organizations to quickly adapt to changes in their internal and external environments. Overall, information systems emerge as a decisive factor in reinforcing organizational capability and ensuring continued success.

Keywords: *MIS Analysis; Effectiveness; Organization*

Abstract: Sistem informasi manajemen (MIS) memainkan peran penting dalam memastikan bahwa organisasi dapat mengarahkan dan memanfaatkan sumber dayanya secara efisien. Studi ini mengeksplorasi bagaimana mengoptimalkan sumber daya melalui sistem informasi yang dirancang dengan baik dapat memperkuat posisi kompetitif organisasi. MIS dianggap sebagai mesin sentral kegiatan organisasi karena memfasilitasi perbaikan berkelanjutan, mendukung pengambilan keputusan, dan mendorong pembangunan berkelanjutan. Penelitian ini menggunakan pendekatan analisis sistem informasi yang mengkaji keunggulan sistem, tahapan pengembangan sistem, upaya peningkatan kualitas sumber daya, dan dimensi utama yang membentuk kinerja sistem informasi. Dalam lanskap teknologi yang berkembang pesat saat ini, kemampuan untuk mengelola data secara akurat dan sistematis telah menjadi penting untuk menghasilkan output dan hasil

yang tidak hanya dapat diandalkan tetapi juga berharga secara strategis untuk pertumbuhan organisasi. Hasil penelitian menunjukkan bahwa optimalisasi teknologi sistem informasi yang efektif memberikan manfaat substansial bagi pengguna, meningkatkan ketahanan organisasi, dan mendukung keberlanjutan jangka panjang. MIS juga berfungsi sebagai komponen penting dalam prosedur operasional, memungkinkan organisasi untuk dengan cepat beradaptasi dengan perubahan di lingkungan internal dan eksternal mereka. Secara keseluruhan, sistem informasi muncul sebagai faktor penentu dalam memperkuat kemampuan organisasi dan memastikan kesuksesan yang berkelanjutan.

Kata kunci: *Analisis MIS; Efektivitas; Organisasi*

INTRODUCTION

In today's era of rapidly evolving globalization and digitalization, every organization is required to compete effectively and efficiently to maintain its existence amidst increasingly fierce competition. One of the main factors determining a company's success in facing competition is the quality of its human resources (HR). Competent and high-performing HR will be a valuable asset that can increase productivity and directly contribute to the achievement of organizational goals. Therefore, companies need a system capable of systematically and measurably managing, assessing, and developing employee performance. (Masniar et al., 2023)

A Management Information System (MIS) is a strategic solution that can be used to support employee performance management. Through the implementation of a MIS, organizations can collect, process, and present performance data accurately and in real time. This system not only facilitates the performance appraisal process but also assists management and data-driven decision-making. Therefore, effective MIS implementation is expected to increase transparency, objectivity, and accountability in the performance appraisal process.

Furthermore, performance assessments conducted through an integrated information system can serve as the basis for determining employee development strategies, reward programs, and career planning. Optimal performance and achievement will drive increased organizational productivity, ultimately creating competitive advantage. This can take the form of operational efficiency, service quality, innovation, and improved customer satisfaction compared to competitors. (Linelejan & Setiyawati, 2023)

It is in this context that performance Management Information Systems (MIS) have become a significant topic in academic discourse. Academic debate has arisen regarding the extent to which MIS can truly improve organizational performance and competitive advantage. Some researchers emphasize that MIS improves data accuracy, decision-making effectiveness, and performance assessment transparency. However, other research indicates that MIS implementation does not always produce significant impacts if the

organization is technologically resistant, data quality is low, or the work culture does not support digital transformation. These differing findings have shaped *the academic debate*, which has yet to reach a strong consensus.(Sukatin et al., 2022)

Furthermore, a rarely discussed research gap exists: the direct link between the effectiveness of performance MIS implementation and its contribution to the formation of organizational competitive advantage in a digital context. While most previous research has focused solely on the impact of MIS on internal efficiency or productivity improvement, few have examined how performance MIS can serve as a strategic differentiation factor that comprehensively impacts corporate competitiveness. This gap presents a *novel* research opportunity, integrating the perspectives of HR performance, MIS implementation, and competitive advantage within a single, integrated analytical framework.

Based on this gap, this study raises the main question: how the implementation of a Performance Management Information System (MIS) affects employee performance, and how the two relate to determining a company's competitive advantage. This question is examined through research methods that include literature analysis, phenomenological observation, and a descriptive-qualitative approach to capture the relationships between variables in depth and context. Data are analyzed by examining patterns, themes, and empirical findings from organizational practices that have implemented a performance MIS.(Melani et al., 2022)

The objectives of this study are to (1) explain the impact of MIS implementation on improving employee performance, (2) analyze the role of MIS as a strategic instrument in strengthening organizational competitiveness, and (3) provide evidence-based recommendations for companies in optimizing the use of information systems in the digital era. Thus, this study not only fills a gap in the literature, but also presents theoretical and practical contributions to the development of modern information systems and HR management.

METHOD

This study uses a quantitative descriptive approach, a research method that aims to describe, explain, and analyze the relationships between variables based on statistically processed numerical data. This approach was chosen because it can provide a more measurable empirical understanding of how the implementation of a performance Management Information System (MIS) affects employee performance and how both variables contribute to the formation of competitive advantage within the organization. The quantitative approach is considered appropriate for this study, given that the research focuses on objective measurement, verification of variable relationships, and identification of statistically demonstrable levels of influence.

The population in this study includes all employees working in organizations or companies that have actively implemented performance MIS. From this population, the research sample was determined using a *purposive sampling technique*, namely selecting respondents based on certain criteria, such as employees who have used or interacted directly with the information system in performance assessment and reporting. This technique was chosen to ensure that the data collected comes from individuals who truly understand the use of MIS and its impact on their work. The sample size was determined based on the minimum requirements for statistical analysis, so that the research results can have an adequate level of generalization. (Sudarsono et al., 2022)

The research instrument used was a Likert-scale questionnaire, which consisted of four main sections: (1) questions regarding the level of implementation of performance MIS in the organization, (2) employee performance indicators, (3) competitive advantage variables, and (4) respondent demographic information. The variables were measured using a scale of 1–5, from “strongly disagree” to “strongly agree.” The questionnaire instrument was developed based on theories of information systems, performance management, and competitive advantage that have been used in previous research, thus ensuring theoretical validity. Before being used in data collection, the instrument was tested for validity and reliability using the Pearson Product Moment validity test and the Cronbach's Alpha reliability test to ensure that all question items were able to measure the variables accurately and consistently. (“English Ability Students Faculty of Economics in the Competition of the World of Work,” 2022)

Data collection techniques were conducted through direct questionnaire distribution and digital forms. The collected data were then analyzed using descriptive and inferential statistical techniques. Descriptive statistics were used to describe the characteristics of respondents and their level of perception of each research variable. Meanwhile, inferential statistics used multiple linear regression analysis to determine the effect of MIS implementation on work performance and to examine the simultaneous relationship between MIS performance, work performance, and organizational competitive advantage. The analysis was conducted using statistical software such as SPSS or similar applications to obtain accurate and accountable results.

The quantitative descriptive approach used in this study is expected to provide a clear picture of the relationship between information systems technology and HR performance within the context of organizational competitive advantage. Through numerical data-based analysis, this study not only identifies the level of influence between variables but also provides empirical contributions that can serve as a foundation for organizations in

optimizing the use of MIS as a strategic tool in the digital era.(Chaaben et al., 2024)

RESULTS AND DISCUSSION

The results of this study indicate that the analysis of performance management information systems and employee achievement in determining competitive advantage, as for achieving this advantage by creating and delivering innovative products. Based on this background, this study was conducted to analyze how the implementation of performance management information systems affects employee performance, as well as how the relationship between the two in determining the company's competitive advantage. This study is expected to provide an overview and recommendations for companies in optimizing the use of information systems as a strategic tool for developing performance and achieving competitive advantage in the digital era. To find out competitive strategies that can utilize companies in their industry, *Porter's Five Forces Model* can be used.(Li et al., 2024)

This model is used to identify the structure of similar industries to enhance a company's competitive advantage. This model is a widely used approach in strategy development across many industries. By utilizing *Porter's Five Forces model* as a foundation, companies can understand unnecessary actions, such as implementations and techniques that can contribute to creating competitive value for each company or organization.(Anggraini & Johannes, 2024)

According to *Porter's Five Forces*, there are five factors that determine the level of competition and market attractiveness within an industry. Using this model analysis, we can understand the strength of the current competitive position and the strength of the competitive position of existing and planned businesses. Below is an explanation of each aspect.

Threat of New Entrants

The threat of new entrants is a key element in Porter's five forces model, crucially determining the direction and intensity of competition within an industry. This concept illustrates the likelihood of new entrants entering an industry, bringing capital, technology, knowledge, and distinct strategies that could displace established firms. (Junker et al., 2024)When barriers to entry are low, new entrants have a greater opportunity to compete and capture market share. This creates additional pressure on incumbent firms, as new entrants can increase market capacity, reduce market concentration, and ultimately reduce the profitability enjoyed by established firms. Porter emphasized that the threat of new entrants extends beyond simply increasing the number of competitors to the industry, but can also drive long-term structural transformation within the industry.

In practice, new entrants often present fresher and more adaptive business approaches. They bring process innovations, digital-based business models, or more efficient production technologies compared to the conventional methods used by incumbent companies. These advantages enable newcomers to move more quickly to capture market opportunities, respond to changing consumer preferences, and offer more competitive prices. This situation forces incumbent companies to reallocate resources, strengthen research and development, and improve product quality to remain relevant. Companies unable to adapt to this wave of change will experience reduced competitiveness and even be threatened with market exit.(Makuya, 2024)

Furthermore, the arrival of new players often triggers price wars, particularly in industries with low levels of product differentiation. Price wars drastically reduce profit margins, forcing companies to find ways to reduce production costs or increase product added value. This increasingly fierce competition also shortens product life cycles, as companies need to continually launch new innovations to maintain consumer interest. The increasingly rapid product life cycle demands that companies be more adaptive in innovating, developing new technologies, and designing marketing strategies that anticipate the arrival of new entrants.

The threat of new entrants is also not universal; its level of threat is strongly influenced by industry characteristics. Factors such as large capital requirements, the scope of government regulation, levels of customer loyalty, and ease of access to distribution networks can act as significant barriers to entry. Industries requiring significant investment, complex technology, or specialized licensing tend to have high barriers to entry, making it difficult for new entrants to enter. Conversely, industries with simple business models or low capital requirements are more vulnerable to various forms of disruptive innovation from new entrants.

In this context, incumbent companies need to create additional barriers to entry to maintain their position. These barriers can include difficult-to-imitate technological innovation, strong product differentiation, high operational efficiency, or strengthened customer relationships through consistent after-sales service and quality. By building a sustainable innovation system and leveraging digital technology, companies can maintain a competitive advantage that is difficult for new entrants to match. The high threat of new entrants ultimately requires companies to continuously strengthen core competencies, enhance organizational capabilities, and develop a business ecosystem that is adaptive to change.(Odermatt et al., 2024)

Bargaining Power of Suppliers

Supplier bargaining power reflects the extent to which suppliers can influence a company's operational conditions, particularly through price,

quality, and availability of raw materials. In many industries, suppliers play a crucial role as the primary source of raw materials or components needed in the production process. When suppliers have significant bargaining power, they can raise prices, lower material quality, or limit supply. This situation will undoubtedly increase the company's costs and potentially disrupt production.

Companies that rely heavily on one or a few key suppliers are in a more vulnerable position. When suppliers experience pressures such as rising production costs, raw material shortages, or regulatory changes, the companies that rely on them are immediately impacted. This can lead to price volatility, a decline in product quality, and even potential production disruptions if supplies are completely interrupted. Suppliers' bargaining power is also often heightened when the number of suppliers is limited or when the products they sell are unique and difficult to substitute.

One strategy to mitigate this risk is to develop a more proactive and sustainable procurement approach. Companies can diversify their suppliers to avoid relying on a single supplier. Having multiple suppliers provides companies with greater flexibility in selecting the best price, adapting to production needs, and reducing the risk of supply fluctuations. Furthermore, building long-term relationships with suppliers can foster stable business relationships, enabling both parties to reach more transparent price and quality agreements.

Another strategy that can be implemented is backward integration, where the company takes over part or all of the raw material supply process through direct investment in raw material production units. This approach can reduce dependence on external suppliers while providing greater control over production quality and costs.

The use of information technology also plays a crucial role in strengthening a company's bargaining position. With an integrated information system, companies can monitor raw material price movements, review supplier performance history, and conduct comparative analysis to select the most efficient supplier. Technology also enables companies to forecast long-term raw material needs, enabling more strategic and accurate procurement decisions.

Strategically managing supplier relationships not only helps companies maintain operational stability but also significantly reduces production costs. When companies are able to optimize supplier relationships, they are more likely to increase competitiveness, strengthen cost structures, and maintain a smooth supply chain. Ultimately, a company's ability to address supplier bargaining power is a critical factor in maintaining its competitive position and creating long-term business sustainability.(Herwati et al., 2023)

Bargaining Power of Buyers

Buyer bargaining power is one of the most crucial elements in an industry's competitive structure. This factor influences not only the prices a company can set, but also product quality, service standards, and the long-term sustainability of demand. When buyers have high bargaining power, they can easily demand lower prices, better product quality, or additional services that provide greater value. In such conditions, companies often face pressure to adjust their cost structures, enhance product features, and improve services without significantly raising prices. As a result, a company's profitability can be eroded if it fails to balance consumer needs with operational efficiency.

In a competitive industry, buyers have numerous alternative choices from various brands and manufacturers. This situation makes them increasingly selective in choosing the products they purchase. Buyers tend to choose products that offer the best combination of price, quality, and utility. This requires companies to continuously innovate, develop product differentiation, and improve service quality to maintain their position in consumers' minds. Companies that fail to meet buyer standards and expectations risk losing market share, as buyers can easily switch to other providers deemed more profitable.

Beyond direct competition, the development of digital technology is increasingly strengthening buyers' bargaining power in nearly all industrial sectors. Ease of access to information allows consumers to compare prices, quality, product specifications, and reviews from other customers in seconds. This transparency fosters more critical, rational, and value-oriented consumer behavior. They no longer rely solely on company advertising but also on tangible evidence in the form of testimonials, ratings, and real-time product comparisons.(Shareef & Alkhazaali, 2023)

This phenomenon is becoming increasingly evident with the rise of e-commerce business models and digital platforms that offer various price comparison features, comprehensive product catalogs, reviews, and algorithm-based recommendations. The existence of these platforms accelerates competitive dynamics and strengthens buyers' control over purchasing decisions. In such conditions, companies must not only offer competitive products but also develop a more holistic marketing strategy. The primary focus must be on creating authentic value, a consistent and satisfying customer experience, and a more personalized service approach so that buyers feel valued and understood.

To address the high bargaining power of buyers, companies need to develop strategies focused on long-term relationships. Building customer loyalty, increasing engagement, and leveraging technology to understand consumer preferences are crucial steps to staying relevant. This way, companies can strengthen their competitive position while maintaining profitability in an increasingly transparent and dynamic market.(Lumingkewas et al., 2023)

Threat of Substitutes (Threat of Substitute Products)

The threat of substitute products is a crucial competitive factor in determining the sustainability of an industry. This threat arises when consumers have alternatives that offer similar benefits, but can be obtained at a lower price, with better quality, or with more innovative features. Widayani (2018) emphasized that the level of this threat increases when switching costs for consumers are very low. In such situations, consumers will not face significant losses when deciding to switch to another product that is deemed more profitable or better suited to their needs.

In industries with a high rate of innovation, the threat of substitute products becomes increasingly significant. An example is the technology sector, where the emergence of new devices, more comprehensive digital applications, or artificial intelligence-based features can quickly replace existing products. Consumers tend to choose products that provide the greatest added value, so companies that fail to continuously innovate will quickly lose market share. This situation demonstrates that innovation is no longer merely a supporting factor but a strategic necessity for companies to remain competitive.

Besides influencing innovation dynamics, the presence of substitute products also creates pricing pressure in the market. As alternatives become more numerous, consumers begin to compare price and value more critically. Companies are then required to ensure that the prices of their products remain competitive, while not compromising quality or eliminating the important characteristics that make them superior. If companies fail to maintain a balance between price and quality, consumers can easily switch to competitors offering better value.

To face these increasingly complex threats, companies need to design a strong differentiation strategy. Differentiation can be achieved through feature innovation, improved product quality, more attractive designs, or by creating unique features that are difficult for competitors to imitate. Brand strengthening is also crucial, as a strong brand can add emotional value to consumers, leading to greater loyalty despite the presence of numerous product alternatives.

Furthermore, quality after-sales service plays a crucial role in reducing the threat of substitute products. Services such as warranties, responsive service centers, and quality customer support can increase customer satisfaction and loyalty. Companies that can provide a comprehensive experience, from purchase to use, will have a greater chance of retaining their customers.

In addition to these strategies, companies must actively monitor market trends, shifts in consumer preferences, and competitive dynamics. Trend analysis helps companies understand shifts in consumer needs and

expectations, allowing for faster and more precise product adjustments. By deeply understanding consumer behavior, companies are not only able to address the threat of substitute products but can also leverage it as an opportunity to innovate and create new value for the market. The threat of substitute products is a strategic challenge that requires companies to continuously develop, adapt, and enhance the value of their products. Companies that are responsive to change will be better able to survive and win the competition in the long term.

Rivalry among existing competitors (Competition with similar competitors)

In this model, competition with similar competitors is the main factor in business competition. Increasingly tight business competition occurs when many competing companies are fighting for similar market share. All aspects are needed to optimize the position such as price competition tactics, promotions, and improving services or guarantees to customers. Work performance is the result of a person's ability in a job. The *partial least squares* (PLS) regression procedure is used to estimate partial least squares regression models or known as projections to latent structures. PLS is a technique that is an alternative to ordinary least squares regression (*OLS*), canonical correlation, structural equation modeling (*SEM*).(Li et al., 2024)

PLS is very useful when several independent variables are highly correlated with each other, or when the number of predictors exceeds the number of cases. PLS combines features of principal component analysis *and* multiple regression. The procedure for using PLS is carried out in two stages. First, by removing a series of latent factors that explain as much of the covariance as possible. Latent factors that explain as much of the covariance as possible between dependent variables using independent variable decomposition.(Mandan et al., 2024)

The management information system has a significant impact on the quality of employee performance, especially at PT. Soka Cipta Niaga, because the management information system makes it easier for management to supervise, plan, direct and delegate performance to all coordinating departments, especially the HR department of PT. Soka Cipta Niaga, in addition, the management information system plays an important role in the decision-making process so that employees who work at PT. Soka Cipta Niaga can improve the quality of workers, one of which is being able to make decisions that are very influential for the company by using relevant information that can be taken from the management information system. The benefits obtained by PT. Soka Cipta Niaga in implementing the management information system are as follows:(Wijayanti et al., 2024)

CONCLUSION

Based on the results of data processing and statistical analysis that describe the relationship between variables, namely real-time data efficiency, ease of management in planning and supervision, improvement of human resource quality, and productivity and cost efficiency, it can be concluded that the implementation of Management Information Systems (MIS) has been proven to have a strong and significant influence on improving organizational performance. The data shows that the higher the level of MIS utilization, the better the work coordination, information accuracy, and effectiveness of managerial processes within the organization. In addition, the results of the analysis also show that MIS is able to encourage increased human resource competency through a more structured and integrated work system. Another positive impact is seen in the increase in organizational productivity accompanied by operational cost savings due to more efficient work processes. Overall, the relationship between variables shows that the implementation of MIS does not only play a role as a technical tool, but also becomes a strategic factor that influences the quality of performance, competitiveness, and sustainability of the organization.

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