

The Rise of AI in Management: Should Technology Take the Lead Over Human Insight?

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ABSTRACT

Artificial intelligence (AI) is increasingly transforming the world of management by enhancing data processing, automation, forecasting, and decision-making support. However, the growing adoption of AI raises questions about whether this technology should take the lead in managerial decision-making or remain a supporting tool for human managers. This study examines the role of AI in management, focusing on its benefits, limitations, ethical risks, and the importance of human-AI collaboration. The study employs a literature review, analyzing selected academic sources on AI, management, human-machine collaboration, ethical considerations, accountability, automation, and augmentation. The findings indicate that AI can enhance managerial efficiency, information processing, organizational agility, and the automation of routine tasks. Nevertheless, AI still has limitations in contextual understanding, moral judgment, responsibility, and the evaluation of complex consequences. Therefore, AI should not replace human managerial authority. Instead, organizations must integrate AI capabilities with human insights through appropriate human oversight, accountability, and ethical evaluation. Effective AI-based management ultimately depends on a balance between technological capabilities and human judgment.

Keywords: *Artificial Intelligence, Human Insight, Management, Managerial Decision-Making, Human-AI Collaboration.*

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1. | INTRODUCTION

Artificial intelligence (AI) has increasingly become an important technology in contemporary business and management. The rapid development of AI enables organizations to process large volumes of information, identify patterns, generate predictions, and support managerial decisions more efficiently than conventional approaches. AI applications have therefore expanded beyond routine technological functions into strategic activities such as planning, resource allocation, marketing, customer relationship management, and organizational decision-making (Canals & Heukamp, 2020; Dwivedi et al., 2021; Kaplan & Haenlein, 2020). This development has created an important question for modern organizations: should technology take the lead in managerial decision-making, or should human insight remain the central element of management?

The increasing capability of AI provides substantial opportunities for managers. AI can automate repetitive activities, analyze complex datasets, and provide information that enables managers to respond more rapidly to changing business conditions. Such capabilities can reduce the time managers spend on administrative and information-processing activities, allowing greater attention to strategic and innovative responsibilities (Berente et al., 2021; Hillebrand et al., 2025). AI can also support organizational agility by providing timely information and analytical insights for decision-making in dynamic environments (Shafiabady et al., 2024). Consequently, the integration of AI into management can improve organizational efficiency while expanding the capacity of managers to deal with increasingly complex business environments.

Nevertheless, the growing reliance on AI also creates significant challenges. AI systems depend heavily on the quality, relevance, and representativeness of the data used to generate their outputs. Biased or inappropriate data can produce discriminatory or unfair outcomes, making fairness an important concern in AI-supported decision-making (Barocas et al., 2020). In addition, AI does not inherently possess human moral judgment, contextual understanding, or responsibility. Ethical risks may emerge when organizations rely on automated recommendations without sufficient human oversight (Douglas et al., 2025; Holzhausen, 2020). The use of algorithms can also create new forms of organizational control and influence over employees, raising concerns about transparency, autonomy, and accountability (Kellogg et al., 2020).

These challenges indicate that AI should not necessarily be understood as a replacement for human managers. The relationship between automation and managerial augmentation suggests that AI can perform particular tasks while humans continue to contribute judgment, contextual interpretation, responsibility, and ethical reasoning (Raisch & Krakowski, 2021). Human–AI collaboration can therefore provide a more balanced approach in which technological capabilities complement rather than eliminate human capabilities (Haesevoets et al., 2021; Trunk et al., 2020). Human–AI decision-making also requires careful consideration of how responsibilities are

distributed between technological systems and human decision-makers (Lai et al., 2023).

Based on this perspective, this study examines the rise of AI in management by discussing its potential benefits, limitations, ethical challenges, and the role of human insight in AI-supported managerial decision-making. Using a literature-based approach, this study seeks to explain why effective management in an AI-driven environment requires not simply technological adoption, but an appropriate balance between AI capabilities and human judgment. The central argument is that AI can strengthen managerial effectiveness when it is used as a decision-support mechanism under appropriate human supervision, rather than being allowed to take complete control of managerial decisions.

2. | LITERATURE REVIEW

Artificial Intelligence in Management

Artificial intelligence (AI) refers to technological capabilities that enable systems to process information, identify patterns, generate predictions, and support activities that traditionally require human intelligence. In the management context, AI has increasingly been integrated into organizational activities because of its capacity to process large amounts of information and provide analytical support for managerial decisions (Dwivedi et al., 2021). The development of AI has consequently changed the traditional understanding of management, particularly in relation to how managers obtain information, evaluate alternatives, and coordinate organizational resources (Canals & Heukamp, 2020). Berente et al. (2021) emphasize that managing AI requires organizations to consider not only technological implementation but also organizational processes and managerial responsibilities. AI can support managers by automating routine activities and providing analytical information that enables greater attention to strategic activities (Hillebrand et al., 2025). Kaplan and Haenlein (2020) further demonstrate that the increasing capabilities of AI create both opportunities and challenges for organizations. Therefore, AI in management should be understood as a transformative organizational capability rather than merely an automated technological tool. Its value depends on how organizations integrate technological capabilities with managerial processes, human expertise, and appropriate governance mechanisms (Raisch & Krakowski, 2021).

Human–AI Collaboration in Managerial Decision-Making

The integration of AI into managerial decision-making does not necessarily require the replacement of human decision-makers. Instead, literature increasingly emphasizes collaboration between human capabilities and machine capabilities. AI is particularly valuable in processing information, identifying patterns, and generating possible alternatives, whereas humans contribute contextual understanding, experience, emotional intelligence, and judgment (Jarrahi, 2018). Haesevoets et al. (2021) explain that human–machine collaboration can influence managerial decision-making by combining technological analytical capabilities with human judgment. This perspective

is consistent with the automation–augmentation paradox, in which AI can simultaneously automate certain managerial tasks and augment human capabilities (Raisch & Krakowski, 2021). Trunk et al. (2020) similarly highlight the importance of combining human and artificial intelligence in strategic organizational decision-making. Hillebrand et al. (2025) argue that effective management with AI requires consideration of the interaction between technological systems and managerial actors rather than focusing exclusively on automation. Furthermore, Lai et al. (2023) demonstrate that human–AI decision-making involves different possible configurations of human and machine participation. Thus, collaboration provides an alternative to the assumption that AI must either completely lead or merely follow human managers.

Ethical Risks, Accountability, and Human Oversight

Although AI can improve managerial efficiency, its implementation introduces ethical and accountability challenges. AI systems can produce unfair outcomes when their underlying data or processes contain biases, making fairness an important consideration in AI-supported decisions (Barocas et al., 2020). Ethical risks also arise when organizations rely on AI outputs without adequately determining who is responsible for decisions and their consequences (Douglas et al., 2025). Holzhausen (2020) emphasizes the importance of legal accountability for outcomes generated through AI in business operations. The increasing use of algorithms can also create new forms of organizational control, potentially affecting employee autonomy and managerial authority (Kellogg et al., 2020). Ivchyk and Shmatko (2024) identify ethical considerations as an important dimension of AI implementation in business management. Explainable AI can further support organizational decision-making by making AI-generated outputs more understandable and facilitating appropriate organizational responses (Shafiabady et al., 2024). Pisoni and Moloney (2024) consequently emphasize responsible AI-based business process management. These perspectives indicate that technological capability alone is insufficient for responsible AI adoption. Human oversight remains necessary to evaluate AI outputs, consider organizational context, address ethical concerns, and maintain accountability for managerial decisions.

3. | RESEARCH METHOD

This research method employs a literature review to analyze the development and role of artificial intelligence (AI) in management, particularly regarding the benefits of the technology, its limitations, ethical risks, and the relationship between AI capabilities and human insight in managerial decision-making. A literature review was chosen because this study aims to integrate and interpret the ideas and findings presented in the literature on AI and management without collecting primary data. The research sources consist of predetermined academic literature, including journal articles, academic books, and conference proceedings that discuss artificial intelligence, management, decision-making, human–AI collaboration, ethical risks, accountability, automation, and augmentation. The literature used is limited to references specified in the study to

ensure the discussion remains consistent with the scope of the research. The analysis process was conducted in several stages: identifying literature relevant to the research focus; reading and understanding the main ideas of each source; grouping information by theme; comparing perspectives among authors; and synthesizing the findings into an integrated discussion. The literature was then grouped into three main focuses: the application of AI in management, human–AI collaboration in decision-making, and ethical risks and the need for human oversight. The analysis was conducted using a descriptive-critical approach, taking into account the similarities, differences, benefits, limitations, and implications of AI use in a managerial context. This approach enables the study to demonstrate that while AI possesses strong capabilities in information processing, data analysis, automation, and providing decision alternatives, these capabilities do not automatically replace human judgment. Therefore, the findings of the literature review are used to build an argument that the effectiveness of AI in management depends on how the technology is combined with human experience, contextual considerations, responsibility, and ethical judgment.

4. | RESULTS

The results of the literature review indicate that artificial intelligence (AI) has evolved from merely a supporting technology to a key component that can influence how managerial activities are designed, implemented, and evaluated. The literature indicates that AI's ability to process large amounts of information, recognize patterns, generate predictions, and provide decision alternatives offers organizations opportunities to improve the speed and efficiency of decision-making (Dwivedi et al., 2021; Kaplan & Haenlein, 2020). In the context of management, these capabilities are relevant because managers face an increasingly complex business environment and require timely information to respond to changes. Canals and Heukamp (2020) explain that advancements in AI have the potential to transform how management carries out organizational functions, while Berente et al. (2021) demonstrate that managing AI requires attention to the relationship between technology, organizations, and managerial processes. Thus, the findings of this study indicate that AI's primary contribution to management lies in enhancing an organization's ability to leverage information to support the decision-making process.

AI also provides benefits through the automation of routine and repetitive tasks. When activities such as collecting, processing, and analyzing information can be performed by systems, managers have the opportunity to devote more attention to activities that require strategic thinking and human interaction. Hillebrand et al. (2025) explain that “managing with AI” involves human interaction with algorithms that perform various managerial tasks. This perspective shows that AI not only functions as an analytical tool but is also beginning to engage in activities previously performed by humans. Pisoni and Moloney (2024) emphasize the importance of responsible AI use in managing and improving business processes. Therefore, automation should not be

understood merely as a reduction in human labor but as an opportunity to redirect human capacity toward activities of higher strategic value.

Further findings from the study show that AI has the potential to enhance an organization's ability to adapt to change. AI systems can provide information and analysis quickly, enabling organizations to identify patterns, evaluate alternatives, and respond to environmental changes more flexibly. Shafiabady et al. (2024) highlight the relevance of explainable artificial intelligence in enhancing organizational capabilities, particularly when the system's outputs need to be understood and utilized in organizational processes. Mazingue (2023) also notes that implementing AI in customer relationship management offers benefits but simultaneously presents challenges that organizations must manage. These findings suggest that the benefits of AI are determined not only by the sophistication of the technology but also by an organization's ability to integrate technological outputs into its work processes and decision-making.

Nevertheless, the study's findings indicate that technological advancements do not mean AI must take over all managerial decisions. Raisch and Krakowski (2021) describe the "automation–augmentation paradox"—the relationship between automation and the enhancement of human capabilities, which cannot be simply separated. Automation allows machines to take over specific tasks, while augmentation enables humans to work alongside machines to enhance their ability to complete tasks. Both processes can occur simultaneously and create tension if an organization places too much emphasis on one over the other. Therefore, the study's findings suggest that a more appropriate approach is to strike a balance between automation and augmentation so that AI can enhance human capabilities without eliminating the human role in managerial functions that require complex judgment.

Human-AI collaboration emerges as one of the key findings of this study. Jarrahi (2018) explains the concept of human-AI symbiosis in organizational decision-making, which positions humans and AI as parties with different capabilities that can complement one another. AI excels at processing information quickly and systematically, while humans have the ability to understand context, consider experience, and exercise judgment in situations that cannot be fully represented by data. Haesevoets et al. (2021) also highlight the importance of human-machine collaboration in managerial decision-making. Trunk et al. (2020) emphasize that the combination of humans and AI holds particular relevance in strategic organizational decision-making. These findings reinforce the view that the central question is not whether humans or AI are superior, but rather how these two capabilities can be effectively combined.

Studies on human–AI decision-making also show that the nature of collaboration can vary depending on the task, context, and level of human involvement. Lai et al. (2023) note that research on human–AI decision-making encompasses a wide range of interaction configurations between humans and AI systems. This means there is no single form of relationship that is universally suitable for all organizational decisions.

In tasks that rely heavily on data processing, AI can be given a greater role in generating analyses and alternatives. Conversely, decisions with ethical, social, or strategic consequences require stronger human involvement. Hillebrand et al. (2025) expand on this perspective by showing that human–AI collaboration and algorithmic management are two interrelated aspects of the phenomenon of AI-driven management. Therefore, AI must be situated within a broader organizational context, not merely as an individual tool to assist a manager.

Study findings also reveal that the quality of AI decisions is highly dependent on the quality of the underlying data and processes. Barocas et al. (2020) identify fairness as a critical issue in machine learning, as systems can produce unfair decisions when their data or learning processes contain bias. This means that decisions that appear objective because they are generated by algorithms are not always free from issues of subjectivity or unfairness. The use of AI in management therefore requires an evaluation of data sources, data processing procedures, and the consequences of the resulting decisions. Douglas et al. (2025) emphasize that the use of AI can give rise to ethical risks that must be considered within organizations. These findings indicate that efficiency and accuracy cannot be the sole measures of the success of AI implementation in management.

Another issue that arises is accountability. When a decision is generated with the help of an algorithm, the organization must determine who is responsible for the decision and its impact. Holzhausen (2020) emphasizes the importance of legal accountability for outcomes generated through the use of AI in business operations. This issue becomes increasingly critical when AI decisions affect employees, customers, or other parties within the organization. If managers simply follow AI recommendations without conducting an evaluation, responsibility for the outcomes of those decisions may become unclear. Therefore, the study's findings indicate that the use of AI must be accompanied by mechanisms for human oversight that allow people to review, question, and, if necessary, reject the results provided by the system.

The use of algorithms in organizations also has implications for the relationship between technology, management, and the workforce. Kellogg et al. (2020) point out that algorithms can serve as a new arena for organizational control. This suggests that AI not only provides information to managers but can also influence how workers' tasks, performance, and behavior are managed. Under these circumstances, organizations need to consider transparency and the impact of algorithm-based decisions on individuals. Tiwari (2023) also notes that advancements in AI and machine learning are linked to changes in jobs and employment opportunities. Thus, the implementation of AI must be considered not only from the perspective of productivity but also from the human perspective and in terms of changes in job structures.

Findings regarding ethical AI further reinforce the need for organizational readiness. Ivchyk and Shmatko (2024) position ethical considerations as a crucial component in the use of AI for business management. Kulkarni et al. (2024) also link

technology readiness to social sustainability and business ethics, indicating that technological readiness must go hand in hand with social and ethical considerations. Pisoni and Moloney (2024) emphasize that the management of AI-based business processes must be conducted responsibly. Therefore, organizations seeking to reap the benefits of AI must do more than simply provide technology and infrastructure; they also require governance frameworks, human competencies, oversight mechanisms, and an organizational culture that supports the responsible use of AI.

Overall, the results of the literature review indicate that AI has great potential to enhance efficiency, speed, information analysis, automation, and decision support in management (Canals & Heukamp, 2020; Dwivedi et al., 2021; Berente et al., 2021). However, this technology has limitations in understanding context, considering moral values, and taking responsibility for the consequences of decisions. Risks of bias, issues of accountability, algorithmic control, and impacts on employment suggest that complete reliance on AI could create new problems (Barocas et al., 2020; Douglas et al., 2025; Kellogg et al., 2020). Therefore, the findings support the position that technology should not fully take over managerial leadership. AI is better positioned as a partner and decision-support mechanism that enhances human capabilities, while managers continue to play a crucial role in providing context, conducting evaluations, considering ethical consequences, and making final decisions. Thus, the success of AI in management is not determined by the extent to which humans can be replaced by technology, but by how effectively organizations combine the power of AI with human insight (Jarrahi, 2018; Haesevoets et al., 2021; Raisch & Krakowski, 2021).

5. | DISCUSSION

A review of the literature shows that artificial intelligence (AI) has a strong capacity to improve management effectiveness, but this capability does not imply that the technology should take over the entire decision-making process. AI excels at processing information, identifying patterns, making predictions, and automating certain activities, whereas humans possess a stronger ability to understand context, weigh values, and evaluate the consequences of decisions (Jarrahi, 2018; Canals & Heukamp, 2020). Thus, the question of whether technology should lead management should not be understood as a choice between humans and AI, but rather as a matter of determining the most appropriate division of roles between the two.

The automation–augmentation paradox perspective explains that the use of AI can result in both automation and an enhancement of human capabilities (Raisch & Krakowski, 2021). If an organization places too much emphasis on automation, there is a risk that managers will become overly reliant on algorithmic recommendations and reduce their involvement in the decision-making process. Conversely, if AI is used only as a simple administrative tool, the organization may not reap the full benefits of the technology’s capabilities. Therefore, research findings support the augmentation approach that is, using AI to enhance managers’ capabilities without eliminating strategic human functions.

Human–AI collaboration is crucial because both have distinct limitations and strengths. Haesevoets et al. (2021) and Trunk et al. (2020) highlight the importance of combining human and AI capabilities in organizational decision-making. AI can provide data-driven alternatives, but managers must assess whether those alternatives align with the organization's circumstances and the interests of stakeholders. Lai et al. (2023) also note that the human–AI relationship in decision-making can take various forms depending on the context and the level of involvement of each party. Thus, the level of AI authority should be tailored to the characteristics of the decisions at hand.

Ethical considerations further reinforce why human insight remains essential. AI systems can produce unfair decisions if there is bias in the data or the process (Barocas et al., 2020). Additionally, ethical risks and accountability issues may arise when organizations are unable to determine who is responsible for the consequences of AI-based decisions (Douglas et al., 2025; Holzhausen, 2020). The use of algorithms within organizations can also affect control over work and employees (Kellogg et al., 2020). Therefore, it is not enough for managers to simply accept AI outputs; they must be able to evaluate, question, and reject technological recommendations if they conflict with the context, organizational values, or ethical considerations.

Thus, this discussion leads to the conclusion that AI should not be the sole leader in management. A more appropriate role is for AI to serve as an analytical partner that enhances managers' capabilities, while humans retain authority over decisions requiring accountability, moral judgment, and contextual understanding (Hillebrand et al., 2025; Pisoni & Moloney, 2024). The effectiveness of management in the AI era ultimately depends on an organization's ability to establish a balanced relationship between automation, augmentation, human oversight, and accountability.

6. | CONCLUSION

Based on the results of a literature review, artificial intelligence (AI) has great potential to transform management practices through its ability to process information, analyze data, make predictions, automate routine tasks, and provide alternatives that can support decision-making. Such applications can improve efficiency and help organizations respond more quickly to changes in the business environment. However, technological capabilities do not automatically mean that AI can replace all managerial functions. AI still has limitations in understanding complex contexts, considering moral values, dealing with situations not fully represented by data, and taking responsibility for the consequences of a decision.

Therefore, technology should not be positioned as the sole leader in management. A more appropriate approach is to foster collaboration between AI and humans, with roles divided based on their respective strengths. AI can play a role in providing analysis, information, predictions, and decision alternatives, while managers retain the responsibility to oversee, evaluate AI outputs, understand the organizational context, consider the impact on stakeholders, and make the final decision. The use of AI must also be accompanied by a focus on fairness, ethics, transparency, and accountability to

ensure that increased efficiency does not result in harmful consequences. Thus, the success of AI in management is not determined by the technology's ability to replace humans, but rather by the organization's ability to integrate artificial intelligence with human insight in a balanced manner. AI should serve as a tool that enhances managerial capacity, while humans retain control over decisions that require strategic, contextual, and ethical judgment.

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The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement

Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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