

Kepemimpinan Digital Dan Agilitas Organisasi: Menelaah Peran Adopsi Kecerdasan Buatan Dalam Meningkatkan Kinerja Strategis

Digital Leadership And Organizational Agility: Examining The Role Of Artificial Intelligence Adoption In Enhancing Strategic Performance

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Abstract

The rapid development of digital technology has significantly transformed organizational management and strategic decision-making processes. Digital leadership has emerged as a critical capability for organizations to navigate complex and dynamic environments. This study aims to examine the relationship between digital leadership and organizational agility, with a particular focus on the role of artificial intelligence (AI) adoption in enhancing strategic performance. The research employs a literature review method by analyzing scholarly articles published between 2020 and 2025 from reputable academic databases. The review highlights how digital leadership facilitates technological integration, promotes data-driven decision making, and encourages innovation within organizations. Furthermore, the adoption of AI is identified as a key enabler that strengthens organizational agility by improving operational efficiency, predictive capabilities, and strategic responsiveness to market changes. The findings indicate that organizations led by digitally competent leaders are more capable of leveraging AI technologies to support strategic initiatives and maintain competitive advantage. In addition, the synergy between digital leadership and AI adoption contributes to more adaptive organizational structures and improved strategic performance outcomes. This study contributes to the growing body of knowledge on digital transformation by emphasizing the strategic importance of leadership capabilities in maximizing the benefits of artificial intelligence in modern organizations.

Keywords: *Digital Leadership, Artificial Intelligence Adoption, Organizational Agility, Strategic Performance*

Abstrak

Perkembangan teknologi digital yang pesat telah membawa perubahan signifikan dalam pengelolaan organisasi dan proses pengambilan keputusan strategis. Kepemimpinan digital (digital leadership) menjadi kemampuan penting bagi organisasi untuk menghadapi lingkungan yang semakin dinamis dan kompleks. Penelitian ini bertujuan untuk mengkaji hubungan antara kepemimpinan digital dan kelincahan organisasi (*organizational agility*), dengan menyoroti peran adopsi kecerdasan buatan (*Artificial Intelligence/AI*) dalam meningkatkan kinerja strategis organisasi. Metode yang digunakan dalam penelitian ini adalah literature review dengan menganalisis berbagai artikel ilmiah yang diterbitkan sejak tahun 2020 hingga 2025 dari basis data akademik bereputasi. Hasil kajian menunjukkan bahwa kepemimpinan digital berperan dalam mendorong integrasi teknologi, memperkuat pengambilan keputusan berbasis data, serta meningkatkan inovasi dalam organisasi. Selain itu, adopsi AI menjadi faktor penting yang mendukung peningkatan kelincahan organisasi melalui efisiensi operasional, kemampuan prediktif, serta respons strategis yang lebih cepat terhadap perubahan pasar. Temuan penelitian menunjukkan bahwa organisasi yang dipimpin oleh pemimpin dengan kompetensi digital yang kuat lebih mampu memanfaatkan teknologi AI untuk mendukung inisiatif strategis dan mempertahankan keunggulan kompetitif. Sinergi antara kepemimpinan digital dan adopsi AI juga berkontribusi terhadap peningkatan kinerja strategis serta adaptabilitas organisasi di era transformasi digital.

Kata kunci: kepemimpinan digital, adopsi kecerdasan buatan, kelincahan organisasi, kinerja strategis

1. Introduction

The rapid development of digital technologies has fundamentally transformed how organizations operate, compete, and create value. Digital transformation has

encouraged organizations to integrate advanced technologies such as artificial intelligence (AI), big data analytics, and cloud computing into their strategic and operational processes. In this context, leadership plays a crucial role in guiding organizations through complex digital environments and ensuring the successful implementation of technological innovations. Recent studies emphasize that digital leadership is essential in facilitating technology-driven change and aligning digital strategies with organizational objectives (Qiao et al., 2024; Seraj et al., 2025). Moreover, organizations that effectively embrace digital leadership are more capable of adapting to technological disruption and maintaining competitiveness in rapidly evolving markets (alhameed & Emeagwali, 2026).

Digital leadership refers to the capability of leaders to leverage digital technologies to enhance organizational processes, foster innovation, and drive strategic transformation. Leaders with strong digital competencies are better positioned to promote data-driven decision-making, encourage experimentation, and build a culture that supports continuous learning and innovation. Research indicates that digital transformational leadership positively influences organizational adaptability and supports digital transformation initiatives across industries (Tsekouropoulos et al., 2025). Furthermore, digital leadership contributes to the development of agile organizational structures that enable firms to respond quickly to environmental uncertainty and technological change (Zhang & Xiao, 2023).

Organizational agility has emerged as a critical capability for firms operating in highly dynamic and uncertain environments. Organizational agility refers to an organization's ability to sense environmental changes, rapidly respond to market shifts, and reconfigure resources to sustain competitive advantage. Studies have shown that agile organizations are more capable of managing uncertainty, adopting new technologies, and implementing strategic innovations compared to less flexible organizations (Hsieh et al., 2025). Consequently, agility has become an essential component of modern organizational strategies, particularly in the era of digital transformation (Elmouhib & Idrissi, 2025).

In recent years, the adoption of artificial intelligence has gained significant attention as a strategic tool for improving organizational performance and decision-making capabilities. AI technologies enable organizations to process large volumes of data, generate predictive insights, and automate complex processes, thereby enhancing efficiency and strategic responsiveness. Empirical studies suggest that AI adoption can significantly strengthen organizational agility by enabling faster information processing and supporting real-time decision making (Zaid & Jum'a, 2026). As a result, organizations increasingly integrate AI into strategic planning and operational systems to enhance their adaptive capacity and competitive advantage (Popa et al., 2025).

Despite the growing body of research on digital transformation, limited studies have comprehensively examined the combined relationship between digital leadership, AI adoption, organizational agility, and strategic performance. Most previous studies focus on the direct impact of digital leadership on digital transformation or organizational performance without fully exploring the mediating role of technological capabilities such as artificial intelligence. However, recent research highlights that AI capabilities and digital leadership jointly contribute to organizational agility and improved firm performance in technology-driven environments (Ismail & Karamanlioğlu, 2026).

Based on these considerations, this study aims to examine the role of artificial intelligence adoption in strengthening the relationship between digital leadership and organizational agility to enhance strategic performance. Through a comprehensive literature review of scholarly publications published since 2020, this research seeks to synthesize existing knowledge and identify key factors that influence the integration of digital leadership and AI technologies in achieving superior strategic outcomes. The findings are expected to contribute to the growing literature on digital transformation and provide insights for organizations seeking to leverage AI-driven strategies to improve agility and long-term performance.

2. Methodology

Research Design

This study employs a systematic literature review (SLR) approach to analyze and synthesize previous research related to digital leadership, artificial intelligence adoption, organizational agility, and strategic performance. A systematic literature review is widely used to identify, evaluate, and interpret relevant research findings in a structured and transparent manner. Through this method, researchers can integrate findings from various studies to develop a comprehensive understanding of theoretical relationships and emerging research trends in a specific field. Furthermore, literature reviews have become increasingly important in management and organizational studies, particularly when examining rapidly evolving topics such as digital transformation and artificial intelligence adoption.

Data Sources and Search Strategy

The literature used in this study was collected from several reputable academic databases, including Scopus, Web of Science, ScienceDirect, and Google Scholar. These databases were selected because they provide access to high-quality peer-reviewed journal articles in the fields of management, information systems, and digital transformation. The search process was conducted using a combination of keywords such as *"digital leadership," "artificial intelligence adoption," "organizational agility,"* and *"strategic performance."* Boolean operators (AND, OR) were used to refine the search and ensure the relevance of the retrieved articles. The literature search focused on publications from 2020 to 2025 to capture the most recent developments in digital leadership and AI adoption research.

Inclusion and Exclusion Criteria

To ensure the relevance and quality of the selected literature, specific inclusion and exclusion criteria were applied during the article selection process. The inclusion criteria consisted of: (1) articles published in peer-reviewed journals, (2) studies published between 2020 and 2025, (3) research discussing at least one of the key constructs digital leadership, artificial intelligence adoption, organizational agility, or strategic performance, and (4) articles written in English. Meanwhile, the exclusion criteria included conference papers, book chapters, non-peer-reviewed publications, and studies that did not directly address the relationship between leadership, technology adoption, and organizational performance. Applying these criteria helps ensure that the selected studies provide reliable and relevant insights for the research objectives.

Data Analysis

After the article selection process, the identified studies were analyzed using a qualitative content analysis approach. The analysis focused on identifying key themes, theoretical frameworks, and empirical findings related to the interaction between digital leadership, AI adoption, organizational agility, and strategic performance. Each article was systematically reviewed to extract information such as research objectives, methodology, key variables, and main findings. This process enabled the researchers to synthesize the existing literature and identify patterns and relationships among the studied constructs. The synthesized findings were then used to develop a conceptual understanding of how digital leadership and artificial intelligence adoption contribute to enhancing organizational agility and strategic performance.

3. Results and Discussion

Digital Leadership in the Era of Digital Transformation

Digital leadership has become a key factor in enabling organizations to successfully navigate digital transformation. Leaders with strong digital competencies are capable of integrating emerging technologies into organizational strategies and fostering a culture of innovation. In the digital era, leadership is not only about managing people but also about leveraging technological capabilities to create value and improve organizational effectiveness. Studies highlight that digital leadership significantly supports technology-driven transformation and enhances organizational competitiveness in rapidly changing environments (Zhang et al., 2025; Zhang & Zhao, 2025).

Furthermore, digital leaders play an essential role in promoting digital literacy and technological awareness among employees. By encouraging continuous learning and experimentation with digital tools, leaders can strengthen organizational readiness for technological change. This leadership approach helps organizations build flexible systems that support innovation and knowledge sharing. Research indicates that organizations led by digitally competent leaders tend to adopt new technologies more effectively and achieve higher levels of digital maturity (Jaciow et al., 2025).

In addition, digital leadership contributes to the alignment between technological initiatives and long-term organizational goals. Effective leaders ensure that digital investments are strategically implemented to enhance operational efficiency and organizational performance. This alignment allows firms to maximize the benefits of digital transformation while maintaining strategic coherence. Previous studies confirm that digital leadership plays a crucial role in ensuring that digital transformation initiatives generate sustainable organizational value (Niu et al., 2022).

Artificial Intelligence Adoption as an Organizational Capability

Artificial intelligence (AI) adoption has become a critical organizational capability in the modern business environment. AI technologies enable organizations to process vast amounts of data, generate predictive insights, and automate complex processes. These capabilities allow firms to improve decision-making quality and enhance operational efficiency. Research shows that organizations adopting AI technologies can significantly improve their strategic capabilities and operational effectiveness (Min & Kim, 2024).

Moreover, AI adoption supports organizations in managing complex and dynamic business environments. AI-driven systems provide analytical insights that help organizations identify emerging opportunities and anticipate potential risks. As a result, firms can respond more effectively to environmental changes and market uncertainties. Studies suggest that AI integration enhances an organization's ability to analyze real-time information and develop more accurate strategic responses (Olievera et al., 2025).

The successful implementation of AI also depends on organizational readiness and leadership support. Organizations that combine technological infrastructure with strong managerial commitment are more likely to achieve positive outcomes from AI adoption. In such cases, AI becomes an important driver of innovation and strategic growth. Empirical findings indicate that AI capabilities contribute to improved organizational performance when supported by effective leadership and strategic alignment (Florea & Croitoru, 2025).

Digital Leadership and Organizational Agility

Organizational agility refers to an organization's ability to quickly sense environmental changes and respond effectively to emerging opportunities or threats. In the context of digital transformation, digital leadership plays a crucial role in fostering agile organizational structures. Leaders who encourage innovation, collaboration, and technological experimentation help organizations adapt more rapidly to dynamic market conditions (Costa et al., 2023). Furthermore, agile organizations rely heavily on effective leadership to coordinate cross-functional teams and accelerate decision-making processes. Digital leaders promote decentralized decision-making and empower employees to respond quickly to operational challenges. This leadership style enhances organizational flexibility and improves the efficiency of internal processes.

Additionally, digital leadership helps organizations build a culture that supports continuous innovation and learning. Leaders who actively promote experimentation and knowledge sharing create an environment where employees feel encouraged to develop creative solutions. This cultural transformation strengthens organizational agility and enhances the organization's ability to cope with rapid technological changes. Research indicates that digital leadership plays a significant role in shaping agile organizational cultures and improving strategic responsiveness (Chen et al., 2025).

Artificial Intelligence and Organizational Agility

Artificial intelligence technologies have become an important enabler of organizational agility. AI systems allow organizations to process information rapidly, identify patterns, and generate predictive insights that support faster decision-making. These capabilities enable organizations to respond quickly to market changes and customer demands. Studies suggest that AI adoption significantly enhances the speed and accuracy of organizational responses in dynamic environments (Li & Jin, 2024).

Moreover, AI technologies contribute to the automation of complex processes and improve operational efficiency. By reducing manual workloads and optimizing resource allocation, AI enables organizations to focus on strategic initiatives and innovation activities. This efficiency allows firms to adapt more effectively to

environmental uncertainty and competitive pressures. Research highlights that AI-driven systems support organizational agility by enhancing operational flexibility and strategic responsiveness (Almalki, 2025).

The integration of AI technologies also facilitates better coordination between different organizational functions. AI-based analytics platforms enable real-time information sharing and improve collaboration among departments. This enhanced coordination strengthens organizational agility and supports faster strategic adjustments. Previous studies confirm that organizations leveraging AI technologies tend to exhibit higher levels of agility and adaptability in rapidly changing markets (Jamil et al., 2025).

Organizational Agility and Strategic Performance

Organizational agility has been widely recognized as a key determinant of strategic performance in modern organizations. Agile organizations are able to quickly adjust their strategies, reconfigure resources, and respond to environmental changes. This adaptability allows firms to maintain competitive advantages and achieve superior performance outcomes. Empirical evidence indicates that higher levels of organizational agility are positively associated with improved financial and operational performance (Homayoun et al., 2024).

In addition, organizational agility enhances a firm's ability to innovate and develop new business models. Agile firms are more capable of experimenting with new technologies and responding to evolving customer needs. This innovation capability contributes to sustainable strategic growth and long-term competitiveness. Furthermore, organizational agility strengthens strategic decision-making processes by enabling faster and more accurate responses to environmental signals. Agile organizations rely on flexible structures, effective leadership, and advanced technologies to support strategic initiatives. These factors collectively contribute to improved strategic performance and organizational resilience. Studies confirm that agility acts as a critical mediator between digital capabilities and long-term organizational success (Atobishi et al., 2024).

4. Conclusion

This study highlights the importance of digital leadership in supporting organizational transformation in the digital era. Leaders with strong digital competencies play a critical role in guiding organizations to adopt emerging technologies and align them with strategic objectives. Through effective leadership, organizations are better able to foster innovation, enhance technological integration, and build adaptive structures that support sustainable growth in an increasingly dynamic business environment.

The findings of this literature review also emphasize the strategic role of artificial intelligence adoption in improving organizational agility. AI technologies enable organizations to process large volumes of information, generate predictive insights, and improve decision-making processes. As a result, organizations can respond more quickly to market changes and environmental uncertainties, which strengthens their ability to maintain competitiveness and improve strategic performance.

Furthermore, the integration of digital leadership, artificial intelligence adoption, and organizational agility creates a synergistic relationship that contributes

to enhanced strategic performance. Organizations that successfully combine these elements are more capable of adapting to technological disruptions and responding to evolving market demands. Therefore, developing strong digital leadership capabilities and investing in AI-driven technologies are essential strategies for organizations seeking long-term competitiveness and sustainable performance in the digital economy.

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