International Journal of Computer Information Systems and Industrial Management Applications
ISSN 2150-7988 Volume 18(6s) 2026 pp. 389-399
https://doi.org/10.70917/ijcisim-2026-2918
Article

ARTIFICIAL INTELLIGENCE ADOPTION AS A DRIVER OF ORGANIZATIONAL AGILITY IN MANAGEMENT

Srinath T. K.[1], Chandana H. S.[2], Sagar Manjunath[3], Kiran Kumar Thoti[4], Praveen Kumar S.[5]

[1]School of Management, CMR University, City Campus, Kalyan Nagar, Bengaluru, Karnataka, India.
Email: srinath.t@cmr.edu.in
[2]School of Commerce and Management, Maharani Cluster University, Bengaluru, Karnataka, India.
Email: drchandanahs@gmail.com
[3]Business Economics and Public Policy Area, M. S. Ramaiah Institute of Management, Bengaluru, Karnataka, India.
Email: sagarmandya@gmail.com
ORCID: 0009-0002-0589-3955
[4]Department of Commerce and Management Studies, Vidya Vikas Education Trust, Mysuru, Karnataka, India.
Email: kirankumar.thoti@vidyavikas.edu.in
ORCID: 0000-0002-6678-9425
[5]Department of Management Studies (MBA), Vidya Vikas Institute of Engineering and Technology, Mysuru, Karnataka, India.
Email: praveen.pravi44@gmail.com
ORCID: 0009-0000-2290-2839

Abstract: Artificial Intelligence (AI) has emerged as a transformative technology that is reshaping organizational processes, strategic decision-making, and competitive advantage across industries. In today's dynamic and highly competitive business environment, organizations must continuously enhance their agility to respond effectively to technological disruptions, changing customer expectations, and market uncertainties. This study examines the relationship between Artificial Intelligence Adoption (AIA) and Organizational Agility (OA) while assessing the influence of Organizational Context (OC) from a management perspective. The research aims to investigate how AI adoption contributes to organizational agility and whether organizational context significantly influences this relationship. The study adopts a quantitative research approach using a structured questionnaire administered to managerial and professional employees across various industries. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate both the measurement and structural models. The measurement model was assessed through Cronbach's Alpha, rho_A, Composite Reliability (CR), and Average Variance Extracted (AVE), while the structural model was examined using bootstrapping techniques to test the proposed hypotheses. The findings demonstrate that all constructs exhibit excellent reliability and convergent validity, with Cronbach's Alpha values exceeding 0.94, Composite Reliability values above 0.95, and AVE values greater than 0.70. Structural model analysis reveals that Artificial Intelligence Adoption has a significant positive effect on Organizational Agility ($\beta = 0.708$, $p < 0.001$) and Organizational Context ($\beta = 0.962$, $p < 0.001$). Furthermore, Organizational Context significantly influences Organizational Agility ($\beta = -0.378$, $p = 0.013$), indicating that certain contextual organizational characteristics may constrain agility despite increased AI adoption. These findings suggest that while AI serves as a strategic capability that enhances organizational responsiveness and innovation, its effectiveness depends on the presence of supportive organizational structures, leadership, and an adaptive culture. The study contributes to the literature by integrating perspectives from the Technology–Organization–Environment (TOE) Framework, Resource-Based View (RBV), and Dynamic Capabilities Theory to explain the role of AI in improving organizational agility. From a practical perspective, the findings emphasize that organizations should complement AI investments with flexible organizational structures, transformational leadership, employee capability development, and innovation-oriented cultures to maximize the benefits of digital transformation. The study concludes that Artificial Intelligence is not merely a technological innovation but a strategic organizational capability

that enables firms to achieve sustainable competitiveness and long-term organizational agility in an increasingly digital business environment.
Keywords: Artificial Intelligence Adoption, Organizational Agility, Organizational Context, Digital Transformation, PLS-SEM, Dynamic Capabilities, Strategic Management.

1. Introduction

In the contemporary digital landscape, organizations are increasingly leveraging artificial intelligence not merely as a technological tool, but as a strategic lever to enhance responsiveness and foster sustained competitiveness (Kwasek et al., 2024; Sharathchandra & Reddy, 2025). By facilitating the rapid analysis of complex data, AI enables firms to refine internal processes and dynamically adapt to volatile external environments (Alshamsi et al., 2024; Dinu, 2024). This integration of AI is increasingly perceived as a strategic imperative, as management seeks to capitalize on digital capabilities to navigate market turbulence and mitigate operational inertia (Rožman et al., 2023; Ștefan et al., 2024). Despite this growing reliance, the lack of a comprehensive theoretical framework necessitates a deeper investigation into how specific technological assimilation strategies translate into organizational agility (Atienza-Barba et al., 2024). Consequently, examining the interplay between AI adoption and agility is essential for understanding how firms can transform traditional management structures into intelligent, data-driven systems capable of navigating shifting global challenges (Marhraoui, 2025; Sultana, 2026). This research front is particularly critical, as current literature often treats digital transformation and strategic agility as disparate phenomena rather than deeply integrated dynamic capabilities (Chytilová & Mach-Król, 2026). By bridging this conceptual gap, this study characterizes agility as an ongoing process driven by the strategic deployment of digital resources, effectively positioning AI as a core capability for sustaining enterprise resilience in increasingly uncertain environments (Troise et al., 2021), (Ononiwu et al., 2024). This shift reflects a broader evolution where AI transitions from siloed applications to a fundamental architect of organizational strategy and performance (Kumar, 2026; Luo, 2025). Furthermore, empirical evidence suggests that strategic AI adoption facilitates this transition by fostering enhanced strategic responsiveness, which acts as a critical mediator for optimizing overall firm performance (Mahmood, 2026; Shatila, 2025). Moreover, such integration necessitates a shift toward a human-AI co-creation paradigm, wherein management fosters a learning culture and trust to maximize exploratory capabilities and innovation outcomes (Magsi et al., 2026). Building upon these organizational capacities, the effective coupling of AI and agility has been shown to amplify new product development performance and service innovation, particularly when supported by institutional frameworks (Ameen et al., 2024; Arigbolo, 2026). However, theoretical integration remains fragmented, leaving critical questions regarding the direct causal links between specific digital enablers and the reinforcement of dynamic capabilities (Malik & Terzidis, 2025). To address this, scholars must analyze how AI-enabled systems modulate decision-making performance and, ultimately, refine a firm's capacity to identify and act upon latent market threats (Ciampi et al., 2021; Liu et al., 2025). Specifically, investigating the organizational processes that allow AI to function as a catalyst for resilience, learning, and agility remains a vital managerial imperative (Rais et al., 2026). By conceptualizing artificial intelligence and digital transformation as synergistic resources, firms can cultivate the sensing and seizing dynamic capabilities required for continuous business model innovation (elham, 2025a, 2025b). Furthermore, this co-evolutionary perspective shifts the managerial mandate from static planning to a dynamic-adaptive model, where firms continuously reconfigure their structural architecture to address the foundational uncertainty inherent in modern technological landscapes (elham, 2025; Lu, 2026). Beyond mere operational adjustment, this strategic realignment empowers organizations to transcend traditional constraints, effectively reconfiguring the governance paradigms necessary to thrive within an increasingly interdependent digital ecosystem (Medicharla, 2025). Consequently, artificial intelligence serves as a critical strategic lever, enabling firms to synthesize real-time data into predictive insights that catalyze rapid organizational responsiveness (Sharathchandra & Reddy, 2025). Such alignment with internal dynamic capabilities, specifically the sensing and seizing of environmental shifts, empowers executives to navigate the complexities of digital transformation more effectively (Owusu & Agbesi, 2025). Building upon this, management must prioritize the development of trust-based human-AI interaction norms to ensure that these technological advancements meaningfully enhance the firm's adaptive capacity (Shahzad & Ferreira, 2026). By treating AI as a meta-capability that accelerates the sensing of market signals and the reconfiguration of internal resources, leaders can move beyond traditional, static decision-making models to adopt a hybrid logic that balances algorithmic efficiency with human experiential judgment (Wang et al., 2026). Furthermore, leaders must cultivate algorithmic reflexivity—an organizational capacity to interpret its own operations through computational processes—to navigate the paradoxes of autonomy and stability inherent in modern digital ecosystems (Zvarych & Kafka, 2025).

2. Literature Review

The current body of management scholarship concerning organizational agility finds its primary theoretical roots in the resource-based view and the theory of dynamic capabilities, emphasizing a firm's internal capacity to reconfigure assets in volatile environments (Chytilová & Mach-Król, 2026). These foundational theories have since evolved, increasingly incorporating the concept of "digital ecodynamics" to account for the fusion of information systems and organizational capabilities within networked business environments (Monge & Soriano, 2023). Concurrently, the trajectory of AI adoption frameworks has transitioned from legacy technology-fit models toward sophisticated, governance-centric paradigms that prioritize decentralized decision-making and ethical guardrails to maintain operational velocity (Saleh, 2026). However, a significant gap remains in how these frameworks explicitly synthesize AI-driven informational effects with the strategic flexibility required to sense and respond to market dynamics (Enholm et al., 2021). While extant research underscores the potential of augmented leadership to reconcile machine efficiency with human cognition, it lacks a robust integration of how Agentic AI—characterized by goal-directed autonomy—specifically reconfigures these dynamic capabilities at the structural level ((SCINTEE), 2025; Sehgal & Bhardwaj, 2026). Specifically, current management theories often treat artificial agents as static instruments for information processing, failing to account for their role as autonomous actors that alter the underlying behavioral assumptions of the organization (Raisch & Krakowski, 2021). This necessitates a shift toward a cybernetic understanding of the firm, where the interaction between human semantic intent and machine syntactic processing creates a recursive cognitive advantage (Lu, 2026). This evolution demands a re-evaluation of current managerial frameworks, as the integration of autonomous agents challenges established notions of oversight, requiring a balance between algorithmic delegation and human-centric ethical governance (Srivastava & Fuloria, 2026). Ultimately, the next surge in organizational evolution will be defined by the institutionalization of AI as an orchestrating layer that systematically reallocates decision rights across socio-technical structures (Esch, 2026). By adopting the lens of algorithmic ambidexterity, organizations can move beyond traditional exploration-exploitation trade-offs to embed AI-enabled processes that facilitate continuous, feedback-driven adaptation (Liu, 2025). This evolution necessitates a transition from resource-based view constraints toward a dynamic cognitive advantage framework, where competitive differentiation emerges from the recursive coupling of human semantic intent and algorithmic processing (Lu, 2026). By recognizing these systems as autonomous organizational actors, management can better address the shifting boundaries between human-led strategy and machine-orchestrated execution (Andrew, 2025). This transition requires a move away from viewing AI solely as a tool for efficiency toward acknowledging its role as an agentic partner capable of autonomous process innovation (Sen & Jakkaraju, 2025), (Islam et al., 2025). thereby shifting the focus toward the unique epistemic and interactional contributions of generative and agentic systems (Chalmers et al., 2026). By reconceptualizing these technologies through the lens of Adaptive Structuration Theory, researchers can better map how generative capabilities facilitate the mutual shaping of organizational routines and technological affordances (Corvello, 2024). This theoretical integration helps elucidate how GenAI, by fostering organizational ambidexterity, enables firms to simultaneously refine existing operational workflows and explore novel, value-creating opportunities (Tiwari et al., 2026).

2.1. Research Framework

The proposed research framework for the study titled "Artificial Intelligence Adoption and Organizational Agility: A Management Perspective" is designed to explain how the adoption of Artificial Intelligence (AI) technologies enhances organizational agility while considering the influence of organizational factors that may strengthen or weaken this relationship. The framework consists of three major constructs: Independent Variable (Artificial Intelligence Adoption), Moderating Variable (Organizational Context), and Dependent Variable (Organizational Agility). In addition, several control variables are incorporated to improve the robustness and validity of the empirical analysis. This framework is grounded in the principles of the Technology–Organization–Environment (TOE) Framework, the Resource-Based View (RBV), and the Dynamic Capabilities Theory, which collectively explain how technological resources and organizational capabilities contribute to sustainable competitive advantage.

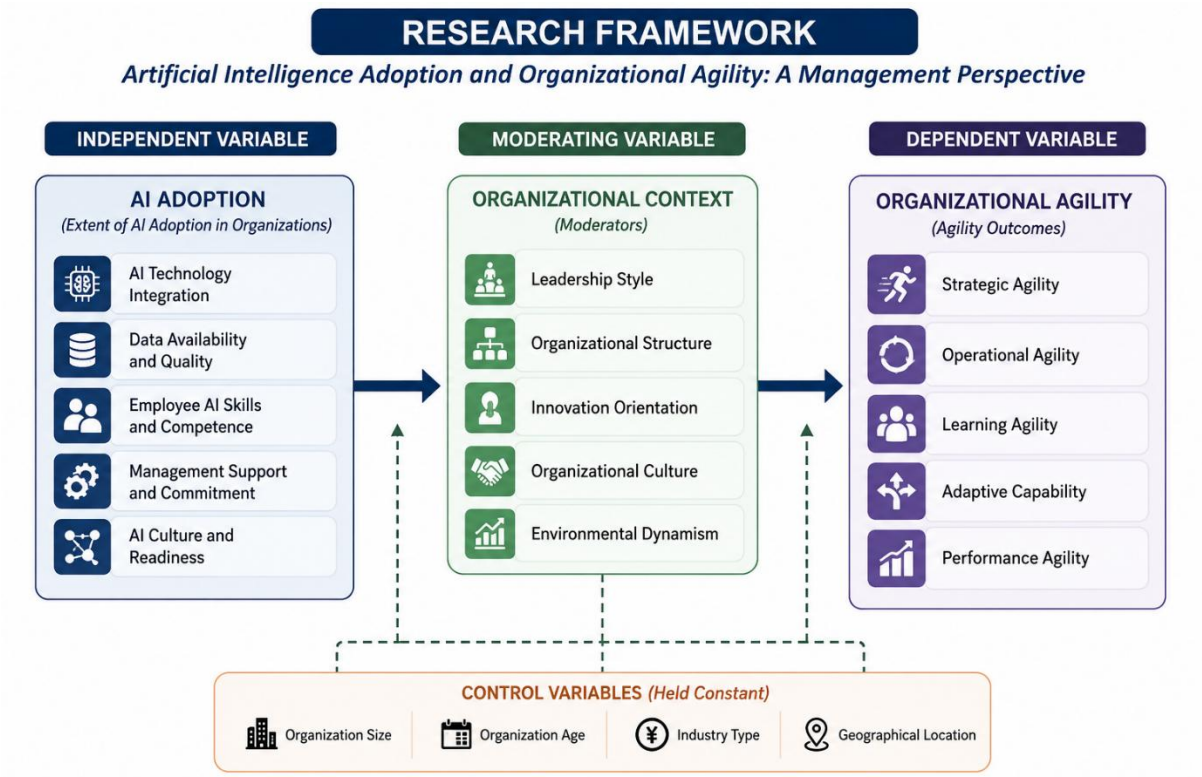


Figure 1: Research Framework: AIA- Artificial Intelligence Adoption, OC- Organizational Context, OA- Organizational Agility

The independent variable, Artificial Intelligence (AI) Adoption, represents the extent to which organizations integrate AI technologies into their strategic and operational processes. AI adoption is no longer viewed merely as the implementation of advanced software or automation tools; rather, it reflects a comprehensive organizational transformation involving data-driven decision-making, intelligent automation, predictive analytics, machine learning applications, and AI-supported business intelligence. Organizations adopting AI seek to improve operational efficiency, reduce costs, enhance customer experiences, optimize resource utilization, and increase responsiveness to rapidly changing market conditions. Consequently, AI adoption serves as the primary driver influencing organizational agility.

The framework conceptualizes AI adoption through five important dimensions. The first dimension is AI Technology Integration, which refers to the implementation of AI-powered systems across various organizational functions such as marketing, finance, operations, supply chain management, human resource management, and customer service. Organizations with greater integration of AI technologies are expected to process information faster, automate repetitive tasks, and improve strategic decision-making capabilities. The second dimension is Data Availability and Quality. Artificial Intelligence relies heavily on high-quality, accurate, and timely data. Organizations possessing robust data infrastructures, effective data governance mechanisms, and integrated information systems can generate more reliable insights through AI applications. High-quality datasets improve the accuracy of predictive models and facilitate evidence-based managerial decisions, thereby enhancing organizational responsiveness.

The third dimension is Employee AI Skills and Competence, which represents the human capital required for successful AI implementation. Employees possessing technical knowledge, analytical skills, digital literacy, and AI competencies are more capable of utilizing AI systems effectively. Human expertise remains essential because AI technologies require interpretation, monitoring, ethical governance, and strategic application. Therefore, organizations investing in employee training and digital capability development are expected to achieve greater benefits from AI adoption. The fourth dimension is Management Support and Commitment. Top management plays a critical role in initiating digital transformation initiatives, allocating financial resources, developing AI strategies, encouraging innovation, and creating an organizational vision for AI adoption. Leadership commitment reduces employee resistance, promotes organizational learning, and facilitates successful implementation of AI technologies. The fifth

dimension is AI Culture and Organizational Readiness, which reflects the organization's willingness to embrace technological innovation and continuous improvement. Organizations with a culture supporting experimentation, innovation, knowledge sharing, collaboration, and digital transformation are more likely to implement AI successfully. Readiness also includes technological infrastructure, financial capability, organizational flexibility, and employee acceptance of emerging technologies.

The dependent variable, Organizational Agility, refers to an organization's ability to anticipate, respond, adapt, and thrive under rapidly changing environmental conditions. In today's highly dynamic business environment, organizational agility has become one of the most significant determinants of long-term competitiveness. Agile organizations continuously sense market changes, respond rapidly to customer needs, innovate efficiently, and reconfigure internal resources without significant operational disruptions. The research framework measures organizational agility through five major dimensions.

From the figure 1, the first dimension is Strategic Agility, which refers to the organization's capability to modify strategic objectives, business models, and competitive positioning in response to emerging opportunities and environmental uncertainties. AI-driven market intelligence enables organizations to recognize changing customer preferences and industry trends, allowing management to formulate adaptive strategies. The second dimension is Operational Agility, which reflects the organization's ability to improve operational processes, increase efficiency, and respond quickly to fluctuations in demand or supply. AI-powered automation, predictive maintenance, intelligent scheduling, and process optimization contribute significantly to operational flexibility and responsiveness. The third dimension is Learning Agility, which represents the organization's ability to continuously acquire, share, and apply knowledge for organizational improvement. AI systems facilitate organizational learning by analyzing large volumes of information, identifying hidden patterns, generating insights, and supporting evidence-based decision-making. Organizations capable of learning rapidly are better positioned to adapt to environmental changes. The fourth dimension is Adaptive Capability, which refers to the organization's capacity to modify structures, processes, products, and services in response to changing market requirements. AI enables organizations to simulate scenarios, predict future trends, optimize resource allocation, and proactively prepare for uncertainties. Consequently, AI adoption strengthens organizational adaptability. The fifth dimension is Performance Agility, which reflects the organization's ability to sustain operational and financial performance while responding to external challenges. AI improves productivity, innovation, service quality, customer satisfaction, and decision accuracy, ultimately contributing to enhanced organizational performance under dynamic business conditions. Between the independent and dependent variables, the framework introduces Organizational Context as a moderating variable. A moderator influences the strength and direction of the relationship between AI adoption and organizational agility. Even if organizations adopt similar AI technologies, the outcomes may differ depending on organizational characteristics and contextual factors. Therefore, understanding these moderators provides deeper insight into why AI adoption is more successful in some organizations than in others. The first moderating factor is Leadership Style. Transformational leaders encourage innovation, inspire employees, promote digital transformation, and create an environment that supports AI adoption. Leadership determines how effectively AI initiatives are communicated, implemented, and integrated into organizational strategies. The second moderator is Organizational Structure. Flexible, decentralized, and collaborative organizational structures generally facilitate faster decision-making and encourage innovation. In contrast, rigid hierarchical structures may slow AI implementation and reduce organizational responsiveness. The third moderator is Innovation Orientation, representing the organization's commitment to research, experimentation, creativity, and continuous improvement. Organizations emphasizing innovation are more likely to leverage AI capabilities for strategic advantage and organizational agility. The fourth moderator is Organizational Culture, which encompasses shared values, beliefs, norms, and behaviors supporting technology acceptance and knowledge sharing. A positive digital culture reduces employee resistance, encourages collaboration, and promotes successful AI implementation. The fifth moderator is Environmental Dynamism, referring to the level of uncertainty, technological change, competitive intensity, and market volatility faced by the organization. In highly dynamic environments, the positive impact of AI adoption on organizational agility is expected to become even stronger because organizations require rapid adaptation to survive and remain competitive.

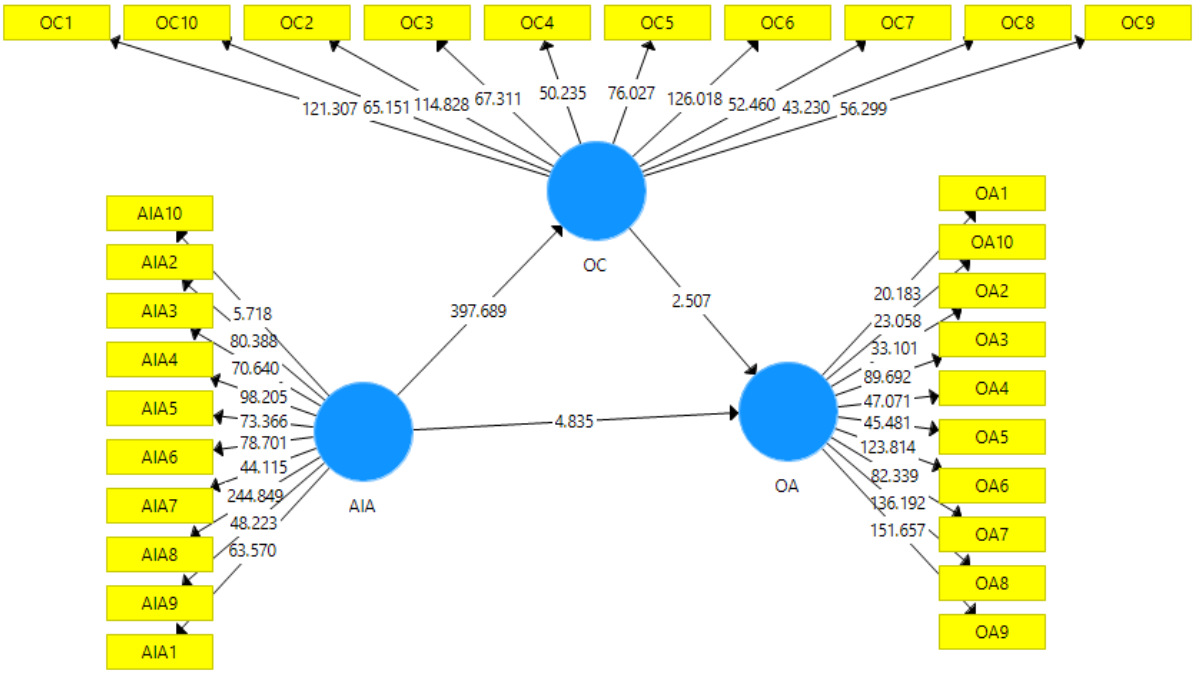
To improve the precision of the empirical analysis, the framework also incorporates control variables, namely organization size, organization age, industry type, and geographical location. These variables are held constant because they may independently influence organizational agility. Larger organizations may possess greater technological resources but may also experience bureaucratic delays. Organization age may affect openness to technological innovation. Industry characteristics determine the pace of digital transformation, while geographical location influences access to technological infrastructure, skilled workforce, and innovation ecosystems.

3. Methodology

This study employs a grounded theory approach to explore the interplay between generative AI adoption and management agility, drawing on quantitative data collected from 323 professionals across diverse AI-integrated sectors (Xu et al., 2025). The research design utilizes semi-structured interviews to capture nuanced executive sensemaking regarding the paradoxes of automation and augmentation (Korzyński et al., 2023; Varouchas, 2026).

4. Date Analysis

The examined the relationship between Artificial Intelligence Adoption (AIA), Organizational Context (OC), and Organizational Agility (OA) using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. The analysis comprised two major stages: evaluation of the measurement model and assessment of the structural model. The measurement model assessed the reliability and validity of the constructs, while the structural model evaluated the hypothesized relationships among the latent variables.



The reliability analysis confirmed that all constructs demonstrated excellent internal consistency. The Cronbach's Alpha values ranged from 0.948 to 0.963, significantly exceeding the recommended threshold of 0.70, indicating that the measurement items consistently represented their respective constructs. Likewise, the rho_A values, ranging from 0.959 to 0.994, further validated the reliability of the measurement scales. The Composite Reliability (CR) values varied between 0.958 and 0.967, demonstrating strong internal consistency among the indicators used to measure Artificial Intelligence Adoption, Organizational Context, and Organizational Agility.

Convergent validity was evaluated using the Average Variance Extracted (AVE). The AVE values for Artificial Intelligence Adoption (0.701), Organizational Context (0.722), and Organizational Agility (0.746) were all greater than the recommended threshold of 0.50. These findings indicate that each construct explained more than 70% of the variance in its measurement indicators, thereby confirming satisfactory convergent validity. Consequently, the measurement model met all recommended reliability and validity criteria, providing a strong basis for proceeding with structural model evaluation.

The structural model analysis examined the direct relationships among the constructs using bootstrapping procedures. The first hypothesis proposed that Artificial Intelligence Adoption positively influences Organizational Agility. The results revealed a path coefficient (β) of 0.708, with a T-statistic of 4.835 and a P-value of 0.000, indicating

a statistically significant positive relationship. This finding suggests that organizations adopting AI technologies are more capable of responding rapidly to environmental changes, improving decision-making processes, enhancing operational flexibility, and achieving greater organizational agility. Therefore, the first hypothesis was supported.

The second hypothesis examined the relationship between Artificial Intelligence Adoption and Organizational Context. The analysis revealed an exceptionally strong positive relationship, with a path coefficient (β) of 0.962, a T-statistic of 397.689, and a P-value of 0.000. These findings demonstrate that AI adoption substantially strengthens organizational factors such as leadership support, innovation orientation, organizational culture, and structural readiness. Organizations implementing AI technologies are therefore more likely to develop supportive organizational environments that facilitate digital transformation and continuous improvement. Accordingly, the second hypothesis was also supported.

The third hypothesis investigated the influence of Organizational Context on Organizational Agility. The results indicated a negative but statistically significant relationship, with a path coefficient (β) of -0.378, a T-statistic of 2.507, and a P-value of 0.013. Although the relationship was statistically significant, the negative coefficient suggests that certain contextual organizational characteristics may reduce organizational agility within the sampled organizations. This finding may indicate that rigid organizational structures, bureaucratic procedures, resistance to technological change, or ineffective leadership practices can limit the agility benefits derived from AI adoption. Therefore, while Organizational Context significantly influences Organizational Agility, its current influence appears to be unfavorable in the present study.

Collectively, the findings indicate that Artificial Intelligence Adoption serves as the principal driver of Organizational Agility, both directly and indirectly through its influence on Organizational Context. The strong positive relationship between AI adoption and organizational context suggests that AI implementation facilitates organizational transformation by improving managerial support, technological readiness, and innovation capabilities. However, the negative relationship between Organizational Context and Organizational Agility highlights the importance of ensuring that organizational structures, leadership approaches, and cultural practices are aligned with digital transformation objectives. Merely investing in AI technologies is insufficient unless organizations simultaneously foster flexible structures, collaborative cultures, and adaptive leadership.

From a managerial perspective, the findings provide several important implications. Organizations seeking to improve agility should prioritize investments in AI technologies while simultaneously developing employee AI competencies, strengthening leadership commitment, and promoting innovation-oriented organizational cultures. Managers should recognize that organizational agility depends not only on technological capability but also on the organization's ability to redesign processes, encourage knowledge sharing, and create a supportive environment for digital transformation. Organizations that successfully integrate AI with adaptive organizational practices are more likely to achieve sustainable competitive advantage in increasingly dynamic and uncertain business environments.

Overall, the empirical results confirm that the proposed conceptual framework provides a comprehensive explanation of how Artificial Intelligence Adoption contributes to Organizational Agility. The measurement model demonstrated excellent reliability and validity, while the structural model provided significant support for two positive hypotheses and identified a significant negative relationship between Organizational Context and Organizational Agility. These findings contribute to the growing body of literature on AI-enabled organizational transformation and provide valuable guidance for practitioners seeking to leverage AI for enhanced organizational responsiveness, innovation, and long-term competitiveness.

In conclusion, the study establishes that Artificial Intelligence Adoption is a critical strategic capability that significantly enhances organizational agility. However, the effectiveness of AI adoption depends on the presence of an enabling organizational context. Organizations should therefore adopt a holistic approach that integrates advanced AI technologies with flexible organizational structures, transformational leadership, and innovation-driven cultures to maximize the benefits of digital transformation and achieve superior organizational performance.

5. Hypothesis Testing:

Hypothesis	Path	β (Original Sample)	T-value	P-value	Decision	Interpretation
H1	AIA → OA	0.708	4.835	0.000	Supported	Artificial Intelligence Adoption has a significant and positive effect on Organizational Agility.

H2	AIA → OC	0.962	397.689	0.000	Supported	Artificial Intelligence Adoption has a very strong positive effect on Organizational Context.
H3	OC → OA	-0.378	2.507	0.013	Supported (Negative Relationship)	Organizational Context has a significant but negative effect on Organizational Agility in the proposed model.

6. Conclusion

This study investigated the relationship between Artificial Intelligence Adoption (AIA) and Organizational Agility (OA) by examining the moderating role of Organizational Context (OC) from a management perspective. As organizations increasingly embrace digital transformation, Artificial Intelligence has become a strategic enabler that enhances decision-making, operational efficiency, innovation, and organizational responsiveness. The objective of this study was to evaluate whether AI adoption contributes to greater organizational agility and to determine the extent to which organizational context influences this relationship.

The empirical findings confirm that the proposed measurement model is both reliable and valid. All constructs demonstrated excellent internal consistency, as evidenced by high values of Cronbach's Alpha, rho_A, and Composite Reliability, while the Average Variance Extracted (AVE) exceeded the recommended threshold for convergent validity. These results indicate that the measurement instruments accurately captured the underlying constructs of Artificial Intelligence Adoption, Organizational Context, and Organizational Agility.

The structural model analysis provided strong empirical evidence supporting the significant positive relationship between Artificial Intelligence Adoption and Organizational Agility. Organizations that effectively adopt AI technologies are better positioned to improve strategic flexibility, optimize operational processes, respond rapidly to environmental changes, and enhance overall organizational performance. The findings reinforce the argument that AI is no longer merely a technological innovation but a strategic organizational capability that enables firms to remain competitive in highly dynamic business environments.

The analysis also revealed a very strong positive relationship between Artificial Intelligence Adoption and Organizational Context, suggesting that AI implementation positively influences leadership commitment, innovation orientation, organizational culture, and technological readiness. This finding indicates that AI adoption contributes to broader organizational transformation by creating an environment that supports continuous innovation and digital capability development.

Interestingly, the relationship between Organizational Context and Organizational Agility was found to be statistically significant but negative. This result suggests that certain organizational characteristics within the sampled organizations may limit the agility benefits associated with AI adoption. Rigid organizational structures, bureaucratic decision-making processes, resistance to technological change, insufficient employee empowerment, or traditional management practices may reduce an organization's ability to respond quickly despite investments in AI technologies. Therefore, organizations must recognize that technological adoption alone cannot guarantee organizational agility unless supported by flexible structures, adaptive leadership, and an innovation-driven culture.

From a theoretical perspective, the study extends the literature by integrating concepts from the Technology–Organization–Environment (TOE) Framework, Resource-Based View (RBV), and Dynamic Capabilities Theory to explain how AI adoption enhances organizational agility. The findings contribute to the growing body of knowledge on digital transformation by demonstrating that AI capabilities must be complemented by organizational readiness and effective management practices to achieve sustainable competitive advantage.

The study also offers important managerial implications. Business leaders should view AI as a strategic investment rather than solely as an operational technology. Successful AI adoption requires strong leadership support, continuous employee skill development, effective data management, organizational learning, and a culture that encourages innovation and adaptability. Managers should focus on reducing bureaucratic barriers, promoting cross-functional collaboration, empowering employees to utilize AI-based insights, and redesigning organizational processes to maximize the value generated by AI technologies. Such initiatives will strengthen organizational agility and improve long-term competitiveness.

Despite its contributions, the study has certain limitations. The analysis focuses on a specific set of organizational variables and may not capture all factors influencing AI adoption and organizational agility.

Additionally, the cross-sectional research design limits the ability to observe changes over time. Future research may adopt longitudinal approaches to examine the evolving impact of AI adoption on organizational performance. Researchers may also investigate additional mediating and moderating variables such as digital leadership, employee readiness, organizational resilience, innovation capability, knowledge management, and environmental uncertainty. Comparative studies across industries and countries could further enhance the generalizability of the findings.

In conclusion, the study demonstrates that Artificial Intelligence Adoption is a significant determinant of Organizational Agility, enabling organizations to improve responsiveness, innovation, and operational effectiveness in an increasingly complex business environment. However, the realization of these benefits depends not only on technological investment but also on the development of a supportive organizational context that encourages flexibility, collaboration, and continuous learning. Organizations that strategically integrate AI technologies with adaptive leadership, innovation-oriented cultures, and agile management practices will be better equipped to achieve sustainable growth and maintain competitive advantage in the era of digital transformation. Thus, AI should be regarded as a strategic organizational capability that drives long-term business success rather than merely a technological tool for automation.

Reference

1. Alshamsi, S. A. S. A., Hussain, T. P. R. S., & Ali, S. S. S. (2024). The Role of Artificial Intelligence on the Public Energy Sector Performance in the United Arab Emirates: The Mediation Role of Organizational Agility. Journal of Law and Sustainable Development, 12(1). https://doi.org/10.55908/sdgs.v12i1.2808
2. Ameen, N., Tarba, S. Y., Cheah, J., Xia, S., & Sharma, G. D. (2024). Coupling Artificial Intelligence Capability and Strategic Agility for Enhanced Product and Service Creativity. British Journal of Management, 35(4), 1916–1934. https://doi.org/10.1111/1467-8551.12797
3. Andrew, G. (2025). Firms as Human–AI Collectives: How Agentic AI Reshapes Organizational Structure and Firm Boundaries. https://doi.org/10.14293/pr2199.002636.v1
4. Arigbolo, K. (2026). Artificial Intelligence-Driven Product Development and Strategic Innovation Excellence. Iconic Research and Engineering Journals, 9(7). https://doi.org/10.64388/irev9i7-1713544
5. Atienza-Barba, M., Río-Rama, M. de la C. del, Meseguer-Martínez, Á., & Barba-Sánchez, V. (2024). Artificial intelligence and organizational agility: An analysis of scientific production and future trends. European Research on Management and Business Economics, 30(2), 100253–100253. https://doi.org/10.1016/j.iedeen.2024.100253
6. Chalmers, D., Hunt, R. 'Rick,' Pachidi, S., Potočnik, K., & Townsend, D. M. (2026). The Acceleration of Artificial Intelligence: Rethinking Organization and Work in an Era of Rapid Technological Change. Journal of Management Studies, 63(2), 285–314. https://doi.org/10.1111/joms.70063
7. Chytilová, L. K., & Mach-Król, M. A. (2026). Artificial Intelligence and Organizational Agility: A Bibliometric Analysis. Global Business Review. https://doi.org/10.1177/09721509261432287
8. Ciampi, F., Faraoni, M., Ballerini, J., & Meli, F. (2021). The co-evolutionary relationship between digitalization and organizational agility: Ongoing debates, theoretical developments and future research perspectives. arXiv (Cornell University), 176, 121383–121383. https://doi.org/10.1016/j.techfore.2021.121383
9. Corvello, V. (2024). Generative AI and the future of innovation management: A human centered perspective and an agenda for future research. Journal of Open Innovation Technology Market and Complexity, 11(1), 100456–100456. https://doi.org/10.1016/j.joitmc.2024.100456
10. Dinu, V. (2024). Innovative Application of Artificial Intelligence in Business Impacting Socio-Economic Progress. Amfiteatru Economic, 26(66), 398–398. https://doi.org/10.24818/ea/2024/66/398
11. elham, rezaei. (2025a). Co-Evolutionary Synergies Between Generative AI and Digital Transformation: A Dynamic Capabilities–Resource-Based Framework for Innovation and Resilience. In Zenodo (CERN European Organization for Nuclear Research). European Organization for Nuclear Research. https://doi.org/10.5281/zenodo.17689356
12. elham, rezaei. (2025b). Co-Evolutionary Synergies Between Generative AI and Digital Transformation: A Dynamic Capabilities–Resource-Based Framework for Innovation and Resilience. In Zenodo (CERN European Organization for Nuclear Research). European Organization for Nuclear Research. https://doi.org/10.5281/zenodo.17689357
13. elham, rezaei. (2025c). Co-Evolutionary Synergies Between Generative AI and Digital Transformation: A Dynamic Capabilities–Resource-Based Framework for Innovation and Resilience. In Zenodo (CERN European Organization for Nuclear Research). European Organization for Nuclear Research. https://doi.org/10.5281/zenodo.17698781
14. Enholm, I. M., Papagiannidis, E., Mikalef, P., & Krogstie, J. (2021). Artificial Intelligence and Business Value: a Literature Review. Information Systems Frontiers, 24(5), 1709–1734. https://doi.org/10.1007/s10796-021-10186-w
15. Esch, P. van. (2026). From agentic AI to AI-orchestrated organizations: Understanding the next surge in artificial intelligence. Business Horizons. https://doi.org/10.1016/j.bushor.2026.03.003
16. Islam, M. A., Somu, S., & Aldaihani, F. M. F. (2025). The Rise of Agentic AI: Synthesis of Current Knowledge and Future Research Agenda. Global Business and Organizational Excellence, 45(3), 402–416. https://doi.org/10.1002/joe.70019

17. Korzyński, P., Mazurek, G., Altmann, A., Ejdys, J., Kazlauskaitė, R., Paliszkiewicz, J., Wach, K., & Ziemba, E. (2023). Generative artificial intelligence as a new context for management theories: analysis of ChatGPT. Central European Management Journal, 31(1), 3–13. https://doi.org/10.1108/cemj-02-2023-0091
18. Kumar, K. J. (2026). The AI Driven Future of Management: Trends and Insights. INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT, 10(1), 86–94. https://doi.org/10.55041/ijsrem.ncdtaim015
19. Kwasek, A., Kocot, M., Kocot, D., Maciaszczyk, M., & Rogozińska-Mitrut, J. (2024). The Role of Artificial Intelligence in Agile Organization Management. EUROPEAN RESEARCH STUDIES JOURNAL, 118–130. https://doi.org/10.35808/ersj/3374
20. Liu, S. (2025). Algorithmic Ambidexterity: Transforming Dynamic Capabilities for AI-Driven Organizations. Academy of Management Proceedings, 2025(1). https://doi.org/10.5465/amproc.2025.10544abstract
21. Liu, Y., Zhang, J. Z., Zheng, J., & Kamal, M. M. (2025). Artificial intelligence-enabled systems and innovation in B2B firms: The role of strategic agility and decision-making performance. Industrial Marketing Management, 127, 164–174. https://doi.org/10.1016/j.indmarman.2025.04.003
22. Lu, T. (2026a). Navigating foundational uncertainty: a dynamic-adaptive model of enterprise digital transformation in the age of generative AI. Humanities and Social Sciences Communications. https://doi.org/10.1057/s41599-026-06689-z
23. Lu, T. (2026b). Governing Human–AI Co-Evolution: Intelligentization Capability and Dynamic Cognitive Advantage. Systems, 14(3), 307–307. https://doi.org/10.3390/systems14030307
24. Luo, J. (2025). AI empowers enterprise agility and performance: Research trends and implications for future research. Business Information Review, 42(4), 238–257. https://doi.org/10.1177/02663821251384881
25. Magsi, S. K., Ahmad, M., Khalid, M., Syed, M. I., Ali, J. M., & Fazal, M. (2026). Enterprise Intelligence 5.0: Human AI Co-Creation Models for Strategic Leadership, Innovation, and Competitive Advantage. Inverge Journal of Social Sciences, 5(1), 42–53. https://doi.org/10.63544/ijss.v5i1.220
26. Mahmood. (2026). Strategic Adoption of Artificial Intelligence and Firm Performance: The Mediating Role of Strategic Agility in Emerging Economies. International Journal of Economics and Business Administration, 186–199. https://doi.org/10.35808/ijeba/924
27. Malik, F. S., & Terzidis, O. (2025). Thriving in turbulence: resilience and strategic adaptation in global business. Review of Managerial Science. https://doi.org/10.1007/s11846-025-00940-8
28. Marhraoui, M. A. (2025). Understanding Drivers and Outcomes of AI Adoption: A Theory-Elaboration Approach. IEEE Transactions on Engineering Management, 73, 920–935. https://doi.org/10.1109/tem.2025.3644129
29. Medicharla, R. (2025). The New DNA of Strategy: Thriving with AI and Digital Transformation. Advanced International Journal for Research, 6(5). https://doi.org/10.63363/aijfr.2025.v06i05.1708
30. Monge, M. E. C., & Soriano, D. R. (2023). The role of digitalization in business and management: a systematic literature review. Review of Managerial Science, 18(2), 449–491. https://doi.org/10.1007/s11846-023-00647-8
31. Ononiwu, M. I., Onwuzulike, O. C., & Shitu, K. (2024). The role of digital business transformation in enhancing organizational agility. World Journal of Advanced Research and Reviews, 23(3), 285–308. https://doi.org/10.30574/wjarr.2024.23.3.2670
32. Owusu, J., & Agbesi, I. S. (2025). Navigating the Dilemma of AI Integration for Organisational Performance: Insights for Contemporary Business Strategists. Pan-African Journal of Education and Social Sciences, 6(1), 49–62. https://doi.org/10.56893/pajes2025v06i01.04
33. Rais, O., GUEZRI, I., & ELBOUSSADI, A. (2026). The role of artificial intelligence in strengthening dynamic capabilities: Proposal for a conceptual model. International Journal of Research in Economics and Finance, 3(1), 152–165. https://doi.org/10.71420/ijref.v3i1.4
34. Raisch, S., & Krakowski, S. (2021). Artificial Intelligence and Management: The Automation–Augmentation Paradox. Academy of Management Review, 46(1), 192–210. https://doi.org/10.5465/amr.2018.0072
35. Rožman, M., Oreški, D., Crnogaj, K., & Tominc, P. (2023). Agility and Artificial Intelligence Adoption: Small vs. Large Enterprises. Our Economy Journal of Contemporary Issues in Economics and Business, 69(4), 26–37. https://doi.org/10.2478/ngoe-2023-0021
36. Saleh, A. (2026). UntitledAdaptive IT Governance: A Strategic Framework for Enhancing Organizational Agility, Institutional Value, and Sustainable Digital Services in the Age of Artificial Intelligence Item [Figshare (United Kingdom)]. In Figshare. https://doi.org/10.6084/m9.figshare.31384591
37. (SCINTEE), A. A. B. (2025). AUGMENTED LEADERSHIP: INTEGRATING HUMAN INTUITION AND MACHINE INTELLIGENCE IN POST-DIGITAL ORGANIZATIONS. Cluj University Journal Interdisciplinary Social Sciences and Humanities, 3, 77–90. https://doi.org/10.61846/cuji-ssh.2025.3-4.09
38. Sehgal, D., & Bhardwaj, S. S. (2026). Exploring the Role of Agentic AI in building Organizational Agility: A Conceptual Model. In Advances in economics, business and management research/Advances in Economics, Business and Management Research (pp. 135–154). Atlantis Press. https://doi.org/10.2991/978-94-6239-608-1_8
39. Sen, P., & Jakkaraju, S. M. (2025). Modeling AI-Human Collaboration as a Multi-Agent Adaptation. In arXiv (Cornell University). Cornell University. https://doi.org/10.48550/arxiv.2504.20903
40. Shahzad, F., & Ferreira, J. J. M. (2026). Artificial intelligence driven dynamic capabilities: unpacking micro-foundational mechanisms. Management Decision, 1–22. https://doi.org/10.1108/md-07-2025-2141

41. Sharathchandra, k, & Reddy, J. K. (2025). The Impact of Artificial Intelligence on Organizational Agility. International Journal For Multidisciplinary Research, 7(4). https://doi.org/10.36948/ijfmr.2025.v07i04.51977
42. Shatila, K. (2025). Artificial intelligence and organizational resilience: the mediating role of agility, innovation, and digital leadership. Strategy and Leadership, 1–25. https://doi.org/10.1108/sl-08-2025-0275
43. Srivastava, A., & Fuloria, S. (2026). Agentic AI in services: orchestrating human–machine synergy for service excellence. International Journal of Quality and Service Sciences, 18(1), 204–212. https://doi.org/10.1108/ijqss-03-2026-303
44. Ștefan, S. C., Olariu, A. A., & Popa, Ștefan C. (2024). Implications of Artificial Intelligence on Organizational Agility: A PLS-SEM and PLS-POS Approach. Amfiteatru Economic, 26(66), 403–403. https://doi.org/10.24818/ea/2024/66/403
45. Sultana, A. (2026). Technology and Digital Transformation: Influence of Artificial Intelligence on Contemporary Management Practices. INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT, 10(1), 1–9. https://doi.org/10.55041/ijsrem.ncdtaim036
46. Tiwari, S., Buch, D., & Rao, A. (2026). Generative Artificial Intelligence as an Enabler of Organizational Ambidexterity in the Knowledge Economy. Management Dynamics in the Knowledge Economy, 14(1), 40–53. https://doi.org/10.2478/mdke-2026-0003
47. Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2021). How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. Technological Forecasting and Social Change, 174, 121227–121227. https://doi.org/10.1016/j.techfore.2021.121227
48. Varouchas, E. (2026). Executives' perspectives on the impact of generative AI in business: a qualitative study of strategic, ethical and organizational transformations. Journal of Science and Technology Policy Management, 1–34. https://doi.org/10.1108/jstpm-10-2025-0493
49. Wang, X., Wah, K. K., & Wang, X. (2026). Exploring the Reconstruction of the Micro foundations of Dynamic Capabilities in the Age of Artificial Intelligence. International Journal of Academic Research in Business and Social Sciences, 16(3). https://doi.org/10.6007/ijarbss/v16-i3/27958
50. Xu, Z., Bao, L., Zhang, K., Wei, W., & Xu, W. (2025). Extending Knowledge-Based View in Generative AI Era. Academy of Management Proceedings, 2025(1). https://doi.org/10.5465/amproc.2025.19643abstract
51. Zvarych, O. I., & Kafka, S. M. (2025). The AI-Enhanced Intelligent Business Diagnostics for Predictive Assessment of Organizational Resilience in Digital Transformation. Business Inform, 10(573), 560–569. https://doi.org/10.32983/2222-4459-2025-10-560-569