

**ADAPTIVE ORGANIZATIONS IN THE AGE OF AGENTIC AI: A  
CONCEPTUAL PERSPECTIVE ON AGILITY, AUTONOMY, AND  
GOVERNANCE**

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**Abstract**

The emergence of agentic artificial intelligence (AI) is reshaping the foundations of organizational agility by introducing systems capable of autonomous decision-making, adaptive learning, and coordinated action across complex environments. This article develops a conceptual perspective on how agentic AI transforms agile organizations, moving them from flexible, human-centered structures toward adaptive, hybrid systems characterized by continuous learning and distributed intelligence. Building on the dynamic capabilities view and socio-technical systems theory, the paper conceptualizes agility as an evolving capability that is increasingly co-produced by human and artificial agents. The study identifies three core dimensions—agility, autonomy, and governance—and examines their interdependencies in the context of agentic AI adoption. It argues that while agentic AI enhances organizational responsiveness, speed, and innovation, it simultaneously introduces new challenges related to control, accountability, and ethical alignment. To address these tensions, the article proposes a multi-layered framework that integrates agentic AI capabilities with organizational structures, governance mechanisms, and human–AI collaboration practices. The framework highlights the role of adaptive governance in balancing autonomy with oversight, ensuring that AI-driven decisions remain aligned with organizational and societal objectives. By synthesizing insights from artificial intelligence, management, and information systems literature, this conceptual study contributes to theory by reframing organizational agility in the age of autonomous systems. It further provides practical guidance for organizations seeking to leverage agentic AI to enhance adaptability while maintaining trust, transparency, and control. The paper concludes by

outlining future research directions on hybrid intelligence, AI governance, and the evolution of agile organizational forms.

**Keywords:** Agentic Artificial Intelligence; Organizational Agility; Adaptive Organizations; Autonomous Systems; AI Governance; Human–AI Collaboration; Dynamic Capabilities; Digital Transformation; Organizational Adaptation; Agile Management

### 1. Introduction

The increasing complexity and volatility of contemporary business environments have intensified the need for organizations to become more agile, adaptive, and responsive. Traditionally, organizational agility has been conceptualized as the ability to sense environmental changes and respond rapidly through flexible structures, iterative processes, and empowered teams (Teece, Peteraf, & Leih, 2016). Agile organizations emphasize responsiveness, collaboration, and continuous learning to sustain competitive advantage in dynamic markets. However, the rapid advancement of artificial intelligence (AI), particularly the emergence of *agentic AI*, is fundamentally reshaping the nature and scope of organizational agility (Islam, Ajmal, & Islam, 2025).

Agentic AI represents a new generation of AI systems characterized by autonomy, proactiveness, and the capacity for goal-directed behavior. Unlike earlier AI applications that primarily supported decision-making or automated routine tasks, agentic AI systems can independently perceive environments, make decisions, and execute actions with minimal human intervention (Wooldridge, 2020; Russell & Norvig, 2021). This shift from tool-based AI to autonomous agents introduces a transformative paradigm in which AI becomes an active participant in organizational processes rather than a passive enabler. As a result, organizations are evolving into hybrid systems where human and artificial agents collaboratively shape outcomes (Ajmal, Islam, & Khalid, 2025).

The integration of agentic AI into organizational systems has significant implications for agility. On one hand, agentic AI enhances agility by enabling real-time data processing, predictive analytics, and rapid decision-making across organizational functions (Ajmal, Khan, & Islam, 2024). These capabilities allow organizations to respond more quickly to market changes, optimize operations continuously, and innovate at scale (Brynjolfsson & McAfee, 2017). On the other hand, the increasing autonomy of AI systems introduces new challenges related to governance, control, and accountability. As decision-making authority shifts partially from humans to machines, organizations must reconsider how to ensure alignment with strategic objectives, ethical standards, and regulatory requirements (Floridi et al., 2018).

The concept of *adaptive organizations* emerges at the intersection of agility and agentic AI. Adaptive organizations are not only capable of responding to change but also of continuously learning and evolving through dynamic interactions between human and technological components (Ajmal, Khalid, & Islam, 2025). This perspective aligns with the dynamic capabilities' framework, which emphasizes the ability of organizations to integrate, build, and reconfigure internal and external competencies in rapidly changing environments (Teece et al., 2016). In the context of agentic AI, these capabilities are increasingly co-produced by human actors and intelligent agents, leading to new forms of organizational intelligence and coordination (Ajmal, 2022).

Despite the growing importance of agentic AI, existing literature on organizational agility has largely focused on human-centric processes and structures, with limited attention to the role of autonomous AI systems. Similarly, research on AI in organizations has predominantly examined automation and augmentation, rather than the implications of AI autonomy and agency (Ajmal, Islam, & Islam, 2025). This gap highlights the need for a conceptual perspective that integrates agility, autonomy, and governance within a unified framework.

Governance is a particularly critical dimension in the age of agentic AI. As AI systems gain the ability to act independently, ensuring transparency, accountability, and ethical alignment becomes increasingly complex (Islam, Khalid, & Ajmal, 2025). Traditional governance mechanisms, which rely on hierarchical control and human oversight, may be insufficient for managing autonomous systems operating in real time (Doshi-Velez & Kim, 2017). Consequently, organizations must develop adaptive governance models that balance the benefits of AI autonomy with the need for control and oversight.

Furthermore, the integration of agentic AI necessitates a reconfiguration of organizational roles and capabilities. Human workers are increasingly required to collaborate with AI systems, shifting their focus from routine task execution to supervision, strategic decision-making, and ethical judgment (Ajmal, Islam, & Islam, 2024). This transformation underscores the importance of developing new skills, fostering a culture of continuous learning, and redesigning organizational structures to support effective human-AI collaboration (Jarrahi, 2018).

In light of these developments, this article aims to provide a conceptual perspective on adaptive organizations in the age of agentic AI. Specifically, it seeks to (1) examine how agentic AI reshapes organizational agility, (2) explore the interplay between agility, autonomy, and governance, and (3) propose a framework for understanding how organizations can leverage

agentic AI while maintaining control, accountability, and ethical integrity (Malik, Bakri, Ajmal, & Malik, 2019). By integrating insights from artificial intelligence, management, and information systems literature, this study contributes to theory development and offers practical guidance for organizations navigating the transition toward autonomous and adaptive systems.

Ultimately, the paper argues that the future of agile organizations lies in their ability to balance flexibility with control, autonomy with governance, and technological capabilities with human values. Agentic AI, while offering unprecedented opportunities for innovation and efficiency, also requires a fundamental rethinking of how organizations are designed and managed in an increasingly intelligent and autonomous world.

## **2. Literature Review**

The concept of *agentic artificial intelligence (AI)* and its implications for adaptive and agile organizations draws upon multiple streams of literature, including organizational agility, dynamic capabilities, artificial intelligence, socio-technical systems, and governance. This section synthesizes these bodies of knowledge to establish the theoretical foundation for understanding how agentic AI reshapes organizational forms and practices.

### **2.1. Organizational Agility and Adaptive Organizations**

Organizational agility has been widely recognized as a critical capability for firms operating in dynamic and uncertain environments. It refers to an organization's ability to sense changes, respond rapidly, and adapt its structures and processes to maintain competitiveness (Teece et al., 2016). Agile organizations are characterized by flexibility, decentralized decision-making, iterative processes, and continuous learning (Rigby, Sutherland, & Takeuchi, 2016). These organizations prioritize responsiveness over rigid planning, enabling them to innovate and adjust strategies in real time.

The concept of *adaptive organizations* extends agility by emphasizing continuous evolution rather than episodic change. Adaptive organizations leverage feedback mechanisms, learning systems, and dynamic resource reconfiguration to sustain long-term performance (Volberda, Mihalache, Fey, & Lewin, 2017). This perspective aligns with the dynamic capabilities framework, which highlights the importance of sensing, seizing, and transforming capabilities in response to environmental shifts (Teece et al., 2016). However, existing literature largely assumes human-driven adaptation, with limited consideration of the role of intelligent technologies in shaping these capabilities.

## 2.2. Evolution of Artificial Intelligence in Organizations

Artificial intelligence has evolved significantly from rule-based expert systems to advanced machine learning and deep learning models capable of handling complex, unstructured data. Early applications of AI focused on automating routine tasks and improving efficiency, often within narrowly defined domains (Russell & Norvig, 2021). With the rise of big data and computational power, AI systems have increasingly been used for predictive analytics, decision support, and process optimization (Brynjolfsson & McAfee, 2017).

More recent developments emphasize AI as a tool for *augmentation*, where human decision-making is enhanced by data-driven insights (Jarrahi, 2018). This human–AI collaboration paradigm has been widely studied in organizational contexts, highlighting the complementary strengths of humans and machines. However, the emergence of *agentic AI* represents a further evolution, where systems are capable of autonomous decision-making, learning, and action. These systems go beyond supporting human decisions to actively participating in organizational processes, thereby transforming the nature of work and coordination.

## 2.3. Agentic AI and Autonomous Systems

Agentic AI is grounded in the concept of intelligent agents, defined as entities that perceive their environment and act upon it to achieve specific goals (Wooldridge, 2020). Unlike traditional AI systems, agentic AI exhibits autonomy, proactiveness, and adaptability, enabling it to operate in complex and dynamic environments. This shift introduces a new paradigm in which AI systems function as semi-autonomous or fully autonomous actors within organizations.

Research on autonomous systems suggests that these technologies can significantly enhance organizational performance by enabling real-time decision-making, continuous optimization, and decentralized coordination (Baird & Maruping, 2021). For example, AI-driven systems can autonomously manage supply chains, optimize resource allocation, and respond to disruptions without requiring constant human intervention. However, the increasing autonomy of AI systems also raises questions about control, accountability, and the distribution of decision rights within organizations.

The integration of agentic AI into organizational systems challenges traditional assumptions about hierarchy and authority. Decision-making is no longer confined to human managers but is increasingly distributed across human and artificial agents. This transformation requires a rethinking of organizational design, including the balance between centralization and decentralization, as well as the mechanisms for coordination and control.

#### **2.4. Human–AI Collaboration and Hybrid Intelligence**

The interaction between humans and AI systems is a central theme in the literature on AI in organizations. Rather than replacing human workers, AI is often seen as augmenting human capabilities, leading to the emergence of *hybrid intelligence systems* (Jarrahi, 2018). In such systems, humans contribute contextual understanding, creativity, and ethical judgment, while AI provides computational power, pattern recognition, and data processing capabilities.

However, the rise of agentic AI complicates this relationship by introducing systems that operate with greater independence. This shift necessitates new forms of collaboration, where humans act as supervisors, orchestrators, and ethical stewards of AI systems. Trust becomes a critical factor in this context, as users must rely on AI systems to make decisions while maintaining confidence in their reliability and fairness (Glikson & Woolley, 2020).

Leadership also plays a crucial role in facilitating effective human–AI collaboration. Leaders must balance the efficiency gains offered by AI with the need for human oversight and ethical considerations. This requires new management approaches that integrate technological and human perspectives, fostering a culture of collaboration and adaptability.

#### **2.5. Governance, Ethics, and Control in Agentic AI**

The increasing autonomy of AI systems introduces significant governance and ethical challenges. Traditional governance mechanisms, which rely on hierarchical control and human oversight, may be insufficient for managing autonomous systems operating in real time. As a result, there is a growing need for *adaptive governance frameworks* that can address the complexities of agentic AI (Floridi et al., 2018).

Key governance issues include transparency, accountability, and explainability. As AI systems become more complex, understanding how decisions are made becomes increasingly difficult, raising concerns about trust and legitimacy (Doshi-Velez & Kim, 2017). Ethical considerations, such as bias, fairness, and privacy, are also critical, as AI systems can perpetuate or amplify existing inequalities if not properly managed.

The concept of *algorithmic governance* has emerged as a potential solution, emphasizing the use of rules, standards, and monitoring mechanisms to ensure that AI systems operate within acceptable boundaries. However, implementing such frameworks requires a balance between autonomy and control, ensuring that AI systems can function effectively while remaining aligned with organizational and societal values.

### **2.6. Agentic AI and Organizational Transformation**

The integration of agentic AI into organizations represents a fundamental transformation in how work is structured and managed. Organizations are evolving from hierarchical, human-centric systems to *distributed, hybrid systems* where decision-making is shared between humans and AI agents. This transformation has implications for organizational design, strategy, and culture.

From a strategic perspective, agentic AI enables organizations to develop new capabilities, such as real-time responsiveness, predictive decision-making, and continuous optimization. These capabilities enhance organizational agility and support innovation. However, they also require significant investments in technology, infrastructure, and skills. From a structural perspective, agentic AI promotes decentralization by enabling decision-making at multiple levels of the organization. This aligns with agile principles but also introduces challenges related to coordination and control. Organizations must therefore develop new mechanisms for managing distributed decision-making processes.

From a cultural perspective, the adoption of agentic AI requires a shift toward a more data-driven and learning-oriented mindset. Employees must be willing to collaborate with AI systems, trust their outputs, and adapt to new ways of working. This highlights the importance of organizational culture in facilitating successful AI adoption.

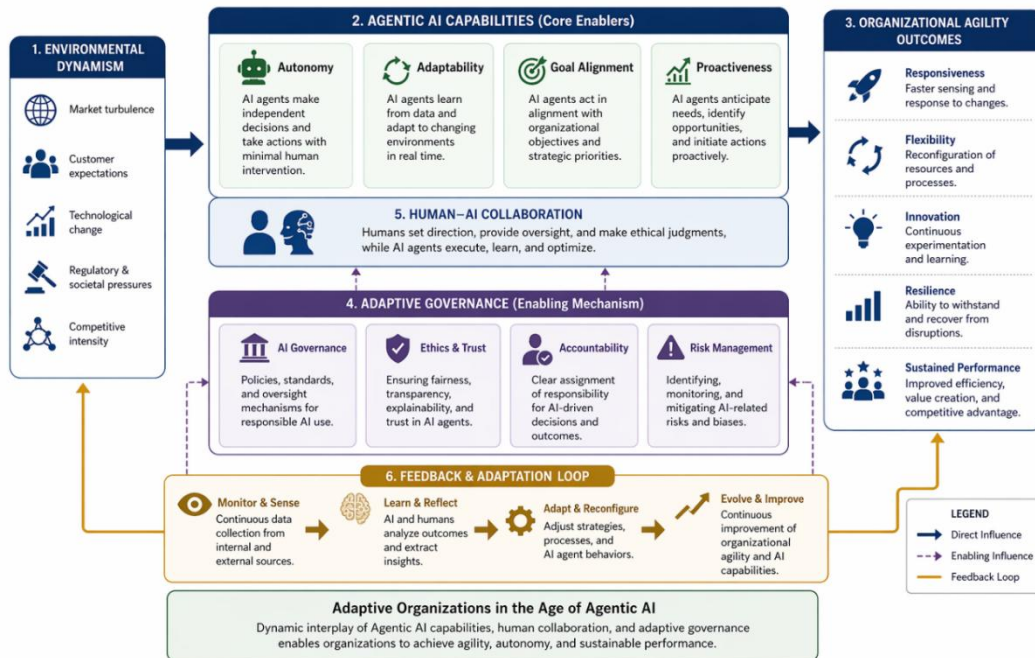
### **2.7. Research Gaps and Contribution**

Despite the growing body of literature on AI and organizational agility, several gaps remain. First, most studies focus on AI as a tool for automation or augmentation, with limited attention to its role as an autonomous agent. Second, research on organizational agility has largely overlooked the impact of AI on adaptive capabilities. Third, there is a lack of integrative frameworks that combine agility, autonomy, and governance in a unified perspective.

This study addresses these gaps by proposing a conceptual framework that integrates agentic AI into the theory of adaptive organizations. By linking AI capabilities with organizational structures and governance mechanisms, the framework provides a comprehensive understanding of how organizations can leverage agentic AI to enhance agility while maintaining control and accountability.

### Conceptual Model: Adaptive Organizations in the Age of Agentic AI

*A Perspective on Agility, Autonomy, and Governance*



### 3. Comprehensive Explanation of the Conceptual Model: Adaptive Organizations in the Age of Agentic AI

The proposed conceptual model explains how organizations evolve into adaptive and agile systems through the integration of *agentic artificial intelligence (AI)*. It presents a multi-layered structure in which environmental pressures, AI capabilities, governance mechanisms, and human-AI collaboration interact dynamically to produce organizational agility and long-term performance. Each component of the model contributes to understanding how organizations transition from traditional, human-centric systems to hybrid, intelligent, and continuously learning entities.

#### 3.1. Environmental Dynamism as the Driving Force

At the foundation of the model lies **environmental dynamism**, which includes rapid technological advancements, shifting customer expectations, regulatory complexity, and competitive pressures. These factors create uncertainty and demand continuous organizational responsiveness. In highly dynamic environments, static strategies and rigid structures become ineffective, making agility a critical organizational capability. The dynamic capabilities perspective emphasizes that organizations must continuously sense opportunities and threats, seize them through timely decisions, and transform their operations accordingly (Teece, Peteraf, & Leih, 2016). Agentic AI enhances this sensing capability by continuously analyzing large volumes of data, identifying patterns, and detecting emerging trends in real time,

thereby enabling organizations to respond more effectively to environmental changes.

### **3.2. Agentic AI Capabilities as the Core Enabler**

At the core of the model are **agentic AI capabilities**, which fundamentally differentiate this paradigm from earlier forms of AI. These capabilities include autonomy, adaptability, proactiveness, and goal-directed behavior. Autonomy allows AI systems to make decisions independently without constant human supervision. Adaptability enables continuous learning from data and environmental feedback, allowing AI systems to improve performance over time. Proactiveness allows AI agents to anticipate future events and initiate actions, while goal alignment ensures that these actions are consistent with organizational objectives.

Recent research highlights that agentic AI represents a shift from reactive and tool-based AI toward systems capable of reasoning, planning, and coordinated action across complex environments (Islam, Somu, & Aldaihani, 2025). Similarly, multi-agent systems research demonstrates that autonomous AI agents can decentralize decision-making and enhance cross-functional coordination within organizations (Hughes et al., 2025). These capabilities collectively position agentic AI as a central driver of organizational transformation.

### **3.3. Transformation into Organizational Agility**

The model posits that agentic AI capabilities directly contribute to **organizational agility outcomes**, including responsiveness, flexibility, innovation, and resilience. Responsiveness is enhanced as AI systems enable faster data processing and real-time decision-making. Flexibility increases because organizations can dynamically reconfigure processes and resources based on AI-driven insights. Innovation is facilitated through continuous experimentation and predictive analytics, allowing organizations to identify opportunities and develop new solutions. Resilience is strengthened as AI systems can detect disruptions early and support rapid recovery.

Empirical and conceptual studies suggest that intelligent AI agents significantly improve decision quality, operational efficiency, and strategic agility by expanding the cognitive capacity of organizations and reducing information asymmetry (Shahzaib, Latif, & Ali, 2025). Thus, agentic AI not only supports agility but also redefines it by embedding intelligence and adaptability into organizational processes.

### **3.4. Adaptive Governance as a Control Mechanism**

While agentic AI enhances autonomy and efficiency, it also introduces risks related to accountability, transparency, and ethical decision-making. The model therefore incorporates **adaptive governance** as a critical moderating

and enabling component. Adaptive governance refers to flexible, evolving mechanisms that ensure AI systems operate within ethical, legal, and organizational boundaries.

Governance mechanisms address issues such as algorithmic bias, explainability, data privacy, and accountability for AI-driven decisions. As AI systems become more autonomous, traditional hierarchical control structures become insufficient, necessitating new governance models that combine technological oversight with organizational policies (Floridi et al., 2018). Research on agentic AI governance further emphasizes the importance of transparency, fairness, and human oversight to ensure responsible deployment (Allam, AlOmar, & Dempere, 2025).

Thus, adaptive governance ensures that while AI systems operate with autonomy, they remain aligned with organizational values and societal expectations.

### **3.5. Human–AI Collaboration as a Bridging Mechanism**

Another key component of the model is **human–AI collaboration**, which bridges the gap between AI autonomy and organizational control. Rather than replacing human workers, agentic AI transforms their roles. Humans increasingly act as supervisors, strategists, and ethical decision-makers, while AI systems handle data processing, analysis, and execution tasks.

This collaborative model is often described as *hybrid intelligence*, where human intuition and contextual understanding complement machine efficiency and analytical capabilities (Jarrahi, 2018). Trust plays a crucial role in this interaction, as employees must rely on AI systems while maintaining confidence in their outputs (Glikson & Woolley, 2020). Effective collaboration also requires new skills, including AI literacy, data interpretation, and system management.

Furthermore, research highlights that organizations adopting agentic AI must redesign roles and workflows to support human–AI co-agency, ensuring that decision-making authority is appropriately distributed between humans and machines (Bandara et al., 2026).

### **3.6. Feedback and Continuous Adaptation Loop**

A defining feature of the model is the **feedback and adaptation loop**, which reflects the continuous learning process of adaptive organizations. AI systems generate insights based on data, which are then evaluated and refined through feedback mechanisms. Organizations use these insights to adjust strategies, processes, and governance structures, creating a cycle of continuous improvement.

Agentic AI systems are inherently designed for such feedback-driven learning, incorporating mechanisms such as reinforcement learning, predictive

analytics, and real-time monitoring (Prakash & Komal, 2025). This continuous adaptation allows organizations to evolve proactively rather than reactively, maintaining competitiveness in rapidly changing environments.

### **3.7. Integrated Model Logic and Organizational Transformation**

The overall logic of the model illustrates a dynamic system in which environmental pressures drive the need for agility, agentic AI provides the capabilities to achieve it, and governance and human collaboration ensure responsible and effective implementation. The feedback loop enables continuous learning and adaptation, resulting in sustained organizational performance.

Importantly, the model redefines organizations as **hybrid socio-technical systems** where humans and AI agents coexist and co-evolve. This transformation shifts organizations from static, hierarchical structures to adaptive, decentralized, and intelligent systems capable of continuous innovation and responsiveness.

### **4. Discussion**

The findings of this study highlight the transformative role of agentic artificial intelligence (AI) in shaping adaptive organizations, particularly in environments characterized by high uncertainty and rapid change. The proposed model demonstrates that the integration of agentic AI capabilities fundamentally alters how organizations achieve agility by embedding autonomy, learning, and real-time decision-making into core processes. This transformation moves organizations beyond traditional agile practices toward a more advanced form of adaptability, where responsiveness is continuously enabled by intelligent systems rather than solely by human-driven processes. A key observation emerging from the model is that agentic AI redefines the nature of organizational responsiveness. Traditional agile organizations rely on iterative cycles, cross-functional teams, and decentralized decision-making to respond to environmental changes (Rigby, Sutherland, & Takeuchi, 2016). However, agentic AI enhances this responsiveness by enabling continuous sensing and instantaneous action. Autonomous agents can process large volumes of data in real time, identify emerging patterns, and execute decisions without delays associated with human intervention. This shift significantly reduces the time between sensing and responding, thereby strengthening organizational agility and allowing firms to operate at a much higher tempo (Teece, Peteraf, & Leih, 2016).

At the same time, the findings suggest that the integration of agentic AI introduces new forms of organizational complexity. As decision-making becomes distributed across human and artificial agents, coordination challenges emerge. Unlike traditional systems where authority and

responsibility are clearly defined, agentic AI systems operate through decentralized and often opaque processes. This creates ambiguity regarding accountability, particularly when AI-driven decisions lead to unintended outcomes. Existing research indicates that such ambiguity can affect trust, decision legitimacy, and organizational coherence if not carefully managed (Glikson & Woolley, 2020). Therefore, while agentic AI enhances agility, it also requires organizations to navigate more complex coordination dynamics. Another important insight relates to the evolving relationship between humans and AI within organizations. The findings reinforce the notion that agentic AI does not eliminate the role of humans but rather transforms it. Humans increasingly function as supervisors, orchestrators, and ethical decision-makers, while AI systems handle execution and analysis. This shift aligns with the concept of human–AI symbiosis, where both entities contribute complementary capabilities (Jarrahi, 2018). However, the model also highlights that this relationship is not static; it evolves over time as AI systems become more capable and organizations gain experience in managing them. The balance between human control and AI autonomy is therefore dynamic, requiring continuous adjustment.

The discussion also underscores the importance of continuous learning and adaptation in agentic AI-enabled organizations. The feedback loop embedded in the model reflects a shift from episodic learning to continuous, data-driven learning. Organizations are no longer limited to periodic reviews or post-hoc analysis; instead, they can continuously refine their strategies and operations based on real-time insights generated by AI systems. This capability enhances not only efficiency but also resilience, as organizations can quickly detect disruptions and adjust their responses accordingly. Studies on intelligent systems suggest that such continuous learning mechanisms are critical for maintaining performance in dynamic environments (Baird & Maruping, 2021).

Furthermore, the findings highlight the dual nature of autonomy in agentic AI systems. While autonomy enables faster decision-making and reduces reliance on human intervention, it also introduces risks related to misalignment and unintended consequences. Autonomous systems may optimize for predefined objectives without fully considering broader organizational or societal implications. This tension between efficiency and control is a central challenge in the adoption of agentic AI. Research on AI governance emphasizes that as systems gain autonomy, the need for oversight, transparency, and ethical alignment becomes more critical (Floridi et al., 2018). The model captures this tension by incorporating governance as a

balancing mechanism, ensuring that autonomy does not compromise accountability.

In addition, the findings reveal that agentic AI contributes to a reconfiguration of organizational structures. Traditional hierarchical models are increasingly supplemented or replaced by networked and decentralized structures enabled by AI systems. Decision-making authority is distributed across multiple nodes, including both human actors and AI agents. This shift supports greater flexibility and scalability but also requires new coordination mechanisms. Multi-agent systems research suggests that decentralized coordination can improve efficiency and innovation, but it also depends on effective communication and alignment among agents (Wooldridge, 2020). The model reflects this complexity by emphasizing the interconnectedness of AI capabilities, governance, and collaboration.

The discussion also points to the importance of trust in agentic AI systems. Trust influences the extent to which employees are willing to rely on AI-generated insights and decisions. Lack of transparency or explainability can undermine trust, limiting the effectiveness of AI integration. Conversely, well-designed systems that provide clear explanations and demonstrate reliability can enhance trust and facilitate adoption. Empirical studies show that trust in AI is influenced by factors such as perceived competence, transparency, and alignment with user expectations (Glikson & Woolley, 2020). The model implicitly incorporates trust through its emphasis on governance and human–AI collaboration.

Finally, the findings suggest that the transition to agentic AI-enabled organizations is not a linear process but a continuous and iterative journey. Organizations must experiment with different configurations of AI capabilities, governance mechanisms, and collaboration models to identify what works best in their specific contexts. This iterative approach aligns with the principles of agile management while extending them to include intelligent systems. The integration of agentic AI thus represents an ongoing process of organizational learning and transformation rather than a one-time implementation.

### **5. Theoretical Implications**

The present study offers several important theoretical contributions by advancing the understanding of how *agentic artificial intelligence (AI)* reshapes the foundations of organizational theory, particularly in relation to agility, autonomy, and governance. By conceptualizing agentic AI as an active organizational actor rather than a passive technological tool, this research extends multiple theoretical perspectives and opens new avenues for scholarly inquiry.

### 5.1. Reconceptualization of Organizational Agility

One of the central theoretical implications of this study lies in the reconceptualization of **organizational agility** (Ajmal, Manzoor Dar, Islam, & Islam, 2025). Traditional theories define agility as a human-driven capability rooted in flexible structures, decentralized decision-making, and iterative processes (Teece, Peteraf, & Leih, 2016; Rigby, Sutherland, & Takeuchi, 2016). However, this study extends this view by demonstrating that agility is increasingly co-produced by human and artificial agents (Islam, Ajmal, & Khalid, 2025). Agentic AI enables continuous sensing, real-time decision-making, and automated responses, thereby transforming agility from a reactive organizational capability into a *proactive and continuously operating system*.

This shift contributes to the dynamic capabilities literature by suggesting that sensing, seizing, and transforming processes are no longer exclusively human-centric but are distributed across hybrid human–AI systems (Ajmal, Islam, & Khalid, 2025). Consequently, agility evolves from episodic adaptation to continuous, data-driven adaptation, expanding the theoretical boundaries of how organizations achieve responsiveness in dynamic environments (Khalid, Islam, & Ajmal, 2025).

### 5.2. Extension of Agency Theory to Non-Human Actors

The study also contributes to **agency theory** by extending the notion of agency beyond human actors. Traditionally, agency theory focuses on relationships between principals and human agents, emphasizing issues such as control, incentives, and information asymmetry (Jensen & Meckling, 1976). The introduction of agentic AI challenges this framework by introducing autonomous, non-human agents capable of decision-making and action.

This research suggests that AI agents function as *quasi-agents* within organizations, possessing delegated authority and operational autonomy. This extension raises new theoretical questions about accountability, monitoring, and control in hybrid systems where both human and artificial agents participate in decision-making. It also highlights the need for revised agency models that incorporate algorithmic decision-making and shared responsibility structures.

### 5.3. Advancement of Socio-Technical Systems Theory

Another significant implication is the advancement of **socio-technical systems theory**, which emphasizes the interdependence between social (human) and technical components in organizations (Bostrom & Heinen, 1977). The model presented in this study extends this perspective by incorporating agentic AI as an autonomous and adaptive component within the technical subsystem.

Unlike traditional technologies that support human activities, agentic AI actively interacts with both human and organizational elements, influencing decision-making, coordination, and performance outcomes. This transforms socio-technical systems into *intelligent, co-evolving ecosystems* where humans and AI agents continuously adapt to each other. The study therefore contributes to the evolution of socio-technical theory by highlighting the emergence of hybrid intelligence systems characterized by shared agency and dynamic interaction.

#### **5.4. Integration of Autonomy into Organizational Design Theory**

The findings also extend **organizational design theory** by introducing autonomy as a critical design dimension. Traditional organizational design focuses on structures such as hierarchy, centralization, and formalization (Mintzberg, 1979). However, the integration of agentic AI necessitates a rethinking of these principles, as decision-making authority is increasingly distributed across autonomous systems.

This study suggests that organizations are transitioning toward *decentralized and networked structures*, where AI agents operate alongside human actors to coordinate activities and make decisions. This shift challenges conventional assumptions about control and coordination, emphasizing the need for flexible and adaptive organizational designs that can accommodate both human and machine agency. As such, the research contributes to organizational design theory by incorporating technological autonomy as a key structural variable.

#### **5.5. Contribution to Human–AI Collaboration and Hybrid Intelligence**

The study also advances the literature on **human–AI collaboration** by conceptualizing it as a dynamic and evolving relationship rather than a static interaction. Existing research has emphasized AI as a tool for augmenting human decision-making (Jarrahi, 2018). However, this study highlights that agentic AI operates with a higher degree of independence, requiring new forms of collaboration based on *co-agency*.

This perspective contributes to the emerging concept of **hybrid intelligence**, where human and artificial agents jointly create value by leveraging their complementary strengths. Humans provide contextual understanding, ethical judgment, and strategic direction, while AI contributes computational power, pattern recognition, and scalability. The study thus enriches theoretical discussions by framing human–AI collaboration as a continuous negotiation of roles, responsibilities, and authority.

### 5.6. Expansion of Governance Theory in the Context of AI

A further theoretical implication relates to **governance theory**, particularly in the context of autonomous systems. Traditional governance frameworks rely on hierarchical control, formal rules, and human oversight. However, the increasing autonomy of agentic AI systems introduces new challenges that existing governance models are not fully equipped to address.

This study contributes to governance theory by introducing the concept of **adaptive governance**, which emphasizes flexibility, continuous monitoring, and alignment with ethical and organizational objectives. Adaptive governance integrates principles such as transparency, accountability, and explainability, which are essential for managing AI-driven decision-making (Floridi et al., 2018). By incorporating these elements into the model, the study provides a theoretical foundation for understanding how governance mechanisms evolve in response to technological autonomy.

### 5.7. Reframing Organizations as Hybrid Intelligent Systems

Finally, the study offers a broader theoretical contribution by reframing organizations as **hybrid intelligent systems**. Traditional organizational theories view firms as collections of human actors coordinated through formal structures and processes. In contrast, this research conceptualizes organizations as systems in which human and artificial agents coexist, interact, and co-evolve.

This perspective aligns with emerging research on digital and intelligent organizations, which emphasizes the role of advanced technologies in shaping organizational behavior and performance (Brynjolfsson & McAfee, 2017). By integrating agentic AI into this framework, the study extends organizational theory to account for the increasing role of autonomous systems in decision-making, coordination, and value creation.

## 6. Practical Implications

The findings of this study provide several important practical implications for organizations seeking to leverage *agentic artificial intelligence (AI)* to enhance agility, adaptability, and long-term performance. As organizations transition toward hybrid human–AI systems, managers must adopt new strategies, structures, and capabilities to effectively integrate agentic AI into their operations.

### 6.1. Strategic Integration of Agentic AI Across Functions

One of the primary practical implications is the need for **enterprise-wide integration of agentic AI** rather than isolated or function-specific implementations. Organizations should embed AI agents across key functions such as operations, marketing, finance, and human resources to enable real-time coordination and decision-making. Cross-functional AI integration

enhances information flow, reduces silos, and supports faster and more consistent organizational responses. Research suggests that organizations adopting integrated digital technologies achieve higher efficiency and improved decision quality compared to fragmented implementations (Brynjolfsson & McAfee, 2017). Therefore, managers should prioritize developing unified AI strategies that align with overall business objectives.

### **6.2. Redesign of Organizational Structures and Workflows**

The adoption of agentic AI requires a **reconfiguration of organizational structures and workflows**. Traditional hierarchical models may limit the effectiveness of autonomous systems, as they rely on centralized decision-making and rigid processes. Instead, organizations should move toward more decentralized and networked structures that allow AI agents to operate alongside human teams. This involves redesigning workflows to enable real-time data sharing, automated decision execution, and continuous process optimization. Such structural changes align with agile principles that emphasize flexibility and responsiveness (Rigby, Sutherland, & Takeuchi, 2016).

### **6.3. Development of Human–AI Collaboration Capabilities**

Another key implication is the importance of **building effective human–AI collaboration**. As agentic AI systems take on more autonomous roles, human employees must shift from task execution to supervision, strategic decision-making, and ethical oversight. This transition requires organizations to invest in workforce development, including training in AI literacy, data interpretation, and system management. Studies indicate that successful AI adoption depends on the ability of employees to understand, trust, and effectively interact with AI systems (Jarrahi, 2018). Organizations should therefore foster a culture that supports collaboration between humans and AI, encouraging learning and adaptability.

### **6.4. Implementation of Adaptive Governance Frameworks**

The increasing autonomy of AI systems necessitates the implementation of **robust and adaptive governance frameworks**. Organizations must establish policies and mechanisms to ensure transparency, accountability, and ethical alignment in AI-driven decision-making. This includes developing guidelines for data usage, monitoring AI behavior, and ensuring compliance with regulatory requirements. Ethical frameworks for AI emphasize principles such as fairness, explainability, and responsibility, which are critical for maintaining trust among stakeholders (Floridi et al., 2018). Managers should adopt governance models that are flexible and capable of evolving alongside technological advancements.

### **6.5. Enhancing Organizational Learning and Continuous Adaptation**

Agentic AI enables organizations to adopt a **continuous learning approach**, which is essential for maintaining agility in dynamic environments. Through real-time data analysis and feedback mechanisms, AI systems provide insights that can be used to refine strategies and improve performance. Organizations should establish processes for capturing, analyzing, and acting on these insights, creating a cycle of continuous improvement. Research on information systems highlights the importance of feedback-driven learning in enhancing organizational adaptability and resilience (Baird & Maruping, 2021). Managers should therefore prioritize the development of learning-oriented cultures and systems.

### **6.6. Strengthening Trust and Transparency in AI Systems**

Building **trust in AI systems** is a critical practical consideration. Employees and stakeholders must have confidence in the reliability, fairness, and transparency of AI-driven decisions. Organizations can enhance trust by implementing explainable AI techniques, providing clear documentation of decision processes, and ensuring that AI systems are aligned with organizational values. Empirical research shows that transparency and perceived competence significantly influence trust in AI systems (Glikson & Woolley, 2020). Therefore, organizations should prioritize communication and transparency when deploying agentic AI.

### **6.7. Managing Risks and Ethical Challenges**

The adoption of agentic AI also requires proactive **risk and ethical management**. Autonomous systems can introduce risks such as algorithmic bias, data privacy violations, and unintended decision outcomes. Organizations must identify potential risks and implement mitigation strategies, including regular audits, bias detection mechanisms, and ethical review processes. Effective risk management ensures that the benefits of AI are realized without compromising organizational integrity or stakeholder trust (Floridi et al., 2018). Managers should integrate ethical considerations into all stages of AI development and deployment.

### **6.8. Investment in Technological Infrastructure and Data Capabilities**

To fully leverage agentic AI, organizations must invest in **advanced technological infrastructure and data capabilities**. This includes scalable computing systems, high-quality data management platforms, and integration tools that enable seamless communication between AI agents and organizational systems. The effectiveness of agentic AI depends on access to accurate, timely, and comprehensive data. As digital transformation research

indicates, data-driven organizations are better positioned to achieve agility and innovation (Brynjolfsson & McAfee, 2017). Therefore, organizations should prioritize building robust data ecosystems.

#### **6.9. Fostering an Agile and Adaptive Organizational Culture**

Finally, the successful implementation of agentic AI depends on the development of an **organizational culture that supports agility and adaptability**. This involves encouraging experimentation, embracing change, and promoting collaboration across functions. Leaders play a critical role in shaping this culture by setting clear visions, supporting innovation, and addressing resistance to change. Agile organizations thrive when employees are empowered to adapt and when systems support continuous improvement (Rigby et al., 2016). Integrating agentic AI into such a culture enhances its effectiveness and sustainability.

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