



EDITORIAL

Mechanisms of Continuous Adaptation

Lina Marlina

Editor-in-Chief

Politeknik Triguna Tasikmalaya, Indonesia
marlinatsm@poltektriguna.ac.id

Artificial intelligence has moved from a specialized technological domain to a general strategic force reshaping the architecture of economic activity. AI increasingly influences how firms identify opportunities, evaluate alternatives, configure resources, interact with customers, and design value propositions. Its strategic significance therefore extends beyond automation. AI can alter the mechanisms through which organizations create and capture value, particularly when data, learning, and prediction become embedded in products, services, and decision processes. Evidence linking AI adoption with innovation and firm outcomes reinforces this broader interpretation (Mikalef & Gupta, 2021; Rammer *et al.*, 2022; Mishra *et al.*, 2022). Yet the transformation is inherently turbulent. Rapid technological evolution, uncertain regulation, shifting stakeholder expectations, and changing competitive boundaries mean that organizations must continually reconsider not only how they deploy AI, but also how their business models remain adaptable as the technology itself evolves.

The intellectual challenge is that research on this transformation remains distributed across partially separated conversations. Artificial intelligence research often emphasizes technological resources, algorithms, and organizational AI capabilities; business model innovation literature examines changing configurations of value creation and capture; and digital ecosystem studies foreground interdependence, platforms, and distributed coordination. Reviews of AI research demonstrate the breadth—and fragmentation—of these streams (Collins *et al.*, 2021; Mariani *et al.*, 2023; Jorzik *et al.*, 2024). This issue advances a mechanism-oriented view of continuous adaptation by connecting distinct perspectives on organizational resilience, governance, interorganizational collaboration, strategic optionality, institutional legitimacy, and leadership sensemaking. Rather than collapsing these mechanisms into a single broad concept of agility, the issue suggests that AI-driven business model innovation emerges from different but complementary processes of strategic adaptation.

Capabilities, Resilience, and Strategic Optionality

The first perspective concerns the capacity of organizations to sustain adaptation when environmental turbulence is persistent rather than episodic. In conventional strategic thinking, disruption is frequently treated as an event that interrupts an otherwise relatively stable trajectory. The AI economy challenges this assumption. Algorithmic improvements, generative technologies, data infrastructures, and competitor experimentation generate recurrent changes in the strategic environment. Resilience consequently becomes more than

recovery from a shock; it represents an organizational capacity to preserve strategic coherence while repeatedly modifying resource configurations.

This interpretation connects naturally with capability-based explanations of AI advantage. Mikalef and Gupta (2021) show that AI capability cannot be reduced to the possession of technological infrastructure. It depends on configurations of tangible, human, and intangible resources that support organizational creativity and performance. Similarly, Sjödin *et al.* (2021) demonstrate that AI-enabled business model innovation develops through co-evolutionary processes and feedback loops. These findings suggest that the strategic value of AI emerges through continuous organizational learning rather than a discrete technology investment.

A resilience perspective extends this argument by focusing on sustained competitive adaptation. AI capabilities become strategically consequential when organizations can repeatedly mobilize them to interpret changing conditions and reconfigure value-creating activities. The relevant question is therefore not whether a firm “has AI,” but whether it can renew the relationship between AI resources and strategic priorities as uncertainty develops. Empirical evidence that AI use is associated with innovation outcomes further indicates that technology becomes productive through its integration into broader innovation systems (Rammer *et al.*, 2022).

Strategic optionality provides a complementary but theoretically distinct mechanism. Under severe volatility, organizations may be unable to predict which AI applications, architectures, or market configurations will become dominant. Committing fully to one technological trajectory can create rigidity. Optionality instead emphasizes maintaining a portfolio of strategic possibilities: experiments, modular initiatives, alternative partnerships, and scalable pilots that preserve future choices. Recent evidence on generative AI and strategic evaluation also illustrates both the potential and limitations of AI in assessing uncertain strategic alternatives (Doshi *et al.*, 2025). AI can expand the range of alternatives considered, but uncertainty surrounding complex strategic futures remains.

Business model innovation under these conditions is best understood as a sequence of adaptive commitments. Resilience supports continuity of strategic functioning, while optionality preserves flexibility regarding future configurations of value creation. These mechanisms should not be conflated. One explains how organizations sustain adaptation; the other explains how they avoid premature strategic closure. Together, they reveal why continuous adaptation requires both organizational depth and strategic room to maneuver.

Adaptive Governance and Institutional Legitimacy

A second perspective shifts attention from capability to governance. AI systems introduce forms of uncertainty that cannot be managed solely by acquiring better technical resources. Decisions concerning data access, algorithmic authority, experimentation, accountability, and risk require organizational arrangements that determine who can act, under what conditions, and with what oversight. Adaptive governance therefore becomes a mechanism for strategic agility because it enables organizations to revise decision structures as environmental conditions evolve.

The governance challenge is particularly significant because AI possesses characteristics that complicate conventional managerial control. AI systems may be opaque, probabilistic, scalable, and capable of changing through learning or repeated interaction. Berente *et al.* (2021) argue that managing AI involves distinctive organizational tensions associated with autonomy, learning, and inscrutability. Governance must consequently combine control with adaptability. Excessively centralized approval may slow experimentation, whereas unconstrained deployment can create strategic, reputational, and operational exposure.

From a business model perspective, adaptive governance shapes the speed and boundaries of AI-enabled value creation. Organizations must determine which decisions can be

algorithmically supported, how data are shared across units, when experiments become scalable offerings, and how accountability is allocated. Governance is thus not simply a compliance layer added after innovation. It is part of the architecture through which AI-based business models become organizationally executable.

Institutional legitimacy introduces another mechanism. Organizations do not innovate in an institutional vacuum. AI applications are evaluated by regulators, customers, employees, professional communities, and broader society. The governance of AI increasingly involves balancing opportunities with social and economic challenges (Goos & Savona, 2024). As expectations concerning fairness, transparency, privacy, and accountability develop, technically effective business models may face resistance if their underlying practices are perceived as misaligned with emerging institutional norms.

Legitimacy therefore becomes a strategic alignment problem. Firms must continuously interpret institutional volatility and adjust the relationship between technological possibilities and socially acceptable value creation. This is especially important because AI can redistribute decision authority and alter stakeholder relationships. A business model built around algorithmic personalization, for example, may create customer value while simultaneously generating concerns about data use. The strategic task is not merely to comply with fixed rules but to maintain alignment as rules and expectations change.

Adaptive governance and institutional legitimacy are related yet analytically separate. Governance concerns the internal architecture of decision and control; legitimacy concerns external alignment with institutional expectations. Their interaction explains why responsible AI is strategically important. Governance mechanisms enable organizations to modify practices, while legitimacy pressures influence the direction of those modifications. Continuous adaptation therefore requires organizations to govern AI in ways that remain responsive to both technological change and evolving institutional environments.

Collaborative Resilience and Algorithmic Coordination

A third perspective moves beyond the boundaries of the individual organization. AI-driven value creation increasingly depends on networks of data providers, technology firms, cloud infrastructures, complementors, customers, and specialized partners. No single organization necessarily controls all resources required to develop and scale AI-enabled business models. Strategic adaptation thus becomes an interorganizational process.

Collaborative resilience captures the capacity of networks to sustain coordinated adaptation under uncertainty. Its theoretical foundation differs from organization-level resilience because the central problem is interdependence. Organizations may depend on partners for data, models, infrastructure, distribution, or domain expertise. When technological or environmental conditions shift, adaptation requires adjustments across relationships rather than only internal resource reconfiguration.

This network perspective is especially relevant to AI because learning effects and feedback loops frequently cross organizational boundaries. Sjödin *et al.* (2021) show that scaling AI for business model innovation involves co-evolutionary processes. Such processes imply reciprocal adaptation among technologies, organizational routines, and value propositions. At an ecosystem level, these feedback dynamics become even more complex because multiple actors contribute resources while pursuing different interests.

AI also introduces algorithmic coordination as an increasingly important mechanism within digital ecosystems. Algorithms can mediate matching, recommendation, allocation, monitoring, and pricing at unprecedented scale. This expands the coordination capacity of platform-based business models, but it also redistributes power. The organization controlling key algorithms or data infrastructures may influence how value is allocated among ecosystem participants.

The automation–augmentation paradox identified by Raisch and Krakowski (2021) is useful beyond the individual workplace. At an ecosystem level, AI may automate coordination while simultaneously augmenting the strategic capabilities of participating organizations. The challenge is to design interorganizational systems in which algorithmic efficiency does not undermine the relational foundations necessary for collaborative adaptation. Human–AI ensembles similarly depend on the conditions under which distinct forms of intelligence can be combined effectively (Choudhary *et al.*, 2025).

Business model innovation in AI ecosystems therefore involves more than redesigning a focal firm's value proposition. It requires orchestrating interdependencies and maintaining network adaptability. Collaborative resilience emerges when partners can realign resources and relationships as uncertainty changes. Algorithmic coordination can accelerate this process, but organizations must recognize that resilient ecosystems depend on reciprocal adjustment, not simply technological centralization.

Sensemaking and Continuous Strategic Renewal

The final perspective concerns the cognitive foundations of adaptation. AI generates large volumes of signals, predictions, and alternatives, but information abundance does not eliminate strategic ambiguity. Indeed, it may intensify it. Leaders must interpret what technological changes mean for organizational identity, competitive positioning, and future value creation. Sensemaking therefore remains central to continuous strategic renewal.

This point challenges deterministic accounts of AI transformation. The same technological capability may support radically different business models depending on how decision makers interpret its strategic relevance. AI can be understood as an efficiency technology, a customer intelligence infrastructure, a product innovation engine, or a foundation for ecosystem orchestration. Each interpretation directs attention toward different opportunities and resource commitments.

Research on AI and strategic decision evaluation indicates that generative AI can contribute to assessing alternatives, yet complex strategic decisions remain vulnerable to inconsistency and bias (Doshi *et al.*, 2025). Leadership judgment is therefore not displaced; its role changes. Leaders increasingly operate within hybrid interpretive systems in which machine-generated analysis interacts with human framing, experience, and contextual knowledge. The automation–augmentation paradox similarly suggests that organizations must manage simultaneous pressures to substitute and complement human work (Raisch & Krakowski, 2021).

Sensemaking becomes a renewal mechanism when interpretation leads to repeated organizational reconfiguration. Strategic renewal is not simply recognizing technological change. It requires translating emerging interpretations into altered priorities, resource allocations, structures, and business model components. In this process, AI may accelerate sensing while leadership remains crucial in constructing meaning and mobilizing organizational response.

From AI Adoption to Adaptive Architecture

The collective intellectual contribution of this issue is a shift from viewing AI transformation primarily as a problem of technology adoption toward understanding it as a problem of adaptive architecture. Research increasingly confirms that AI can influence innovation, business model configurations, and organizational performance (Mishra *et al.*, 2022; Jorzik *et al.*, 2024). Yet these outcomes cannot be explained by technological presence alone. Continuous adaptation depends on distinct mechanisms operating at organizational, interorganizational, institutional, and cognitive levels.

Capability and resilience explain sustained reconfiguration; optionality preserves alternative strategic pathways; adaptive governance structures responsive decision making; legitimacy

aligns innovation with changing institutional expectations; collaborative resilience coordinates adaptation across organizational boundaries; and leadership sensemaking converts technological ambiguity into strategic renewal. These mechanisms are complementary precisely because they are not theoretically interchangeable. Their separation provides a richer vocabulary for explaining heterogeneous organizational responses to AI-driven turbulence.

For business model innovation research, this mechanism-oriented synthesis suggests that value creation should be examined as an evolving configuration rather than a static design choice. AI changes the informational and technological conditions of competition, but organizations differ in how they organize adaptation around those changes. The strategic frontier therefore lies not simply in building more sophisticated AI systems. It lies in designing organizations and ecosystems capable of repeatedly revising how technological intelligence is converted into legitimate, collaborative, and strategically coherent forms of value.

References

- Berente, N., Gu, B., Recker, J., & Santhanam, R. (2021). Managing artificial intelligence. *MIS Quarterly*, 45(3), 1433–1450. <https://doi.org/10.25300/MISQ/2021/16274>
- Choudhary, V., Marchetti, A., Shrestha, Y. R., & Puranam, P. (2025). Human-AI ensembles: When can they work? *Journal of Management*, 51(2), 536–569. <https://doi.org/10.1177/01492063231194968>
- Collins, C., Dennehy, D., Conboy, K., & Mikalef, P. (2021). Artificial intelligence in information systems research: A systematic literature review and research agenda. *International Journal of Information Management*, 60, 102383. <https://doi.org/10.1016/j.ijinfomgt.2021.102383>
- Doshi, A. R., Bell, J. J., Mirzayev, E., & Vanneste, B. S. (2025). Generative artificial intelligence and evaluating strategic decisions. *Strategic Management Journal*, 46(3), 583–610. <https://doi.org/10.1002/smj.3677>
- Goos, M., & Savona, M. (2024). The governance of artificial intelligence: Harnessing opportunities and mitigating challenges. *Research Policy*, 53(3), 104928. <https://doi.org/10.1016/j.respol.2023.104928>
- Jorzik, P., Klein, S. P., Kanbach, D. K., & Kraus, S. (2024). AI-driven business model innovation: A systematic review and research agenda. *Journal of Business Research*, 182, 114764. <https://doi.org/10.1016/j.jbusres.2024.114764>
- Mariani, M. M., Machado, I., Magrelli, V., & Dwivedi, Y. K. (2023). Artificial intelligence in innovation research: A systematic review, conceptual framework, and future research directions. *Technovation*, 122, 102623. <https://doi.org/10.1016/j.technovation.2022.102623>
- Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), 103434. <https://doi.org/10.1016/j.im.2021.103434>
- Mishra, S., Ewing, M. T., & Cooper, H. B. (2022). Artificial intelligence focus and firm performance. *Journal of the Academy of Marketing Science*, 50(6), 1176–1197. <https://doi.org/10.1007/s11747-022-00876-5>
- 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>
- Rammer, C., Fernández, G. P., & Czarnitzki, D. (2022). Artificial intelligence and industrial innovation: Evidence from German firm-level data. *Research Policy*, 51(7), 104555. <https://doi.org/10.1016/j.respol.2022.104555>
- Sjödin, D., Parida, V., Palmié, M., & Wincent, J. (2021). How AI capabilities enable business model innovation: Scaling AI through co-evolutionary processes and feedback loops. *Journal of Business Research*, 134, 574–587. <https://doi.org/10.1016/j.jbusres.2021.05.009>