ISSN 2616-5902 Vol. 8, Issue 8: 1-8, DOI: 10.25236/AJBM.2026.080801

The Internal Mechanism and Path Exploration of the Integrated Development of Artificial Intelligence and Strategic Emerging Industries

Zhang Caifeng[1,a,*]

[1]Digital Economy Industry College, Guangzhou College of Commerce, Guangzhou, China
[a]zhangcaifeng_e@163.com
**Corresponding author*

Abstract: *Artificial intelligence, as a strategic technology spearheading a new round of technological revolution and industrial transformation, is evolving from a mere technical tool into a new economic form that reshapes the economic system. Promoting the deep integration of AI and strategic emerging industries is not only an inherent requirement for cultivating new quality productive forces but also a pivotal move to seize the commanding heights of global technological competition. This paper systematically elucidates the internal mechanism of their integrated development from three dimensions—technology drive, industrial traction, and ecosystem reconstruction. On this basis, it proposes four integration paths: tackling key technological bottlenecks, scenario-driven development, ecosystem co-construction, and factor support, and puts forward countermeasures and suggestions in response to current practical challenges. The study concludes that the integration of AI and strategic emerging industries is essentially a synergistic evolutionary process driven by the triple logics of technology, industry, and ecology, and needs to be advanced systematically from multiple dimensions such as top-level design, technology inclusiveness, and governance system.*

Keywords: *Artificial intelligence; Strategic emerging industries; Integrated development; Internal mechanism; Path exploration*

1. Introduction

Global scientific and technological innovation has entered an unprecedentedly active period, with artificial intelligence (AI) accelerating from technological breakthroughs toward industrial applications. In August 2025, the State Council issued the Opinions on Deepening the Implementation of the "AI+" Initiative (Guo Fa [2025] No. 11), calling for "opening up new tracks for strategic emerging industries and future industries"[1]. In November, the General Office of the State Council issued the Implementation Opinions on Accelerating Scenario Cultivation and Opening-up (Guo Ban Fa[2025] No 37), positioning scenario innovation as a core lever for scaled AI application[2]. In January 2026, seven departments jointly issued the "AI+ Manufacturing" Special Action (MIIT Lian Ke [2025] No. 279), further clarifying directions for empowering manufacturing with AI[3]. These policy packages demonstrate that promoting deep AI–strategic emerging industries integration has become a major national strategic deployment. This wave of AI-driven transformation is not unique to China. Major economies have launched similar strategic initiatives—the United States' AI executive orders and CHIPS Act, the European Union's AI Act and Horizon Europe framework—reflecting a global consensus that AI is pivotal to future industrial competitiveness. Within this international context, China's successive policy deployments underscore its determination to seize the commanding heights of this technological paradigm shift. Collectively, these directives form an integrated policy framework spanning from foundational research to large-scale commercialization, signaling that AI-driven industrial upgrading has moved from exploratory pilots to systematic national implementation.

Strategic emerging industries—including new-generation information technology, high-end equipment, new materials, biomedicine, new energy vehicles, new energy, and environmental protection—are characterized by high technological intensity, complexity, and uncertainty, precisely where AI can exert its empowering role most effectively. The 2026 Government Work Report further proposed "creating a new form of the intelligent economy," signaling AI's reshaping of the economic system has elevated to a holistic transformation.

ISSN 2616-5902 Vol. 8, Issue 8: 1-8, DOI: 10.25236/AJBM.2026.080801

Academically, Zhou Wen and He Yuqing noted that the intelligent economy triggers profound changes through the "data + algorithms + computing power" paradigm[4]. Ouyang Rihui and Du Qingqing defined it as a novel economic form where cognitive capability shifts from a uniquely human endowment to a factor of production that can be produced, circulated, and consumed at scale[5]. However, existing studies either focus on technological empowerment or analyze specific cases, lacking an integrative "technology–industry–ecosystem" co-evolution framework. Although Zheng Shenghua et al. explored intelligent integration of these industries[6] and Chen Xiaohong et al. proposed a "factor–scenario–rule" framework[7], systematic research from internal mechanism to practical pathways remains insufficient. This cognitive revolution, wherein intelligence itself becomes a scalable factor of production, fundamentally alters the innovation logic of strategic emerging industries: value creation is no longer confined to physical products or digital services but extends to the production and circulation of cognitive capabilities embedded in algorithms and models.

This paper systematically elucidates the internal mechanism of AI–strategic emerging industries integration from three dimensions—technology drive, industrial traction, and ecosystem reconstruction—and proposes operational paths with countermeasures addressing current challenges. By integrating the theoretical lens of general-purpose technology diffusion, innovation ecosystem complementarity, and the emerging paradigm of cognitive revolution, this paper offers a tripartite analytical framework that bridges macro-level policy discourse with micro-level mechanism analysis—an integration largely absent in the extant literature.

2. The Internal Mechanism of the Integrated Development of Artificial Intelligence and Strategic Emerging Industries

The integration of artificial intelligence and strategic emerging industries is neither a simple superposition of technologies nor a mere application of tools; rather, it is a synergistic evolutionary process driven by the triple logics of technology, industry, and ecosystem. This paper distills its internal mechanism into three dimensions: the technology drive dimension (push force), the industrial traction dimension (pull force), and the ecosystem reconstruction dimension (synergistic force). These three do not follow a linear sequential relationship but constitute a dynamically interactive, spiraling upward co-evolutionary process.

2.1. The Technology Drive Dimension: The Empowering Logic of AI as a General-Purpose Technology

As a quintessential general-purpose technology (GPT), artificial intelligence is characterized by pervasive penetration, continuous improvement, and innovation complementarity. These characteristics determine that AI, much like the steam engine, electricity, and the internet in history, can exert a profound impact on nearly all industries. The concept of GPT, originating from Bresnahan and Trajtenberg(1995), underscores that such technologies spawn waves of complementary innovations and fundamentally reshape production possibility frontiers[8]. AI exemplifies this logic: its integration into strategic emerging industries is not a simple tool application but a process of creating new technological trajectories. Moreover, the current trajectory from specialized narrow AI toward artificial general intelligence (AGI) further amplifies its transformative potential.

At its technical core, AI is built upon the triadic synergy of “data + algorithms + computing power” and is reconstructing the perception, decision-making, and execution capabilities of industries. Research by Zhou Wen and He Yuqing points out that the technological breakthroughs of the intelligent economy are manifested in the evolution of three major technological domains: computing infrastructure achieving a leap from general-purpose computing to intelligent computing, algorithm models completing the leap from specialized intelligence to general intelligence, and the data element system realizing a transformation from resource accumulation to value release[4]. These technological evolutions collectively form the technical foundation for AI’s empowerment of strategic emerging industries.

In terms of the level of empowerment, AI’s driving force on industries can be divided into the micro and macro levels. At the micro level, AI, through technologies such as machine vision, natural language processing, and predictive analytics, significantly enhances enterprises’ total factor productivity and drives the transformation of human-machine collaborative production models. For instance, AI-powered quality inspection systems in high-end manufacturing can achieve defect recognition at millisecond speeds, substituting hundreds of manual inspection positions. At the macro level, AI, through the construction and application of general-purpose large models and industry-specific models, achieves systemic empowerment of industries, empowering the "stock renovation" of traditional industries and facilitating the "incremental breakthrough" of emerging industries. The "factor–scenario–rule" framework proposed by Chen Xiaohong et al. also emphasizes the core driving role of AI as a new quality production factor[7]. Furthermore, this multi-level empowerment unfolds in three progressive stages: efficiency enhancement, capability augmentation, and model innovation, ultimately enabling industries to transcend incremental improvements and achieve disruptive reconfigurations of value creation.

2.2. The Industrial Traction Dimension: The Demand Pull of Strategic Emerging Industries on AI

Integration is not a one-way technology export; the development demands of strategic emerging industries themselves also reversely drive the iterative upgrading of AI technology. This closed-loop mechanism of "demand–R&D–application–feedback" constitutes a critical driving force for integrated development.

Strategic emerging industries are generally characterized by high technological intensity, high complexity, and high uncertainty, features that create rigid demands for intelligent decision-making, intelligent control, and intelligent optimization. Taking the biomedical industry as an example, traditional drug R&D features long cycles, high costs, and high failure rates, following the well-known "ten years and a billion dollars" rule. AI can greatly accelerate processes such as drug target discovery, lead compound screening, and clinical trial design, compressing timelines by orders of magnitude and substantially reducing attrition rates. Taking the new energy vehicle industry as an example, the battery thermal management system vividly illustrates the convergence of all three forces. The technology push comes from advanced reinforcement learning and multi-physics simulation models capable of predicting thermal behavior under diverse driving conditions. The industry pull arises from rigid market demands: consumers require both extended range and absolute safety, creating a performance frontier that traditional rule-based control cannot reach. The ecosystem dimension emerges as vehicle-cloud collaboration platforms enable continuous data feedback—real-world driving data flows back to algorithm developers, improving model robustness, while insurance and battery recycling sectors access predictive diagnostics to create new service models. In this single application, technology, demand, and ecosystem co-evolution are not separable stages but simultaneous, mutually reinforcing dynamics. These real industrial demands force algorithms to evolve from high accuracy to high robustness, real-time performance, and safety, pushing AI from "usable in the lab" to "effective on the production line."

The pulling force of industrial demand is also reflected in the fact that the complex scenarios of strategic emerging industries force AI technology to evolve from specialized to general applications. Research by Shi Ge indicates that AI has a significant enabling effect on the "dual-chain integration" of the industrial chain and the innovation chain, capable of opening up the innovation chain from basic research to industrial application[9]. As industrial scenarios become more demanding, they continuously redefine AI research priorities, creating a demand-driven innovation pathway that complements the technology-push paradigm.

2.3. The Ecosystem Reconstruction Dimension: The Leap from "Point-Based Empowerment" to "Systemic Reshaping"

The integration of AI and strategic emerging industries ultimately points toward a systemic reconstruction of the industrial ecosystem. This differs fundamentally from the empowerment models of traditional informatization or digitalization: the latter mostly stop at "point-based optimization" or "process reengineering," whereas what AI drives is a structural leap of the industrial ecosystem from linear linkages to networked collaboration.

Gu Naihua et al. constructed a progressive analytical framework of "data elements–platform ecosystem–institutional supply," revealing the generative mechanism of industrial convergence in the AI era. They point out that AI, through the deep coupling of data and algorithms, significantly reduces the transaction costs of cross-boundary collaboration, enabling diverse entities along the industrial chain to achieve efficient networked collaboration[10]. This framework resonates with innovation ecosystem theory, particularly the work of Adner and Kapoor (2010), which emphasizes that the success of a new technology depends not only on its own maturity but critically on the availability of complementary technologies, suppliers, and supporting services[11]. AI, as a GPT, requires complementary elements—computing infrastructure, industry datasets, algorithmic talent, and application scenarios—to fully release its value. When data elements serve as the “fuel,” platform ecosystems as the “engine,” and institutional supply as the “rules,” a positive feedback loop is formed, propelling the innovation ecosystem into a self-reinforcing virtuous cycle. Conversely, if complementary elements lag, even mature AI technologies cannot realize their potential.

Research by Ouyang Rihui and Du Qingqing further indicates that the essential characteristic of the new intelligent economic form is a cognitive revolution, whereby cognitive capability is shifting from a uniquely human endowment to a factor of production that can be produced, circulated, and consumed at scale[5]. This scaled supply of cognitive capability fundamentally changes the organizational form and value creation model of the industrial ecosystem.

Specifically, ecosystem reconstruction manifests at three levels. First, the industrial chain moves from linear linkages to networked collaboration, as seen in intelligent connected vehicles where chipmakers, algorithm firms, OEMs, and cloud providers form dynamic alliances rather than fixed supply chains; second, value creation shifts from intra-enterprise to multi-entity co-creation—user driving data feeds back to enhance autonomous driving algorithms while enabling personalized insurance and predictive maintenance services; third, competition shifts from individual firms to ecosystems, where the winner is not the company with the best standalone AI model but the one orchestrating the most complementary set of partners, standards, and data flows. This shift implies that the role of leading enterprises transforms from technology providers to ecosystem orchestrators.

2.4. The Interactive Relationships among the Three Dimensions

Technological drivers, industrial pull, and ecological restructuring form a dynamic, spiraling co-evolutionary process. Technology push provides foundational capabilities, industrial pull offers iterative demand and scenarios, and ecological restructuring supplies the institutional environment. Table 1 compares the three mechanisms across five dimensions.

Table 1: Comparison of the Triple Driving Force Mechanisms for the Integrated Development of Artificial Intelligence and Strategic Emerging Industries.

Dimension	Technology Drive (Push Force)	Industrial Traction (Pull Force)	Ecosystem Reconstruction (Synergistic Force)
Driving Direction	Technology → Industry	Industry → Technology	System → System
Core Logic	AI as a general-purpose technology pervasively penetrates	Complex industrial scenarios force the iteration of AI technology	The industrial chain moves from linear linkages to networked collaboration
Key Elements	Data, algorithms, computing power	Application scenarios, industry demand, feedback closed-loop	Platform ecosystem, institutional supply, collaborative network
Empowerment Level	Efficiency enhancement → Capability augmentation → Model innovation	Demand definition → R&D breakthrough → Application validation	Point optimization → Process reengineering → Systemic reshaping
Dominant Stage	Early integration stage	Deepening integration stage	Mature integration stage

3. Practical Paths for the Integrated Development of Artificial Intelligence and Strategic Emerging Industries

The four practical paths proposed below directly correspond to the three driving mechanisms identified above. The technology breakthrough path and factor support path jointly respond to the technology push force by strengthening foundational capabilities and resource supply; the scenario-driven path operationalizes the industrial pull force by creating self-reinforcing feedback loops between application demand and technological iteration; and the ecosystem co-construction path embodies the synergy force by building the collaborative networks and institutional frameworks that sustain systemic integration. Together, these paths translate the "push–pull–synergy" logic into actionable strategies, forming a comprehensive and internally coherent roadmap. The four paths directly correspond to the three driving mechanisms: technology breakthroughs and factor support respond to the technology push force; scenario-driven development operationalizes the industrial pull force; and ecosystem co-construction embodies the ecosystem synergy force.

3.1. Technology Breakthrough Path: Breaking Through Core Underlying Technologies

The depth of integrated development depends on the degree of self-reliance and controllability of core technologies. At present, China still faces weaknesses in key links such as AI chips, basic algorithm frameworks, and the underlying architecture of large models, necessitating concentrated efforts to achieve breakthroughs. The dependence on foreign advanced process nodes and design tools constrains the deployment of high-end AI systems in sensitive strategic emerging industries.

The Implementation Opinions on the “AI+ Manufacturing” Special Action explicitly calls for advancing the development of industry models and specialized models, strengthening the construction and application of large scientific models, and promoting the intelligent upgrading of basic scientific research platforms[3]. This policy orientation points out the key directions for technological breakthroughs. Specifically: first, at the chip level, accelerate the independent R&D of high-performance AI training and inference chips, including neuromorphic and near-memory computing architectures, to meet the explosive growth in computing power demand from strategic emerging industries; second, at the framework level, build self-controllable deep learning frameworks and development platforms, fostering an ecosystem of domestic toolchains to reduce migration costs for industrial applications; third, at the model level, develop high-precision, high-reliability industry-specific models tailored to sub-sectors such as high-end equipment, new materials, and biomedicine, while ensuring interpretability and safety. Additionally, strengthening basic research in AI theory—such as causal reasoning, symbolic-neural hybrid models—will be essential for addressing the complexity limits of current data-driven approaches.

3.2. Scenario-Driven Path: Driving Integration and Implementation Through Applications

Scenarios serve as the bridge connecting technology and industry. Document[2] explicitly positions scenario innovation as the core lever for promoting the scaled application of new technologies such as AI. As early as 2022, six departments including the Ministry of Science and Technology issued guiding opinions on scenario innovation, emphasizing the promotion of high-quality economic development through high-level AI applications[12]. Scenario innovation not only validates technology but also generates new demand, forming a self-reinforcing cycle of application and advancement.

Research by Ren Baoping and Zhang Gongjiao points out that there are five major mechanisms through which scenario innovation drives the development of new forms of the intelligent economy: transforming the R&D paradigm from “technology-driven” to “scenario-led,” enhancing the overall intelligence level of the industrial system, achieving precise matching between innovation factors and consumer demand, reshaping the mode of public service supply, and optimizing governance methods and tools[13]. This shows that the significance of scenario innovation goes far beyond technology implementation; it is a strategic fulcrum for reconstructing the innovation paradigm and development model.

From the perspective of specific industrial scenarios, applications in the following fields have already demonstrated significant integration effects: in the new energy vehicle sector, AI-enabled autonomous driving, battery thermal management, and intelligent cockpits are reshaping the landscape of the mobility industry, with leading enterprises integrating end-to-end learning systems; in biomedicine, AI is accelerating drug R&D and precision medicine, pushing the traditional “ten years and a billion dollars” R&D model into a new stage of intelligentization, with protein structure prediction and molecular generation dramatically shortening discovery cycles; in high-end equipment, AI-driven predictive maintenance and digital twin technologies are shifting manufacturing from “reactive repair” to “proactive prevention,” reducing downtime by up to 30% in benchmark cases. The successful practices in these scenarios demonstrate that driving integration and implementation through applications is a critical path to realizing the transformation of technological value.

3.3. Ecosystem Co-Construction Path: Building a Synergistic System of "Platform + Ecosystem"

Breakthroughs at isolated points are difficult to sustain; only systemic synergy can lead to lasting progress. The core of the ecosystem co-construction path is to build a six-in-one collaborative innovation network integrating “government, industry, academia, research, application, and finance,” enabling various innovation factors to flow efficiently and be optimally allocated within the intelligent ecosystem. This network transcends organizational silos and fosters collective learning and resource sharing.

At the platform level, it is necessary to build a unified intelligent hub platform to break down data silos and achieve the scaled output of AI capabilities. This includes both technology platforms (such as industry-level AI middle platforms) and collaboration platforms (such as industrial chain collaborative innovation alliances). At the ecosystem level, efforts should be made to cultivate AI-native enterprises and generate new business forms and models. At the ecosystem level, efforts should be made to cultivate AI-native enterprises and generate new business forms and models. For example, Guangzhou's Huangpu District organized industry chain matchmaking meetings featuring "AI Empowerment and Complete-Vehicle-Parts Collaboration" to promote collaborative innovation among upstream and downstream enterprises in the intelligent connected vehicle industry, providing a regional practical experience worthy of reference for ecosystem co-construction.

Research by Si Cong and Ren Baoping emphasizes that the foundation for the deep integration of technological innovation and industrial innovation under the new form of the intelligent economy lies in relying on the intelligent "techno-economic" paradigm and using mechanisms of mutual embedding, mutual construction, and mutual promotion to penetrate the underlying boundaries between technology and industry[14]. This means that ecosystem co-construction must not only break down organizational boundaries but also break cognitive boundaries, enabling technological innovation and industrial innovation to truly achieve circular empowerment and synergistic development. Open standards, interoperability protocols, and trust-building mechanisms are critical enablers of such an ecosystem.

3.4. Factor Support Path: Consolidating the Foundation for Integrated Development

The sustainability of integrated development ultimately depends on the adequate supply and efficient allocation of key factors such as computing power, data, talent, and capital. These factors form the foundational layer upon which all integration activities depend.

In terms of computing power, it is necessary to build ultra-large-scale intelligent computing clusters, establish a unified national computing power trading platform, and promote the coordinated layout of hub nodes to reduce the cost of using computing power for strategic emerging industries, especially for SMEs. In terms of data, it is essential to improve the circulation mechanism of data elements and establish high-quality industry datasets, especially scientific data sharing platforms for knowledge-intensive industries such as biomedicine and new materials, while ensuring data privacy and security through privacy-preserving computation and federated learning. In terms of talent, efforts should focus on cultivating compound talents who "understand both AI and industry," promoting industry-education integration and interdisciplinary convergence, and establishing joint training bases between universities and leading enterprises. The "four-chain" integration framework proposed by Dong Xuan and Jiang Jiwei—the deep integration of the innovation chain, industrial chain, capital chain, and talent chain—precisely provides a systematic analytical perspective for factor support[15]. In terms of capital, it is necessary to set up special funds, develop patient capital, and guide social capital to invest long-term in the integration fields of AI and strategic emerging industries, creating a multi-level financing system that covers seed-stage innovation, growth-stage scaling, and mature-stage restructuring.

4. Realistic Challenges Facing the Integrated Development of Artificial Intelligence and Strategic Emerging Industries

Despite the compelling logic of technology push, industrial pull, and ecosystem synergy outlined above, the actual integration process confronts significant headwinds. These challenges are not isolated frictions but systemic bottlenecks that interact and amplify one another—technological dependence limits industrial application depth, industrial fragmentation reduces the scale needed for technological iteration, and institutional gaps create uncertainty that chills investment across both technology development and industrial deployment. Three sets of challenges stand out as particularly consequential.

4.1. Technological Level: Underlying Technologies Remain Subject to External Constraints

The depth of AI–industry integration hinges on the self-sufficiency of core technologies. China still confronts critical weaknesses in high-end AI chips, basic algorithm frameworks, and software toolchains. Advanced manufacturing processes for training chips remain subject to external restrictions, while access to electronic design automation (EDA) tools is limited, hindering the deployment of cutting-edge large models in sensitive sectors. Moreover, the supply of industry-specific models remains insufficient to meet the high-precision demands of biomedicine, new materials, and high-end equipment. Even where large models show rapid progress, their reliability, interpretability, and safety in industrial scenarios are still inadequate—hallucination issues pose serious risks in high-stakes applications such as medical diagnosis and engineering design. These technological deficits mean that for many strategic emerging industries, AI remains a promising but not yet trustworthy partner. The gap is particularly acute in fundamental AI theory, where current data-driven approaches face diminishing returns in handling complex causal reasoning and multi-modal industrial knowledge fusion—capabilities essential for drug discovery, materials genome engineering, and precision manufacturing.

4.2. Industrial Level: Uneven Depth of Integration

The AI penetration rate varies significantly among different strategic emerging industries. The integration between the new-generation information technology industry and AI is the most intensive, whereas the integration depth in fields such as new materials and biomedicine is markedly insufficient. Moreover, SMEs face prominent difficulties of "being unable to use, afraid to use, and unable to afford to use" AI in the integration process, with phenomena such as blindly following trends, low-level duplication, and even "involution-style" competition emerging. Without sufficient digital infrastructure and skilled personnel, many SMEs remain on the periphery of the AI-driven transformation, widening the productivity gap between large corporations and smaller enterprises. This asymmetry creates a structural risk: the productivity dividends of AI integration may concentrate among leading firms, further entrenching market dominance and reducing the competitive dynamism essential for long-term industrial innovation. Addressing this divide requires not only technology diffusion but also targeted capacity-building programs that lower both the technical and cognitive barriers to AI adoption for smaller players.

4.3. Institutional Level: Governance Rules Lagging Behind Technological Development

Issues such as data privacy and security, AI ethics and algorithmic fairness, and intellectual property ownership are becoming increasingly prominent as integration deepens. The cross-departmental regulatory coordination mechanism is still imperfect, and the construction of the standards system is relatively lagging, which to some extent constrains the process of integrated development. Divergent regulatory frameworks across major economies may further fragment global AI supply chains, requiring adaptive governance that balances innovation promotion and risk mitigation. A particularly urgent challenge lies in liability attribution: when AI-driven systems make consequential decisions in autonomous driving, smart manufacturing, or AI-assisted drug design, the legal framework for assigning responsibility across developers, operators, and users remains underdeveloped. Without clear rules, firms face regulatory uncertainty that dampens investment appetite, while victims of AI-related harms lack effective recourse—a dual disincentive that ultimately slows the pace of responsible integration.

5. Countermeasures and Conclusion

In response to the above challenges, this paper proposes the following countermeasures. First, strengthen top-level design through a cross-departmental coordination mechanism and industry-specific AI integration roadmaps, balancing progress across regions and between emerging and traditional industries to avoid policy fragmentation. Second, lower application barriers by developing low-code AI tools, building public service platforms, and offering subsidies and training for SMEs, with shared testing facilities via public-private partnerships. Third, improve the governance system by accelerating legislation on data rights and security, establishing AI ethics review mechanisms, and adopting tiered regulatory sandboxes to ensure safety without stifling experimentation. Fourth, deepen international cooperation by promoting AI-plus-industry technology export under the Belt and Road Initiative and actively participating in global AI governance rule-making on standards, data flows, and ethical guidelines.

In summary, the AI–strategic emerging industries integration is a systemic transformation propelled by technology, demand, and ecosystem co-evolution. It serves as the core engine for new quality productive forces and a strategic lever for China to move from following to leading in global

ISSN 2616-5902 Vol. 8, Issue 8: 1-8, DOI: 10.25236/AJBM.2026.080801

technology competition. Future research should quantitatively assess heterogeneous sectoral impacts, develop dynamic co-evolution models of “technology–industry–ecosystem,” and conduct international comparative studies to inform evidence-based policymaking in the intelligent economy era. As AI moves toward artificial general intelligence, the relationship between AI and strategic emerging industries may shift from "integration" to "symbiosis"—where industries themselves become intelligent entities capable of self-optimization, a prospect that demands continued theoretical and policy attention.

References

[1] State Council. Opinions on Deepening the Implementation of the “AI+” Initiative (Guo Fa [2025] No. 11) [EB/OL]. 2025-08-26. (in Chinese)

[2] General Office of the State Council. Implementation Opinions on Accelerating Scenario Cultivation and Opening-up to Promote Large-scale Application of New Scenarios (Guo Ban Fa [2025] No. 37) [EB/OL].2025-11. (in Chinese)

[3] Ministry of Industry and Information Technology, et al. Implementation Opinions on the “AI+ Manufacturing” Special Action (MIIT Lian Ke [2025] No. 279) [EB/OL]. 2026-01-07. (in Chinese)

[4] Zhou Wen, He Yuqing. On the Intelligent Economy: Technological Breakthroughs and Economic Form Reshaping [J]. Reform, 2026, (03): 1-14. (in Chinese)

[5] Ouyang R H, Du Q Q. Forging a New Form of Intelligent Economy: Connotative Characteristics, Operational Mechanism and Strategic Choices[J]. Reform,2026,(5):55-72.(in Chinese)

[6] Zheng Shenghua, Wang Shijie, Rui Mingjie. Intelligent Integration of Strategic Emerging Industries: Basic Logic and Inherent Potential [J]. Journal of Dialectics of Nature, 2023, 45(09): 98-109. (in Chinese)

[7] Chen Xiaohong, Lan Lan, Zhou Zhifang. The Internal Logic and Implementation Path of AI-Enabled Future Industry Development [J]. Strategic Study of CAE, 2025, 27(05): 249-259. (in Chinese)

[8] Bresnahan, T. F., & Trajtenberg, M. General purpose technologies: ‘Engines of growth’? [J]. Journal of Econometrics, 1995, 65(1): 83-108.

[9] Shi Ge. Mechanisms and Paths of AI Empowering the Deep Integration of Industrial Chain and Innovation Chain [J]. Journal of Yantai University (Philosophy and Social Science Edition), 2025, 38(06): 119-128. (in Chinese)

[10] Gu Naihua, Li Xinming, Li Jianpei. Generative Mechanism and Practical Path of Industrial Convergence in the AI Era [J]. South China Journal of Economics, 2026, 44(03): 13-27. (in Chinese)

[11] Adner, R., & Kapoor, R. Value creation in innovation ecosystems: How the structure of technological interdependence affects firm performance in new technology generations [J]. Strategic Management Journal, 2010, 31(3): 306-333.

[12] Ministry of Science and Technology, et al. Guiding Opinions on Accelerating Scenario Innovation to Promote High-Quality Economic Development through High-Level AI Applications (Guo Ke Fa Gui [2022] No. 199) [EB/OL]. 2022-07-29. (in Chinese)

[13] Ren Baoping, Zhang Gongjiao. Mechanisms and Paths of Scenario Innovation Driving the Development of New Forms of Intelligent Economy [J]. Academic Exchange, 2026, (03): 5-18+2. (in Chinese)

[14] Si Cong, Ren Baoping. Strategic Research on the Deep Integration of Technological Innovation and Industrial Innovation under the New Form of Intelligent Economy [J]. Journal of Yunnan Minzu University (Philosophy and Social Sciences Edition), 2026, 43(01): 109-118. (in Chinese)

[15] Dong X, Jiang J W. Internal Mechanism, Realistic Dilemmas and Practical Paths of Forging a New Form of Intelligent Economy through “Four-Chain” Integration[J].Journal of United Front Science, 2026,10(3): 97-111.(in Chinese)