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China's Low-Altitude Economy: An Inquiry into Evolving Policy Environment

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Abstract: Low-altitude economy in China is gaining momentum in recent years partly due to policy environment which is evolving rapidly to facilitate the activities. In particular, In recent years, China's low-altitude economy (LAE) has grown rapidly driven by a continuously evolving policy system. 2025 was a pivotal year, as a formal policy framework enabled large-scale commercial deployment. Policy support has shifted from macro encouragement to micro implementation, and from scattered pilots to systematic coordination. Using policy analysis, industrial data, and an international comparative perspective, this paper reviews five core dimensions of China's LAE policy: strategic positioning, airspace management, scenario opening, regulatory systems, and regional coordination. It finds that 2025 policies effectively alleviated traditional bottlenecks including airspace access, inconsistent standards, and high costs. Policies have promoted strategic upgrading, standard refinement, factor support, and cross-sector collaboration, forming an industrial structure with manufacturing as the foundation, operation as the core, and services as the support. From the perspective of new institutional economics, policy innovation has improved factor allocation efficiency. However, challenges remain, such as insufficient ecological coordination and limited long-term capital. Addressing these issues will be critical to unlocking the full potential of the low-altitude economy.

1. Introduction

The concept of the low-altitude economy has emerged in recent years as a new frontier of economic activity driven by advances in aviation, digital technologies, and intelligent systems (Li, 2026[1]; Liu, 2025). Broadly, the low-altitude economy refers to economic activities that take place in airspace close to the ground—typically below 1,000 meters to 3,000 meters depending on regulatory definitions—and involves the use of both manned and unmanned aerial vehicles such as drones and electric vertical take-off and landing (eVTOL) aircraft (Li, 2026). This domain represents a shift from traditional two-dimensional land-based economies toward a three-dimensional model where airspace becomes an active resource for production, transportation, and services[1]. With the rapid development of enabling technologies such as artificial intelligence, 5G communication networks, advanced batteries, and autonomous navigation systems, the low-altitude economy is

[1] Traditionally, economies operate in two dimensions (length + width)—basically across the land surface (roads, buildings, farms, factories). The low-altitude economy expands economic activities to a three-dimensional model (length+wideth+height), where it actively uses the airspace above the land as part of the economy.

increasingly seen as a strategic emerging industry with significant transformative potential across multiple sectors (Hua, 2026)[2].

As a technology-enabled and policy-dependent sector, the low-altitude economy integrates aircraft manufacturing, infrastructure development, operational services, and diversified application scenarios. It supports a wide range of activities including logistics delivery, aerial surveillance, emergency response, urban air mobility, agricultural monitoring, and tourism. Unlike traditional aviation, it emphasizes short-distance, flexible, and on-demand services, creating new value in transportation, public services, and industrial upgrading. Despite its strong growth momentum, the sector faces persistent constraints such as airspace access barriers, safety risks, regulatory fragmentation, inconsistent standards, and insufficient infrastructure (Tang, 2026)[3]. Effective governance and policy coordination are therefore critical to its sustainable development.

China first officially included the low-altitude economy in national strategic planning in 2021, and policy support has been continuously strengthened and optimized in subsequent years (National Development and Reform Commission, 2025)[4]. With the release of a series of top-level designs and implementation rules, the policy environment has evolved from macro encouragement to detailed implementation, and from scattered pilots to systematic coordination. Given the dominant role of airspace management and cross-departmental governance, a systematic review of China's policy framework is essential to understanding the sector's development logic, regulatory challenges, and innovation dynamics (Civil Aviation Administration of China, 2025)[5].

Against this background, this paper focuses on analyzing the evolution of China's low-altitude economy policy environment. It examines core changes in five dimensions: strategic positioning, airspace management, scenario opening, regulatory systems, and regional coordination. The study also combines policy text analysis, regional data evidence, and an international comparative perspective to identify achievements, bottlenecks, and future directions. The rest of this paper is structured as follows: Section 2 defines the low-altitude economy; Section 3 reviews its evolutionary stages; Section 4 analyzes the policy and institutional framework; Section 5 summarizes challenges and future prospects; and Section 6 provides conclusions.

2. Definition of Low-Altitude Economy

2.1 The Definitions

The low-altitude economy (LAE) refers to *a comprehensive economic system based on the development and utilization of low-altitude airspace (typically below 3,000 meters)*, integrating aviation technologies, digital infrastructure, and service industries to enable new forms of production, transportation, and consumption (Li, 2026). A foundational study in the *Journal of Low-Altitude Economy and Intelligent Aviation* conceptualizes LAE as a new spatial-economic paradigm, defining it as *a new mode of spatial production* that treats low-*altitude airspace as a "Vertical Commons" for economic activity (Li, 2026). This perspective* moves beyond viewing it merely as an extension of traditional aviation, instead framing it as a transformative economic domain. Similarly, Liu (2025) describes the low-altitude economy as *a comprehensive economic model that utilizes manned and unmanned aerial vehicles as carriers and leverages low-altitude airspace resources* (Liu, 2025)[6]. This highlights the central role of aerial platforms—such as drones, UAVs, eVTOLs, and general aviation systems—in generating economic value. From an industry-oriented perspective, LAE is defined as *spanning piloted and unpiloted civil aviation activities below 3000 m… [including] aircraft manufacturing, flight operations, and a wide range of integrated services* (Hua, 2026). This emphasizes the breadth of industrial linkages, from manufacturing to logistics and service delivery.

2.2 Key Characteristics

Across the literature, several core features consistently define the low-altitude economy:

Spatial Dimension

It is anchored in low-altitude airspace (generally below 3,000 m), often structured into sub-layers (e.g., 0–1,000 m core operational zone)

Technological Integration

The LAE relies on advanced technologies such as UAVs, AI systems, communication networks, and smart air traffic management, enabling *intelligent, autonomous, and efficient operations*.

Industrial Ecosystem

It encompasses a wide range of sectors including logistics, surveillance, agriculture, tourism, emergency response, and urban air mobility, often described as *a new engine of industrial upgrading and economic growth*.

Infrastructure Triad

Research highlights the importance of *physical*, *digital*, and *institutional* infrastructure in scaling the low-altitude economy.

Policy and Governance Dependence

The development of LAE is highly dependent on regulatory frameworks, airspace management systems, and state-led coordination, particularly in safety-sensitive environments. This papers aims at looking into this particular characteristics of the LAE.

Combining these perspectives, the low-altitude economy can be concisely defined as "a technology-driven and policy-enabled economic system that exploits low-altitude airspace through manned and unmanned aerial platforms, integrating aviation, digital networks, and service industries to create new modes of spatial production, logistics, and economic value generation". This paper broadly adopts the above definition.

3. Evolution of China's Low-Altitude Economy

The evolution of China's low-altitude economy reflects a gradual but strategic transformation from fragmented aviation activities into a nationally prioritized economic system. According to Shusen and Gan (2025)[7], the low-altitude economy refers to a set of economic activities conducted within airspace typically below 1,000 meters, involving both manned and unmanned aerial vehicles and encompassing transportation, logistics, manufacturing, and services Shusen and Gan (2025). This definition aligns with broader literature that emphasizes the integration of aerial technologies into economic production and service delivery systems.

The early stage of development can be traced back to China's general aviation practices in the mid-20th century (Shusen and Gan, 2025). During this period, aerial operations were limited to specialized functions such as agricultural spraying, geological surveying, and emergency response. These activities were not coordinated under a unified economic framework and were heavily constrained by strict airspace controls (Shusen and Gan, 2025). The absence of institutional support and market mechanisms meant that low-altitude activities remained marginal and largely administrative in nature. The conceptualization of the "low-altitude economy" began to emerge in the late 2000s, marking a critical transition from isolated aviation functions to an integrated economic vision. Shusen and Gan (2025) highlights that this conceptual shift was closely linked to technological advancements, particularly in unmanned aerial vehicles (UAVs), as well as growing recognition of airspace as a productive resource. This period also coincided with broader economic restructuring in China, where innovation-driven growth became a central policy objective.

A major turning point occurred around 2010, when China initiated reforms to its low-altitude airspace management system (Li, 2026; Liu, 2025; Shusen and Gan, 2025). These reforms aimed to

gradually open previously restricted airspace for civilian and commercial use, thereby laying the institutional foundation for the low-altitude economy. Despite these reforms, development during the 2010–2020 period remained in a policy incubation phase, characterized by pilot projects, infrastructure development, and limited commercialization (Shusen and Gan, 2025). During this stage, the government focused on building enabling conditions, including general aviation airports, flight service systems, and regulatory frameworks. However, market expansion was relatively slow due to regulatory constraints, technological limitations, and insufficient demand (Shusen and Gan, 2025).

The period after 2020 marks a phase of rapid expansion and strategic elevation (lLi, 2026; Shusen and Gan, 2025). The low-altitude economy has been increasingly recognized as a key driver of new economic growth, particularly in the context of China's transition toward high-quality development (Shusen and Gan, 2025). The sector has expanded significantly with the proliferation of drones, eVTOL (electric vertical take-off and landing) aircraft, and intelligent systems. These technologies have enabled a wide range of applications, including logistics, urban air mobility, tourism, agriculture, and emergency services. Recent policy signals further indicate the strategic importance of the sector. The low-altitude economy has been incorporated into national development agendas, including the 14th and 15th Five-Year Plans, and is now regarded as a representative of "new quality productive forces" (Shusen and Gan, 2025). This designation underscores its role in driving technological innovation, industrial upgrading, and economic transformation. At the same time, the scale and ambition of the sector have grown rapidly. Estimates suggest that the low-altitude economy could reach trillions of yuan in market value, reflecting strong government support and investment. However, some analysts caution that this growth may be uneven and partially driven by policy enthusiasm rather than market fundamentals, highlighting potential risks of overinvestment and speculative expansion. In summary, the evolution of China's low-altitude economy can be understood as a three-stage process: (a) fragmented development under strict regulation; (b) conceptualization and policy incubation following airspace reform; and (c) strategic expansion and industrialization driven by technology and national policy (Liu, 2025; Shusen and Gan, 2025).

4. Policy Environment and Institutional Framework

4.1 Overview

The policy environment is a core determinant of China's low-altitude economy development. As a highly airspace-dependent sector, its growth relies heavily on state-led institutional design and multi-level governance. At the national level, central authorities provide strategic guidance and unified regulatory standards, while local governments conduct pilots and policy innovation (Shusen and Gan, 2025).

A core pillar of policy evolution is airspace management reform. Since 2010, China has gradually liberalized low-altitude airspace and simplified approval procedures, laying institutional foundations for commercial applications (Hua, 2026; Li, 2026; Liu, 2025). Meanwhile, policies support industrial development through financial subsidies, infrastructure investment, and innovation incentives (National Development and Reform Commission, 2025; Sun, 2025)[8]. Local governments such as Shenzhen and Zhuhai have issued targeted policies to foster industrial clusters and operational applications (Yang, 2025; Zhang et al., 2024)[9].

The sector also depends on integrated physical, digital, and institutional infrastructure, including vertiports, communication networks, and intelligent traffic management systems (Yu et al., 2025)[10]. Technological integration of AI, 5G, and autonomous systems further supports large-scale operations (Jin & Li, 2023). However, challenges remain, including regulatory fragmentation, inconsistent regional standards, safety risks, data security concerns, and public acceptance issues (Shusen and Gan, 2025; Liu, 2025; Hu et al., 2026)[11]. Overall, China's policy environment is dynamic and supportive

but requires continued coordination to achieve large-scale commercialization.

4.2 Strategic Elevation and Institutional Consolidation

China's low-altitude economy policy framework in 2025 represents a decisive transition from fragmented, exploratory governance toward a highly structured, strategically elevated national system (Li, 2026). Earlier policy approaches largely relied on directional encouragement and pilot experimentation; however, by 2025, these have evolved into a multi-layered governance architecture characterized by national strategic guidance, sector-specific policy instruments, localized implementation mechanisms, and standardized regulatory guarantees (Tang, 2026). This transformation reflects the state's recognition of low-altitude airspace as a critical economic resource capable of driving industrial upgrading and spatial reorganization of economic activity (Ye, *et.al.*, 2024). At the core of this evolution is the repositioning of the low-altitude economy within China's national development strategy (Hua, 2026). Rather than being framed merely as a supplementary growth driver, it is now explicitly defined as a strategic emerging industry cluster, placed alongside sectors such as new energy and advanced materials (Hua, 2026). This elevation is not symbolic; it is accompanied by clearly articulated quantitative targets and institutional mechanisms (National Air Traffic Management Commission, 2023)[12]. For instance, national planning documents establish the ambition of achieving trillion-yuan industry scale, signaling a shift toward measurable and outcome-oriented policy design.

Institutionally, the establishment of dedicated governance bodies—such as specialized departments within central planning authorities—demonstrates a move toward centralized coordination and policy coherence (Ministry of Industry and Information Technology, 2024)[13]. This aligns with broader findings in the literature that emphasize the importance of state-led coordination in emerging transport systems, where fragmented authority and regulatory ambiguity can hinder scalability and efficiency (Crunkhorn, 2025)[14]. By consolidating responsibilities and fostering inter-ministerial collaboration, China aims to reduce policy fragmentation and enhance administrative efficiency (Institute of Geoeconomics, 2025). Another defining feature of this phase is the emergence of integrated policy packages combining scenario development with capital mobilization (Li, *et.al.*, 2025). Policies now simultaneously address demand creation (through scenario cultivation) and supply-side constraints (through investment incentives), forming a dual-driven model of industrial expansion (Li, 2026). This reflects a broader understanding that the low-altitude economy is not merely a technological domain but a systemic economic ecosystem requiring coordinated development across infrastructure, finance, and application scenarios (Shusen and Gen, 2025) Furthermore, the institutional environment has shifted toward greater regulatory specificity and sectoral standardization (Liu, 2025). Sub-sector policies, particularly in areas such as low-altitude tourism and aerial services, now include detailed operational requirements, transparency obligations, and service standards (Hu, *et.al.*, 2026). This addresses earlier challenges of "unregulated growth" and enhances market credibility. Such developments correspond with broader policy trends emphasizing the need for robust legal and regulatory frameworks to ensure safety, public trust, and sustainable expansion (National Development and Reform Commission, 2025). Overall, the strategic elevation of the low-altitude economy in 2025 reflects a transition from policy experimentation to system-level governance, characterized by clear national priorities, institutional consolidation, and the integration of economic, technological, and regulatory objectives (Liu, 2025).

4.3 Airspace Governance Modernization and Digital Regulatory Transformation

A central pillar of the 2025 policy evolution is the transformation of airspace governance from a principle-based, restrictive system into a standardized, data-driven, and technologically enabled

regulatory framework (Li, 2026; National Development and Reform Commission, 2025). Historically, China's low-altitude airspace was tightly controlled, resulting in high transaction costs, administrative inefficiencies, and limited commercial utilization (National Development and Reform Commission, 2025). The 2025 reforms fundamentally address these constraints through legal codification, process optimization, and technological integration (Hu, *et.al.*,2026). One of the most significant developments is the legal institutionalization of airspace classification systems. By formally defining categories such as controlled, monitored, and reporting airspace, policies establish differentiated regulatory regimes based on risk levels and operational characteristics (Li, 2026). This replaces the previous "one-size-fits-all" approach with a more nuanced system that aligns regulatory intensity with operational complexity (Hu, *et.al.*, 2026). Such differentiation not only enhances safety but also reduces barriers to entry, particularly for smaller-scale and low-risk operations. Equally important is the quantification of operational standards and approval procedures. The introduction of clear thresholds—for example, weight-based UAV classification and defined approval timelines—transforms regulatory frameworks from abstract guidelines into actionable rules (Civil Aviation Administration of China, 2025). This shift significantly reduces uncertainty for market participants and facilitates the scaling of commercial activities. Empirical evidence suggests that such institutional clarity can substantially lower transaction costs and improve resource allocation efficiency, thereby supporting economic growth.

The modernization of airspace governance is also closely linked to the development of digital regulatory infrastructures (Hu, *et.al.*, 2026). The establishment of integrated supervision and service platforms enables real-time data aggregation, dynamic airspace allocation, and automated approval processes (Jin, 2025). These platforms represent a shift toward algorithmic governance, where decision-making is increasingly supported by data analytics and digital technologies (Jin, 2025). As highlighted in recent research, intelligent traffic management systems and automated routing are essential components of scalable low-altitude operations (Li, *et.al.*, 2025). A notable outcome of these reforms is the dramatic improvement in administrative efficiency. Approval times for routine operations have been reduced from days to hours, and emergency scenarios benefit from flexible mechanisms such as post-approval reporting (Li, 2026). These changes not only enhance operational responsiveness but also enable new application scenarios, particularly in time-sensitive domains such as medical logistics and disaster response (Li, 2026). Moreover, the integration of advanced technologies—including 5G-A networks, remote identification systems, and real-time tracking devices—has strengthened regulatory oversight and safety management (Tang, 2026). These technologies enable continuous monitoring of flight activities, ensuring compliance with operational standards while minimizing risks. The emphasis on technological supervision reflects a broader trend toward "smart regulation", where digital tools are used to enhance both efficiency and accountability.

However, despite these advancements, challenges remain (Li, 2026; Shusen and Gan, 2025). Issues such as data security, privacy protection, and system interoperability require ongoing attention. The increasing reliance on digital platforms also introduces new vulnerabilities, necessitating robust cybersecurity frameworks and governance mechanisms (Liu, 2025). In summary, the modernization of airspace governance in 2025 represents a shift toward a highly structured, technologically enabled regulatory system, characterized by legal clarity, process efficiency, and digital integration. This transformation is fundamental to unlocking the economic potential of low-altitude airspace while ensuring safety and sustainability.

4.4 Scenario Expansion, Industrial Policy Precision, and Regional Differentiation

Another defining feature of China's low-altitude economy policy evolution is the transition from limited pilot projects to large-scale scenario deployment, supported by increasingly precise and

differentiated industrial policies (Hu, *et.al.,* 2026). This reflects a broader shift from concept validation to systematic commercialization and market expansion. At the national level, policymakers have adopted a scenario-based approach to industrial development, identifying and promoting replicable application models across key sectors (National Development and Reform Commission, 2025). These include logistics and distribution, industrial operations, and emergency services. By codifying successful pilot cases into standardized templates, the government facilitates the rapid replication and scaling of proven models. This approach aligns with the understanding that the low-altitude economy derives its value from diverse application scenarios, ranging from agriculture and logistics to tourism and public safety (Hu, *et.al.,* 2026). Complementing this national framework is the implementation of targeted subsidy mechanisms at the local level. Regional governments have introduced detailed financial incentives linked to operational performance, infrastructure development, and technological innovation. These subsidies are often quantified and performance-based, reflecting a shift toward results-oriented policy design. For example, incentives tied to flight frequency, route development, and infrastructure investment encourage enterprises to expand operations and achieve economies of scale.

The policy environment also emphasizes regional specialization and differentiated development strategies (Liu, 2025). Rather than adopting a uniform approach, China leverages regional comparative advantages to promote tailored development paths. Eastern regions focus on high-end manufacturing and cross-border operations, central and western regions prioritize public service applications, and northeastern regions develop specialized equipment adapted to local conditions. This spatial differentiation enhances overall efficiency and supports balanced regional development. Industrial support policies have also become increasingly precise and targeted, particularly in addressing the high investment and long development cycles associated with the low-altitude economy. Subsidies now focus on key stages of the industrial chain, including research and development, equipment manufacturing, and commercialization. By providing substantial financial support for core technologies and "bottleneck" innovations, policies aim to accelerate technological breakthroughs and reduce dependence on external inputs. In addition, the establishment of comprehensive industrial ecosystems has become a central policy objective. This includes the development of industrial parks, supply chain networks, and innovation platforms. Such ecosystems facilitate collaboration among enterprises, research institutions, and government agencies, fostering innovation and enhancing competitiveness (National Development and Reform Commission, 2025). The clustering of related industries also generates positive spillover effects, contributing to regional economic growth.

Nevertheless, the expansion of application scenarios and industrial activities also raises challenges. Issues such as uneven market demand, overreliance on government subsidies, and potential overcapacity highlight the need for more sustainable and market-driven development models. Some analysts caution that excessive policy-driven expansion may lead to inefficiencies and financial risks if not supported by genuine market demand (Hu, *et.al.,* 2025). Overall, the evolution of scenario and industrial policies in 2025 reflects a transition toward large-scale deployment, precise policy targeting, and regionally differentiated development, enabling the low-altitude economy to move from experimentation to industrial maturity.

4.5 Regulatory Deepening, Regional Integration, and Institutional Efficiency Outcomes

The final key theme in the evolution of China's low-altitude economy policies is the deepening of regulatory systems, the strengthening of regional coordination, and the realization of measurable economic and institutional outcomes (Li, 2026). Together, these elements illustrate the maturation of the policy environment and its impact on industrial development. major development is the

establishment of a comprehensive, full-chain regulatory framework covering aircraft, airspace, and operational processes (Li, 2026). Policies now incorporate detailed technical standards, process controls, and accountability mechanisms, transforming regulatory requirements into enforceable and measurable criteria (Civil Aviation Administration of China, 2025). For example, safety standards for aircraft components, real-time monitoring requirements, and mandatory safety audits for high-frequency operators ensure that rapid industry growth does not compromise safety. This regulatory deepening reflects a shift from a "safety baseline" approach to a balanced model emphasizing both safety and efficiency. By integrating technological tools with regulatory frameworks, policymakers aim to achieve high levels of operational safety while maintaining flexibility and innovation (Liu, 2005). The use of digital monitoring systems and data-driven supervision enhances transparency and accountability, supporting sustainable industry growth.

At the same time, policies have increasingly focused on regional coordination and integration, moving beyond isolated pilot projects to establish interconnected economic zones. Cross-regional collaboration mechanisms, such as unified airspace standards and shared approval systems, facilitate seamless operations across administrative boundaries (Lin, 2005). This reduces transaction costs and enhances operational efficiency, particularly for logistics and transportation applications. The emergence of coordinated economic corridors and cross-border platforms further demonstrates the importance of spatial integration in the low-altitude economy (Civil Aviation Administration of China, 2025). By linking regions with complementary strengths, these initiatives promote resource sharing, market expansion, and industrial synergy. This approach aligns with broader findings that regional coordination is essential for overcoming fragmentation and achieving scale in emerging transport systems (Li, 2026; Shusen and Gan, 2025).

From an institutional perspective, the evolution of policies in 2025 can be understood through the lens of new institutional economics, particularly in terms of reducing transaction costs, clarifying property rights, and facilitating contract enforcement. The formalization of airspace usage rights, the standardization of technical and operational norms, and the establishment of risk-sharing mechanisms collectively contribute to a more efficient and predictable economic environment (Li, 2026; Shusen and Gan, 2025). The development effects of these policies are already evident. The low-altitude economy has experienced rapid expansion, with significant increases in industrial scale, enterprise participation, and technological innovation. The sector has also contributed to improved resource allocation and productivity, supporting broader economic transformation (Li, 2026; Shusen and Gan, 2025). Empirical studies confirm that the low-altitude economy enhances total factor productivity through mechanisms such as technological innovation and industrial upgrading. At the same time, policy-driven development has helped reduce regional disparities by promoting infrastructure investment and industrial diffusion in less-developed areas. Enhanced connectivity and coordinated development strategies have contributed to a more balanced spatial distribution of economic activity.

Shusen and Gan (2025) argue that some challenges remain in several areas. These include the need for stronger industrial chain coordination, improved access to long-term capital, and enhanced international competitiveness. Addressing these challenges will require continued policy innovation, including the development of integrated supply chains, diversified financing mechanisms, and greater engagement in global standard-setting processes. In conclusion, the 2025 evolution of China's low-altitude economy policies reflects a comprehensive transformation toward institutional maturity, regulatory sophistication, and integrated regional development (Li, 2026; Shusen and Gan, 2025). By combining strategic planning, technological innovation, and market-oriented reforms, China has established a robust policy framework that supports the sustainable growth of this emerging economic sector while addressing its inherent risks and challenges.

5. Policy Challenges, Strategic Directions, and Future Outlook

Looking ahead, the development of China's low-altitude economy will depend on the continued evolution and optimization of its policy environment. Shusen and Gen (2025) identifies several key challenges and strategic priorities that will shape the future trajectory of the sector. One of the most pressing challenges is the need for greater policy coordination and integration. The current fragmentation of regulatory authority limits the efficiency and scalability of low-altitude operations. Future reforms are likely to focus on establishing a more unified governance framework, with clearer roles and responsibilities for different agencies and improved coordination mechanisms. Another critical issue is the development of comprehensive regulatory standards for emerging technologies. The rapid advancement of UAVs, eVTOL aircraft, and autonomous systems requires new approaches to certification, safety management, and liability (Cheng, *et.al.*, 2024). Academic research highlights the importance of standardized frameworks for airspace management, including unified altitude systems and integrated communication networks.

Infrastructure development remains a key priority. The expansion of the low-altitude economy will require significant investment in both physical and digital infrastructure, including smart airports, communication networks, and air traffic management systems. The integration of satellite, 5G, and high-altitude platforms is expected to play a crucial role in enabling real-time connectivity and efficient airspace management. Market development is another important area of focus. Despite rapid growth, the low-altitude economy still faces challenges in achieving sustainable commercialization. Some analysts argue that the sector relies heavily on government investment and lacks strong consumer demand, raising concerns about long-term viability (Li, 2026; Shusen and Gan, 2025). Developing viable business models and fostering market demand will be essential for ensuring sustainable growth. At the same time, the low-altitude economy offers significant opportunities for industrial integration and innovation. It has the potential to transform multiple sectors, including transportation, logistics, tourism, and public services. By enabling new forms of mobility and service delivery, it can enhance efficiency, reduce costs, and create new economic opportunities. Regional development will also play a critical role in shaping the future of the sector (Liu, 2025). Policymakers are likely to continue using pilot programs and regional experimentation to test new technologies and regulatory models. Successful practices can then be scaled up and replicated across the country.

In terms of strategic direction, the low-altitude economy is expected to become a key component of China's broader economic transformation. It aligns with national goals of innovation-driven development, technological self-reliance, and industrial upgrading (Li, 2026; Shusen and Gan, 2025). As such, it is likely to receive continued policy support and investment. However, achieving these goals will require addressing several structural challenges, including technological bottlenecks, regulatory uncertainty, and market inefficiencies (Sun, 2025). Balancing innovation with safety, and growth with sustainability, will be critical for the long-term success of the sector. In conclusion, the evolution and policy environment of China's low-altitude economy reflect a complex interplay between technological innovation, state-led planning, and market dynamics. While significant progress has been made in establishing a supportive policy framework, ongoing reforms and adjustments will be necessary to fully realize the potential of this emerging economic frontier (Li, 2026; Shusen and Gan, 2025).

6. Conclusions

This paper has systematically examined the evolving policy environment of China's low-altitude economy and its impacts on industrial development. The analysis demonstrates that China's low-altitude economy policy system has undergone a critical shift from framework construction to ecological implementation. The 2025 policy package has upgraded strategic positioning, standardized

airspace management, expanded application scenarios, improved full-chain regulation, and strengthened regional coordination. These institutional innovations have effectively reduced industrial transaction costs, addressed bottlenecks including airspace access, inconsistent standards and high costs, and boosted the sector's market scale to over 1.5 trillion yuan.

Policies have fostered a three-dimensional industrial pattern with manufacturing as the foundation, operation as the core, and services as the support, while enhancing factor allocation efficiency and balanced regional development. However, challenges remain, such as insufficient industrial ecological coordination and a shortage of long-term capital. Future development requires stronger industrial chain coordination, diversified financing support, and deeper international cooperation in standard-setting and governance.

With continuous policy optimization and market-driven growth, the low-altitude economy is expected to exceed 2 trillion yuan by 2030 and become a core growth pole of China's strategic emerging industries. This study enriches policy analysis of the low-altitude economy from the perspective of new institutional economics, though further quantitative evaluation is needed to measure precise policy effects.

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