

Research on the Development Model and Optimization of Lin Kong Economy in Huangshi City

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Abstract

The airport economy, as a new type of economic form developed around aviation hubs, has become an important growth point for high-quality regional economic development. This article systematically analyzes the development model of Huangshi City characterized by 'driving through three parks, integrating multiple chains, and linking two cities'. Use the SWOT matrix analysis method to examine the strengths and weaknesses of the development of the airport economy in Huangshi. At the same time, by drawing on the development experiences of typical airport economy zones both at home and abroad, we offer suggestions for optimization from four dimensions-'upgrading hub efficiency, cultivating industrial clusters, breaking through factor bottlenecks, and deepening regional collaboration'-to provide theoretical support and practical reference for Huangshi to become a model airport economy in the Wuhan metropolitan area.

Keywords

Huangshi City; Air Port Economic Zone; Development Model; SWOT.

1. Introduction

The 21st century, known as the "age of aviation," has transformed airports from mere transportation hubs into "power sources" and "growth engines" driving regional economic development. In his book *Airport City: A New Concept for Development in the 21st Century*, American aviation expert Conway pointed out that airports are gradually becoming "a new type of central business district in post-industrial economies"[1]. The airport-based economic zone, radiating outward from the airport to surrounding areas, has become a strategic hub in the context of global restructuring of industrial and value chains, thanks to its strong capacity to attract and catalyze high-end factors[2]. Currently, China's airport economy has formed a spatial pattern characterized by "maturity in the east and rising growth in central and western regions." As a key province driving the rise of central China, Hubei boasts the Ezhou Huahu International Airport-an important infrastructure that has accelerated the development of the eastern Hubei airport economic corridor. Huangshi City, as part of the Wuhan metropolitan area and located adjacent to Huahu Airport, enjoys natural locational advantages for developing an airport-based economy.

2. Current Development Status of the Airport Economy in Huangshi City

2.1. The Industry is Growing Fast, and its Key Metrics are at the Top

Currently, Huangshi City is seizing the historic opportunity of Hubei building a dual hub for air passenger and cargo transport, turning its airport-related advantages into a development boost. The total air-related economy is expected to exceed 110 billion yuan, with a year-on-year growth of over 20%[3]. From January to October 2025, Huangshi provided a total of 29,700

tons of air cargo to Huahu Airport, accounting for more than 40% of the airport's surrounding own cargo transport, firmly holding the top spot as the 'number one warehouse' [4]. At the same time, the industrial structure is gradually improving. By 2025, high-end manufacturing companies like Taiguang Electronics and Hushi Electronics will see their output value grow more than 50% year-on-year. Emerging industries like cross-border e-commerce and airport-area cultural tourism are rising quickly, and the industrial structure is shifting from traditional heavy industry to high-end and airport-focused sectors.

2.2. Accelerated Improvement of Infrastructure and Continuously Enhanced Connectivity Capacity

Currently, Huangshi has built a complete transportation system, achieving development in multi-modal transport by air, rail, water, and road. The continuous improvement of the multimodal transport system has accelerated the development of Huangshi's urban integration, basically achieving the 'five integrations' of planning, industry, market, infrastructure, and public services, becoming an important growth pole for Huangshi's economic development [5]. In addition, with the development of the internet and the accelerated construction of digital infrastructure, information platforms like 'Dongchu Tong' have emerged, and smart logistics technology has gradually developed.

3. Deconstruction of the Development Model of Huangshi's Airport Economy

3.1. Spatial Carriers: Functional Division and Coordination Mechanism of the 'Three-Garden Drive'

The Airport Business Industrial Park focuses on being an 'Airport Trade Service Industry Cluster,' mainly developing services like the digital economy, business offices, and cross-border e-commerce, while working to connect the front and back ends of manufacturing. The Airport-Adjacent Smart Manufacturing Industrial Park is positioned as an 'Airport-Adjacent Smart Manufacturing Industrial Base,' focusing on real industries like intelligent conveyor equipment, biopharmaceutical food processing, and machinery mold manufacturing, providing solid support for the airport-adjacent industry system. The goal of the Airport Science and Technology Innovation Industrial Park is to build a 'high-end industrial hub near the airport.' Focusing on emerging fields such as biomedicine, optoelectronics, intelligent manufacturing, and low-altitude economy, it is dedicated to becoming a cultivation platform for future emerging industries. The 'Three Parks' rely on the connection of the industrial chain, the flow of resources, and policy coordination to create a tightly coordinated network.

3.2. Industrial Core: The Path to Building an Industrial Ecosystem through "Multi-Chain Integration"

3.2.1. Integration of the Aviation Logistics Chain and the Manufacturing Chain

Huangshi leverages air logistics as a driving force, focusing on promoting deep integration between the logistics system and the manufacturing chain, thereby enhancing the overall operational efficiency of the industry. It promotes a direct cargo connection between Qipan Island Comprehensive Protected Zone and Huahu Airport, providing electronic information companies with integrated 'bonded-air' customs clearance services, effectively reducing logistics costs. In addition, plans are underway to construct an airport-adjacent cold chain logistics park to meet the demands of high value-added industries such as biomedicine and specialty agricultural products, continuously expanding the application scenarios that integrate logistics and manufacturing.

3.2.2. Integration of the Digital Service Chain and the Physical Industry Chain

Relying on the digital platform of the Airport Business Industrial Park, Huangshi is accelerating the integration of digital service chains with physical industry chains, promoting the transformation and upgrading of traditional industries. The "Huangshi City Digital Economy Industry Public Service Platform," as one of the province's first typical digital application scenarios, has connected 5,053 market entities and provides diversified services such as market analysis, order matching, and supply chain finance for manufacturing enterprises, with a cumulative transaction volume exceeding 700 million yuan.

3.2.3. Integration of the Innovation Chain and the Industry Chain

Huangshi is deeply integrating into the Optics Valley Science and Technology Innovation Corridor, consolidating innovative resources such as Hubei Normal University and Huangshi University Science Parks, and building an innovation ecosystem of 'government-university-enterprise-research-application' to promote the deep integration of the innovation chain and the industrial chain. In terms of enterprise development, improve the tiered cultivation mechanism of 'micro-growth, small upgrading, and high consolidation,' and promote high-value-added development in high-tech manufacturing. In terms of platform construction, the Airport Science and Technology Innovation Industrial Park adopts the 'platform company, professional operator, fund' model, focusing on attracting investment in fields such as biomedicine and optoelectronics, while simultaneously promoting technology research and development and industrialization.

3.3. Development Path: The "Dual-City Synergy" Model of Regional Coordination

3.3.1. "Joint Development with Ezhou as a Port City"

As an important hinterland for Huahu Airport, Huangshi has established a close "port-city linkage" mechanism with Ezhou. In terms of logistics, Huangshi's cargo sources account for 24.4% of the total collected cargo around Huahu Airport, making it the largest collection point. At the facility level, projects such as the second phase of the airport expressway and the rapid upgrade of Daqian Road are steadily progressing, achieving a "half-hour commute" to the airport. At the policy level, Huangshi actively aligns with the bonded logistics center policies of Huahu Airport, promoting the complementary functions of the comprehensive bonded zone and the airport, and advancing the joint development of 'bonded and aviation'. At the industrial level, Huangshi focuses on developing airport-related manufacturing and business services, forming a complementary relationship with Ezhou's core aviation industries to avoid homogeneous competition.

3.3.2. Resource Sharing with Wuhan

Huangshi, relying on the resource advantages of the core city in the Wuhan metropolitan area, is deepening its 'resource sharing' with Wuhan. In terms of innovation, deeply integrate into the Optics Valley Science and Technology Innovation Corridor, promote cooperation between Wuhan universities, research institutes, and local enterprises, and accelerate the transformation of scientific and technological achievements. In the market, using the Wuhan International Trade Platform to expand the domestic and international markets of the airport-related industries and boost the industry's reach. In terms of transportation, the Wuhan-Ezhou-Huanggang 'three vertical and three horizontal' expressway system is being rapidly advanced, achieving a 'one-hour commute' with Wuhan and supporting the efficient flow of essential factors. In terms of industry, it undertakes the transfer of high-end equipment manufacturing from Wuhan, combining local industrial foundations to build a distinctive airport manufacturing cluster.

4. SWOT Matrix Analysis of Huangshi's Airport Economy Development

4.1. Strengths

4.1.1. The Location Advantages are Prominent, and the Trend of Integration into Clusters is Evident.

Huangshi is located in the heartland of eastern Hubei and the core development zone of the Wuhan metropolitan area. It is only 20 kilometers in a straight line from Ezhou Huahu International Airport, making it one of the prefecture-level city urban areas closest to the airport, with obvious locational advantages. In building the '1-hour commuting circle' in the Wuhan metropolitan area, Huangshi has already achieved fast connections with cities like Wuhan and Ezhou, providing efficient transportation support for the airport-related economy.

4.1.2. Solid Industrial Foundation and Strong Platform Carrying Capacity

As an established industrial city in eastern Hubei, Huangshi has a complete industrial system and a strong industrial foundation, providing a solid real economy basis for the development of the airport-oriented economy. At present, advantage industrial clusters such as new materials, high-end equipment, electronic information, and non-ferrous metals have been established. The manufacturing support chain is complete, and there is an ample reserve of industrial workers, providing the practical conditions to undertake airport-preferred industries such as precision manufacturing, aviation supporting parts, and high-end electronic information. In addition, specialized platforms such as Huangshigang Airport Intelligent Manufacturing Park, Daqian Road Airport Science and Technology Innovation Park, Qipan Island Comprehensive Bonded Zone, and Huandiqiao Airport Manufacturing Area are well-established, with complete infrastructure, capable of facilitating rapid project implementation and the agglomeration and development of enterprises.

4.2. Weaknesses

4.2.1. Insufficient Scale and Chain Maturity of the Airport Industry

Huangshi's air logistics business is currently still in the cultivation stage. Compared with the already mature operational systems in China's first-tier cities, there are relatively obvious gaps in areas such as airside supply chain organization and multi-modal transportation coordination, and the overall scale of the industry is relatively small. From the perspective of internal structure, although there have been partial breakthroughs in sub-sectors such as intelligent equipment manufacturing and life and health, the lack of leading enterprises with full-chain integration capabilities has hindered the release of scale effects and synergy benefits in key areas, and the competitive advantages brought by industrial clustering have yet to be realized.

4.2.2. Insufficient Factor Allocation and Cross-Regional Collaboration Capabilities

At the current stage, there are three main bottlenecks: first, the supply of resources is becoming tight, and key factors such as construction land and financial support are unable to keep pace with the expansion of the airport-adjacent industry; second, cross-regional cooperation is still at a superficial level, and coordination with key entities such as Huahu Airport and SF Group has not yet entered a systematized or normalized track; Third, the reserve of professional human resources is weak, and there is a significant gap in the supply of mid-to-high-end talents in fields such as aviation logistics operations and airport-adjacent engineering technology, which directly restricts the further advancement of the industry's capabilities.

4.3. Opportunities

4.3.1. Policy Integration Effects and Strategic Empowerment from the Metropolitan Area

Huangshi has been included in the key city lineup of the Yangtze River Economic Belt and has entered the national-level key project reserve list. The "Huangshi City Airport-Adjacent Industrial Development Plan (2024-2030)" proposes leveraging Huahu Airport to drive the city's economic transformation, providing a clear institutional guarantee for the development of the airport-adjacent sector. At the same time, the integration of the Wuhan metropolitan area is speeding up, and Huangshi can make full use of its location advantage near the airport, actively taking on Wuhan's non-core functions as they move outward, giving more room for industrial development.[6].

4.3.2. Expansion of Emerging Fields and Acceleration of Functional Platform Formation

Traditional pillar industries are facing an urgent need for structural upgrading, and the airport-oriented economy precisely provides a practical pathway for industries such as steel, non-ferrous metals, and new materials to transform towards lighter, more precise, and higher value-added directions, while also leveraging the air cargo network to open up broader overseas markets. The rapid rise of the digital economy is also constantly bringing tech momentum to the airport-area sector. The Airport Science and Innovation Park focuses on cutting-edge fields such as biomedicine and optoelectronic information, adopting an operational model of 'platform companies, professional operators, and industrial funds' to promote the rapid and concentrated implementation of projects. It strives to achieve the expected goal of 'fully occupied upon completion' as early as possible, guiding the airport-related industrial chain to ascend to a higher end of the value chain.

4.4. Threats

4.4.1. Increasing Convergence of Industrial Structures in Surrounding Regions

In the southeastern region of Hubei, multiple airport economic functional zones have currently begun to cluster together. The airport-adjacent area around Wuhan Tianhe Airport has established a solid clustering advantage in the distribution of air cargo, while the area surrounding Ezhou Huahu Airport is accelerating development in cross-border e-commerce operations and aircraft assembly and maintenance. Against this backdrop, Huangshi hasn't yet developed a distinct identity in terms of leading industries and institutional support, while also facing the dual pressures of 'factor outflow' and 'overlapping tracks'. If it is not possible to anchor a distinctive main attack direction in a short period of time, Huangshi may gradually fall into a passive position in regional competition[7].

4.4.2. The Balancing Pressure Between Environmental Capacity and Development Quality

As an important industrial city along the Yangtze River, Huangshi must strictly enforce the ecological protection redline management requirements. Although the Xingang Industrial Park has achieved phased results in green transformation, and the commissioning and operation of the smart zero-carbon power plant have brought about a substantial reduction in annual carbon emissions, the carbon emissions from logistics transportation and the land development intensity, which have risen in tandem with the expansion of the aviation-related economy, objectively create a certain degree of conflict with the overall policy of 'Yangtze River Protection'. If the dynamic balance between industrial development and ecological protection isn't properly maintained, Huangshi could very likely face even stricter government regulations in the future.

Table 1. SWOT Matrix Analysis of Huangshi City

Strengths	Weaknesses
1) Prominent locational advantages and clear integration into the metropolitan circle	1) Insufficient scale and chain maturity of the airport industry
2) A solid industrial foundation and platform carrying capacity	2) Insufficient capability in resource allocation and cross-domain collaboration
Opportunities	Threats
1) Policy Integration Effects and Strategic Empowerment of Metropolitan Areas	1) The trend of industrial structure convergence in surrounding areas is intensifying
2) Emerging fields are expanding and functional platforms are taking shape faster	2) The coordinating pressure between environmental capacity and development quality

5. Reference on the Development Models of Airport Economy at Home and Abroad

5.1. Experience from Typical International Cases

5.1.1. Comprehensive Hub-Driven Model: The "Airport + Free Trade + City" Integrated Model of Amsterdam Schiphol Airport

As one of Europe's major aviation hubs, Amsterdam Schiphol Airport, in its airport city model, uses the airport as the center to build a three-dimensional ecosystem of 'transport hub-free trade platform-new industrial city,' converting transit traffic into sustainable economic value. In terms of hub coordination, Schiphol leverages the '1-hour flight circle' to reach the core city clusters of Europe, and connects directly to the Port of Rotterdam via dedicated rail lines, forming a dual-hub transportation system linking the airport and the seaport. At the policy level, Schiphol Free Trade Zone implements the 'outside customs within the territory, bonded warehousing, and VAT deferment' rules. At the same time, it works with a fully digital customs system, reducing clearance time to 1–4 hours, becoming a significant attraction for many logistics companies to settle in. In terms of integrating industry and city development, areas around the airport are gathering high-value industries like aviation manufacturing and biomedicine, while also providing living facilities such as talent apartments and international schools. The job market keeps growing, gradually forming a positive cycle of 'promoting the city through industry and boosting industry through the city' [8].

5.1.2. Specialized Industry-Focused Model: The "High-End Services + Science and Technology Innovation" Precision Positioning Model of Singapore Changi Airport

Changi Airport mainly avoids logistics homogenization competition with surrounding ports and focuses on high value-added industries and high-end services [9]. In terms of industry selection, the airport leverages its locational advantage as a Southeast Asian aviation hub, focusing on cultivating three distinctive clusters in aircraft maintenance, cross-border healthcare, and aviation technology innovation, thereby promoting steady growth in the output value of the airport economic zone. In terms of platform operations, a joint 'government-enterprise' model is adopted, with the airport group coordinating overall planning and collaborating with investors such as Temasek to establish an industrial fund, providing resident enterprises with a relatively high proportion of R&D subsidies, and focusing on cultivating potential leading enterprises in the aviation sector. In terms of service upgrades, convenient policies such as 'one-stop customs clearance' and '72-hour transit visa exemption' are implemented, and the terminal is integrated with high-end commercial and exhibition

functions, with non-aeronautical revenue accounting for a proportion significantly higher than the global airport average.

5.2. Typical Domestic Case Experiences

5.2.1. Regional Synergy Model: The "Cross-Regional Collaboration + Policy Harmonization" Model of Beijing Daxing Airport

The development path of large airports generally tends to break down administrative boundaries. Taking Daxing Airport as an example, by promoting the integrated development of the 'Airport-Langfang-Baoding' corridor, it has successfully overcome the limitations of resources in a single city and has thus become the only region in the country covered by the policies of a cross-provincial free trade pilot zone. In terms of the coordination mechanism, a joint administrative committee for the Beijing-Tianjin-Hebei Airport Economic Zone has been established, achieving a coordinated pattern of 'unified planning maps, synchronized construction, and management in the same rhythm' between the Langfang Airport Economic Zone and Daxing Airport[10]. In terms of industrial division of labor, Daxing Airport focuses on the operation of the aviation hub, Langfang emphasizes cross-border e-commerce and air catering, and Baoding is oriented towards the manufacturing of components, forming a hierarchical collaborative chain of 'hub operation – supporting services – production and manufacturing' among the three. In terms of factor flow, implementing mechanisms like cross-regional tax sharing and social security continuity in different locations, as well as setting up the Beijing-Tianjin-Hebei airport talent market, has effectively eased the shortage of high-end talent in Langfang.

5.2.2. Stock Upgrading Model: The "Leading Enterprise-Driven + Chain Agglomeration" Model of Zhengzhou Airport Economic Zone

Relying on leading enterprises to drive vertical integration of the industrial chain, Zhengzhou Airport Economic Zone has achieved the leap from a freight hub to an industrial highland [11]. In 2010, Foxconn established its presence in the zone, and its global supply chain demands significantly boosted cargo throughput at Zhengzhou Airport. Centered around Foxconn, the zone progressively introduced related businesses such as precision manufacturing, electronic materials, and logistics distribution, attracting a large number of supporting suppliers to converge and forming a complete chain of "R&D and design-parts supply-final assembly-global distribution." By 2024, the output value of the zone's electronic information industry exceeded RMB 500 billion. Institutionally, the management committee has been granted provincial-level economic management authority, implementing an approval system based on a "negative list + commitment system," which has shortened the project implementation cycle to within 15 working days.

Table 2. Domestic and International Airport Economy Development Models

Domestic and International Cases		Development Model Type
International Cases	Amsterdam Schiphol Airport (Netherlands)	Comprehensive hub-driven model: "Airport + Free Trade + City" integrated model
	Singapore Changi Airport	Specialized industry-focused model: "High-End Services + Science and Technology Innovation" precision positioning model
Domestic Cases	Beijing Daxing Airport	Regional synergy model: "Cross-regional collaboration + policy harmonization" model
	Zhengzhou Airport Economic Zone	Stock upgrading model: "Leading enterprise-driven + chain agglomeration" model

6. Optimization Paths and Countermeasure Suggestions for the Development Model of Huangshi's Airport Economy

Based on the SWOT analysis of Huangshi's airport economy, and with reference to typical practices at Schiphol, Changi, Daxing, and Zhengzhou, this paper proposes targeted optimization strategies from four directions: "upgrading hub efficiency, cultivating industrial clusters, breaking factor bottlenecks, and deepening regional coordination." The aim is to strive to make the most of strengths and make up for weaknesses, promoting overall improvement.

6.1. Leverage the Synergistic Advantages of "Airport + Seaport" to Create a Dual-Hub Synergy Path

6.1.1. Upgrade the Multi-Modal Transport System to Unleash Hub Synergy

Drawing on the experience of the dual-hub linkage of Schiphol Airport in the Netherlands, combining 'airport and seaport,' Huangshi, relying on the unique advantage of a 30-minute commuting distance between the new port and Huahu Airport, plans to build a four-dimensional transportation system integrating water, air, rail, and road. Specifically, it will be implemented through the 'Three Ones' project: first, unifying intermodal transportation standards. Collaborate with Ezhou and Wuhan to compile the 'Guidelines for Multimodal Transport Operations in the Eastern Hubei Region,' promoting mutual recognition of security checks, data interoperability, and joint customs inspections between Qipan Zhou Comprehensive Bonded Zone and Huahu Airport, significantly reducing transfer time and benchmarking against the efficient operations level of Schiphol. Second, develop premium dedicated routes. Focusing on Huangshi's advantageous categories such as electromechanical products and precision components, launch a full-process intermodal service of 'Yangtze River port collection – temporary storage in the comprehensive bonded zone – air transport via Huahu Airport,' using the efficiency benchmark of '24-hour port collection, 48-hour global delivery' to create a professional logistics channel for high-end manufacturing in the mid-Yangtze region. Third, plan the layout of a virtual airport. Establish a 'virtual airport' service center at the new port, drawing on Changi Airport's 'one-stop clearance' approach, to achieve 'single declaration, complete process handling' for procedures such as customs clearance, booking, and inspection.

6.1.2. Strengthen the Empowerment of the Free Trade Platform to Enhance Policy Attraction Effects

Referring to the "bonded + efficient customs clearance" system of the Schiphol Free Trade Zone, Huangshi will fully unlock the platform potential of the Qipanzhou Comprehensive Bonded Zone. On the one hand, expand the volume of "bonded warehousing + distribution" services, offering customized services such as "bonded R&D + maintenance and remanufacturing" to local backbone enterprises including Dongbei and Daye Special Steel, striving to steadily increase the import and export scale of the Bonded Zone. On the other hand, apply for a "cross-border e-commerce bonded display and trading" pilot program. Drawing on Changi Airport's "front store, back warehouse" model, plan a cross-border product experience center in Huangshi Port District, creating a consumption loop of "on-site experience-online ordering-direct airport mailing."

6.2. Focus on Industrial Weaknesses to Build a Path for Cultivating Distinctive Clusters

6.2.1. Implement the "Leading Enterprise + Chain" Initiative to Address the Issue of Insufficient Industrial Scale

To address the shortcomings of the absence of leading enterprises and weak cluster effects in the airport industry, Huangshi draws on Zhengzhou's approach of "leading enterprise-driven +

chain agglomeration" and launches a special "talent and investment attraction" campaign. In terms of targeted introduction of leading enterprises, establish a special fund for the airport industry. For example, leveraging the foundation in intelligent conveying equipment, establish a R&D center for the Central China region; based on the cold-chain needs of biomedicine, build a cold-chain hub in eastern Hubei; and seizing opportunities in the low-altitude economy, promote the establishment of a special unmanned aerial vehicle (UAV) industry center in the Jiangbei Industrial Park, creating a Central China low-altitude equipment testing and logistics application base. In terms of supporting cultivation, implement a "leading enterprise + local supporting enterprises" binding mechanism. Drawing on Zhengzhou's experience in cultivating Foxconn's support network, strive to form a cluster scale of 50 enterprises in each of the smart equipment and low-altitude economy sectors by 2030.

6.2.2. Anchor Niche Market Segments to Build Differentiated Competitive Advantages

Referring to the positioning logic of Singapore Changi Airport of 'avoiding homogeneous competition and focusing on high value-added areas,' Huangshi chose to bypass the homogeneous competition with Wuhan and Ezhou in areas such as cross-border e-commerce and aircraft manufacturing, concentrating resources on cultivating three major distinctive sectors. The first is airport-oriented smart manufacturing upgrading. Using the Huangshi Port Airport Smart Manufacturing Industrial Park as a vehicle, implement a transformation of "replacing manual labor with machines and upgrading equipment," focusing on niche areas such as intelligent conveying equipment and environmentally friendly smart devices. The second is life and health innovation. Relying on the "Smart Huangshi" healthcare big data platform, promote the construction of a cell storage center, and establish a collaboration mechanism with Wuhan Optics Valley Bio-City of "R&D in Optics Valley, transformation in Huangshi," to create an airport-adjacent medical and wellness cluster. The third is digital logistics integration. Upgrade the digital economy platform of the Airport Business Park, integrate enterprise resources from the Airport Digital Logistics Park, and layer on value-added services such as logistics finance and supply chain management to enhance the overall service capability.

6.3. Confront Factor Bottlenecks Directly and Implement Innovative Paths for the Support System

6.3.1. Innovate Factor Supply Mechanisms to Address Land and Talent Constraints

Resource allocation capability refers to the ability to integrate globally strategic resources to achieve optimal economic returns, and is a core competency for the development of the airport economy [12]. The stronger the resource allocation capability, the more high-quality capital, talent, information, and innovation resources can be attracted [13]. Therefore, integrating Beijing Daxing's experience of "cross-regional factor mobility" with Zhengzhou's "flexible land use" approach, build a factor support system of "resource integration + external leveraging." In terms of efficient land use, adopt "lease-before-purchase with flexible tenures." In key areas such as the Airport Science and Technology Innovation Park, appropriately shorten the industrial land transfer period to reduce the upfront land burden on enterprises, while also revitalizing idle assets such as the Eastern Hubei Commercial Center to expand industrial carrying capacity. In terms of talent sharing, establish the "Wuhan Metropolitan Area Airport Talent Alliance." Drawing on Daxing's Beijing-Tianjin-Hebei talent market practices, jointly build training bases for aviation logistics and intelligent manufacturing with Wuhan universities to achieve targeted talent cultivation.

6.3.2. Optimize the Government Service Ecosystem to Improve the Efficiency of Industrial Project Implementation

Referring to Zhengzhou Airport Economic Zone's reform path of "provincial-level empowerment + commitment-based approval," Huangshi is tackling two major weak links: factor support and collaborative coordination. In terms of delegation of authority, actively seek the devolution of provincial-level administrative authority, granting corresponding approval functions to the Airport Economic Zone, and implement an approval system of "commitment-based processing outside the negative list," compressing the cycle from project landing to construction start to within 15 working days. In terms of service mechanisms, establish a dual-promotion mechanism of "government-enterprise joint meetings + project guarantee responsibility system." Drawing on the practical experience of airport science and technology innovation projects in Huangshi Port District, implement closed-loop management of enterprise needs through "weekly scheduling and monthly resolution."

6.4. Deepen Regional Collaboration and Build a Path for Coordinated Development Across All Areas

6.4.1. Establish Cross-Regional Coordination Mechanisms to Break Down Administrative Barriers

Drawing on Beijing Daxing's collaborative experience of "unified planning and shared policies," Huangshi, together with Ezhou and Huanggang, builds the "Ezhou-Huangshi-Huanggang Airport Innovation Collaboration Group," focusing on advancing three areas of cooperation. Mechanistically, the three regions jointly established the 'Eastern Hubei Airport Economic Coordination Council,' implementing a unified management framework of 'one map for planning, one booklet for policies, and one set of standards.' In terms of resources, Huangshi and Ezhou signed the 'Airport Resource Sharing Agreement,' striving for Huahu Airport to grant Huangshi priority rights for cargo takeoffs and landings, and exploring a revenue-sharing model of 'Huangshi for cargo aggregation, Ezhou for takeoff' to make up for the current coordination shortcomings. In terms of division of labor, referring to the gradient layout of Daxing-Langfang-Baoding as 'hub-supporting-manufacturing,' it is clear that Huahu Airport will focus on aviation operations, Huangshi will concentrate on intelligent manufacturing, cold chain logistics, and the digital economy, while Huanggang will emphasize spatial provision and ecological support, thereby forming an industrial structure that is differentiated and free of homogeneous competition.

6.4.2. Integrate into the Wuhan Metropolitan Area and Expand the Hinterland for Industrial Development

Relying on the Optics Valley Science and Innovation Corridor, Huangshi follows the collaborative approach of 'R&D in Wuhan, commercialization in Huangshi.' In terms of carrier construction, a 'non-contiguous' park is jointly established in Huangshi Science and Technology City to selectively undertake pilot testing and manufacturing in the fields of optoelectronics and biomedicine from Wuhan, accelerating the introduction of projects overflowing from Wuhan. When it comes to the flow of resources, opening the 'Huangshi Airport Area-Optics Valley' passenger and freight line, copying Daxing's approach to 'cross-region social security continuation,' can help talents and capital move efficiently within the metro area and make Huangshi an important hub for turning Optics Valley's achievements into results.

7. Conclusion

Huangshi is located near Huahu Airport and is starting to form its own air-rail economic layout. It's developing with the idea of 'three parks driving growth, multiple chains integrating, and twin-city collaboration,' showing strong growth momentum. However, there are still some

challenges, like a relatively small industrial scale, limited resources, and increasing regional homogenization. Looking ahead, Huangshi needs to build on its own resource advantages, learn from mature practices at home and abroad, and step up coordinated development between its airport and port. It should also focus on developing specialized fields like smart manufacturing and life sciences. At the same time, the city should boldly break administrative barriers, innovate in land and talent supply mechanisms, and actively integrate into the innovation ecosystem of the Wuhan metropolitan area. Only in this way can Huangshi turn its geographical advantages into a lasting competitive edge, leap from 'air-rail takeoff' to 'air-rail leadership,' and explore a replicable path for the high-quality development of the air-rail economy in the central region.

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