Research on high-end manufacturing and aviation economy development of Henan Province

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Abstract. With the development and construction of zhengzhou airport, Henan province' seconomic transformation and upgrading, aviation economy has become an integral part. High-end manufacturing will be the future development direction of China's manufacturing industry, so the organic combination of high-end manufacturing and aviation economic development is imperative. This article mainly introduced the aviation economy, high-end manufacturing as the breakthrough point, using SWOT to study how to perfect and improve the high-end manufacturing to develop the aviation economy, advanced manufacturing and aviation economy to promote common progress.

1 Introduction

Aviation economy is a new economic form formed by aviation hub as the center to attract air transport industry, highend manufacturing industry and modern service industry agglomeration development. Zhengzhou Airport Economy Zone is approved by the State Council as the first national strategy of the airport economic development and reform of the first area. Whether the area can develop smoothly and obtain experience, the air cargo industry will further promote the development of China's air cargo industry, especially to promote the rise of the Central Plains, the revitalization of Henan Province and the expansion of the central and western regions.

2 The Current Development of Aviation Economy in Henan Province

Henan Province, the most significant aviation economic development is the Zhengzhou airport port area. Zhengzhou Airport Economy Zone is China's first airport economic development zone, which is the Henan Zhengzhou City Xinzheng International Airport near the comprehensive bonded zone as the core of the aviation economy. It has farreaching significance.

The relevant national development planning report Zhengzhou airport construction is the construction of Central Plains' economic zone top priority, as Henan to enhance the degree of opening up, to create the level of opening up the Central Plains three-dimensional handle. In the port area, positive innovation and development of new ideas provide mature experience.for the overall leap-forward development of Henan. At the same time, actively develop a reasonable experimental area planning, the construction of high standards around the infrastructure, build efficient service-oriented management mechanism, and focus on the experimental area of environmental protection, so that high-speed economic sustainable development. The initial development goal is to 2017,and the experimental area of the facilities, basic services, industrial chain basic shape wil be done; by 2025, the experimental zone will become competitive, the international influence of large, leading the rapid economic development of Henan Zhongyuan open upland.

3 The SWOT analysis of the economic development for Zhengzhou Airport Economy Zone

3.1 Strengths

3.1.1 Traffic and Location advantages

Comprehensive experimental area has a good location and traffic advantages, the location of Zhengzhou City, although located inland hinterland, but as an integrated transport hub in central China, has an important geographical advantage which can not be copied. Beijing-Hong Kong and Macao high-speed, even the Huo-speed and other national backbone highway in this convergence, even around the city high-speed, Zhengzhou Airport Expressway, Zheng Shao-speed high-speed road network, and other highways, plus national high-speed rail, 107,310 State Road cross the experimental

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area. With the Zhengzhou City to the airport expressway, light rail line 6 and the "four port" linkage avenue complered, the airport port and Zhengzhou city merged into one, high-speed rail, light rail and road and air traffic Way will achieve the "zero" transfer. This will create good airspace conditions for the economic development of the integrated experimental zone, connecting east-west and north-south routes, facilitating the development of intermodal transport, and providing a powerful guarantee for the development of airport logistics.

3.1.2 Infrastructure improving

Over the years, Henan adheres to the high standard of design, high-intensity inputs and high-performance management concept, and strive to create a comprehensive experimental area of the airport industry development new platform. At present, relatively complete infrastructure such as power supply, drainage, communication, heating, natural gas, cable TV and broadband network have been built in the experimental area. As well as the number of quality to meet the requirements of the schools, hospitals, banks, hotels and passenger terminals and other living facilities for large and medium-sized enterprises settled in the experimental area to provide adequate support.

3.2 Weaknesses

The industrial structure of the aviation harbor area is unreasonable. In the aviation economy, high-end manufacturing industry is neglected, such as lack of core technology, insufficient R & D investment, low degree of concentration, high-tech manufacturing industry development. There is no complete industrial chain, and the number of enterprises is small, lack of world-class brand, imperfections but other issues are still outstanding. So Zhengzhou Airport Economy Zone in the high-end manufacturing industry gathering and development still has a long road to go. In this case, it is necessary to study the present situation and prospects, development environment and development strategy of the high-end manufacturing industry in Zhengzhou Airport Economy Zone.

In August 2012, the strategic high-end manufacturing industry will be included in the scope of emerging industries in the "second five" strategic emerging industries in Henan Province Development Plan ". In December 2012, the State Council promulgated the "Central Plains Economic Zone Planning" and clearly put forward to speed up the process of new industrialization to develop advanced manufacturing actively cultivate equipment manufacturing, bio-medicine, electronic information, new energy and new strategic new industries. In March 2013, the State Council approved the "Zhengzhou Airport Economy Zone Development Plan" on the pillars of high-end manufacturing industry has made a specific description. The promulgation of these documents for the Henan Province to speed up industrial restructuring, promote industrial transformation and upgrading pointed out the direction. Development of high-end manufacturing industry will undoubtedly be a focus of our province's development, which is of great significance to change the transformation of economic growth mode, optimize the industrial structure and improves overall competitiveness. But there is no doubt that the development of high-end manufacturing industry in Henan has just started, low-end manufacturing industry still occupies the majority of the manufacturing sector, and the development of the airport port can meet the high-end industry on the speed of a series of stringent requirements. High-end manufacturing industry will promote the aviation economy and high-end manufacturing industry and common development.

3.3 Opportunities

Our province port has external market potential. Zhengzhou is located in the hinterland of the Central Plains, radiation surrounding the economic location and rich labor resources in Henan Province, the comprehensive experimental area in the industry to undertake the transfer of the advantage is very significant, so the market has great potential. In the Ministry of Industry and Information Technology released the "Industrial Transfer Guidance Catalog (2012)" clearly defined Zhongyuan Economic Zone as the focus of regional industrial transfer. In recent years, Zhengzhou has made remarkable progress in industrial transfer, and its economic aggregate and market space have been enlarged obviously. This has provided a good external opportunity for enhancing the competitiveness of the comprehensive experimental area.

3.4 Threats

The central region competing to develop the airport economy, Zhengzhou airport in attracting investment and other areas faces fierce competition. Such as Wu Han, in 2006, became the first comprehensive pilot city for air transport and then Chang Sha, He Fei have established the development of regional industrial development strategy of the regional economy. Brothers provinces competing to develop the airport industry, will inevitably bring investment and industrial competition is increasing.

In addition, the rapid development of other modes of transport for the aviation industry is also a huge impact. Henan Province is the national railway transportation hub city, extending in all directions of the rapid development of high-speed rail industry will undoubtedly have a certain impact on the airport economy. The major feature of air transport is speed, but in recent years the full coverage of high-speed rail network is gradually affecting the air transport and

aviation economy. Convenient high-speed rail compressed part of the civil aviation transport market. Therefore, Zhengzhou airport economic development to find a breakthrough, to seek their own better development quickly.

4 Development strategy of high - end manufacturing industry and aviation economy

Comprehensive analysis of the impact of comprehensive experimental area of the airport industry development of various factors, highlighting the development of high-end manufacturing, in the external opportunities to seek development is the better Countermeasures. So, we choose Weaknesses and Opportunities as development strategy. As shown in the Table1.

Strength s (S)	Weaknesse s (W)	Opportunit ies (O)	Threat s(T)	Policy Selection (WO)
Traffic and Location advantag es ,Infras tructure improvin g	unreasonab le industrial structure	external market potential	Compe titive	Political strategy, Governme nt support, talent introductio n

Table 1. Development Strategy of Zhengzhou Airport Economy Zone.

4.1. Government policy guidance

The government can directly give subsidies or the implementation of tax cuts, improving the government's high-end manufacturing financial guidance policies to increase subsidies to stimulate the development of high-end manufacturing. Opening land use policy, to attract high-end enterprises settled in order to promote high-end enterprise development of aviation economy. Government campaign and increasing publicity attract high-end manufacturing companies. What's more providing a platform to increase the network and other information technology advocacy is necessary.

4.2 Developing high-end manufacturing agglomeration and base park strategy

High-end industrial agglomeration-different enterprises in the same industry and the same region can share basic public facilities and technical personnel in the region and form industrial clusters. Successful manufacturing clusters have the characteristics of export-oriented and centralized. They are in the region in a high-end manufacturing sector significantly exceeded the average level of the host country, showing obvious characteristics, comparative advantages and industrial scale. Meanwhile, high-end manufacturing cluster also has the effect of capital accumulation, which can effectively promote regional economic development.

Developing high-end manufacturing industry needs together and economic scale, so it is necessary to make high-end manufacturing base and park concentration. Large high-end manufacturing enterprises need to have their own base, which is similar to the manufacturing industry in the "Auto City", "Space City." Smaller high-end manufacturing enterprises should enter the industrial park. Only in this way can we truly realize the high-end manufacturing industries and enterprises gathered, resulting in economies of scale, in order to save infrastructure costs, rational use of infrastructure and a variety of public service facilities.

4.3 Introducing leading high-end manufacturing

The region's high-end manufacturing may not be able to meet local demand and the construction of such enterprises need a long time, so to speed up the local development we can choose to introduce high-end manufacturing. Many high-end manufacturing industries are in developed areas. Our province has the advantage of labor resources, and the high labor costs in developed areas, so many companies are willing to transfer to the central region, the province can introduce high-end manufacturing to attract our needs. At the same time, the government also can introduce some preferential policies to attract excellent enterprises, with the introduction of preferential policies, large projects, highlighting the introduction of the manufacturing industry leader, not blind investment, and it can enhance the introduction of enterprise level and influence. The focus is to attract large multinational companies, Taiwan-funded enterprises to settle down in the experimental area, and identify the weak links in the manufacturing sector in Henan Province, to guide the flow of funds to the R & D and other sectors to form high-end manufacturing industry cluster effect.

4.4 Developing high-end services

Services and manufacturing in parallel, can not develop high-end manufacturing alone, so we should pay attention to high-end manufacturing and related services in the coordinated development, in order to achieve mutual melting and mutual promotion. Focus on the development in the production period can provide services directly to the service industry. What's more focusing on the development of high-end manufacturing industry chain in the technical services, research and opening up, information security, logistics and transportation and other related industries, can do a good job in the development of high-end manufacturing protection.

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4.5 Introducing and training high-end technical personnel

High-end manufacturing industry requires a high quality of labor. Although Henan is a large population, but meeingt the needs of high-end manufacturing is still a big problem. Henan has developed traditional manufacturing, so its labor requirements are relatively low and the labor force may not be able to adapt to high-end manufacturing production. The labor force itself attracts the important advantages of foreign investment, but now something does not seem obvious, so training high-quality technical personnel is imminent. At present, there is a large gap in the number of high-quality skilled workers. Most of the laborers are migrant workers. Their cultural level is low, and it is difficult to upgrade their technical level in the short term. There is also a large number of college graduates who are graduated from colleges and universities. As a result, Adapt to the needs of production. Therefore, we should further strengthen the vocational and technical education, while training in the enterprise, the formation of a gang of a model and pass it down, so that more first-line technical staff to quickly get started.

4.6 Guide enterprises to increase investment

High-end manufacturing needs high invest to support its development of the industry, so the funding problem must be solved. It is essential to develop high-end manufacturing industry to integrate financial services with the development of financial service industry, expand its financing channels, and consider the capital chain of small and medium-sized enterprises in high-end manufacturing industry, and provide more financial support. Besides their own need to find funding channels, the national policy support is also very important. And continuously improve the manufacturing enterprise R & D innovation capacity for national science and technology special funds, and take the national special research project funding support, cultivate a number of technology research and development strength can lead the industry progress model enterprise.

5 Conclusion

In summary, the weak development of aviation industry in Henan Province is a high-end manufacturing industry, which can be a breakthrough of aviation development in our province. In the development of high-end manufacturing sector, there are many areas we need to improve. High-end manufacturing agglomeration can form a complete production chain, promote and serve the entire aviation economy. To the development of aviation economy in our province to bring more opportunities, while the rise of the central contribution to a force, is committed to building a more harmonious and prosperous society.

References

- Hongbin Li. Bei Jing: Journal of Beijing University of Aeronautics and Astronautics. On the Concept and Development of Aviation Economy. 02 (2014)
- 2. Jilin Long, Guangcai Liu. China Transportation Review. Aviation Economy: New Forms of Future Development of China 's Aviation Industry. 09 (2013)
- Zhenzhong Tian. Logistics Technology. Development Strategy of Aviation Logistics Based on SWOT Analysis in Zhengzhou Airport Economy Zone. 21:77-79 (2014)
- Yang Liu. Industry Productivity Research. The Strategic Orientation of the Development of China 's High end Manufacturing . 03 (2011)
- Lina Gao, Ping Wei. Journal of Industrial Technological Economics. An Empirical Study on the Spatial Structure Change of China 's High - end Manufacturing Industry: 2003-2009. 01 (2012)
- Daoxu Zhang. Economic Research Guide. Research on Development of High end Manufacturing Industry in Zhengzhou Airport Economy Zone. 26 (2014)
- Bianmin Kou. Statistics and Management. Discussion on Construction and Development of Zhengzhou Airport Economic Comprehensive Experiment. 04:99-100 (2016)
- Zhifu Wei, Zhanjie Zhou. Public Finance Research. A Study on the Financial Policy to Support the Zhengzhou Airport Economic Comprehensive Experimental Zone. 01:66-69 (2014)