

## Summary of Research on Aeronautical Characteristic Towns

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### Abstract

Aviation characteristic towns, also known as navigable towns, are based on the navigable infrastructure, gathering a variety of industries and carrying out related business, including aircraft sales, aircraft maintenance, aviation tourism, air exhibition, aviation culture dissemination and so on. First appeared in the United States, at present, the number of small towns with aviation characteristics in the United States accounts for 80% of the world's total. In terms of development mode, international aviation towns mainly adopt three modes: aviation + real estate, aviation + tourism and aviation + industry.

### Keywords

Aviation Characteristic Town; Policy Research; Connotation Study.

## 1. INTRODUCTION

In 2017, China completed 837,500 hours of general aviation production flights, nearly six times as many as 139,800 hours in 2010. Great progress has been made in the development of general aviation. However, at present, only a few small towns with aviation characteristics, such as Sanzao in Zhuhai, Aifeike in Jingmen and Pengzhou in Sichuan, have been built in China. The list of small towns with aviation characteristics published in Shandong Province includes Laixi Dianbu Aviation Culture Town and Houcun Aviation Town in Donggang District of Zhaozhou. However, in the 13th Five-Year Plan for the Development of General Aircraft Industry in Shandong Province drafted by the Development and Reform Committees of Shandong municipalities, nearly 30 small towns with aviation characteristics are proposed to be built. If other small towns with aviation characteristics are included, the number of planned towns will reach 100. The enthusiasm for building small towns with aviation characteristics in Shandong Province and even in the whole country is unprecedented. However, there are few studies on small towns with aeronautical characteristics in China. Gao Yuanyang of the Beijing Airlines Navigation Industry Research Center and the Institute of Civil Aviation Management Cadres of China hold that under the background of rapid development of navigation, small towns with aeronautical characteristics have great potential in the new urbanization. We should strengthen the research on small towns with Aeronautical characteristics of the United States to provide valuable experience and reference for China. Sun Miaoqing, taking Hengdian Aviation Town in Zhejiang Province as an example, studied the development of aviation tourism from the perspective of industrial integration, and put forward some constructive suggestions on how to develop aviation tourism. However, the above studies are limited to macro-suggestions. Domestic scholars have just started to study the development model of small towns with Chinese aviation characteristics, the agglomeration of different industries, and how to innovate and develop small towns with aviation characteristics.

## 2. RESEARCH ON POLICY BACKGROUND

### 2.1. Relevant Policies of Characteristic Towns

Under the background of the new urbanization development proposed by the Eighteenth National Congress of the Communist Party of China, the integration of production and city has become a new idea for the development of new urbanization. All cities are looking for a new path of industrial and urban development.

2015The concept of characteristic towns was first put forward in Zhejiang Province in 1997, which was written into the government work report and issued guidance. It was proposed that we should accelerate the planning and construction of a number of characteristic towns that adhere to the "four in one" of industry, community, culture and tourism and "three in one" of production, life and ecology.

2015In December, the Central Economic Work Conference pointed out that characteristic towns are important measures to promote the structural reform of supply side under the new normal economic situation, which meet the new requirements of current economic development, and also an important grasp to speed up the construction of new urbanization.

General Secretary Xi Jinping gave important instructions to the construction of characteristic towns: "Grasping the construction of Characteristic Towns and small towns has great potential and is of great significance to the economic transformation and upgrading and the construction of new urbanization".

2016In February, the State Council promulgated "Several Opinions of the State Council on Further Promoting the Construction of New Urbanization" (Guofa No. 8, 2016), which calls for speeding up the development of characteristic towns.

2016In July, the Ministry of Housing, Urban and Rural Development and Reform, the National Development and Reform Commission and the Ministry of Finance jointly issued a paper proposing the cultivation of about 1,000 characteristic towns by 2020.

2016In December, the National Development and Reform Commission issued the Guiding Opinions on Accelerating the Construction of Small Towns with Beautiful Characteristics.[2]

2016In September, the General Office of the Shandong Provincial People's Government issued the Notice on the Implementation Plan of Establishing Characteristic Towns in Shandong Province. It was proposed that 100 Characteristic Towns should be created by 2020.

From the policy level, the construction of characteristic towns will become a "new engine" to promote economic development and realize economic leap under the new normal conditions.

### 2.2. General Aviation and Airport Policies

2013In July, the State Council's Opinions on Promoting Civil Aviation Development raised the development of civil aviation industry to a national strategy. General Aviation has become a new bright spot in China's industrial upgrading, and it belongs to a strategic emerging industry supported by national policies.

Document No. 38 of the General Office of the State Council in 2016, Guiding Opinions on Promoting the Development of General Aviation Industry, clearly states that 500 general airports will be built by 2020.

The Shandong Provincial Government has promulgated the Opinions of the Shandong Provincial People's Government on Accelerating the Development of Civil Aviation Industry and the 12th Five-Year Plan for the Development of Shandong Aviation Industry.

The medium-term and long-term development plan of Shandong civil aviation industry (2014-2030) put forward that by 2030, there will be 16 transport airports and 30 general

airports in Shandong Province, and the general aviation industry will become an important engine of Shandong's future economic development.

The development of general aviation is of great significance for Shandong Province to expand domestic demand, promote economic restructuring, accelerate industrial upgrading, promote scientific and technological progress, and build a comprehensive transportation system.

To sum up, under the background of the new and old kinetic energy conversion and the new normal economic development, the construction of small towns with aviation characteristics is facing unprecedented policy opportunities, so the research on innovative development of small towns with aviation characteristics is also urgent.

### **3. STUDY ON THE CONNOTATION OF AERONAUTICAL CHARACTERISTIC TOWNS**

#### **3.1. Study on the Connotation of Characteristic Towns**

At the two sessions of Zhejiang Province in 2015, the provincial government work report described the characteristic towns: "Promoting industrial agglomeration, industrial innovation and industrial upgrading with new ideas, new mechanisms and new carriers.

Characteristic town is not an administrative town, but a new carrier of economic and social development with industry as the core. It requires distinctive industrial characteristics, strong humanistic atmosphere, beautiful ecological environment, tourism and community functions. As a complex of characteristic industry, regional culture, beautiful environment and perfect supporting system, characteristic town is a sustainable and innovative industrial organization form. It is an important platform for high-end industry, emerging industry and talent gathering. It not only embodies the superposition of functions of industry, culture, tourism and leisure energy, but also embodies the high integration of production, life and ecology. Essentially, it is a high-level integration of production, life and ecology. A kind of agglomeration economy, population concentration, industrial agglomeration and exchange agglomeration, thus bringing about the agglomeration of consumption activities.

In the construction of characteristic towns, we should grasp the three concepts of "new", "special" and "integration". New refers to innovation (new carrier of innovation and entrepreneurship and new momentum of economic development), coordination (highlighting the integrity and complementarity of regional development), green (resource conservation and environmental friendliness), openness (breaking administrative divisions) and sharing (radiation drives the common development of surrounding regions). In particular, it refers to the characteristics of industry, culture and development mode. Fusion refers to the integration of production, city, people and culture, industrialization, informatization and urbanization, and the integration of multiple subjects.

In a word, characteristic towns are an important functional platform which combines innovation, coordination, green, open and shared development concepts, combines their own characteristics, finds industry orientation, plans scientifically, excavates industry characteristics, humanities and ecological endowments, and integrates production, city, people and culture.

#### **3.2. Research on the Connotation of General Aviation and Airport**

##### **(1) General aviation**

Definition: According to the provisions of the International Civil Aviation Organization, general aviation refers to the use of aircraft for all civil aviation activities except commercial flights (fixed routes). Article 145 of the Civil Aviation Law of the People's Republic of China stipulates that "general aviation refers to the use of civil aircraft for civil aviation activities

other than public air transport." It covers operational flights in industry, agriculture, forestry and fisheries, as well as flight activities in medical and health, education and training, rescue and disaster relief, marine monitoring, culture and sports, etc.

**Important role:** The development of general aviation is the need of economic and social development. The development of general aviation plays an important role in increasing investment and promoting consumption. It can effectively promote economic growth and promote the development of related industries. It is estimated that 1 yuan of investment in the aviation industry can stimulate economic growth by 10 yuan. At the same time, the development of general aviation is the need of developing high-tech industry. The development of general aviation requires a large number of aircraft, which will promote the improvement of aircraft manufacturing level in China, and further promote the development of a series of related high-tech industries such as new materials, electronics, communications, energy, precision manufacturing and so on. The development of general aviation is also the need of modern business activities and modern tourism.

## (2) General Airport

**Definition:** Article 84 of the Regulations on the Administration of Civil Airports (Decree No. 533 of the State Council) defines "general airport" as follows: "refers to civil aircraft engaged in industrial, agricultural, forestry, fisheries and construction industry, as well as medical and health, emergency and disaster relief, meteorological detection, marine monitoring, scientific experiments, education and training, cultural and sports flight activities. Airport for take-off, landing and other services.

2012The General Airport Construction Code promulgated in 1998 puts forward the classification of general airports. According to this standard, general airports can be divided into three categories according to their impact on the public interest.

A general airport refers to a general airport with 10 to 29 aircraft operating manned flights or with a maximum monthly takeoff and landing volume of more than 3000 sorties.

**Class II general airport:** refers to a general airport with 5 to 9 operational manned flights of aircraft or a maximum monthly takeoff and landing volume of 600 to 3000 sorties.

Three types of general airports: general airports except Class I and II.

**Function and characteristics:** General aviation airport is small in scale, less in investment and less in equipment. According to statistics, the funds needed to build a kilometer railway are enough to exceed the funds needed to build a small and medium-sized airport. The construction of general airport provides convenience for local residents to travel and plays a role of high-end industrial agglomeration. It will introduce a series of navigation guarantee services, such as navigation maintenance industry, aviation oil, aviation materials and so on. It also promotes and promotes the development of tourism.

At present, the main source of revenue for general airports is to collect parking fees and landing fees for the guaranteed aircraft, to collect guaranteed fees for the stationed aircraft, and to carry out aviation fuel filling business to obtain revenue. These charges are low in unit price and small in total, which make it difficult to support the hundreds of operating costs of general airports every year. Investment recovery and depreciation are even more irreparable. As a public infrastructure, General Airport itself should not be used as a profitable tool. But investment recovery and operation cost are also the problems that airport investors must face.

## 4. CONCLUSION

Under the background of new urbanization and new normal economic development, on the one hand, from the policy level, the construction of Aeronautical Characteristic Towns as a combination of Characteristic Towns and general aviation industry is facing unprecedented

policy opportunities. On the other hand, China's research on small towns with aviation characteristics is still in its infancy. There are few studies on the components of small towns with aviation characteristics, the role of industrial agglomeration, which development model and development path are more suitable for China's national conditions. Therefore, it is urgent to study the innovative development model of small towns with aviation characteristics. Using foreign experience for reference, relying on general airport for related development is a feasible way. Under this background, aviation towns will develop rapidly under the background of the development of Chinese Characteristic Towns and the development of navigation.

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