The Analysis and Layout Research of Airport Economic Zone Industry in Wuhan

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Keywords: Airport Economic Zone, Status Quo Analysis, Positioning and Layout, Research.

Abstract. Air transport industry plays a more and more important role in the development of regional economies and airport economic zone become a driven force for the development of the economies around airport. It can promote urban economies grow fast, optimize the urban space resource and create a considerable amount of jobs. So it is significant to the location and reasonable layout of airport economic zone industry so as to make a full use of its importance for the surrounding economies. The airport economy in Wuhan district status and layout were deep research and analysis in this paper and some suggestions are put forward to promote the development of Wuhan airport economic zone.

Introduction

With the rapid development of economy, industry positioning and structure upgrading, the importance of air transport industry in regional development has become more and more important. Airport economy as the areas around the airport development of active force and new economic growth mode, it not only can create a lot of jobs, and promote urban economic fast growth, promote the upgrading of the industrial structure, optimize the allocation of resources for urban space, enhance the city in the global economic system the status of an important role. Therefore, the airport economic zone industry positioning, layout of reasonable planning, to give full play to the central role in the economy of the surrounding is particularly important.

The airport economic zone as a new economic and social phenomenon has attracted great attention of scholars at home and abroad. In the world, John D. Kasarda professor of the University of North Carolina in 1992 first proposed the concept of “Aerotropolis”. Due to the different research angles, methods and key points, as well as the impact of foreign research and translation differences, domestic scholars on the title of this phenomenon is not unified, we used such as: aviation city, airport city, air-transportation related economic zone, airport economic zone and so on a variety of concepts.

The domestic researchers engaged in the planning work tend to use “Air-City” or “airport city” concept. Liu Wujun (1999) believes that: “Airport Economic Zone is a corn economic zone which aims at developing air transport industry, a geographical center of the airport presented in the range of a certain geographic range (usually means the space that setting the airport as the center and expanding the range of 10-15km radius), expanding along traffic line. The business park is consisted of forerunner industry and relevant industry. The first one includes Transportation industry (passengers and freight transport service) and Aviation Services; the latter one is consisted of airport services, modern logistics industry, Modern airport manufacturing industry etc.” [1]

1. Outline and Development Status

Wuhan airport economic zone is located in the northwest of Wuhan City. It is divided into planned area and coordinated area. Wuhan airport economic zone covering “two cities three areas” which refers to the two cities of Wuhan and Xiaogan and three zones including Huangpi District, Wuhan Dongxihu District and south part of Xiaogan [1]. Economic Area is covering air transport, logistics, aircraft maintenance and other industries. According to the statistics of 2013, planned area is 371km² among which 51km² is used for building land, and the total population of it is 400
thousand. The coordinated area covers 1105km$^2$ among which 112km$^2$ is used for construction land and has a population of 10.5 million.

### 1.1 Comprehensive economic development status

Since the completion of Wuhan airport economic zone, it is developing fast with growth rate keeping at 20%. Until 2012, the GDP in coordinated area has reached 70 billion yuan, accounting for 8.7% of the gross regional product of Wuhan City and the proportion gradually increased in recent years which indicates the growing importance of the coordinated area of the airport in Wuhan economic development. In recent years, the economic growth of Wuhan Dongxihu District and Huangpi District are higher than the average level in Wuhan City. The Dongxihu economic grows faster and real estate investment in Huangpi District increased rapidly in recent three years but Xiaogan airport economic zone development has just started.

### 1.2 Industry situation

#### 1.2.1 The overall industrial development status

Airport coordination zone existing industrial, agricultural and sideline products processing industry to highlight a dominant position, in 2012 the total output value of more than 150 billion yuan. Other total output value of more than 50 billion industry, including electrical machinery and equipment manufacturing, metal products industry, tobacco industry, nonmetallic mineral products industry, alcoholic beverages and refined tea manufacturing industry, automobile manufacturing, textile and apparel industry.

#### 1.2.2 Dongxihu District Industrial Development Status

Dongxihu District has formed four major advantages industries including a food processing, light textile machine industry, building materials, packaging, bio medicine industry and has several aircraft maintenance and aviation services to aviation enterprises: Sanjiang Space Group, Lingyun science and technology, Wuhan Hangda etc. Expanding the scale of food processing industry and the tobacco industry chain in Hubei becomes the city’s total output value of food processing industry worth one hundred billion yuan important support. Food Industrial Park, bonded logistics park, Taiwan Industrial Park, Taiwan Strait science and Technology Park have formed joint efforts. Industrial Development Area doubled is Dongxihu District to achieve industrial doubling the main carrier, since 2012 (as of May 2013) the introduction of industrial projects 51,129 billion yuan in industrial investment, a number of Industrial Enterprises Above Designated Size reached 46, initially formed in food processing, textile machinery, raw pharmaceutical industry as the leading industrial structure.

#### 1.2.3 Huangpi District Industrial Development Status

Huangpi District aimed at industrial chain of high-end links in investment, initially formed in the aviation industry, electronic information, tracking equipment manufacturing, automobile and parts, high-grade consumer goods and industrial system dominated. Huangpi District industrial distribution can be divided in three large groups: airport economic area of demonstrative garden of industry of Huangpi District advanced manufacturing as the main carrier; North Hankou matching Industrial Park, new building materials, light industry, furniture manufacturing, food and agricultural products processing industry can be the leading part; Electronic information, energy saving and environmental protection, equipment manufacturing industry, the steel deep processing industry are the leading part in Qian Chuan City Industrial Park.

### 1.3 The current development situation for service industry

Coordination of airport district service industry development compared to other industry has lagged behind. At present it still sets wholesale and retail, warehousing postal, transportation, accommodation, catering and other traditional service industry as the main object of development. Among them, wholesale and retail industry in Dongxihu District is stronger but real estate development in Huangpi District is faster.
2. Analysis of Airport Industry Development Status

2.1 The current status for development mode

The current status of Wuhan airport economic zone mainly sets the district’s own development as the driving force while dependence of the airport and utilization rate is not high, but urban economic development is quite good. In the late stage of industrialization, aviation related industries (manufacturing of aviation maintenance, aviation food) has certain development but Radiation driven effect is not obvious. Airport economy is still in the primary stage.

Dongxihu District industrial base is better, processing of agricultural products, food and beverage, tobacco, textiles and clothing industry among which light industry has a long history and strong foundation; The development of Taiwan business park, Strait science and Technology Park promoted the development of Dongxihu District machinery manufacturing industry; The aviation industry-the Sanjiang Space Group, Lingyun science and technology, Wuhan Hangda three leading enterprises, have a good foundation for the development, but the radiation driven effect has not yet appeared. Overall, Dongxihu District development model is oriented to take advantage of the resources of traditional light industry, leading enterprises significantly, machinery manufacturing industry, the rapid development, the foundation of aviation industry is not associated with the local economy [5].

Due to the long domination by agriculture, Huangpi’s industrial development presents obvious small and scattered situation. Agricultural and sideline food processing industry, metal products industry, non-metallic mineral products industry have a certain basis for development, but smaller companies, large enterprises have not yet appeared so the industry competitiveness is not strong. In recent years, with the development of the North Hankou international trade center, the tertiary industry in Panlong City has grown fast. The aviation industry, the hang general aviation landing project, but has not yet started. In general, Huangpi airport area economy development model is mainly small and medium enterprises spontaneous growth. Trade and real estate develops faster, and aviation industry is starting but promising.

There is a small amount of tertiary industry in Xiaogan Airport Economic Zone, a town is dominated by the traditional agricultural economy

2.2 Analysis on the current situation of independent innovation power

Some well-known brands have already begun to take shape: such as Coca Cola, unified food, Shuanghui food, Mengniu Dairy, Yuanda electrical has settled in these places which enable them with a certain brand advantage.

Part of the leading enterprises have problems in making decision, in addition to local enterprises such as week coot food with complete decision ability, and most of the leading enterprises of the decision is affected by external influence so local decision-making ability is not strong. This makes it difficult to guarantee the autonomy of leading enterprises meanwhile industrial development also has a certain vulnerability.

Industry research and development ability are missing: Lingyun group, TCL group, week coot food, Hubei in smoke have the function of research and development but most of the other industries are lack of R & D links to enhance the capability of independent innovation of greater impact.

3. Current Situation of Industrial Space

Airport Economic Zone status of gross value of 904 billion yuan, mainly in the East Lake industrial, has formed food and beverage, tobacco, building materials and logistics market, tourism, commerce and other leading industry, food, machinery manufacturing, and other industries. Status of industrial land is about 36.7km$^2$, the average output value of yuan, distributed in the industrial park of the 9 concentration. The development of the park varies larger, only food industrial park, bonded logistics park construction tends to saturation, land supply cannot meet the development needs and other industrial park along the main road scattered layout, in the park there are many for the development.
4. Advantages

4.1 Location advantage

Wuhan city circle, located in China’s main body function area of “Two vertical and three horizontal”, and in the center of five cities cluster space level, and it’s the strategy node of Chinese “Tianyuan”. It stands in the east of Yangtze River economic belt and connects the Maritime Silk Route and the Silk Road economic belt in the west, Wuhan locates in the middle reaches of the Yangtze River, which is the strategy pivot of the west Yangtze River economic belt connecting Chengdu, Chongqing, and Shanghai, Nanjing in the east. At the same time, it connects to Changsha and Nanchang along the Yangtze river tributary, it’s the triangle in the pilot city cluster. Meanwhile, Wuhan tianhe airport located in the central of the Chinese main land, only two hours to reach main cities.

4.2 Traffic advantages

Wuhan known as thorough fares of nine provinces, Wuhan airport economic zone has a comprehensive capacity of the strongest international airport, the largest Asia railway marshalling yards and large railway freight yard, the national railway container terminal, Beijing to Hong Kong and Macao expressway and Shanghai-Chengdu expressways as well as Hanjiang river mouth freight port and other major transport infrastructure. Adjacent to the national inland shipping is now planning for the second largest port. It’s air speed and the Yangtze river shipping traffic advantage make the unique pattern of “double port”, and the entire inland areas located the middle reach of Yangtze river and mixed with the land area traffic facilities with train, river shipping, and airport transportation development potential, and have the great potential of comprehensive portal transportation development [2].

4.3 Science and education advantages

Wuhan science and education power is one of the most outstanding advantages. At present, compared to other cities in China, the number of ordinary university ranks the second as well as Guangzhou in the whole country, the number of college students ranks first in the country; Graduate education students ranks the third, institutes of Chinese Academy of Sciences and the total number of 985 universities as well as national laboratories rank the third among other cities. With the help of science and education advantage, Wuhan airport economic zone must have strong potential in independent innovation.

5. Development Suggestions

5.1 Airport services

Airport services are including hotel, airline food services, and other service industries. Due to special environment, airport has its own unique characteristic of locating at the intersection of a large number of people and logistics center, thus the airport services have close connection to the airport industry, so the airport service industry should be put as the first industry to develop. What’s more, the development of airport services should become the key industry at airport economic zone [4].

5.2 To develop modern logistics industry

Depending on the logistics park, it’s the goof way to develop the air express logistics and international transshipment logistics, bonded logistics, trade logistics, the logistics industry, such as priority to introduce domestic and foreign famous logistics enterprises. And Promoting the priority areas development including: accelerating the enterprises construction of regional air express logistics ; Enhanced the combined transport effect via express logistics and international logistics, bonded logistics, commerce logistics and to build the regional express logistics center; thus gradually building the international logistics and convenient transport system, improving the international transit goods regulation facilities, further standardizing and simplifying the transit
procedures, reducing transfer costs, eventually to achieve the aim of the international transit business services competitiveness.

5.3 To develop modern manufacturing

Modern manufacturing industry is the combination of high-tech and traditional manufacturing industry of a new industry, so that the production process is strong airport directivity [3]. And high-tech oriented manufacturing has great especially at this point, it is knowledge-intensive and knowledge-intensive industry, with the characteristics of high added value, small volume, time-sensitive, product update quickly and so on, thus the industry must was based on the high degree of integration which maintaining the vitality and researching as well as development, transportation, sales, and have great requirements for technical personnel, due to the fierce competition among enterprises, they have great dependence on aviation logistics, which can fully use of the advantages of the airport, thus modern manufacturing has also becoming one of the most fully use the airport advantages in airport economic zone.

Reference


