

# *Research on Formation Mechanism and Path of Aviation Economy Spillover Effect on Regional Economy*

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**Abstract:** In recent years, with the continuous development of China's aviation economy, the regional policy system has been further improved. The development of aviation economy can form a strong pulling force and driving force for regional economy. Aviation economy has a strong spillover effect on regional economy because of its transportation advantages and the role of advanced production factors. Aviation economy can enhance the comprehensive competitiveness and radiation of the region. At the same time, it is an important way to improve the international level of regional economic development. Firstly, this paper analyses the industry chain of aviation economy and its spillover effect. Then this paper analyses the formation mechanism and path of aviation economic spillover effect. Finally, some suggestions are put forward.

## 1. Introduction

With the further deepening of economic globalization and international industrial transfer, air transport has developed rapidly because of its fast and efficient. Promoting regional economic development through transportation is a new mode of economic growth. The development of aviation economy has attracted wide attention, and the local government has also actively constructed the airport economic zone. The government expects to promote the development of aviation economy through airports. Therefore, they take aviation economy as a new economic growth point to guide and cultivate. Aviation economy takes airport hub as its core to expand regional space and radiate economic space to the surrounding areas. Airports can accelerate the agglomeration and flow of production factors, such as people flow, logistics, information flow and capital flow. It has a strong spillover effect on the surrounding areas and has become a new growth pole to drive regional economic growth.

## 2. Aviation economy

### 2.1 Aviation economic industry chain

Aviation economy includes all industries in the core industry chain of aviation, including aircraft R&D manufacturing, aviation service guarantee and aviation operation. Besides aviation core industry, aviation economy also includes aviation related industry. The industrial chain model of

aviation economy is a typical mixed industrial chain, which consists of a main industrial chain and several auxiliary industrial chains. The broad aviation economy can cover most of the industries of the national economy, which plays a much greater role than the general industry in pulling the region, as shown in Figure 1.

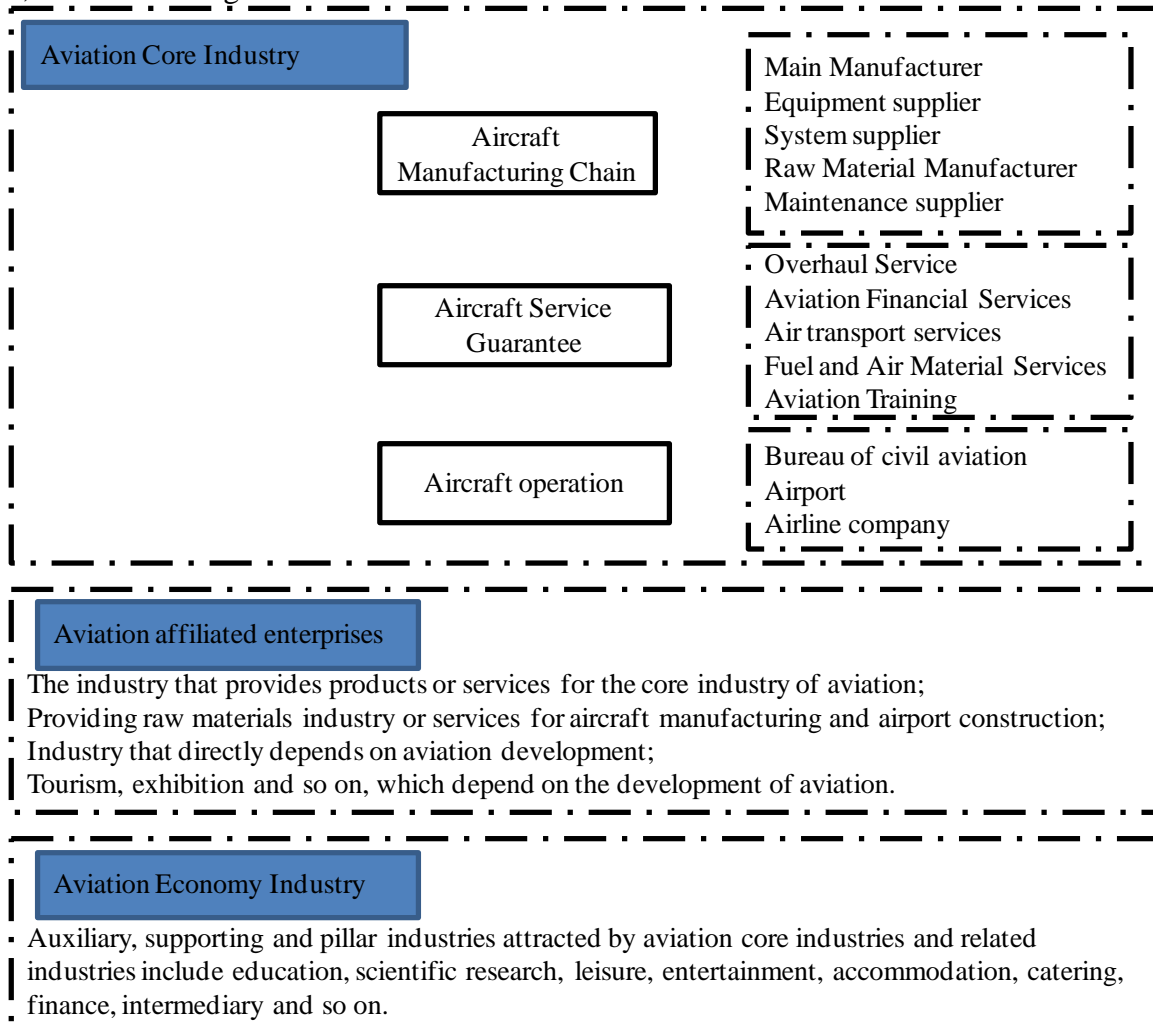


Figure 1: Aviation Economic Industry Chain

## 2.2 Aviation economy spillover effect

The aviation economy spillover effect can be understood as follows.

When the behavior of the main body of aviation economy brings improvement to other economies, but the aviation economy can not get all the benefits. We think that the behavior of aviation economy has spillover effect. So spillover effect is actually a description of economic externalities. The aviation economy spillover effect is an unconscious and non-subjective influence on the growth of surrounding regional economy in the process of its emergence and development.

## 3. Formation mechanism of aviation economy spillover effect

### 3.1 Efficient air transport function

Rapid and efficient air transport function is the fundamental reason for the aviation economy

spillover effect. According to the new economic growth theory, human capital, knowledge, technology and other factors are endogenous factors to promote economic growth. With the further deepening of globalization, the air transport industry has developed rapidly. Air transportation is the fastest, convenient and efficient mode of transportation. It is the first choice for the displacement of high-quality talents and high-tech products, especially some high-quality talents, such as senior managers, government staff, academics and so on. In order to save time and cost, elite personnel tend to choose air transport mode. In the emergence and development of airports, there are many sources of spillover effects of aviation economy, such as fully functional Airport facilities, accessible air routes, high-quality passenger flow, high-tech cargo flow.

### **3.2 Convergence of traffic advantage attracting elements**

Transportation advantage of airport area attracts the agglomeration of many factors, which is the external condition of aviation economy spillover effect. With the development of global economic integration, the role of air transport in regional economic development has become increasingly prominent. Transportation infrastructure can promote the agglomeration of capital, labor, technology and other factors of production in many ways. In the current era of speed economy, airport is an important transportation infrastructure. The advantages of fast and convenient airports have attracted a large number of industries to gather around them. Airports attract factor industries to gather in and around the airport, such as technology, capital, information and population. With the construction of airports and the development of new functions, the scale of air transport will continue to increase. Therefore, the gathering and diversion functions of airports are gradually enhanced. Airport will attract more factors to gather, which promotes many industries closely related to airport functions, such as high-tech industry, modern manufacturing industry, modern logistics industry, business exhibition industry and so on.

## **4. The path to form the aviation economy spillover effect**

### **4.1 Technology diffusion and knowledge spillover**

Technology diffusion and knowledge spillover are the ways to realize the aviation economy spillover effect. According to the input-output linkage driving theory proposed by Venables, industrial agglomeration enlarges the local demand for upstream products and reduces the transportation cost of downstream products. Therefore, the region will improve the efficiency of resource utilization and reduce the overall transaction costs within the region. This not only enables upstream enterprises to produce on a higher scale, but also improves the efficiency of downstream enterprises. Aviation industry cluster takes aviation manufacturing industry and air transportation industry as its core. Other leading industries include aviation logistics industry, high-tech product manufacturing industry, international business exhibition industry, etc. Leading industries will produce technology diffusion, knowledge spillover and economic spillover through forward linkages, backward linkages and side linkages. By promoting the development of related industries, the aviation economy will radiate to the related industries in its industrial chain. Then it will drive the development of the whole regional economy.

### **4.2 Vigorously develop electronic commerce**

We should speed up the construction of e-commerce market system. By establishing a "four-in-one" integration development mechanism of entity enterprises, e-commerce, information networks and logistics distribution, the airport economic zone can vigorously promote the extension

of e-commerce from product sales to upstream procurement, downstream procurement and distribution in the industrial chain. Airport areas should further accelerate the development of cross-border e-commerce and the construction of electronic ports. Through the agglomeration of well-known e-commerce and logistics enterprises, the airport area will form the advantages of integration of e-commerce and modern logistics, and then build an international aviation logistics center. Airport areas should actively cultivate and expand new information services such as Internet of Things, Cloud Computing, Big Data, Mobile Internet, Satellite Navigation. By exploring cooperation models in emerging areas, the aviation economy spillover effect will drive the regional economy of the whole airport area.

## 5. Conclusions

The aviation economy spillover effect on regional economy is not spontaneous. It needs the joint efforts and cooperation of various industries. Therefore, it is far from enough to build and develop aviation economy only depending on geographical conditions and location advantages. It needs a variety of factors, such as supporting ground transportation network, overall transport demand, regional industrial restructuring and so on. It is more important for the aviation economy to give full play to its spillover effect to meet the needs of regional development around the airport. The airport economic zone should become the growth point of regional economy.

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