

The study on China's civil aviation manufacturing industrial development strategy facing international industrial transfer

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Abstract. This paper analyzes the characteristics of world civil aviation manufacturing industry and the present situation of the international transfer, on this basis, the influence of international transfer on China's civil aviation manufacturing industry is discussed. And it also discusses the global civil aviation manufacturing industry how to get better under the new trend of international transfer.

1. Introduction

The increasing scale of civil aviation manufacturing international transfer will have great impact on China's civil aviation manufacturing industry, which provide opportunities and challenges for China's civil aviation manufacturing industry. Therefore, it is an important issue that China's civil aviation manufacturing industry how to develop facing the new trend of global civil aviation manufacturing industry .

2. The current situation of international industry transfer of civil aviation manufacturing industry

2.1 The civil aviation manufacturing market is highly monopolized

With the restructuring and merger of the world's civil aviation manufacturing industry , it has formed a monopolistic competition between the US Boeing Company and the European Airbus "Duopoly" in the global trunk aircraft manufacturing market. The two oligarchic enterprises continuously invested heavily on technology research and development, enhance their core technology, so as to consolidate its monopoly in both manufacturing and research and development. Besides, the civil aviation manufacturing industry shows oligopolistic competition in many aspects. For example, in the engine market, GE, Rolls-Royce and Pratt & Whitney are the three largest. In the avionics system market, develop to where it is today, it basically forms a market dominated by giants such as Honeywell International and Rockville Collins. Honeywell Company, Hanson Company and GoodRich Company occupy the dominant position in the electromechanical equipment system market. In life equipment system on the market, BAE aerospace company has high market share, its scale has been ranked among the world's top 100 aviation enterprises; In international airport equipment market, the dominant firms have the American FMCTechnologies Inc, French TLD group and TITAN, German SCHOPF Maschinenbau GmbH, etc.; In the atc equipment market, the dominant French Navcontrol, Canada Intelcan, Thales group, Raytheon, Aeronav etc. .

2.2 The scale of international transfer of civil aviation manufacturing industry is expanding

At present, the civil aviation manufacturing significantly expands, the international transfer of civil aviation manufacturing industry in developed countries is not only the production base is located in other countries, the research and development, procurement, sales and after-sales service, and other operating link also started in these countries, while implementing the horizontal integration of investment. At the same time, the world civil aviation manufacturing industry international transfer chain extends gradually, namely the civil aviation manufacturing industry in developed countries

started to civil aviation manufacturing industry chain, the various stages of the product of the middle and lower reaches to the whole industry chain of large-scale investment, the vertical integration of investment. In that world civil aviation international transfer of manufacturing scale is more and more big, the level is higher and higher.

2.3 Subcontracting production has become an important way of international transfer

Subcontract production refers to a country of the contractor, with their own capital, technology, labor, equipment, raw materials and licenses, etc., the foreign contracting related parts or systems of manufacturing enterprises, and according to the contractors and clients the price stipulated in the contract signed, receive payment for the cost and profit due to a way of international production transfer. At present, subcontracting production has become an important way for the civil aviation manufacturing industry to reduce costs and transfer production capacity. It is one of the signs of the globalization of civil aviation manufacturing industry and the result of the deepening international division of labor. At present, more than half of the aircraft overhaul and modification business in the world, engine maintenance and component maintenance business is outsourced to third parties to reduce the cost of aviation maintenance. For major international aviation system integrators such as Airbus and Boeing, they can seek lower production costs through production subcontracting and obtain greater profits. At the same time, subcontracting production can also reduce the manufacturing cost of the contractor, so as to focus on the development of new and better technology, focusing on their core areas, through the reorganization of this business and industrial layout adjustment to gain strategic advantage. At the same time, subcontracting production can also reduce the manufacturing tasks of the contractor, so as to focus on the development of new and better technology, focusing on their core areas, through the reorganization of this business and industrial layout adjustment to gain strategic advantage.

3. The influence of International Industrial transfer of Civil Aviation Manufacturing Industry on China

3.1 Strengthen the international cooperation of civil aviation manufacturing industry

Because of the characteristics of the civil aviation manufacturing industry itself determines its internationalization characteristics, therefore, our country must vigorously carry out international cooperation to develop the civil aviation manufacturing industry, and the acceleration of the international transfer of the civil aviation manufacturing industry will be conducive to the expansion of international cooperation. Both civil aviation manufacturing industry transfer of production capacity, and the transfer of the civil aviation manufacturing research and development activities, will bring to China's civil aviation manufacturing industry and the civil aviation manufacturing powerhouse for more cooperation opportunities, it also can make our country civil aviation manufacturing partners, risk by subcontract production, continuously improve the level of manufacturing and research and development of civil aviation, so that to promote steady and rapid development of civil aviation manufacturing industry in China.

3.2 Improve the industrial structure and layout of China's civil aviation manufacturing industry

From the view of industrial development law, the strategic decision of the aircraft main system integrator has certain influence on other level integrators and suppliers, and the system integrator will transfer the civil aviation product production to China for the sake of its own interests. It will help to promote the extensive cooperation between China's civil aviation manufacturing industry and international aircraft main system integrators. With the deepening of the international transfer process, China's civil aviation manufacturing industry will continue to optimize the industrial structure and layout.

3.3 Promote the development of the related industries of civil aviation manufacturing

Civil aviation manufacturing industry is the industry with the highest scientific and technological content and the most complex technology. Developing civil aviation manufacturing industry vigorously will upgrade the industrial level and the technical level of machinery, electronics and other related industries in China, and optimize the industrial structure. At the same time, it can form a longer industrial chain, promote the development of civil aviation transportation services, civil aviation maintenance services, modern logistics, civil aviation finance and other modern services, and promote the upgrading of China's industrial structure.

4. Development strategies of China's civil aviation manufacturing industry

4.1 Accelerate the transfer of international civil aviation manufacturing industry to China

As the international transfer of civil aviation manufacturing industry will have a positive impact on the backward countries, China should make full use of favorable conditions, such as good industrial infrastructure, investment environment and huge market demand, strengthen project cooperation with multinational civil aviation manufacturing enterprises, and speed up the pace of international transfer of industry. At present, the infrastructure in mainland China, especially in the eastern coastal areas, has been basically perfected. This kind of good resource base has certain attraction to the multinational corporation of civil aviation manufacturing industry. Making full use of this good industrial infrastructure, it will provide enough attraction for the world civil aviation manufacturing enterprises to transfer to China, so as to accelerate the industrial transfer of the world civil aviation manufacturing industry to China.

At present, China's increasing efforts to protect intellectual property rights will gradually ease the concerns of multinational civil aviation manufacturing giants about possible technological leaks in the process of industrial transfer. We will strengthen protection of intellectual property rights, weaken restrictions on foreign investment imposed by industrial policies, further improve the investment environment, and accelerate the transfer of international civil aviation manufacturers to Chinese industries.

More importantly, China's civil aviation market has grown rapidly to the world's second largest in recent years. The demand for the aviation industry brought by the expansion of the market scale has brought huge market opportunities for the development of the civil aviation manufacturing industry. Airbus and Boeing have noticed the size of the Chinese market, which has weakened its negotiating position. This enhanced negotiating position due to market expansion has enabled China to demand more aviation industry enterprises to accelerate the pace of industrial transfer to China.

4.2 Improve the position in the civil aviation manufacturing industry chain

The international transfer process of global civil aviation manufacturing industry is dominated by low added value, which is mainly transferred through subcontract production. China can participate in the industrial transfer of the international civil aviation manufacturing industry because of its low manpower cost and certain capital and resource base, so we have a certain comparative advantage. This for China's civil aviation manufacturing industry accumulates more civil aviation manufacturing industry production, the management experience, own technology, management and so on each aspect accumulation could lay the foundation.

However, this comparative advantage is not conducive to China's occupation of the global civil aviation manufacturing industry in the medium and high-end sector. With the enhancement of China's own economic strength and technological level, China needs to gradually shift from simple production and processing to research and development partners who take on certain risks, and participate more in the international transfer of research and development activities in the civil aviation manufacturing industry, occupying a higher value-added link in the international civil aviation manufacturing industry chain. The development of the civil aviation manufacturing industry in China should strive for more parts and components of the civil aviation industry to be produced and assembled in our country.

4.3 Improve the layout of China's civil aviation manufacturing industry

The industrial layout of China's civil aviation manufacturing industry is dispersed, which makes the development of China's civil aviation manufacturing industry lack the strength of agglomeration, and the industrial correlation and spillover effect are not obvious. From the successful experience of the development of foreign civil aviation manufacturing industry, we can see that the road to cluster development is an effective countermeasure for the big civil aviation countries to move toward a strong civil aviation country. In the future development of China's civil aviation manufacturing industry, attention should be paid to resource integration, development of civil aviation manufacturing industry cluster, staggered positioning of general assembly integrators of civil aircraft and suppliers of different levels, giving play to advantages, clear division of labor, and coordinated development, this will have a profound impact on China's construction of civil aviation manufacturing base and development of civil aviation manufacturing industry.

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