

Research on the Optimization Path of Zhuhai's Industrial Structure in Guangdong-Hong Kong-Macao Greater Bay Area

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Abstract: Guangdong-Hong Kong-Macao Greater Bay Area is an urban agglomeration composed of two special administrative regions of Hong Kong and Macao and nine cities of Guangzhou, Shenzhen, Zhuhai, Foshan, Zhongshan, Dongguan, Huizhou, Jiangmen and Zhaoqing. It is an important space carrier for China to build a world-class urban agglomeration and participate in global competition. The construction of Guangdong-Hong Kong-Macao Greater Bay Area focuses on promoting infrastructure connectivity, improving the level of market integration, building an international science and technology innovation center, establishing a modern industrial system of coordinated development, and co-building a financial core circle, which has many possibilities for coordinated development with Zhuhai, a core city on the West Bank of the Pearl River Estuary. Zhuhai has its own inherent location advantages and unique industrial pattern, but it is also facing problems such as uncoordinated industrial structure, low economic quality and weak development foundation. Based on the interpretation of Zhuhai's industrial structure, taking Guangdong-Hong Kong-Macao Greater Bay Area as a development opportunity for Zhuhai, this paper puts forward the research on the optimization path of Zhuhai's industrial structure, such as promoting agricultural industrialization and modernization, improving the layout of modern industrial system, and accelerating the development of modern service industry.

1. Research background

In March 2017, Premier Li Keqiang clearly proposed in the *"Report on the Work of the Government"* that "we should promote the deepening cooperation between the mainland and Hong Kong and Macao, study and determine the development plan of urban agglomeration in the Guangdong-Hong Kong-Macao Greater Bay Area, give full play to the unique advantages of Hong Kong and Macao, and improve their status and function in the national economic development and opening-up progress." This shows that the new blueprint of "Guangdong-Hong Kong-Macao Greater Bay Area" has entered the national strategic vision. Since then, with the signing of the *"Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area"*, the development plan of urban agglomerations in Greater Bay Area has achieved important phased results and taken a solid step in coordinated development, marking the comprehensive start of the construction of Guangdong-Hong Kong-Macao Greater Bay Area. Guangdong-Hong Kong-Macao Greater Bay Area refers to the "9 + 2" urban agglomerations composed of two special administrative regions of Hong Kong and Macao and nine cities of Guangzhou, Shenzhen, Zhuhai, Foshan, Zhongshan, Dongguan, Zhaoqing, Jiangmen and Huizhou in Guangdong Province. It is one of the regions with the highest degree of openness and the strongest economic vitality in China, and plays an important strategic role in the overall situation of national development.

Zhuhai is close to the South China Sea, 36 sea miles away from Hong Kong in the East, and connected to Macao in the south. After the completion of Hong Kong-Zhuhai-Macao Bridge, Zhuhai has become the only city in the mainland connected to Hong Kong and Macao at the same time by land. Zhuhai has eight national first-class ports and is the second largest port city in China after Shenzhen. In 2018, Zhuhai achieved a GDP of 291.474 billion yuan, ranking seventh in the

Pearl River Delta, with a per capita GDP of 159428 yuan/person, ranking second in the Pearl River Delta. Zhuhai has established a new modern industrial system. The industrial clusters of household electrical appliances, electronic information, petrochemical industry, clean energy, etc. have been further strengthened. The industrial clusters of equipment manufacturing, biomedicine, leisure tourism, financial services, etc. have achieved rapid growth. The brand effect of Zhuhai Manufacturing and Zhuhai Service is prominent, and the technical level and service level of key industries have entered the world's advanced ranks. Zhuhai has basically built a regional industrial service center, a world-class marine engineering equipment manufacturing base, an international advanced general aviation industry base, a global leading household appliance base and an international business and leisure resort. However, the dilemma of industrial structure optimization faced by Zhuhai is also very prominent. Small economic aggregate, small population scale, weak agricultural foundation, low level of agricultural industrialization and modernization, insufficient production capacity, slow industrial transformation, lagging development of service industry and small consumption scale have become the difficulties that Zhuhai's industrial structure optimization has to face. The construction of Guangdong-Hong Kong-Macao Greater Bay Area focuses on the deepening cooperation between Guangdong, Hong Kong and Macao, so as to enhance the core driving force of the Pearl River Delta, promote the development of the Pan-Pearl River Delta region and optimize the national regional development pattern, thus becoming an important support for the construction of the "one belt and one road". This undoubtedly provides a strong impetus and new historical opportunities for Zhuhai's further development.

2. Review of theory

Industrial structure, also known as industrial system, is the main component of social economic system, which refers to the five-dimensional relationship among production factors, industries, time, space and level within the industry. We know that the industrial structure of social production is generated and developed on the basis of general division of labor and special division of labor. The study of industrial structure mainly focuses on the relationship between means of production and means of livelihood. From the perspective of sectors, it mainly studies the relationship between agriculture, light industry, heavy industry, construction industry, commercial service industry and other sectors, as well as the internal relationship among various industrial sectors.

William Petty (1623-1687), the founder of British classical economics, first studied the theory of industrial structure. British economist Colin Clark (1905-1989) revealed the law that, due to the transformation from the primary industry dominated to the secondary industry dominated, and then to the tertiary industry dominated, the change of per capita income caused labor flow, which led to the evolution of industrial structure. Simon Kuznets (1901-1985), an American economist, made a further discussion on the evolution law of industrial structure and clarified the general law of the distribution and change of labor force and national income among industries.

3. The present situation and analysis of industrial structure in Zhuhai

Based on the statistics of 2018, in terms of industrial structure, Zhuhai's primary industry achieved an added value of 5.009 billion yuan, an increase of 1.2% and a contribution rate of 0.3% to the growth of regional GDP; the secondary industry achieved an added value of 143.382 billion yuan, an increase of 12.6% and a contribution rate of 78.5% to the growth of regional GDP; the tertiary industry achieved an added value of 143.083 billion yuan, an increase of 3.5% and a contribution rate of 21.2% to the growth of regional GDP. The proportion of three industries is 1.7:49.2:49.1.

From the evolution path of industrial structure, we can know that in the late stage of industrialization, the proportion of the secondary industry occupies a dominant position in the three industries, even an absolute dominant position. In the post industrialization stage, industrial intellectualization has become the main feature. From the above data, we can see that Zhuhai is in the late stage of industrialization, and the industry is in the transition from the acceleration stage to the mature stage. In the future, we should focus on the development of high-tech and

deep-processing manufacturing industry, improve the industrial chain, and vigorously cultivate and develop modern service industry.

In the primary industry, there is agriculture, forestry, fishery, animal husbandry and their services in Zhuhai. Due to the particularity of natural conditions, fishery is the only branch with the output value accounting for more than two-thirds of the primary industry. The output value of forestry is small enough to be ignored, and the proportion of other industries is relatively balanced. In the secondary industry, Zhuhai is supported by six major industries, such as household electrical appliances industry, electronic information industry, petrochemical industry, power and energy industry, precision machinery manufacturing industry and biomedical industry. The brand effect of Zhuhai Manufacturing and Zhuhai Service is prominent, and the technology and service level of key industries have entered the world's advanced ranks. In the tertiary industry, there is mainly wholesale and retail, catering, transportation, post and telecommunications, warehousing, finance and insurance, real estate, tourism and other services in Zhuhai. Due to its special geographical location and natural environment, Zhuhai's tertiary industry has developed well, showing a complete pattern of covering extensive fields and all industries developing simultaneously.

4. Optimization path of industrial structure in Zhuhai

4.1 Promoting agricultural industrialization and modernization

Agricultural industrialization and agricultural modernization are the only way for agricultural development. Zhuhai should actively implement the strategy of strengthening agriculture by brand and promoting agriculture by quality, constantly enhance brand awareness and quality awareness, and gradually release brand bonus, so as to steadily improve the quality and efficiency of agricultural development. Guangdong-Hong Kong-Macao Greater Bay Area focuses on the development of secondary and tertiary industries. In terms of primary industry, Zhuhai has the foundation of large-scale planting and breeding base. Driven by the leading enterprises in agricultural industrialization, focusing on modern production factors, it can build an agricultural industrial park of "production + processing + science and technology", and build a modern agricultural scientific research center and leisure tourism base. We should complete the promotion of improved varieties and agricultural science and technology, and build 14100 mu of high-standard basic farmland. We should promote the construction of the National Agricultural Science and Technology Park, the Taiwan Farmers' Entrepreneurship Park and the Modern Agricultural Industrial Park to provide high-quality agricultural products to the residents of the Bay Area. Implement the policy of dot-like land supply to support the development of rural industries, and accelerate the construction of the Lingnan Land Rural Complex, Ten-mile Lian River and Yifeng Ecological Park and other projects. We will carry out the project of cultivating and optimizing leading agricultural enterprises and support the development of rural e-commerce. We will strengthen the construction of the management and service platform for rural "Capital & Asset & Resource" and complete the reform of the rural collective property rights system.

4.2 Improving the layout of modern industrial system

Zhuhai has formed an economic system and development model with innovation as the main guide and support, realized the dislocation development with Guangdong-Hong Kong-Macao Greater Bay Area, and further expanded the industrial clusters of household electrical appliances, electronic information, petrochemical, clean energy, etc. Strive to achieve high-speed growth in equipment manufacturing, biomedicine, electronic information, petrochemical and other industrial clusters, attract the injection of advantageous resources of enterprises in Guangdong-Hong Kong-Macao Greater Bay Area, and basically build a regional industrial service center, a world-class marine engineering equipment manufacturing base, an international advanced general aviation industry base, and a global leading household appliance base. In addition, Zhuhai takes the advanced equipment manufacturing industry as the development opportunity, creates a good industrial development environment, and strives to steadily expand the scale of marine engineering equipment,

ships and yachts, aerospace, rail transit equipment, new energy vehicles and other high-end equipment industries. Zhuhai should continue to improve the industrial competitiveness of smart distribution grid equipment, smart office equipment, medical equipment, smart home equipment, artificial intelligence, energy-saving and environmental protection equipment, 3D printing and other intelligent precision equipment, so as to highlight the high-end characteristics of the industry and basically establish the independent innovation mechanism.

4.3 Accelerating the development of modern service industry

Zhuhai should seize the excellent opportunity brought by the opening of the Hong Kong-Zhuhai-Macao Bridge to the development of Zhuhai's service industry, actively attract the high-quality service industry of Hong Kong and Macao, gather the high-end service industry at home and abroad, improve the development level of commerce, tourism, exhibition, logistics, finance and other industries, and strive for a higher level of service industry development. Accurately introduce top international consortiums and powerful enterprises to build a number of commercial complexes and brand hotels in Zhuhai-Macao Port Artificial Island of Hong Kong-Zhuhai-Macao Bridge, High-tech Zone, Western Ecological New Area and other places, so as to meet the consumption demand of high-quality life circle in Bay Area. We should integrate and revitalize idle and inefficiently used properties, focus on the development of business and commerce, financial technology, cultural and creative industries, and implement measures for strengthening the development of headquarters enterprises. Accelerate the development of modern logistics industry, focus on the development of "land and air transport of Zhuhai-Hong Kong" and its expand business, promote the development of third-party logistics and cold chain logistics, and build an industrial park combining e-commerce and express industry. Relying on the advantages of Zhuhai's unique location, first-class exhibition venues and existing exhibition brands, we should introduce and cultivate more professional exhibitions to make the exhibition economy bigger and stronger. We will give full play to the leading role of producer services in R & D and design, process optimization, marketing, logistics and distribution, energy conservation and consumption reduction, and promote the deep integration of advanced manufacturing and modern service industries.

5. Conclusion

Each industrial sector of the national economy should maintain a certain proportion relationship, but there is no uniform standard for the specific optimal proportion relationship. As one of the core node cities of Guangdong-Hong Kong-Macao Greater Bay Area, Zhuhai has a unique location advantage and industrial foundation. In terms of industrial structure optimization, Zhuhai should deeply integrate into the construction of Guangdong-Hong Kong-Macao Greater Bay Area, strive to explore the fields of port customs clearance, two-way investment, multi-dimensional cooperation, trade facilitation, etc., promote the convergence of rules, and build a new cooperation model. Zhuhai should continue to develop characteristic agricultural economy, so that agriculture can develop from pure crop production to agricultural product research, processing, circulation, leisure service and other fields, and realize the increase of agricultural added value. Zhuhai should continue to build a modern industrial system. Relying on its own resources and industrial foundation, taking the park as the carrier, we can improve the industrial agglomeration, and connect the construction of Guangdong-Hong Kong-Macao Greater Bay Area with high-level professional industries such as electrical machinery and equipment manufacturing, electronic information, biomedicine, cultural and educational goods manufacturing, petrochemical industry, equipment manufacturing, etc. In terms of the tertiary industry, taking advantage of the historical opportunity of the opening of the Hong Kong-Zhuhai-Macao Bridge, we will make new breakthroughs in commerce, tourism and logistics and strive to build an international business leisure tourism resort, making tourism an important role of Zhuhai's economy.

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