

On the Export Trade Structure of Anhui Manufacturing Industry from the Perspective of Manufacturing Service

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Abstract: Manufacturing industry is very important to Anhui's economic development. With the sustained development of national economy and society, Anhui's manufacturing industry can't fully adapt to the development of social economy. Anhui's manufacturing industry is big but not strong. At present, Anhui's manufacturing industry is undergoing a service-oriented transformation. Starting from the connotation and characteristics of manufacturing service, systematically analyzing the present situation and problems of Anhui's manufacturing service-oriented transformation is of great significance to the development of Anhui's manufacturing export trade structure, and to the transformation of China's overall manufacturing export trade structure from labor-intensive to technology-intensive and capital-intensive.

Keywords: Anhui, Export trade structure, Manufacturing service.

1. Introduction

There are many domestic and foreign scholars who study the export trade structure, but there are few studies on the export trade structure of China's manufacturing industry. A country's export trade structure can be extended to a country's export trade structure to a specific country (Schoot, 2006). There is a close relationship between export structure, economic growth and industrial structure adjustment. However, the structure of export commodities is unreasonable (Liu Binbin and Ding Junfeng, 2019). In view of the phenomenon that the change of export commodities can fully reflect the change of export trade structure, commodities can be divided into three categories: labor-intensive, resource-intensive and capital-intensive, according to the different intensity of elements contained in commodities (Xu Huawei, 2015). By measuring the structure of China's export technology in emerging market countries, the technical level of China's export of manufactured goods in emerging market countries has been continuously improved and the export technology has been continuously optimized (Hong Shiqin et al., 2016). Although the technical structure of China's export trade has turned to high-tech manufacturing industry, because the trade of high-tech products mainly depends on processing trade and foreign-funded enterprises, and China's export trade is significantly lower than that of major developed countries in the world, the distribution of technical structure of export trade and export competitiveness may be exaggerated (Wen Dongwei, 2012). As the development of eastern and western China is not the same, through the analysis of export trade technology structure of product technology content and value-added distribution in Zhejiang Province, it shows that although the export proportion of high-tech products in Zhejiang Province has increased significantly, its innovation target is still low-tech value-added links, lacking independent research and development capability of high-tech links (Cong Haibin, 2012). The year 2021 is the beginning of China's high-quality development. In today's world, when the world is undergoing great changes in a hundred years, China's transition from a big trading country to a strong trading country must first speed up its independent innovation capability, increase its investment in a new round of science

and technology, and realize the development from factor-driven to innovation-driven (Pei Changhong and Liu Hongkui, 2020). To further promote the transformation and upgrading of manufacturing industry and build a new competitive advantage in goods trade, it is necessary to promote the organic integration of manufacturing industry and Internet, and promote the development of Chinese manufacturing to "China's intellectual manufacturing" (Sun Yuqin and Guo Huijun, 2018).

Academic research on manufacturing service mainly focuses on the impact on enterprise performance, global value chain, industrial structure upgrading and total factor productivity. "Service-oriented" was first defined by foreign scholars from the perspective of enterprise transformation. "Service-oriented" refers to the gradual transformation of manufacturing enterprises from offering products at the beginning to "product-service package" (Vandermerwe, 1988). Service-oriented manufacturing is mainly manifested in two aspects: internal production input and external service output. The improvement of internal service efficiency is helpful to improve the production efficiency and competitiveness of manufacturing sector. External service output increased the proportion of service products in the final output (Szalavetz, 2003). With the transformation of global industrial structure from "industrial economy" to "service economy", how to give full play to the role of manufacturing service in promoting the high-quality development of export enterprises is an important issue to be studied in China at this stage (Zhu Shujin et al., 2019). China's over-reliance on such labor-intensive and resource-endowed sectors as tourism and transportation has not changed, and the export of knowledge and technology-intensive services has increased rapidly, but the proportion is low (Qing Qianlong and Kong Yunlong, 2003). The 13th Five-Year Plan clearly puts forward "promoting the deep integration of advanced manufacturing industry and modern service industry". However, compared with western developed countries, China's manufacturing industry does not contain high service elements, and the service level of manufacturing industry is still low, which is the key factor for China's manufacturing industry to be "clamped down" at the low end of the global value chain (Gao Xiang and Sharla Cheung, 2021). On the one hand, the input

of service factors improves the utility of consumers and producers, on the other hand, it reduces the cost, thus realizing economies of scale and scope. Obviously, the service of manufacturing industry can significantly improve the quality of China's export products (Chen Baodong and Yu Chao, 2021). Represented by information infrastructure, it can reduce the information asymmetry between exporting countries and importing countries, reduce the "iceberg cost" of trade between the two countries, deepen the global division of labor and cooperation, and then promote the growth of export trade (Bojnec, 2009).

2. Present Situation of Anhui Export Trade Commodity Structure

Since China's entry into WTO, Anhui has a variety of export commodities, almost all kinds of products have been exported, but the export of manufactured goods is still the main body. Among the primary products, food and live

animals for consumption are the main products exported by Anhui, which is related to Anhui's abundant agricultural resources and rich varieties of characteristic agricultural products. At the same time, non-food raw materials are also the primary products for export. From the perspective of the export of industrial manufactured goods, the industrial manufactured goods exported by Anhui are mainly concentrated in machinery and transportation equipment, textile products, rubber products, mining and metallurgy products and manufactured goods. Generally speaking, the proportion of primary products in Anhui's export commodities is basically decreasing year by year, while the proportion of industrial manufactured goods is on the average increasing. With the continuous advancement of China's new industrialization and urbanization, Anhui's export products will gradually shift to manufactured products with high added value and low pollution energy consumption, and the export proportion of emerging strategic industries will increase.

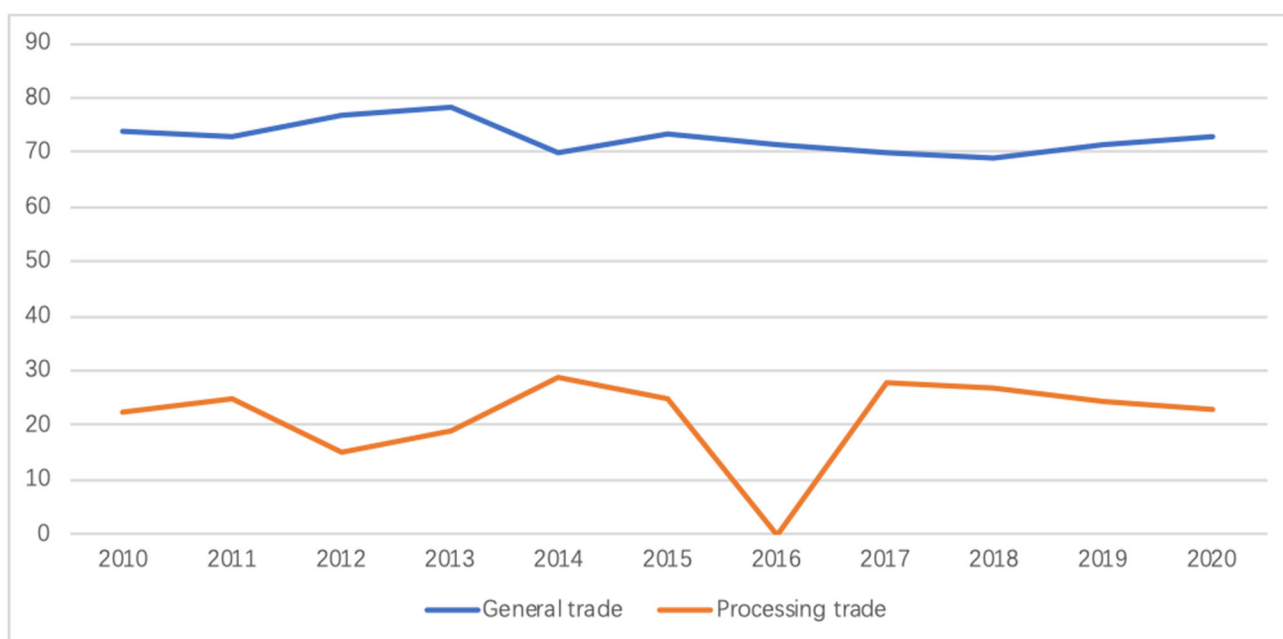


Figure 1. 2010-2020 Proportion of primary products and manufactured goods in Anhui's total exports

2.1. Factor Intensity of Export Products

Differentiate the composition of main export commodities by different factor intensity. Firstly, the change of the factor intensity of Anhui's export commodities is roughly divided into three stages. The first stage is from 2001 to 2003. The export commodities are mainly natural resource-intensive commodities, supplemented by technology-intensive and labor-intensive products. In this stage, the trade mode is to rely on the advantages of natural resource endowment to develop foreign trade. The second stage is from 2003 to 2009, which can be regarded as the transition period of Anhui's export trade constantly adapting to the international market and WTO rules. With the deepening of industrialization, the export of technology and capital-intensive products has become the mainstream. The third stage is from 2010 to now. The export of technology-intensive products still dominates, but the total amount has declined, and the export of natural resource-intensive and labor-intensive products has increased.

2.2. Export Trade Is Dominated by General Trade and Supplemented by Processing Trade

Since 2008, Anhui has classified and counted the import and export trade data according to the different trade modes. At present, Anhui's processing trade mainly includes processing and assembling with incoming materials and processing with incoming materials, and the processing trade with incoming materials is the main mode. In the future, Anhui's export trade will still be dominated by general trade, and processing trade will develop slowly in fluctuations. At the same time, trade activities are greatly affected by the economic crisis, the international environment and the COVID-19 epidemic. It can be clearly seen from Figure 2 that the processing trade in the four years from 2017 to 2020 is on a downward trend, indicating that the COVID-19 epidemic and the unstable international environment are unfavorable to the development of Anhui processing trade. On the contrary, the general trade has been slowly increasing in recent years, which once again confirms the conclusion that Anhui's export

trade will still be dominated by general trade in the future.

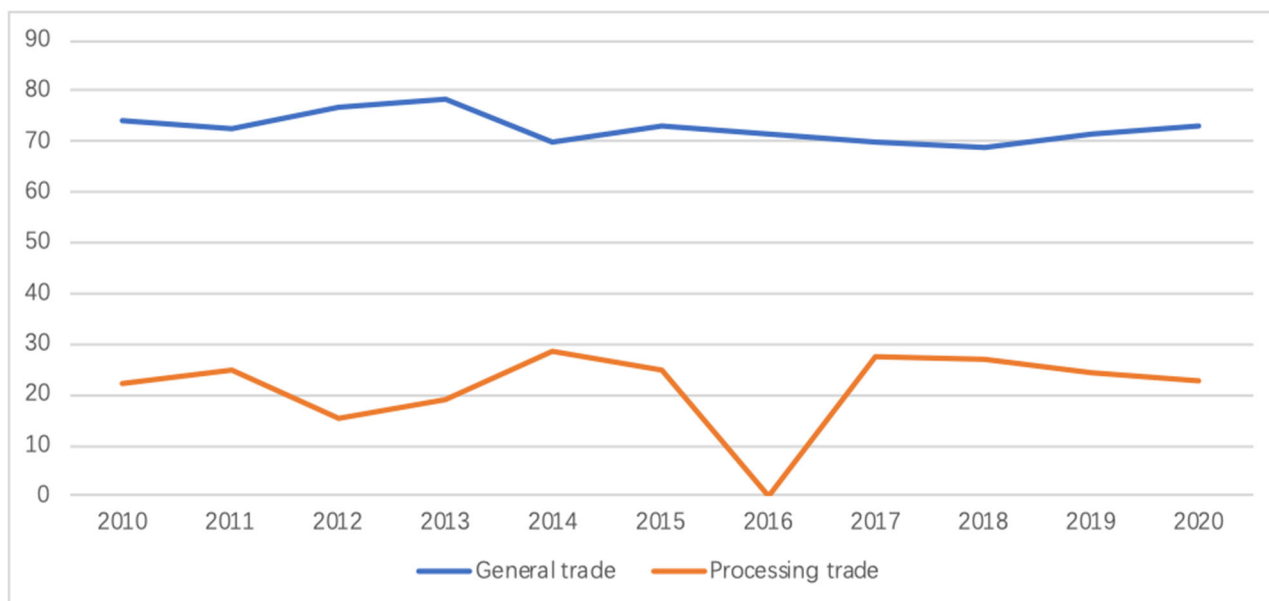


Figure 2. 2010-2020 Proportion of primary products and manufactured goods in Anhui's total exports

2.3. Summary

From the above analysis of the current situation of Anhui's export commodity structure, since 2010, machinery and equipment, mining and metallurgy products, etc. have accounted for the vast majority of Anhui's export trade, while other commodity types have less exports. Anhui's main export destinations are the European Union and the United States, while the European Union and the United States have been in a period of economic damage and slow recovery since 2018, resulting in the deterioration of the international environment of Anhui's main export commodities, and the shrinking foreign demand leading to weak export. On the other hand, the forces of new trade protectionism are constantly on the rise, and non-tariff barriers of various names are prevalent. As for machinery and equipment, mining and metallurgy products and agricultural products that Anhui mainly exports, technical barriers and environmental barriers have become important barriers to export. In addition, with the rising prices of raw materials in the international market, enterprises are facing the pressure of a sharp increase in production costs. Therefore, it is an urgent task to improve the current export commodity trade structure. The trend of simplification of Anhui's export trade mode is obvious, and the general trade mode is the absolute main body, accounting for more than 70% of exports over the years. In contrast, the proportion of processing trade is small, the development trend is unstable, and the fluctuation is large. Processing trade is significantly affected by non-tariff barriers. How to reduce the current production of high-emission and high-energy products and avoid export risks depends on the transformation and upgrading of processing trade.

3. Present Situation of Service in Anhui Manufacturing Industry

3.1. Problems Existing in the Innovation Ability of Anhui Manufacturing Service

Anhui has a strong and complete industrial base. Since the reform and opening up, with the merger and reorganization of

enterprises, Anhui manufacturing industry has initially formed a modern industrial system, including machinery manufacturing, automobile, aviation, electronic information and other industries; At the same time, Anhui focuses on promoting the development of automobile, machinery and equipment, and aviation industries, and three industrial clusters have basically taken shape. However, there are still some problems in the process of service transformation of Anhui manufacturing industry:

(1) The traditional idea of attaching importance to technology and neglecting service is widespread. Anhui's manufacturing enterprises generally attach importance to technology, neglect service, emphasize product production, carry out technological innovation, quality management and control around product production, improve enterprise production efficiency, and further produce high-quality qualified products. Too much emphasis is placed on technology, which then separates the connection between products and services, as well as the limitation of enterprise resources. Compared with services, more attention is paid to products, and there must be a good market for good products. About one-third of enterprises in Anhui think that services are just an addition to products, and enterprises only provide them free of charge, which takes up large resources of enterprises. At present, among the profits of Anhui manufacturing enterprises, product profits account for nearly 80% of the total profits, which not only shows that enterprises attach importance to technical products but neglect services, but also shows that services will be the growth point of future enterprise profits.

(2) Managers have a low level of understanding of service-oriented transformation. Anhui manufacturing enterprises mainly focus on product processing and manufacturing, which belongs to the inverted U-shaped curve with small profit margin. Products are mainly reflected in the low-end level, mainly in the following aspects: after-sales service, product recycling, and product leasing. They belong to the back end of the industrial chain, but there is no deep excavation and expansion. In order to make an overall change, the depth and breadth of management's understanding of service must be improved to reverse the current situation.

(3) Lack of effective service information exchange platform. In the current era of personalized market, especially in the service-oriented transformation mode, customers have become product leaders rather than passive recipients. Inviting customers to participate in the production process of enterprises is an inevitable choice of service-oriented transformation, which includes customer participation in the whole product life cycle from product research and development, production management and operation, product application and maintenance. Therefore, the invisible knowledge of customers needs a good enterprise information communication platform to realize, so as to establish good customer relationship management for enterprises, effectively tap customer needs and expectations, and improve ".

(4) The development of producer services in Anhui is immature, and the self-sufficiency of manufacturing enterprises is serious. At present, about 45% of Anhui manufacturing enterprises have not considered service outsourcing, which reflects the imperfection of Anhui's producer service industry. About 80% of Anhui's enterprises are provided internally, and about 30% of managers and technicians have more or less knowledge of producer service and service transformation. Managers and customers of enterprises have a low level of knowledge of manufacturing service, which shows that Anhui's manufacturing service transformation is immature, and the awareness of enterprises and customers needs to be strengthened.

3.2. Analysis of the Problems Existing in the Core Competence of Anhui Manufacturing Industry

(1) The core competence is concentrated in the manufacturing field. Anhui manufacturing enterprises attach great importance to the core competence in production technology, but pay relatively little attention to the innovation of service management. They have not systematically expanded and explored the core competence from production technology to service, nor have they conducted the same research and training from the perspective of enterprise development strategy. Only by taking service as one of the core competence of enterprises can they realize the real transformation of service from the inside out.

(2) Lack of systematic customer service management. Most manufacturing enterprises in Anhui have recognized the importance of customer service, but they still lack effective management means and methods. Almost 100% of enterprises have very important customer response ability. However, in terms of customer response ability, providing traditional and simple after-sales and maintenance services accounts for about 80%. The service forms are not only single, but also low in level of awareness, with average service effect and little value added. It reduces the customer's expectation of enterprise products, and the enterprise has no motivation to serve deeply.

(3) Lack of awareness of the importance of service to enhance the core competence of enterprises. Most enterprises in Anhui think that service-oriented and upgrading the core competence of enterprises can't help basically, and they can't enhance the core competence of enterprises. Only a few enterprises begin to gradually realize the importance of service-oriented and try to think about service-oriented transformation at the strategic level of enterprises, and gradually incorporate service-oriented ability into the core competence of enterprises, so as to promote the service-

oriented transformation of enterprises with planning and design. Only by recognizing that service is the way to enhance the core competence of enterprises, can enterprises systematically and effectively promote the service transformation from the inside out and create new profit growth poles for enterprises.

4. Ways

(1) Innovation of enterprise management system and management system, giving full play to the importance of enterprise industrial engineering. The original management mode of Anhui manufacturing industry is no longer suitable for the development of modern manufacturing industry, and the enterprise system management mode needs greater reform and innovation, reforming the management system and taking the innovative enterprise management system. Informatization and intelligence are what enterprise organizations have always wanted to embody in their own management mode. The change of management mode aims at highly operating enterprise management mechanism, reasonably decentralizing power, and greatly reducing enterprise management costs. Therefore, enterprises integrate the ideas and methods of industrial engineering into all aspects of enterprises, and set up temporary organizations such as operation teams and project teams among various departments and production units based on business needs, so as to improve the adaptability of enterprise organizational structure and the coordination and cooperation ability among internal organizations.

(2) Change traditional thinking and strengthen service consciousness. Operators of manufacturing export enterprises should constantly learn and absorb advanced management concepts and models, systematically and comprehensively analyze and understand the competitive environment faced by enterprises, break the inherent traditional thinking and consciousness, and take the initiative to seek innovation and change, so as to ensure that enterprises are in a dominant position in the competition. Managers should attach equal importance to management innovation, technological innovation and service innovation, develop in a unified and coordinated way, and constantly optimize the core competitiveness of enterprises. The basic mission of manufacturing export enterprises is to provide goods and services to satisfy customers, that is, to serve customers all the way and satisfy them in all directions. There are four paths for the transformation of enterprise service: first, product service route; Second, knowledge and technology-intensive service routes; Third, the product service integration route; The fourth is the service productization route.

(3) Dig the needs of customers in various countries and create customer value. Which way an enterprise chooses to be service-oriented has its own advantages and disadvantages, and the decision must be made according to the enterprise's technical capability, customer orientation, customer's expectation and demand, and social environment. Guided by the needs of customers from all over the world, and digging deep into customers' needs, we can transform the front end, back end or both ends of the industrial chain into services at the same time, carry out a partial or complete "product+service" route, optimize service measures, create higher-than-expected value and services for customers, and open up new profit sources for enterprises.

(4) Pay attention to customers from all over the world in time and optimize communication channels for customers

from all over the world. Service transformation is "product+service" and "tangible+intangible". The effectiveness of service is reflected by customer satisfaction, which is highly dependent on customers. Therefore, in order to use customers' differentiated and individualized needs, it is necessary to pay attention to customers in time. It is necessary to have an efficient communication platform system that integrates software and hardware, establish seamless communication between enterprises and customers, discover and develop customers' needs, pay attention to them, meet them and improve customer satisfaction.

(5) Pay attention to the excavation and protection of the core competence of service. Paying attention to the excavation and protection of service-oriented core competence is an important guarantee for service-oriented transformation. While absorbing and learning the successful experience of service transformation at home and abroad, managers should pay more attention to the development of their own resources, and form a service transformation mode with their own characteristics, which can not only keep the advantages of engineering technology, but also keep the advantages of service, and form the core competence. Similarly, service technology is as important as engineering technology and needs to be protected. Enterprises must establish and improve the protection system of service core technology, avoid being imitated by competitors and homogenized in the market, and ensure that enterprises are ahead of the competition.

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