

Innovation in the service sector promotes China's position in the global value chain

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Abstract

Under the background of economic globalization, accelerating the opening up of the service industry is an important hand in shaping new advantages in international competition and cooperation under the new situation, and the service industry has become the main driving force of the world's economic growth, and an important indicator of a country's international competitiveness. The level of development of China's service industry is still far from the leading level in the international arena, which to some extent affects China's improvement in its position in the global value chain. For this reason, this project intends to combine the KPWW method of accounting research, Hausmann, Hwang and Rodrik (2007) and other research methods to jointly explore the mechanism and countermeasures of the opening up of the service industry to promote the improvement of China's position in the global value chain.

Keywords

Services, global value chains, innovation, economic globalization.

1. Introduction

Under the background of economic globalization, accelerating the opening up of the service industry is an important hand in shaping new advantages in international competition and cooperation under the new situation, and the service industry has become the main driving force of the world's economic growth, and an important indicator of a country's international competitiveness, and there is a gap between the level of development of China's service industry and that of the international leading level. At the same time, the shortcomings of China's manufacturing industry are also very prominent, the most obvious feature is "big but not strong", located in the downstream of the global value chain, and engaged in the processing and assembly of low value-added links in the global value chain.

By combing through the previous literature, it is found that most of the existing studies focus on the analysis of outsourcing, agglomeration and foreign direct investment in the service industry, and few of them pay attention to the impact of the opening up of the service industry on the position of China's manufacturing industry in the global value chain. Therefore, the empirical analysis in this paper is conducive to enriching the existing research results, and the conclusions of the study can also provide theoretical support for further expanding the opening up of the service industry, promoting the upgrading of China's value chain status, and providing theoretical support for the high-quality development of the industry.

Now some studies show that China's manufacturing industry is in a lower position in the global value chain, and the role of expanding the opening up of services in the process of the manufacturing industry moving towards the middle and high end is becoming more and more prominent, however, the supporting role of opening up of the service industry for the enhancement of China's position in the value chain has not yet been given full play to by , and

therefore, how to further rely on the opening up of the service industry to promote China's position in the global value chain is of great policy significance.

The main research objectives of this project include the following three aspects: (1) to systematically describe the positive impact of the opening up of the service industry on China's economic development, and systematically introduce it through the three perspectives of the cost effect, productivity enhancement effect, and competitive advantage, and select the "service trade dependence" and "export technology complexity" indicators as the core variables, and use the world input-output table to calculate the manufacturing export technology complexity of the relevant countries for empirical testing and analysis. We will select "service trade dependence" and "export technology complexity" two indicators as the core variables, and use the world input-output table to calculate the related countries manufacturing export technology complexity, and carry out empirical testing and analysis. (2) Analyze China's development advantages in the global value chain from three aspects: industrial system, market scale and institutional environment. (3) Analyze the problems of China's service industry opening up at this stage, and put forward feasible suggestions.

2. The Current Situation and Evolution of China's Service Industry Opening to the World Situation Analysis

Adopting reasonable and rigorous indicators and scientific methods to measure and describe the cost effect of the opening up of China's service industry in promoting the reduction of China's production costs, the productivity enhancement effect of the opening up of the service industry through the formation of a specialized division of labor and the improvement of productivity, as well as the opening up of the service industry in favor of giving full play to the comparative advantage of high technology, promoting the improvement of the overall technological level, and the formation of a competitive advantage are the basic work of this project. This part will calculate the export technological complexity of each segmented product, etc., so as to fully characterize and summarize the current situation and evolution pattern of the impact of the opening up of the service industry on China's position in the global value chain.

2.1. An empirical analysis of the impact of deepening the liberalization of the service industry on China's position in the global value chain

This part conducts static and dynamic empirical analysis on the impact of deepening the liberalization of the service industry on China's position in the global value chain from the perspective of China's industrial scale, market scale and institutional environment. Instrumental variables estimation, structural equation modeling and other methods and different research perspectives are used to explore the specific impact and realization path of the opening up of the service industry on China's economy. is also used to evaluate the barriers to foreign trade in the service industry of China. Meanwhile, the measurement is used to examine the foreign trade barriers of the service industry of China, so as to evaluate the level of service trade liberalization. While testing the theoretical assumptions, it provides a reference policy entry point for China's service industry liberalization planning.

2.2. The Construction of Policy System to Promote the Transformation and Upgrading of China's Value Chain under the Perspective of Services Opening

Under the current development trend of China's value chain in terms of industrial system, market scale and institutional environment, how to further stabilize the advantages of China's value chain in the global value chain through the opening up of the service industry is the focus of this project's countermeasure research and policy design. Based on the conclusions of the empirical tests, this part explores the options and paths for China to optimize its own value

chain system through the opening up of the service industry from a multi-dimensional perspective, and builds a policy system conducive to promoting the transformation and upgrading of China's value chain as well as management policies in the perspective of opening up of the service industry to the outside world.

2.3. Liberalization of the service sector Promote the reduction of China's production costs Form a cost effect

Liberalization of the services sector will reduce the cost of intermediate inputs for services and the cost of service exports, reduce barriers to trade in services, reduce restrictions on market access and national treatment, reduce the cost of entry of foreign capital and the cost of doing business, as well as reduce the restrictions on outsourcing of services, offshore consumption and the cross-border movement of people, promote the further mobility of factors of production, enhance the export competitiveness of Chinese enterprises, and then promote China's exports of services.

2.4. The liberalization of the service sector is conducive to the realization of the comparative advantage of high technology and the advancement of the overall technological level

The technological spillovers generated by China's opening up of services to the outside world are categorized into vertical and parallel technological spillovers. Vertical technology spillover manifests itself in China's services through the opening up of the services industry will be related to the services products of the various production links allocated to countries with greater comparative advantage, these countries to provide China's intermediate inputs in the technical content will be directly transferred to the domestic service enterprises, to help enterprises in the learning and absorption of foreign enterprises in the perfect technology; and parallel technology spillover is specifically manifested in the deepening of the degree of opening up of the services industry, the countries along the route of the service industry and China's service industry enterprises together to compete for market share, China's service industry must accelerate the pace of technological innovation, to play the comparative advantage of high technology.

2.5. The opening up of the services sector can have productivity-enhancing effects through the formation of a specialized division of labor and the consequent increase in production efficiency

Through the opening up of the service industry, China can allocate the production process of production, assembly, sales and other service products to other countries with higher production efficiency, saving a large amount of manpower, material and financial resources, enabling enterprises to focus on research and development of the core business core products, and then the formation of specialized division of labor, which will help to obtain the effect of economies of scale and improve the level of product quality, and promote the improvement of China's total factor productivity.

3. China's Development Advantages in Global Value Chains

3.1. China has a large industrial scale and a complete manufacturing system

The scale of China's industry is large, in 2022, the added value of China's manufacturing industry accounted for 27.7% of GDP, in the world's 500 major industrial products, more than 40% of China's product output ranked first in the world. 65 manufacturing enterprises have been shortlisted in the list of the world's top 500 enterprises in 2022, and the cultivation of specialization, specialization and new small and medium-sized enterprises amounted to more than 70,000. The supporting system is complete. According to the statistical classification of the

national economy, China's manufacturing industry has 31 major categories, 179 medium categories and 609 subcategories, which is the most complete industrial category and the most complete industrial system in the world, and this kind of supply chain, which is formed by a highly specialized division of labor and large-scale collaboration, has a strong resilience.

3.2. China's market size and consumption potential

China's urban and rural consumer markets are growing together, with the urban consumer goods market maintaining good momentum, with retail sales of consumer goods in urban areas exceeding 27 trillion yuan in 2021, with an average annual growth rate of 8.1% from 2013 to 2021; the pace of development of the county and rural consumer markets is accelerating, with retail sales of consumer goods in townships and villages amounting to 10.8 trillion yuan and 5.9 trillion yuan in 2021, with an average annual growth rate of 10.4% and 9.8% from 2013 to 2021, respectively. 10.4% and 9.8% respectively, with growth rates 2.3 and 1.7 percentage points higher than that of retail sales of consumer goods in urban areas. This shows that China has a "giant country effect" that is difficult for other countries to match, which brings us the possibility of innovating on a large scale.

3.3. The country has an excellent institutional environment with increasing openness

The government work report for 2023 clearly states that greater efforts will be made to attract and utilize foreign investment and implement national treatment for foreign enterprises. We will actively promote accession to the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) and other high-standard economic and trade agreements, take the initiative to steadily expand system-based opening up against relevant rules, regulations, management and standards. All these will promote deeper and broader supply chain cooperation between global enterprises and China.

3.4. Services liberalization promotes China's position in global value chains

The opening up of China's service industry further promotes the improvement of China's position in the global value chain by lowering production and transaction costs, promoting the formation of scale effects through specialization and division of labour, as well as promoting the formation of a high-technology comparative advantage through technological spillover, and further developing China's existing industrial, market and institutional advantages.

4. Academic thinking is somewhat distinctive and innovative

Against the background of economic globalization and the further deepening of the international division of labour, this project analyses the impact of the opening up of the service industry on economic development. At the same time, the project focuses on revealing the mechanism of the impact of the liberalization of the service industry on China's upgrading of its position in the global value chain, reflecting the characteristics and innovations of the project's academic thinking.

5. Academic perspectives are somewhat distinctive and innovative

The project also puts forward some new ideas, such as the idea that opening up of the services sector can reduce production costs in China and create a cost effect, and that opening up of the services sector can create a productivity-enhancing effect through the formation of a specialized division of labour and the consequent improvement of production efficiency. In addition, the project points out that there is still room for opening up in terms of market access and the lack of systematic and coordinated policies on "bringing in" and "going out", which are deficiencies in the liberalization of the services sector.

6. The research methodology is distinctive and innovative

This project adopts the input-output analysis method using Leontief's Quantitative Relationships of Inputs and Outputs in the U.S. Economic System to conduct empirical tests, which can be used to examine the relationship between inputs and outputs among a country containing G countries and N sectors, and to study the importance of the service industry in the global value chain. In addition, this project adopts the research methodology of Hausmann, Hwang and Rodrik (2007), which reflects the characteristics and innovation of the research methodology.

7. Research methodology

(1) The KPWW method. This method results in a value-added trade accounting system that provides a more accurate measure of actual trade benefits and also eliminates the double counting component of total value trade. A higher value of the GVC status index indicates that a country's industrial sector is relatively upstream in the value chain and can therefore be considered to be at the middle to high end of the value chain, while a lower value indicates that the sector is relatively at the middle to low end of the value chain.

(2) Input-Output Analysis. This project adopts an empirical test using the input-output analysis method utilizing Leontief's Quantitative Relationships of Inputs and Outputs in the U.S. Economic System, which helps to quantitatively and systematically study the interrelationships between the sectors of a complex economy by examining an inter-country input-output table that contains N sectors in G countries.

(3) Instrumental variable estimation. The project uses strongly exogenous land variables (e.g., land grant area, etc.) and geographic variables (e.g., river density, surface relief, etc.) to construct instrumental variables to minimize bias in the results caused by endogeneity.

Acknowledgements

This work is supported by Anhui University of Finance & Economics 2023 Undergraduate Research innovation fund project fund, Project number: XSKY23018ZD.

References

- [1] Qin Shuai. Research on the opening-up of the service industry to the manufacturing industry's global value chain position [D]. Nanjing University,2018.
- [2] Zhang Wei. Enhancing China's New Advantage in Global Supply Chain Competition[J]. Foreign Economic and Trade Practice,2021,(01):9-10.
- [3] Chang Qingqing. Exploration of the Path of China's Service Industry to Enhance the Level of Global Value Chain - Under the Background of "Belt and Road" Initiative[J]. Northern Economy and Trade, 2022,(08):25-27.
- [4] Qin Rong. Analysis of investor behavior under the perspective of behavioral finance[J]. China Small and Medium-sized Enterprises,2021,(12):197-198.
- [5] LI Jun, FU Xin, ZHANG Wei. Synergistic development of China's services liberalization and services trade: effectiveness, problems and countermeasures[J]. International Economic Cooperation, 2023,(01):4-13+92.
- [6] WANG Hongsen, FANG Bengxi, ZHANG Dongsheng. Manufacturing servitization and total factor productivity under the opening of service trade[J]. Technical Economics and Management Research, 2024,(02):137-143.
- [7] WANG Nan, ZONG Yuxin, LIU Shuqi. An empirical study on the impact of China's service trade structure on its international competitiveness[J]. Foreign Trade and Economics,2024,(02):10-15.