

Reanalysis of comparative advantage of China's manufacturing exports based on factor income

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Under the background of global division of production, the international transfer of production factors makes China appear "inverse comparative advantage" in the global trade pattern. Taking factor income as the entry point, this paper aims to explore the endowment advantages of China's manufacturing exports, clarify the real international competitiveness of China's manufacturing industry, and provide economic explanations for the phenomenon of "deformation" of revealed comparative advantage (RCA). In addition, this study attempts to identify the key factors driving the improvement of China's manufacturing competitive advantage by exploring the RCA index of different production factors.

Based on the production accounting framework of the global value chain that distinguishes firm heterogeneity (Zhu et al., 2022), this paper advances the production decomposition accounting framework from the perspective of value added to factor income, and proposes the RCA index of factor income accordingly. It is further deconstructed into RCA index of labor income of domestic firms, RCA index of labor income of multinational enterprises and RCA index of capital income of home country.

This paper relies on the 2023 edition of the OECD-AMNE database, including the Inter-country Input-output table, which distinguishes domestic firms and multinational enterprises in 77 economies and 41 industries from 2000 to 2019. This paper also uses the proportion of labor income in the value added of various sectors in each country to calculate the proportion of capital income in the value added, and combines it with the bilateral output matrix of multinational enterprises in the OECD-AMNE database to get the income distribution flow matrix of multinational enterprises.

The major contributions are as follows: (1) A measurement method of RCA index based on factor income is proposed, providing theoretical support for accurately judging national competitive advantage and factor endowment. (2) This paper measures RCA index of different enterprises, laying a micro foundation for the research on RCA to penetrate into the enterprise dimension. (3) This paper attempts to deconstruct the RCA index based on factor income into the labor income RCA index of domestic firms, the labor income RCA index of multinational enterprises and the capital income RCA index of home countries, which is helpful to identify the hidden comparative advantage potential of different factor incomes.

Our results indicate that the RCA index of China's manufacturing exports based on factor income roughly experienced an N-shaped trend from 2000 to 2019, and always presented a significant comparative advantage during this period. Labor-intensive sectors, resource-based sectors and several technology-intensive sectors have obvious competitive advantages, but high-tech manufacturing sectors such as the transportation equipment and pharmaceutical products still have shortcomings. Among different production factors, The RCA index of labor income of multinational enterprises has always occupied the first place, but in recent years, China's labor cost advantage cannot be sustained, and the contribution rate of China's outward investment income has increased, gradually becoming an important part of the comparative advantage of manufacturing industry. There is significant industry heterogeneity in the RCA index of different production factors. The labor income of domestic firms is the most important factor to promote the increase of RCA index of most manufacturing sectors, but it is also a key factor to limit the improvement of comparative advantage

of some high-tech manufacturing sectors (such as chemical products, pharmaceutical products and transportation equipment). The competitiveness of capital income of home country to a certain extent inhibited the improvement of comparative advantage of resource-based sectors and emerging technology sectors.

With the development of digitalization in the manufacturing industry chain and the promotion of a new round of technological revolution, China should further consolidate the competitiveness of advantageous industries, especially the position of products with real production factor endowment advantages, in order to achieve a higher position in global value chain.