

Revealed Comparative Advantage Based on Value-Added Trade: An Analysis for China

Topic: Exports and Value Chains

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The index of revealed comparative advantage (RCA) is always used in many international trade researches to measure whether a country has a revealed comparative advantage in some industry. In standard applications, it is defined as the share of an industry in a country's total gross exports relative to the world average of the same industry in world exports. This paper presents a new measure of RCA which substitute domestic value added embedded in exports for gross exports since traditional RCA ignores domestic and international production sharing. The new RCA of an industry exclude foreign value added and include indirect exports of the industry's value added through other forward industries' exports. In order to test the impacts of domestic industry relatedness and international production fragmentation on the new RCA, we further define three factors: forward influence index, backward influence index and vertical specialization share. Using the compiled world input-output tables from WIOD, we present China's comparative advantage based on both concepts. Both RCA indices show that China enjoys comparative advantage in the global market for labor and resource intensive sectors, such as textile products, leather and footwear. The traditional index presents that China has a revealed comparative disadvantage in agriculture, hunting, forestry and fishing. In contrast, the new RCA takes on a much higher value and shows strong comparative advantage. Further mechanism analysis reveals that forward linkage and vertical specialization significantly increase the future probability of an industry to have RCA. In other words, when a sector has a larger vertical specialization share and its forward sectors have comparative advantage in export, this sector is more likely to have RCA based on value added trade.