

Economy wide Assessment of Global Value Chains- Case of China and India

Topic: Implications of GVCs

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Abstract

Global Value Chains (GVCs) have taken centre stage in the process of development in developing and developed countries alike. China has established itself as the hub of low-cost production in the world and India has also been making tremendous policy shifts to reap the benefits of participating in GVCs. The position of a country in the vertical supply chain has come to dictate the distribution of surplus generated by this process. In this context, research and development (R&D) plays a significant role in productivity enhancement of production processes and is often the source of technology improvement in developing nations. However, the extent of the impact of R&D in GVCs, especially in upstream positions of the supply chain, remains inconclusive. Given the dominant role played by GVCs in the globalization process of economies, both India and China have made significant policy changes for better integration in the same. The participation in GVCs has significant implications for technology improvement and productivity enhancement.

In light of recent developments, focusing on China and India, this study aims to measure the imported intermediate inputs used in domestic processing sectors and the content of imported intermediate inputs in the export basket. The study assesses the R&D content in the imported intermediates and also in export. The study extends its analysis to the environmental impacts on the economies by accounting carbon emissions of imported intermediate inputs and its exports of both economies. Further, it calculates the domestic labour requirement to process the imported input so also export for China and India. The study attempts to address these objectives using the data from GTAP and GVC.

Results indicate the efficiency and the competitiveness of China over India in inter-national trade in value-added with a deepening of vertical specialization. Overall for both countries, the use of intermediate imports for exports is high although it varies depending on the trading partner. As per the results, R&D embodied in imported input by India is highest in the case of those from the EU and USA. In the Chinese economy, the EU and USA have highest absolute R&D content embodied in imported inputs. Additionally, the trade in intermediate goods appears to have large polluting implications on the economy.