

Trade redirection in global supply chains

Topic: Vertical Specialization and Value Chains

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In global input-output models the global Leontief inverse links value added from a given source to the final sinks (where both sources and sinks are country-industry pairs). Rising globalization has raised the complexity of cross-border linkages between sources and sinks. In the literature on trade in value added the processes operating beyond the global Leontief inverse are either not described at all or decomposed in a way that is not very illuminating. The paper tries to clarify how value added embodied in gross trade reaches its final destination by decomposing gross trade into imports in exports and value added trade. The process of value added accumulation from the source towards the sink is split into three different stages: from the source to the final output factory gate (via trade in intermediates), at the final output factory (in final output production) and at the sale of final output to foreign customers (via international transport). Redirected trade in value added is defined as the re-export of imported value added by the country that is the last exporter in all chains that lead to the final sink. For each specific industry of final output the importance of trade redirection can be established for both the sources, the last exporters in all chains and the sinks of final output from the industry at hand. Thus I aim to show that the concept of redirected trade provides useful indicators for globalization patterns. Several conclusions emerge when the findings are confronted with those from the pioneering and some of the more recent studies on trade in value added. First, value added exports are often underestimated by excluding value added exports that return home. In particular, the domestic value added exports that are needed abroad to produce the intermediate imports for final output production at home are often excluded. This exclusion does not seem to be useful. Second, decompositions that aim to fully convert gross trade flows into value added trade flows are inappropriate and not meaningful. The framework developed in the paper has useful applications. I include as examples: the identification of the major producer hubs, their major suppliers and their major customers in selected global supply chains, using both global input-output tables derived from the GTAP datasets for 2001, 2004 and 2007 and the WIOD-tables for the period 1995-2011. The GTAP tables have as an advantage that they include an international transport market. The WIOD-tables are more suitable for comparisons over time.