# Fragmentation, Global Trade and Domestic Value-Added Ratio

Topic:
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International fragmentation of production, which refers to the phenomenon that different tasks in the process of producing a good are carried out in different countries, has become widespread. As a result of fragmentation, domestic value-added embedded in the exporting country's gross exports (called domestic value added ratio, DVAR) is often much lower than 100%. Thus, DVAR is an important indicator of fragmentation. In this paper, we develop a multi-country Ricardian model of comparative advantage with international fragmentation of production by modifying the Eaton and Kortum (2002) framework. We show that international fragmentation of the production process has important implications on the global specialization and trade pattern and on the DVAR of countries all over the world. The paper makes a few contributions to the literature. First, it helps us to understand global trade pattern and trade flows through the lens of fragmentation and global value chain. It explains roundabout trade between countries in the global trading system, and predicts the locations of the assembly centers. Second, it explains the stylized facts about DVAR across countries and across sectors. Third, it provides a theory to explain how the DVAR of a country is determined, and then tests the hypotheses that arise thereof. In the empirical work, we make use of the updated data set jointly constructed by the OECD and WTO and released in June 2015 that accounts for trade in value-added (TiVA) among the major economies in the world. We find reasonably strong empirical supports for our theory.