Theoretical Foundations of the WIOD

Topic: Input-Output Analysis: Trade and Global Value Chains policies (7)
Author: Neha Shailendra Dhanawade
Co-Authors: Rajas Kamalakar Parchure

World Input-Output Databases (WIOD) are widely used to study trends in intercountry interindustry trade, mapping of global value chains, trade in value added, trade in employment, and the energy and environment sectors located in the different countries. WIODs have also been extensively used for the analysis of intercountry intersectoral impacts of trade policies like trade liberalization and free trade agreements. In contrast to the proliferation of the policy applications of WIODâ€™s there have been surprisingly few contributions to the theory that underlies the WIOD. Clearly trade theories of the Heckscher-Ohlin type, new trade theory or modern versions of Ricardian trade theory are insufficient to provide adequate foundations due to their limitations which include a) limited dimensionality e.g. two-countries and two-or-more goods and b) absence of intermediate capital goods. and c) trade between static economic systems. The purpose of paper is to formulate a general equilibrium model of trade whose solution is the production and trade entries of the world input output matrix. It is shown how the static open Leontief system augmented by a household demand system (e.g. Mongelli, Neuwahl and Rueda-Cantuche, 2010) can itself be used to formulate a theory of trade between several countries in several commodities which can determine the intercountry interindustry trade flows appearing in the world input-output tables in physical and value terms.