

Modelling bilateral international trade flows. The INFORUM Legacy

Topic: International Linked Systems of Models

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Several major economic issues – such as the impact of climate change, the role of trade agreements in growth process, the consequences of international imbalances, and the transmission of shocks – are better investigated with a global perspective and this evidence has stimulated the development of international applied models. Since their first stage of development in the 1970s much progress in data quality and availability as well as in computer capabilities has occurred. However, building and maintaining international multi-country models is still a daunting task. After a description of the main characteristics of the INFORUM Bilateral trade model and its potential in explaining and forecasting international phenomena, we focus on: i) presenting a highly detailed database of bilateral trade flows specifically built for a bilateral trade model (BTM) which links multisectoral country models; ii) estimating bilateral trade share equations. The INFORUM international system of models has been active for several decades and has always paid attention to modelling international trade. The main features of BTM are (i) a detailed disaggregation of commodity classification, (ii) the econometric estimation of import shares, and (iii) the linking system between national models. The high level of disaggregation in trade flows is particularly useful for fully capturing the complex interrelations between economies and for investigating issues of international competitiveness as well as for simulating the detailed aspects of trade policies, which are often tailored to specific commodity categories. Trade shares are computed and used in many multi-country models. However, exogenous assumptions are dominant, either with parameters assumed from existing literature or with exogenous hypotheses on shares behavior. In BTM, trade shares are econometrically estimated as functions of a set of explanatory variables at the commodity level. Finally, the linking system of national models through BTM is a key feature to understand the transmission channels of shocks via international trade.