TINFORGE â€" Trade in the INterindustry FORecasting GErmany Model

Topic: International Linked Systems of Models
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INFORGE (INterindustry FORecasting GErmany) is a national macroeconometric input-output model for Germany. It is used by public and private institutes for impact analysis and forecasting of economic tasks. Usually, in national models international trade is treated as exogenous. In early versions of INFORGE and in many other national models, foreign trade is an exogenous variable. The problem with this approach is that impacts of changes in the world economy (e. g. competitive advantages) and their rebound effects cannot be captured.

In later versions of INFORGE, foreign trade was derived from the global model GINFORS (Global INterindustry FORcasting System). The core of GINFORS is a bilateral trade module that comprises 50 countries plus two regions and their import and export goods as well as export and import prices. The economies of major German trade partners are modeled in detail using the input-output framework and additional economic data such as labor market and price data. Rebound effects were taken into account but updating the underlying data base and the evaluation of the complex model structure were time-consuming.

The most recent version of INFORGE is linked to the bilateral trade model TINFORGE. TINFORGE does not incorporate input-output-models but includes 60 macroeconomic country models (including a macroeconomic model for Germany) that are linked via bilateral trade. Each country model includes the demand-side components of GDP (consumption, investments etc.) as well as wages, employment, prices (e. g. export and import prices, consumer prices) and population by age groups. Imports are estimated with production in each country model and weighted sales prices of the exporting countries. The imports of each country are a share of total exports of the trade partners. Of course, the sum of all country imports is equal to the sum of all exports. The main advantages of this approach are that TINFORGE can be updated more quickly than the GINFORS model and that trade results for Germany now can be easily integrated into the national input-output model INFORGE. In this paper, the general modeling approach of TINFORGE will be illustrated.