

Constructing a Global Dataset of IO Tables Linked with Trade and Assistance: GTAP 9 Data Base

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We begin this abstract by answering the questions asked above:

(i) What is the scientific question to be answered by your paper?

This paper addresses the question of how to harmonize and assemble IO tables from various countries, by linking them with widely accepted international official statistics.

(ii) What is the method used?

A wide range of methods are employed for this purpose and will be elucidated in this paper; examples include, targeting of IO tables using RAS and entropy methods and disaggregation of sectors.

(iii) What is, or will be, the result of the study?

As a result of such methods, we explain how we develop the GTAP (Global Trade Analysis Project) Data Base, focusing on its latest release – GTAP 9 Data Base.

The centerpiece of the Global Trade Analysis Project is the GTAP Data Base, a fully documented, publicly available global data base which contains complete bilateral trade information, transport and protection linkages. The GTAP Data Base represents the world economy and is utilized by thousands worldwide and is a key input into contemporary applied general equilibrium (AGE) analysis of global economic issues.

This year, we released the 9th version of the database. It boasts three reference years of 2004, 2007, and 2011 as well as 120 countries and 20 aggregate regions for all 57 GTAP commodities. This version also features 5 labor categories added to the other 3 factors of production considered (i.e., Capital, Land, and Natural Resources).

Input-Output Tables are at the core of the GTAP Data Base. These data are contributed by our network members worldwide. This data is supplemented with other international data sources to enhance the quality of the data base as a whole and in order to be used for economic analysis. All data contributors receive free access to the data base. Previous versions of the database are also freely available. These I-O tables are further processed to have harmonized disaggregation, targeted to international datasets of agriculture, energy, trade, protection and domestic support and are assembled together to form the GTAP Data Base.

In addition to the GTAP 9 Data Base, the Center for Global Trade Analysis develops and releases a number of satellite datasets including data on land-use, migration and capital flows. These additional datasets allow users to more easily use and adapt the full suite of GTAP Computer General Equilibrium (CGE) Models, including the dynamic GTAP model (GDyn), the energy extension (GTAP-E) and the extension that includes international migration (GMig2) for analysis of global trade and environmental issues.

This presentation will describe the data components and procedures that are necessary to produce the GTAP Data Base, limitations, and future directions. This presentation will also serve to showcase additional activities that the center sponsors such as model extensions, training opportunities, and conferences.

Following are the major features of GTAP 9 Data Base:

− Three reference years: 2004, 2007, 2011

− Additional regional disaggregation: 140 regions and 57 sectors

− Newly added regions:

Benin, Burkina Faso, Guinea, Togo, Rwanda, Brunei Darussalam, Jordan, Dominican Republic, Jamaica, Puerto Rico, Trinidad and Tobago

− Updated/Improved regions:

Brazil, Colombia, Paraguay, Belarus, Pakistan, Turkey, China, Japan, Korea, Singapore, Taiwan, Australia, New Zealand, Norway, Malawi, Mozambique, Nigeria, Senegal, Tanzania, Zambia

− New five-way labor-splits, instead of the older two-way splits

− New macro-economic data for 2004, 2007, and 2011

− New trade data for 2004, 2007, and 2011

− New protection data for 2007 and 2011

− Improved bilateral services trade data for 2004, 2007, and 2011

− Improved energy data for 2004, 2007, and 2011

− Revised OECD domestic support for 2004, 2007, and 2011

− Decomposition of tariff (into ad valorem and specific) and OECD domestic support payments

data (into different types of payments based on the extent of decoupling and base), for 2004, 2007 and 2011.

− CO2 emissions dataset integrated into core data base