

GTAP Board Report 2015

European Commission

The European Commission and its different services are active users of the GTAP database and other products provided by the GTAP Center. This report highlights GTAP related activities for the period 2014-2015 and priority areas for future developments.

GTAP related activities

DG TRADE uses the GTAP database and standard and dynamic versions of the GTAP model as tools for analysis of different trade policy initiatives carried out in-house and by external consultants. Most notably, these products have been used as inputs into the analysis of the impacts of the EU-Canada FTA, the EU-GTAP project in terms of improving European Input-Output database for global trade analysis, the Public Procurement data base extension and modelling modification project, etc.

DG JRC uses the GTAP database to run global CGE models like MAGNET, GLOBE and GEM-E3, as well as for the calibration of the regional CGE model RHOMOLO. These models are used for policy support to DG CLIMA, DG AGRI, DG ENV, DG ENER, DG DEVCO, DG REGIO, etc.

The RHOMOLO model, which DG JRC has recently developed, is implemented at regional (subnational) level. In that sense, it is extension of the CGE modelling approach taken in GTAP.

As a joint project DG TRADE, DG JRC and ESTAT (as advisory partner) started working together on improving the EU28 Input-Output database in GTAP, by providing a set of Input-Output Tables for the 28 Member States for the year 2010 under the new European System of Accounts (ESA2010). In addition, the EU-GTAP project will also provide fully-fledged matrices of Taxes less Subsidies on Products. An analysis of the effects of the ESA95-ESA10 shift on IO tables will also be reported. The base year will be 2010.

DG ENER in cooperation with DG MOVE and DG CLIMA regularly develops projections of energy and transport trends and greenhouse gas emissions to 2050. These so-called "Reference scenarios", are consulted with EU Member States and serve as benchmark for evaluating alternative policy options in Impact Assessments. This process involves consultants' work (currently the National Technical University of Athens) using the GEM-E3 model inter alia for developing sectoral value added projections for EU Member States. The GEM-E3 model draws on the GTAP database.

Priority areas

Different services of the European Commission that are actively using the GTAP database as an input in their daily activities highlighted different areas of priority for future improvements.

Public procurement

Improving the representation of public procurement flows in the GTAP database and model remains high among the priorities of the European Commission. Several important steps have been already

made in this direction most importantly in the framework of the advanced though still ongoing DG Trade project "*Public Procurement data base extension und modelling modification for analysis purposes*". Distinguished features of the project are the split of total investment in government and private investment in the GTAP database as well as the creation of a MRIO for the purpose of this project. The study is will be finalized by end September 2015.

GTAP database

- We strongly emphasize the need for considering NTBs trade cost equivalents in the services and goods sectors likewise in the GTAP database. Being able to assess the impact of NTBs is of crucial importance for trade policy analysis. This of course would have implications on the standard/dynamic GTAP model.
- There is a need for a disaggregation of Business Services into ITC, Professional services, Technical services: with the growing importance of services, the current coverage of services in the GTAP database is often too limited.
- We strongly encourage taking years ending in -0 and/or -5 as base years in future updates of the GTAP database. All EU Member States are obliged to submit to Eurostat a full set of ESA10 (SNA08) supply and use tables at basic prices (also at purchasers' prices), input-output tables, matrices of taxes less subsidies on products and matrices of trade and transport margins once every five years (ending in -0 and -5). Therefore, all of them will be publicly available from the Eurostat website later on. Therefore, the use of a different base year would imply the need to use projections and updating methods that would certainly increase uncertainties in the EU data used by GTAP.
- Additional regional disaggregation of European neighbours (e.g. Bosnia Herzegovina, Serbia, Algeria and Libya) and improving the IO of existing neighbour countries (such as Turkey).
- Further disaggregation of the manufacturing sectors and also in particular for the energy-intensive sectors.
- The higher level of technological detail in the power sector (e.g. coal-fired, gas-fired, wind, solar, hydro, nuclear, etc.) – developed in the GTAP Power project- should become a permanent feature of the GTAP database as the database is widely used for energy and climate questions on an international and national level.
- The GTAP database should be provided in an official GTAP-MRIO format.
- More information on the representation of tariffs by type (specific, mixed, compound, tariff rate quotas with fill rates and rents).
- We have an interest in having energy trade represented in detail, including for biomass and biofuels.
- There is a need for further disaggregation of the GTAP database in particular in respect to the sector "OTN Transport equipment nec" between new vehicle technologies (e.g. electric

vehicles) and other transport equipment and the sector "OTP Transport nec" between road and rail transport.

- One could provide more insights and documentation about why the GTAP database may deviate from the values published in the National Accounts.

Other issues

- There is a need for more validation exercises of CGE models using the GTAP database as sometimes key parameters (e.g. energy demand and supply elasticities) of these models are not econometrically estimated, and the performance of the model is not contrasted against historical outcomes.
- Better representation of the institutional accounts and their transfers within the GTAP database (particular attention to government and taxation).
- Increasing attention towards the so-called "bio-economy"; biofuel, 2nd generation biofuel, bio-energy, bio-plastic etc.
- An update and time-series extension of the GTAP migration data base
- The construction of a GTAP baseline up to 2030 or beyond where the GTAP database is extrapolated in the future, based on clear assumptions on global indicators like GDP growth, population etc.

Selected publications

Official EU publications

European Commission (2015), *The Paris Protocol – A blueprint for tackling global climate change beyond 2020*, SWD (2015)17.

European Commission (2014), *Impact Assessment accompanying the Policy Framework for Climate and Energy in the Period from 2020 up to 2030*, SWD(2014)15.

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JRC reports and Working Paper Series:

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