

European Commission
GTAP Board Report
2010

The GTAP database (but also the GTAP model) has been used for many years by European Commission services (either directly or indirectly) as part of the modelling work carried out in support of different policy initiatives. The overall interest of the European Commission remains the continuous improvement of the GTAP database in terms of coverage and quality, given the systemic benefits this could have for on-going and future modelling projects.

1. Completed and ongoing activities since the last Board report

As part of the EU trade policy making, the GTAP database has been used for a number of studies on EU bilateral trade relations with e.g. Japan, Libya and Korea as well as for the EU mid-term evaluation of the Generalized System of Preferences. Furthermore, both the GTAP database and model have been used by Commission officials in the internal assessment of various trade policy issues.

A special version of the GTAP database with more details on biofuels production and trade was produced (together with an adapted version of the Mirage model) to assess the emission impact of biofuels.

In addition to trade policy analyses, the GTAP database remains an important input to a number of EU-sponsored projects using other modelling tools (e.g. GEM-E3, DSGE, Mirage, WorldScan, QUEST, etc), in particular in the areas of the environment, climate change and energy. For example, in a current project on green growth, the GTAP database is used to construct the input-output matrices, which are further extended with data on emissions and R&D investments obtained from other sources.

The Commission has contributed with input-output tables for the EU. In total 27 social accounting matrices, have been included in the GTAP database version 7.1. These will be distributed to board members for review before a decision will be made about the version's wider release.

2. Future priorities

The European Commission is in particular interested in further developing the GTAP database in the following areas:

(i) Energy, transport and the environment

Any improvements that would facilitate the construction of comprehensive cross-country data on input-output, export, and import activities of different non-fossil fuel based carriers (nuclear and renewable wind, solar, hydro, and geothermal) and fossil fuel based carriers (coal, petroleum, gas) would be welcome.

A greater focus on the transport sector and the modelling of transport margins would be appreciated. The sector “Transport, nec” could perhaps be further split between “Land transport; transport via pipeline services” and “Supporting and auxiliary transport services; travel agency services”.

It would be useful to obtain cross-country sector-level data on CO₂ and non-CO₂ emissions or, alternatively, provide a consistent industrial activity convergence key to allow better mapping of the GTAP data with the UNFCCC data. The potential integration of the energy volume/prices/tax and CO₂ emissions module into the GTAP database would also be welcome.

(ii) Vertical integration of trade

An identification of the origin of imported intermediates would be an important qualitative improvement of the GTAP database. This would facilitate the analysis of global value chains in general as well as work on carbon leakage, competitiveness and trade impacts of climate policy, since sector-specific energy and environmental content of traded goods and services then could be identified.

(iii) Other (data) issues

The expansion of regional disaggregation for a number of regions, in particular Israel, Saudi Arabia and other countries in the Middle East, would enable more and improved research on the impact on these countries of a number of policy measures.

We welcome the progress made in PE-GE model linking as well as the on-going work on the poverty module. We would fully support efforts to incorporate this work into the runGTAP or runGDYN interfaces.

Any type of data on public or private R&D investments or innovation activities would be a useful addition to the database.

Finally, a more frequent update of the GTAP database (every two years instead of three?) would be in the interest of all its end-users.

3. Selected publications

- Mueller, M. et al (2009), Construction of Social Accounting Matrices for EU27 with a Disaggregated Agricultural Sector (AgroSAM), <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=2679>,
- Hayden, M., Veenendaal, P.J.J. and Z. Zarnic (2010), Options for International Financing of Climate Change, European Economy, Economic Paper No. 406, http://ec.europa.eu/economy_finance/publications/economic_paper/2010/ecp406_en.htm,
- Varga J. and J. in 't Veld (2010), The Potential Impact of EU Cohesion Policy pending in the 2007-13 programming period: a model-based analysis, European Economy Economic Paper, (forthcoming),
- Abler, D. et al (2009), EU Agricultural Trade Relations with Asian Countries, IPTS, EUR 24065, <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=2741>
- European Commission (2010), Unlocking Europe's potential in clean innovation and growth – Analysis of options to move beyond 20%, Commission Staff Working Document accompanying the communication, forthcoming in May.
- Al-Riffai, P, Dimaranan, B and D. Laborde (2010), Global Trade and Environmental Impact: Study of the EU Biofuels Mandate, http://trade.ec.europa.eu/doclib/docs/2010/march/tradoc_145954.pdf