

European Commission (EC) GTAP Board Report, 2012

The GTAP database (but also the GTAP models) 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 (including further disaggregation), quality and the introduction of new features such as public procurement and sourcing of intermediate inputs, given the systemic benefits this could have for ongoing and future modelling projects and to maintain the GTAP database relevant.

1. Completed and ongoing activities since the last Board report

As part of the EU trade policy making, the GTAP database and/or GTAP models have been used for a number of studies on EU bilateral trade relations with e.g. the Central American countries, Peru and Colombia and Japan. Furthermore, both the GTAP database and the GTAP models have been used by Commission officials in the internal assessment of various trade policy issues.

In addition to trade policy analyses, the GTAP database remains an important input to a number of EC or EC-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, energy and tax).

The Commission is carrying out work aiming at updating domestic support representation in the GTAP database, in particular for the agri-food sector and is interested in improving the representation of the Common Agricultural Policy (CAP) in the GTAP database.

Similarly, the EC's Joint Research Centre in Seville, Spain aims to update the AgroSAMs for the EU 27 Member states (included since the version 7.1. of the GTAP database) for the next database release.

Commission services have actively supported the FP7 funded World Input-Output Database (WIOD, <http://www.wiod.org>). At the heart of the project is the creation of a database built around EU-KLEMS and extended into an internationally harmonised set of I-O tables covering roughly 85% of world GDP. Some Commission users are looking into the possibilities to exploit the WIOS as an alternative to GTAP.

2. Future priorities

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

(i) Public procurement

Given the size of the public sector and the increasing focus given to this area by policy makers and trade negotiators, an improved representation of public sector expenditure in

the GTAP database is key in order to allow proper analysis of access to public procurement markets. Several important shortcomings have been identified. The European Commission welcomes and strongly encourages ideas and further data collection and analytical work from the GTAP community on how to improve the representation of public procurement in the GTAP database.

(ii) Origin of imported intermediates

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. Without this feature, GTAP risk losing in relevance in some aspects as users increasingly are turning to the WIOD database for this type of data. In light of the fact that WIOD covers the period from 1995 to 2009, more frequent updates of the GTAP database would be important.

(iii) Other 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 see a need for a further sectoral disaggregation. Splitting out sectors such as cement, aluminium and glass would be useful. Likewise, the meat sector is an important sector in the analysis of agricultural policies. A further disaggregation of pig and poultry (both in livestock and meat) would pave the way for improved analyses of domestic and trade policies in the agricultural area.

A better and more detailed representation of the different taxes, subsidies and transfers; such that the GTAP database could be used more extensively for analyses with a public finance focus (e.g. tax reforms).

Biofuels is becoming increasingly important in many economies and is key when analyzing the energy markets. We would welcome biofuels as default in the GTAP database as opposed to a separate GTAP-BIO database.

Improved services and FDI data coverage, including services protection data and sectoral R&D investments would be valuable.

For the advanced user, the available documentation is not sufficient as far as issues related to agricultural domestic support is concerned.

3. Selected publications

For external studies carried out by DG Trade, see the website of the Chief Economist, <http://ec.europa.eu/trade/analysis/chief-economist/>

Boulanger, Ferrari, Michalek and Vinyes (2012), Analysis of the Impact of Croatia's Accession into the EU on the Agri-Food Sectors. A General Equilibrium Approach. Paper prepared for 2012 ECOMOD Conference, July 2012, Seville (Spain)

Burrell, Ferrari, Gonzalez-Mellado and Michalek (2011), Doha Development Agenda in the European Union: Impacts on the agricultural sector, Paper presented at the 15th European Trade Study Group (ETSG) Conference, September 2011, Copenhagen, Denmark. <http://204.3.197.155/ETSG2011/Papers/Gonzalez.pdf>

Burrell, Ferrari, Gonzalez-Mellado and Michalek (2012) "EU Market Access for Agricultural Products in the Doha Development Round: A Sensitive Issue", Paper prepared for the 28th ICAE Conference, August 2012, Foz de Iguacu (Brazil)

Cardenete, Boulanger, Delgado, Ferrari and M'barek (2012), The agri-food and other bio-based sectors in Spain. A description based on multiplier analysis Paper prepared for presentation at the 1st AIEAA Conference 'Towards a Sustainable Bio-economy: Economic Issues and Policy Challenges', June 2012, Trento, Italy

Cardenete, Ferrari, Boulanger, Vinyes, Delgado, Müller and Parra, (2012), Multipliers Analysis of Social Accounting Matrix for the EU-27 with a Disaggregated Agricultural Sector, Paper prepared for 2012 ECOMOD Conference, July 2012, Seville (Spain)

Ciscar JC, Iglesias A, Feyen L, Szabó L, Van Regemorter D, Amelung B, Nicholls R, Watkiss P, Christensen OB, Dankers R, Garrote L, Goodess CM, Hunt A, Moreno A, Richards J, and Soria A (2011). [Physical and economic consequences of climate change in Europe](#). Proc. Natl Acad. Sci. USA 108:2678-2683 doi:10.1073/pnas.1011612108

Ciscar JC, Szabó L, van Regemorter D, Soria A (2012). [The integration of PESETA sectoral economic impacts into the GEM-E3 Europe model: methodology and results](#). Climate Change DOI: 10.1007/s10584-011-0343-y

Ciscar Martinez J, Saveyn B, Soria Ramirez A, Szabo L, Van Regemorter D, Van Ierland T. A (2012). [Comparability Analysis of Global Burden Sharing GHG Reduction Scenarios](#). JRC Scientific and Technical Reports. EUR 25222 EN.

European Commission - Directorate-General for Agriculture and Rural Development (2011), Part II Quantitative Analysis of Uncertainties in "Prospects for agricultural markets and income 2011-2020". http://ec.europa.eu/agriculture/publi/caprep/prospects2011/index_en.htm

European Commission (2011). "A Roadmap for moving to a competitive low carbon economy in 2050" Commission Staff Working Document. [Impact Assessment](#). (COM(2011) 112 final, SEC(2011) 289 final)

European Commission (2011). "[Tax Reforms in EU Member States 2011](#)" European Economy. 5, Directorate General Economic and Monetary Affairs, European Commission, October 2011, 139p

European Commission, Joint Research Centre / Institute for Prospective Technological Studies (2011), "Potential EU-Mercosur Free Trade Agreement: Impact Assessment", JRC Reference Report. <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=4819>

Ferrari, Boulanger, Gonzalez–Mellado and McDonald (2012), Decoupling Agricultural Policies in CGE Models: Theory and Empirics, Paper prepared for the 15th Annual Conference on Global Economic Analysis "New Challenges for Global Trade and Sustainable Development" June 2012, Geneva, Switzerland. <https://www.gtap.agecon.purdue.edu/resources/download/5838.pdf>

For a list of technical papers and academic articles using different versions of the QUEST model, see our webpage at: http://ec.europa.eu/economy_finance/research/macroeconomic_models_en.htm

Gonzalez–Mellado and Ferrari (2011), A CGE model analysis of reducing obstacles to trade in Kenya: a focus on the agro-food sector, Presented at the 14th Annual Conference on Global Economic Analysis, Venice, Italy. <https://www.gtap.agecon.purdue.edu/resources/download/5533.pdf>

Henseler, Piot-Lepetit, Gonzalez-Mellado, Ferrari, Banse, Grethe, Parisi and H elaine (2012), On the Asynchronous Approvals of GM crops: Potential Market Impacts of a Trade Disruption of EU Soy Imports, paper under review in *Food Policy*

Maisonnavre H, Pycroft J, Saveyn B, Ciscar Martinez J. (2012). [Does climate policy make the EU economy more resilient to oil price rises A CGE analysis](#). JRC Scientific and Technical Reports. EUR 25224 EN.(accepted in Energy Policy)

Mueller and Ferrari (2011), An Inventory of Datasets for the Compilation of Regional Social Accounting Matrices for the EU, Presented at the 14th Annual Conference on Global Economic Analysis, Venice, Italy. <http://www.gtap.agecon.purdue.edu/resources/download/5380.pdf>

Mueller and Ferrari, (2011), Deriving CGE Baselines from Macro-economic Projections, 2011 International Congress, August 30-September 2, 2011, Zurich, Switzerland, European Association of Agricultural Economists. http://ageconsearch.umn.edu/bitstream/114638/2/Mueller_Marc_667.pdf

Németh, G., Szabó, L., and Ciscar, J.-C. (2011). [Estimation of Armington elasticities in a CGE economy–energy–environment model for Europe](#). *Economic Modelling* 28(4), 1993-1999

Saveyn, B., Van Regemorter, D., and Ciscar, JC. (2011). [Economic analysis of the climate pledges of the Copenhagen Accord for the EU and other major countries](#). *Energy Economics* 33, S33-S40

Vinyes and Roe (2012) Growth of the Brazilian biofuel sector: an inter-temporal general equilibrium analysis, Paper prepared for the 15th Annual Conference on Global Economic Analysis "New Challenges for Global Trade and Sustainable Development" June 2012, Geneva, Switzerland.
<https://www.gtap.agecon.purdue.edu/resources/download/5926.pdf>