

Environment Directorate Activities related to GTAP

A) Studies based on GTAP data

In the year 2010 the Oecd Environment directorate has done different applied studies / working paper with its ENV-Linkages CGE model that is based on GTAP data.

More noticeable examples are :

- 1) A document on 'carbon-based border tax adjustments (BTA) ' (OECD/ECO WP No 794)

Where we showed that First, BTAs can reduce carbon leakage if the coalition of countries taking action to reduce emissions is small, because in this case leakage (while typically small) mainly occurs through international trade competitiveness losses rather than through declines in world fossil fuel prices that trigger rising carbon intensities outside the region taking action. Second, the welfare impacts of BTAs are small, and typically slightly negative at the world level. Third, and perhaps more strikingly, BTAs do not necessarily curb the output losses incurred by the domestic energy intensive-industries (EIIs) they are intended to protect in the first place.

For 2011, the ENV-Linkages model is actually participated to a model comparison exercise with other modeling teams on this topic of BTA, coordinated by T. Rutherford around EMF-24 main exercise.

- 2) Multiple studies about economics, environmental and trade impacts of 'Removing Fossil Fuel Subsidies'. The OECD/ECO WP no 853, develops and extend the modeling work done by OECD for Joint Report on fossil fuel subsidies that had been prepared by the IEA, OECD, OPEC and the World Bank for G20 and presented to the G-20 Toronto Summit in June 2010.

This analysis shows that removing fossil fuel subsidies in a number of non-OECD countries could reduce world Greenhouse Gas (GHG) emissions by 10% in 2050. The studies also insist on the difference between considering economic gains of removing subsidies at a regional level (unilateral action) with possible losses that could occur in some countries if the reform is undertaken at the global level (multilateral action).

For 2011, this work is actually updated with latest IEA data for 2009 and with GTAP 7 database and more countries taken into account.

In a parallel way and for G20 requests too, OECD TAD directorate has extensively worked in the last couple of years on the development of a methodology for identifying and estimating producer and consumer energy subsidies, based on the Producer and Consumer Subsidy Estimates (PSE & CSE) used by OECD in other sectors, such as agriculture.

(for more details see:

http://www.oecd.org/document/57/0,3746,en_2649_37465_45233017_1_1_1_37465,00.html)

-3) Various studies and update of past works about architecture of world global and regional carbon markets have been pursued like studies on 'Costs, Revenues and Effectiveness of the Copenhagen Accord' (OECD/ ENV WP No 22) that examines with our CGE model the costs and effectiveness of the 'Copenhagen pledges'. Or a study about 'Direct and Indirect Linking (through CDM) to Carbon Markets' (OECD/ ENV WP No 20) that shows, that the potential gains to be reaped are so large, that substantial efforts in this domain are warranted.

B) Technical work

For a more technical point of view we have spend a lot of time in the last year to update and refine the baseline of our model. To this purpose we have in particular generalized for all the GTAP 7 regions, and up to 2050 a set of macro-economic and socio-economic trends and forecast based on OECD Eco Dpt and Labour Directorate projections but also on IEA, UN, IMF, World-bank projections.

Trade and Agriculture Directorate Activities Related to GTAP

A) OECD PSE:

Since 2009, the new PSE classification has been introduced into the GTAP database (v7). In a significant break from past practice, the new classification no longer calculated PSEs for individual commodities, in recognition that agriculture support is increasingly being provided to several (or all) commodities in aggregate, and in some cases do not require production at all :
(see https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=3154).

In particular, the category of payments “Other Transfers to Producers”, which does not oblige a recipient to engage in commodity production at all, was allocated equiproportionally to all commodities and all factors of production. Discussions with Martina Brockmeier, Hans Jensen, Kirsten Urban and Badri Gopalakrishnan are ongoing to verify that this is being implemented in the best way in the latest release of the GTAP database. There is also an ongoing discussion about whether or not to pursue a more detailed program by program approach, in particular for programs believed to be mainly related to agricultural land.

B) Studies using GTAP data:

**THE ROLE OF FACTOR CONTENT IN TRADE: HAVE CHANGES IN FACTOR ENDOWMENTS BEEN REFLECTED IN TRADE PATTERNS AND ON RELATIVE WAGES?
OECD Trade Policy Working Paper No. 109
by Susan F. Stone, Ricardo Cavazos and Anna Jankowska**

[http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=tad/tc/wp\(2010\)14/final&doclanguage=en](http://www.oecd.org/officialdocuments/displaydocumentpdf/?cote=tad/tc/wp(2010)14/final&doclanguage=en)

This paper investigates the relevance of the factor content approach in analysing a country’s trade pattern. It shows that overall trade patterns do reflect the relative factor endowments of the countries under investigation. However, some large economies, such as the United States and Japan, exhibit counterintuitive. Accounting for intermediate trade in our analysis reverses some of these seemingly counterintuitive results, and in general has a large impact on measured factor content. We argue that this is a reflection of the changing nature of trade, driven by the forces of production fragmentation and offshoring. The evidence presented here implies that factor content patterns are undergoing fundamental changes calling for more careful analysis of the broad measures used in trade. An implication of this work for policy makers is the need to be aware that the methods used to derive the value for trade balances matter. Acknowledging the role of intermediate goods in understanding a country’s trade position is only the first step, however. What remains a challenge for policy makers is the need to reconcile the seemingly opposing trends of the domestic (i.e. geographic specific) determination of employment and wages with the international (i.e. non-geographic specific) determination of the movement of goods and services and location of tasks.

OECD (2011), The Impact of Trade Liberalisation on Jobs and Growth: Technical Note (OECD Trade Policy Working Paper no. 107)

By Philippa Dee, Joseph Francois, Miriam Manchin, Hanna Norberg, Hildegunn Kyvik Nordås and Frank van Tongeren,

This work was undertaken in support of the mandate from the G20 Toronto Summit in June 2010 that tasked the OECD, the ILO, World Bank and the WTO to report on the benefits of trade liberalisation for employment and growth, and is a contribution to the work of the OECD Trade Committee in the area of Understanding the benefits of globalization.

This report shows how more open markets in goods and services can contribute to creating jobs and increase incomes. Reducing tariffs and non-tariff barriers can help in the short run where the economic crisis has led to significant involuntary unemployment by reducing costs of imported products for consumers and by providing new market opportunities for exporters. Taking a longer term view of a more healthy global economy, lasting gains can be found from reallocation of resources across sector and from productivity growth. Reducing barriers to foreign direct investment in services is found to particularly increase demand for higher skilled labour, while the offshoring of services is not found to shift jobs abroad. The report presents in detail new results based on two large scale global computable general equilibrium models, one for goods and one for services, using novel approaches to assess the effects of reducing trade costs related to non-tariff measures, and to assess the effects of regulatory impediments to foreign direct investment in services. The analysis disentangles the effects of actions that the G20 economies could take from the potential effects of global tariff liberalisation efforts in which all countries would participate.

http://www.oecd-ilibrary.org/trade/the-impact-of-trade-liberalisation-on-jobs-and-growth_5kgj4j4j1nq2-en

C) Network activities

Work on Long-Term Scenarios on world agricultural markets

A first workshop was held in October 2010 ('Long-term scenarios: Supporting robust policies for global agriculture and food'), with a rather broad presence of different models, including the partial equilibrium model IMPACT/Global Change Model (IFPRI), general equilibrium models ENVISAGE (The World Bank) and LEITAP/IMAGE (LEI/PBL), and the expert-based platform Agrimonde (CIRAD/INRA). A report on the workshop is available on request (TAD/TC/CA/WP/RD(2010)1/FINAL). A second, more technical, workshop was held in April 2011, aiming at better understanding differences in long term (to 2050) scenarios generated by various models. Reference scenarios using a standard set of basic assumptions had been generated using IMPACT (IFPRI), ENVISAGE (The World Bank) and LEITAP (LEI). Following the workshop, these scenarios are being revised. A joint report highlighting and discussing commonalities and differences will be produced later in 2011.