Agricultural Reform

The agriculture directorate is using a modified version of the GTAP model to analyse the impact of agriculture and non-agriculture reform. This analysis is part of an overall project that analyses policy reform using a "top-down" approach that integrating a variety of modeling techniques. Global and regional analysis is carried out using general equilibrium (modified GTAP), while at the other extreme, household impacts are measured for a selected number of OECD and non-OECD countries using more eclectic modeling techniques.

The LEI has been contracted to custom tailor GTAP for OECD. The modified version of GTAP incorporates some features already introduced by papers such as Hertel and Keeney (2003):

• factor substitution between purchased farm input intermediates, and between the aggregate intermediates and farm-owned inputs
• agriculture and non-agriculture specific factors of production

In addition, the land allocation system has been significantly revised to include several types of land using a three level Constant Elasticity of Transformation structure, similar to that used in the OECD's Policy Evaluation Model (PEM):

The lower nest assumes a constant elasticity of transformation between 'Miscellaneous agricultural land' (vegetables, orchards, etc.), 'Rice' and the group 'Field crops and pastures' (FCP). The transformation is governed by the elasticity of transformation $\sigma 1$. The FCP- group is itself a CET aggregate of Pastureland, the group 'Cereal, Oilseed and Protein cropland' (COP) and other field crops that (cotton). Here the elasticity of transformation is $\sigma 2$. Finally, the transformation of land within the upper nest, the COP-group, is modelled with an elasticity $\sigma 3$. In this way, the degree of substitutability of types of land can be varied between the nests. It captures to some extent agronomic features. In general it is assumed that $\sigma 3 > \sigma 2 > \sigma 1$. This means that it is relatively easier to change the allocation of land within the Cereal, Oilseed and Protein group, while it is more difficult to move land out of this group into a lower nest, such as into vegetables. The parameters are calibrated to land supply elasticities used in the PEM model (OECD, 2001).

THE DOHA DEVELOPMENT AGENDA: WELFARE GAINS FROM FURTHER MULTILATERAL TRADE LIBERALISATION WITH RESPECT TO TARIFFS

Quantitative work that employs the GTAP model and takes into account applied and bound tariffs drawing on the recently updated OECD Tariffs and Trade Database. Taking the fully implemented Uruguay Round as a starting point, eight scenarios are studied. Each scenario considers a different specification for tariff reduction. All eight assume a reduction in trading costs equal to 1% of the value of trade.
Results are presented focusing on:

• global welfare gains and the relative contribution of tariff reductions and trade facilitation to these gains,
• the regional distribution of total gains,

• regional and sectoral sources of these gains (e.g. shares of total gains attributed to the liberalisation in particular regions and sectors), and
• the breakdown of the total gain into allocative (efficiency) gains and terms of trade gains.

The standard GTAP model is used to produce the estimates. This is a static, multi-region, multi-sector model reflecting an assumption of perfect competition. The data reflect the information on MFN applied and bound tariffs contained in the newly updated OECD Tariffs and Trade database (2003), with a base year of 1998. In order to facilitate analysis of the results, countries are aggregated into ten regional groupings and industry categories are aggregated into ten sectors. Some modifications are made to the GTAP database.

SERVICES LIBERALISATION: IDENTIFYING OPPORTUNITIES & GAINS PART TWO: MODELLING THE ECONOMIC BENEFITS OF SERVICES TRADE LIBERALISATION

A study that, in part, aims to provide objective and quantifiable assessments of the benefits of services trade liberalisation, drawing upon the most recent modelling and econometric work on the gains from liberalisation of services and building upon previous work undertaken by the OECD's Trade Directorate. For both the new studies identified, and the studies covered in previous OECD work, the results relevant to developing and developed countries are extracted separately to allow for comparative analysis of the findings. With respect to services barriers, the study presents estimates of barriers for developing countries, analysing their sectoral variation and comparing them with estimates for developed economies. Similarly, in terms of modelling the welfare effects of removing those barriers, the study presents a quantitative picture of the gains for developing countries compared with the gains for developed countries, for the service sector as a whole, and for individual service sectors.

QUANTITATIVE ASSESSMENT OF THE BENEFITS OF TRADE FACILITATION

This study follows some earlier work by representing direct and indirect trade transaction costs (TTCs) in a manner that is different from prior work. The indirect costs are modelled according to the iceberg-approach, while the direct costs are reflected in "logistics duties". The latter are split into charges applying at the export side and representing the direct TTCs in the exporting country and levies that correspond to the direct TTCs in the importing country. These additional duties are incorporated into the analysis by using the "Altertax" option, which makes it possible to change parameters in the model database. The procedure is designed to integrate additional information on policy variables into existing GTAP data aggregations. Trade facilitation in the form of reduced direct TTCs is then modelled as a cut in export and import charges, which reduces TTCs, but also triggers adjustments in the government sector, due to the loss of revenues from logistics duties. These adjustments are associated with economic costs. For example, employees that used to work in documentation-processing but are no longer needed in this function might need to be retrained and moved to other jobs.

Impact of Changes in Tariffs on Developing Countries' Government Revenue

First, this work provides a discussion of the world pattern of tariff protection devoting special attention to developing countries tariff profiles. Second, it outlines the Doha Development

Agenda (DDA) work in the area of tariffs and discuss the various formula approaches to tariff reduction used in the past rounds of multilateral trade negotiations. Third, it describes a methodology that can be used for estimating the impact of tariff liberalization on government revenues. And conduct a number of simple (partial equilbrium) and reasonably complex simulations to estimate welfare and revenue effects that would be associated with Swiss formula type of tariff liberalization in 24 selected WTO developing countries. Based on empirical findings it discusses cross-country differences in revenue impact as well as sensitivity with respect to three different coefficients in the Swiss formula. Additionally, it provides some comments on revenue, trade and welfare properties of the Swiss and linear tariff reduction formulas. Using GTAP the paper also offers a simulation of the welfare effects of reducing tariffs and simultaneously replacing tariff revenue with revenues from consumption tax. The paper concludes with some policy implications and caveats.

Barriers to trade in services and effective rate of protection in manufacturing.

By Nora Dihel (ongoing with no public details yet available)