

GTAP at the World Bank: July 2005-June 2006

The past year has been a banner year for GTAP-related research at the World Bank.

Two major WTO-related books built on GTAP data and modelling were released in the run up to the Hong Kong Ministerial. These books were extensively disseminated prior to the meeting so that their main findings were able to influence the policy debate on key issues such as the importance of sensitive products. In addition, key findings from recent research were disseminated through Journal articles and chapters in books.

On the data front, we made arrangements to disseminate the UNCTAD Trains data without charge to anyone. This, coupled with extensive training in the use of the WITS software in developing countries, has allowed analysts in developing countries to have access to the data they need to make informed decisions about policies. One of the key—and we hope growing uses of these data will be for constructing policy analysis scenarios for modelling built up from more disaggregate data.

Considerable activity was undertaken to improve the coverage of the GTAP database. Bank staff and consultants are helping add data for country coverage, particularly in Central Asia, the Middle East and, in collaboration with UNECA's work, in Africa.

A number of policy applications were undertaken by Dominique van der Mensbrugge using the Linkage model and GTAP data. Chapter 2 of *Global Economic Prospects 2006* focused on the economic implications of raising South to North migration. This involved collaboration with the GTAP Center for the bilateral migration and remittances data and relatively significant changes to the Linkage model to include migrants (by source and host regions), their families and remittances. Beyond the new data and model, the report highlighted the role of labor differentiation between native and foreign born workers, a correction to the standard welfare measurement to correct for differences in the cost of living between the source and host countries and the role of factor income allocation and fiscal policies on the distributional consequences of the migration scenario.

Initiated work on *Global Economic Prospects 2007*—looking at different scenarios of the world through 2030. Initial work on this project has been used as background material for the Executive Directors of the World Bank.

The Linkage model was used for three different country studies—trade policy options for Uganda (regional trade agreements, EPAs, Doha etc.), further trade opening by Mexico, and the potential impacts for Turkey of its accession to the EU, focused particularly on the agricultural sectors.

The Linkage model was also used to analyze potential avian flu scenarios. The scenarios were divided into three degrees of severity—bird-to-bird and the impacts on the poultry sector and their indirect effects on the rest of the economy, a mild pandemic but associated with temporary severe restrictions on travel and human-to-human services

(restaurants, cultural activities, etc.), and a severe pandemic including major economic disruption (through absenteeism and death). These scenarios are summarized in the recently published *Global Development Finance*.

The GTAP model has been used by Betina Dimaranan, Elena Ianchovichina and Will Martin to assess the effects of rapid growth in China and India on the world economy, and particularly on other developing countries. This contributes to a World Bank study led by L. Alan Winters on this issue to be released at the Singapore Annual Meetings of the International Monetary Fund and the World Bank.

On methodology, a newly published study by Markusen, Rutherford and Tarr pointed to the possibility of much larger gains from liberalization of services is undertaken. A study by Manole and Martin showed that the welfare gains obtained when using appropriate tariff aggregators are a large multiple of those obtained using standard weighted averages. A survey paper in preparation by Joe Francois and Will Martin looks at approaches to improving our estimates of the welfare implications of trade reform.

Books

Anderson, K. and W. Martin 2006. *Agricultural Trade Reform and the Doha Development Agenda*, London: Palgrave Macmillan and Washington DC: World Bank

The agriculture book examines first the potential implications of global trade reform, and then the possible implications of a Doha-type agreement. This analysis provides two major insights. The first is the great importance of agricultural trade reform, despite the small share of agricultural trade in total world trade. For both developed and developing countries, we find that agricultural trade reform accounts for about two-thirds of the total potential gain. The second is that, within agriculture, the market access pillar is overwhelmingly more important than the domestic support or export competition pillars. This reflects the much greater importance of market access barriers as sources of protection; the greater distortions created by market access barriers; and the greater variability of protection rates in these sectors.

Examination of potential agreements consistent with the Doha framework highlights some important conclusions. Building on the excellent MAcMaps data, we were able to highlight the importance of binding overhang in developed and developing countries as an influence on the policy outcomes. Also, even small percentages of self-selected tariff lines treated as sensitive or special dramatically reduces the benefits of reform. Current proposals for special and differential treatment also substantially reduce the benefits to developing countries of the negotiations—while the potential gains to developing countries are larger as a share of GDP, the likely gains from a Doha scenario are lower.

Hertel, T. and L.A. Winters eds. 2006. *Poverty and the WTO: Impacts of the Doha Development Agenda* Palgrave Macmillan and the World Bank, Washington DC.

The poverty book reports on the findings from a major international research project investigating the poverty impacts of a potential Doha Development Agenda. It combines in a novel way the

results from several strands of research. Firstly, it draws on an intensive analysis of the DDA Framework Agreement, with particularly close attention paid to potential reforms in agriculture. The scenarios are built up using newly available tariff line data and their implications for world markets are established using a global modeling framework. These world trade impacts, in turn, form the basis for thirteen country case studies of the national poverty impacts of these DDA scenarios. The focus countries include: Bangladesh, Brazil (2 studies), Cameroon, China (2 studies), Indonesia, Mexico, Mozambique, Philippines, Russia, Vietnam and Zambia. While the diversity of approaches taken in these studies limits the ability to draw broader conclusions, an additional study which provides a 15 country cross-section analysis is aimed at this objective. Finally, a global analysis provides estimates for the world as a whole.

A few of the main findings follow:

- The liberalization targets under the DDA have to be quite ambitious if the round is to have a measurable impact on world markets and hence poverty.
- Assuming an ambitious DDA, we find the near-term poverty impacts to be mixed; some countries experience small poverty rises and others more substantial poverty declines. On balance, poverty is reduced under this DDA, and this reduction is more pronounced in the longer run.
- Allowing minimal tariff cuts for just a small percentage of special and sensitive products reverses the results, with the ensuing DDA raising, rather than lowering, global poverty.
- Deeper cuts in developing country tariffs would make the DDA more poverty friendly.
- Key determinants of the national poverty impacts include: the incomplete transmission of world prices to rural households, barriers to the mobility of workers between sectors of the economy, as well as the incidence of national tax instruments used to replace lost tariff revenue.
- In order to generate significant poverty reductions in the near term, complementary domestic reforms are required to enable households to take advantage of new market opportunities made available through the DDA.
- Sustained long term poverty reductions depend on stimulating economic growth. Here, the impact of the DDA (and trade policy more generally) on productivity is critical. In order to fully realize their growth potential, trade reforms need to be far reaching, addressing barriers to services trade and investment in addition to merchandise tariffs.

Journal Articles

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