The GTAP Advisory Board Meeting, June 2001

Economic Research Service of the United States Department of Agriculture


The Economic Research Service (ERS) of the U.S. Department of Agriculture has contributed to and utilized the products of the Global Trade Analysis Project since its inception. This provides a short summary of recent and forthcoming activities.

Contributions to GTAP Products

Trade data

Mark Gehrhar continues to contribute the bilateral trade and transport database for GTAP database 5. Additional work on concordance construction was completed. Complete trade concordances are now available for HS96 and HS88 with links to the GTAP sector classification, ISIC, CPC, and SITC. There are now detailed descriptions available at the HS 6-digit level on concordances. Belgium and Luxembourg will be separated in the trade data for future versions. These countries did not report separately to the United Nations until 1999. Time-series data is being revised for final version. A more detailed industry-level data for the food processing sectors was created that can be aggregated to the GTAP level.

1996 US-IO

Ken Hanson and Agapi Somwaru contributed the United States (US) Input-Output (I/O) accounts for the GTAP version 5 database. They US IO was derived from the 1992 benchmark Input-Output accounts published in 1997 by the US Department of Commerce, Bureau of Economic Analysis (Survey of Current Business, November 1997). For modeling projects at USDA-ERS, the detailed 1992 I/O accounts have been updated to 1996. For the GTAP project, they have aggregated the 1996 I/O accounts to the GTAP database version 5 sectors.

The US I/O accounts, consists of about 500 commodities and industries, classified according to the 4-digit standard industry classification (SIC) codes, except for agriculture. The 17 agricultural sectors are aggregated according to a commodity grouping. Three sectors in the US I/O accounts had to be further disaggregated to accommodate the sectoral detail of the GTAP database.

1997 China IO

Zhi Wang contributed the China’s 1997 IO table to version 5 GTAP database.

ERS’s work on agricultural protection data for GTAP database version 5

A team at Market and Trade Economics Division (MTED), ERS, contributed the agricultural protection data on the three disciplines: market access, export subsidies, and domestic support.
The team obtained detailed information allowing for further reclassification of the producer support estimates as measured by the OECD. Another dimension of this disaggregation was based on WTO notifications of specific programs, where minimally distorting payments (green) were separated from trade distorting-type of support payments (amber).

**GTAP related products**

Mark Gehlhar performed simulations with the newly specified domestic support in the GTAP database version 5, prerelease 2, to measure the impacts of reducing the AMS ceiling and leveling support on a commodity basis.

Roy Darwin, Kevin Ingram, John Sullivan, Wesley Nimon, and Vince Breneman continue to revise the land and water resources database used by the Future Agricultural Resources Model (FARM), a modified version of the first GTAP database and model, to be compatible with version 5 of the GTAP database. Work on this database was suspended last year so as to devote resources to research on the environmental impacts of trade agreements and the agricultural impacts of greenhouse gas emissions. It is now back on track. A GTAP V5 compatible land and water resources database is scheduled for completion by October 1, 2001. Documentation is scheduled for completion by January 1, 2002. We are using resources immediately available to ERS. Once completed other consortium members will be asked for help in upgrading the database through one or another mechanism (e.g., GTAP’s Proposal on Integrated Assessment of Climate Change Policy to the U.S. Department of Energy).

**Research Topics**

**Agricultural Trade Reforms**

A team of MTED, ERS, analyzed the full elimination of agricultural policy distortions to understand what is in stake in global agricultural negotiations. The global costs and benefits of a full reform are decomposed and analyzed by country, commodity, and type of policy. This work was included in ERS’s report on the Agricultural Policy Reform in the WTO: The Road Ahead.

Alternative assumptions regarding treatment of land-based payments for the United States was assessed by comparing results from the current version of the database to an alternative where land payments are apportioned evenly across all land uses. The assumption makes a big difference for welfare and sectoral output changes from trade liberalization. This is used as a discussion paper at Special Session on Domestic Agricultural Support at the Fourth Annual Conference on Global Economic Analysis 2001

**World Food Security**

A team of MTED, ERS, analyzed issues of trade liberalization and food security in low-income countries.
Trade and the Environment

In collaboration with staff from the U.S. International Trade Commission and the U.S. Environmental Protection Agency, Roy Darwin prepared a plan of work to conduct an analysis of potential environmental impacts of the Free Trade Area of the Americas under Executive Order 13141, \textit{Environmental Review of Trade Agreements}. ERS’s role in this endeavor is to estimate domestic and foreign changes in land and water resources and domestic changes in soil erosion, nitrogen and phosphorus losses, greenhouse gas emissions, and other agriculturally related environmental effects. The proposed research was outlined in a report to the U.S. Office of the Trade Representative’s Trade Policy Staff Committee. ERS also plans to evaluate potential environmental impacts of World Trade Organization proposals for agriculture and services with a revised version of FARM later this year.

Roy Darwin revised ERS’s Global Climate Change Impacts briefing room to reflect results from recent FARM-based analyses of greenhouse gas emissions. He also wrote an Agricultural Information Bulletin that discussed how global climate change might affect food security in developing countries.

Publications

1. Monographs


2. Articles


3. Chapters in Edited Books & Monographs


4. Invited Speeches

Wang, Zhi. “The Road to Economic Recovery in Asia--A Recursive Dynamic CGE Analysis” (with Dian Qing Xu), Presented at Workshop on Financial Crisis in East Asia, Taipei, Taiwan, January 23, 2000

5. Unpublished Conference Papers


Wang, Zhi M. Gehlhar “Impact of MFA phase-out with China’s inclusion in the Agreement on Textiles and Clothing” at Fourth Annual Conference on Global Economic Analysis, June 27-29, 2001


6. Other Publications


Canning, Patrick and Marinos Tsigas. “Effects on U.S. Agriculture” Agricultural Outlook, October, USDA/ERS, 2000


Wang, Zhi, Mathew Shane and Jone Dyck. Participate in the analysis of impact of oil price shock on U.S. agricultural exports (with) for the office of USDA chief economist (Staff Analysis). Constructed a 17-region and 27-sector CGE model based on version 4 GTAP database to conduct the analysis, 2001

7. Manuscripts and Working Papers
