

**U. S. International Trade Commission
Report on GTAP Related Activities**

for
The Advisory Board Meeting,
Center for Global Trade Analysis

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The United States International Trade Commission (USITC) continues to use GTAP on requests from the United States Trade Representative and Congress to evaluate the potential impacts of prospective trade policy changes. Since June 2005, GTAP-related projects requested by our customers include an on-going analysis of a bilateral FTA between the United States and Peru. Pre-release version 1 of the GTAP version 6 data base is being used to analyze this FTA. In addition, as part of the process for renewing the President's trade promotion authority (TPA), the ITC conducted an investigation for Congress using the data base to examine the aggregate impact of the FTAs implemented under the current TPA, specifically those with Australia, Chile, and Singapore. Other requests are anticipated to analyze bilateral FTAs between the United States and Colombia, Malaysia, and Korea. In addition, the ITC is currently conducting an environmental review of the Doha Round where the GTAP and USITC national models are jointly used, to allow bilateral trade flow implications from the GTAP model to be incorporated in the USITC model, which is a single-country model with a high degree of sectoral disaggregation.

In collaboration with Monash University, the USITC continues work on a highly detailed dynamic U.S. model—the *USAGE-ITC model*—with updated parameters, state level components, and greater labor and household detail. The USAGE-ITC model will be easily linkable to the GTAP model and will offer interested parties an alternative U.S. model with enhanced capabilities. In December 2005, Peter Dixon and Maureen Rimmer gave a short-course at the USITC on the use of the model. During the last year, the project team completed the forecast simulations for the period 2002 to 2020 to establish a dynamic baseline for future simulations. In addition, the team completed the occupational module for USAGE-ITC to enhance labor market analysis. These enhancements to the model will be applied in the next update of the Import Restraints study which is scheduled for delivery to U.S. Trade Representative in February 2007. During the next phase of the project, the team aims to disaggregate households in USAGE-ITC to enhance consumer welfare analysis;

create an investment/rate-of-return module for use in dynamic policy simulations; and redefine sectors in the data base using the NAICs system.

Other items of interest to the GTAP board include work in the following areas: quantification of global NTMs, an examination of U.S. China trade patterns, reconciliation of trade statistics reported by China, Hong Kong and their trading partners, model validation, and analysis of developing country utilization of U.S. tariff preferences.

The USITC continues its work at improving global NTM measurements for possible inclusion in CGE analyses. Two members of the project team, Judith Dean and Jose Signoret, have completed econometric estimates of the effect of NTMs on prices using a revised model which includes the effect of foreign trade policies on local prices. Various specifications were examined using random effects and instrumental variables approaches. These approaches are promising. They yield country specific estimates of the average impact of NTMs on prices of product groups (e.g., apparel). These estimates can be used in the GTAP model to estimate the impact of removal of these NTMs globally. However, due to the nature of the price data, estimates are not available for all GTAP sectors. Our method can also generate estimates at the product level (e.g., men's shirts), but this requires time series data on the incidence of NTMs. Thus, it would limit the estimates to the small set of countries for which such data are available.

The China trade project will examine various issues of U.S.-China bilateral trade using a new, highly- disaggregated comprehensive database of Chinese official data. The team is collaborating with three Chinese economists, Shunli Yao (Peking University), K.C. Fung (UC Santa Cruz) and Lawrence Lau (Stanford University). Work thus far has examined growth in China-US trade and China-world trade, to determine which sectors account for the largest share of growth in imports, in exports, and in two-way trade, and the extent to which growth can be attributed to foreign-invested firms, firms involved in processing trade, firms receiving special incentives, and firms located in particular regions of China. Of specific interest to the GTAP Board is the work currently underway by Zhi Wang to reconcile inconsistencies in China, Hong Kong and their trading partners' reported data and the production of Hong Kong re-exports adjusted trade flows. The corrected trade data will be used in the newest release of the GTAP model.

The model validation project will undertake the development and execution of a systematic model testing framework to guide and inform the Office's GE modeling efforts. The first phase of this

project will identify techniques we plan to use to test model performance. This includes identifying the testing criteria to be used, the exogenous shocks to be incorporated into the testing framework, and the specific model structures and parameters to be tested.

As noted last year, the tariff preference utilization project aims to examine the utilization of U.S. non-reciprocal tariff preferences granted to developing countries. The project has yielded estimates of tariff preference margins, utilization of preferences, and the value of preferences for each beneficiary country in US regional programs and the US GSP for 2003. A database with these data and related data, at the HS 8-digit level, will be available soon. This database is part of a larger joint study with the USDA, CEPII, and the World Bank. Summary findings from the study were presented at the WTO, June 13-14, 2005. A paper with detailed findings is forthcoming in the World Bank Policy Research Working Papers and in a special issue of the *World Economy*.

Finally, Marinos Tsigas worked with Sarah Wong from the School of Post-graduate Studies at ESPOL (Ecuador) to develop a SAM of the Ecuadorean economy for inclusion in the GTAP data base. In addition Marinos also participated in the *13th Annual Short Course in Global Trade Analysis* as instructors. He also provided the Center with a 2002 U.S. SAM for inclusion in the next version of the GTAP data base.

The following USITC public studies or papers by USITC economists completed during 2005 and 2006 contain research based on, or relevant to, the GTAP model and database:

Monographs:

USITC *Economywide Simulation Modeling: Technical Analysis of the Doha Round*, Inv. No. 332-468 (forthcoming).

USITC *The Impact of Trade Agreements Implemented Under Trade Promotion Authority*, Investigation TA-2103-1 (June 2005).

USITC *U.S.-Malaysia Free Trade Agreement: Advice Concerning the Probable Economic Effect of Providing Duty-Free Treatment for Imports*, Investigation Nos. TA-131-033 and TA-2104-022 (forthcoming).

USITC *U.S.-Peru Trade Promotion Agreement: Potential Economy-wide and Selected Sectoral Effects*, Investigation TA-2104-20 (forthcoming).

USITC *U.S.-Republic of Korea Free Trade Agreement: Advice Concerning the Probable*

Economic

Effect of Providing Duty-Free Treatment for Imports, Investigation Nos. TA-131-032 and TA-2104-021 (forthcoming).

Manuscripts:

Hugh Arce, Robert Koopman, and Marinos Tsigas “Using State-level Simulations in a Political Economy Model of U.S. Trade Policy,” 8th Annual Conference on Global Economic Analysis, Lübeck, Germany (June 2005).

Patrick Canning and Zhi Wang “A Flexible Mathematical Programming Model to Estimate Interregional Input-Output Accounts.” *Journal of Regional Sciences* 45(3):539-563, August 2005.

James Fetzer and Sandra Rivera “Modeling Modifications in Rules of Origin: A Partial Equilibrium Approach,” 8th Annual Conference on Global Economic Analysis, Lübeck, Germany (June 2005).

Alan Fox “Minimizing Carbon Leakage under Open Trade: Strategies for the Allocation of Pollution Permits,” 8th Annual Conference on Global Economic Analysis, Lübeck, Germany (June 2005).

Elisabetta Gotor and Marinos Tsigas, “The Role of the EU’s Economic Partnership Agreements in Development: A General Equilibrium Analysis,” 9th Annual Conference on Global Economic Analysis, Addis Ababa, Ethiopia (forthcoming).

Elisabetta Gotor and Marinos Tsigas, “Effects of EU Sugar Trade Reforms on Poor Households in Africa: A General Equilibrium Analysis” 9th Annual Conference on Global Economic Analysis, Addis Ababa, Ethiopia (forthcoming).

Robert Koopman, Ashley Winston, and Alan Fox, “Decomposing NAFTA: An Application of the USAGE Model and an Approach to Model Validation” 9th Annual Conference on Global Economic Analysis, Addis Ababa, Ethiopia (forthcoming).

Sandra Rivera and Marinos Tsigas “How does China’s Growth affect India and Asia: An Economywide Analysis,” 8th Annual Conference on Global Economic Analysis, Lübeck, Germany (June 2005).

Zhi Wang, Mark Gehlhar and Shunli Yao “A Mathematical Programming Model to Estimate Hong Kong Re-export Markups and Reconcile Trade Statistics from China, Hong Kong and Their Major Trading Partners,” 9th Annual Conference on Global Economic Analysis, Addis Ababa, Ethiopia (forthcoming).