

**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) uses GTAP to evaluate the potential impacts of prospective trade policy changes, in response to requests from the United States Trade Representative and Congress. Since June 2007, version 6.1 of the GTAP data base was used to analyze the bilateral FTA between the United States and Korea. In addition, the ITC has recently completed a technical assistance project for the Ways and Means Committee concerning potential State-levels effects of the U.S.-Colombia TPA. For this project, GTAP and the USITC national model (USAGE) were jointly used. Bilateral trade flow implications from the GTAP model were incorporated into the USAGE model and to its State-level decomposition add-on. The GTAP model has also been linked to a partial equilibrium model of beef products trade at the 6-digit HS level to analyze restrictions on imports of beef from the United States since 2004. The earlier USITC contribution of the U.S. input-output accounts to GTAP was revised in March 2008.

In collaboration with Monash University, the USITC continues work on the highly detailed dynamic USAGE model with updated parameters, greater labor and household detail, and an important detailed treatment of sweeteners and ethanol sectors. The team completed the occupational module for USAGE-ITC to enhance labor market analysis. The USAGE-ITC model is easily linkable to the GTAP model, as in the project described above, and will offer interested parties a new U.S. model with powerful capabilities. In December 2007, Peter Dixon and Maureen Rimmer gave a third short course at the USITC on the use of the model. Some enhancements to the model will be applied in the upcoming update of the Import Restraints study requested by the U.S. Trade Representative. During the next phase of the project, the team aims to disaggregate households in USAGE-ITC to enhance consumer welfare analysis and incorporate the investment/rate-of-return module for use in dynamic policy simulations. We are now redefining sectors and commodities in the model's data base using the NAICS-based I-O accounts for 1997 and 2002, permitting the data base to remain consistent with national income data into the future. Once this work is completed the ITC will supply to GTAP the 2002 I-O data as balanced in USAGE.

In support of this and other USAGE developments, the ITC has established a working group with other Federal Government users of the USAGE model, principally the International Trade Administration of the Commerce Department and the Economic Research Service of the Department of Agriculture.

Quantitative analysis of nontariff trade measures is becoming increasingly important to the modeling of trade and this research continues to focus on quantification of NTMS for use in models such as GTAP and USAGE. In our Congressionally-mandated study of the U.S.-Korea FTA, we explored new methods of bringing price data into contact with policy data to assess the market impact of particular NTMs. We are also developing new methods of mining global unit value data in order to bridge the gap between “mass-produced” and “handicraft” estimates of price gaps, and have produced work that furthers understanding of institutional arrangements such as conformity assessment procedures for international standards. The latest work in this area, authored by Michael Ferrantino and Bob Feinberg, is being presented at the Helsinki conference. Other work, by Erland Herfindahl and Richard Brown have been econometrically estimating potential changes in tariff equivalents from services commitments in US bilateral trade agreements. USITC provides the Donnelly-Manifold database of NTMs on its website, and plays an active observer's role in the Multi-Agency Support Team (MAST), which reports to UNCTAD's Group of Eminent Persons on Non-Tariff Barriers on new multilateral initiatives to collect policy data on NTMs.

The development and exploitation of new sources of data on China's trade have important implications for model development. The China trade project is continuing to examine various issues in U.S.-China bilateral trade, making simultaneous use of highly disaggregated official customs data from China, the United States, and Hong Kong. Work has continued on two related papers measuring vertical specialization and domestic value-added in Chinese trade. Zhi Wang, Bob Koopman, and Shang-Jin Wei have developed a method to split the Chinese input-output table to allow for different intermediate input usage for processing and normal exports. They use this method to estimate the domestic value-added in Chinese exports. Judy Dean, K.C. Fung (U.C. Santa Cruz) and Zhi Wang also use this method to incorporate separate estimates of the vertical specialization of China's exports into their earlier analysis. On a related topic, Zhi Wang and Shang-Jin Wei (Columbia U. and NBER) write on the sources of increasing Chinese export sophistication.

The model validation project is developing a framework to guide and inform the Office's GE modeling efforts. Policy makers (or more precisely their staff) have repeatedly expressed concerns related to CGE results as they are unable to match up model analysis with post agreement results, particularly for trade flows. William Powers and Peter Dixon are conducting separate studies of this topic. Powers is examining the implications of nontraded and newly traded varieties of goods for CGE modeling. In particular, his study includes the incorporation of tariff rates on nontraded goods to more accurately represent the restrictiveness of U.S. tariffs, and the effects of growth in new varieties of imported goods on price aggregators in a dynamic forecast. Dixon is using the USAGE model to generate historical forecasts for detailed U.S. commodities for the period 1998 to 2005 and compares them actual outcomes.

The following USITC public studies or papers by USITC economists completed during 2006 and 2007 contain research based on, or relevant to, the GTAP model and database:

Monographs:

USITC *U.S.-Korea Free Trade Agreement: Potential Economy-wide and Selected Sectoral Effects*, Investigation TA-2104-24 (September 2007).

USITC *The Economic Effects of Significant U.S. Import Restraints: Sixth Update 2009*, (forthcoming 2009).

Manuscripts:

Hugh Arce, Robert Koopman, and Marinos Tsigas, 2008, "Using State-level Simulations in a Political Economy Model of U.S. Trade Policy," *Public Choice* 135(3-4):91-107, June.

Judith M. Dean, K.C. Fung, and Zhi Wang, "Measuring the Vertical Specialization in Chinese Trade," Revised version of Office of Economics Working Paper (Publication EC2007-01-A, January 2007).

Michael Ferrantino and Zhi Wang, "Accounting for Discrepancies in Bilateral Trade: The Case of China, Hong Kong, and the United States," Forthcoming in *China Economic Review*, 2008. (An earlier version was presented at the 10th Annual Conference on Global Economic Analysis, West Lafayette, Indiana.)

Robert Koopman, Zhi Wang and Shang-Jin Wei, "How Much of Chinese Exports is Really Made in China? Domestic and Foreign Value-Added in Gross Exports," Office of Economics Working Paper (Publication EC2008-03-B, March 2008).

Zhi Wang and Shang-Jin Wei, "What Accounts for the Rising Sophistication of China's Exports?" NBER Working Paper No. 13771, January 2008.

P. Siegesmund, D. Luskin, L. Fujiwara, and M. Tsigas, 2008, "Applying USAGE-ITC, a Computable General Equilibrium Model of the U.S. Economy, to Evaluate Investment in the Texas Gulf Intracoastal Waterway and Other Texas Channels," manuscript presented at 87th Annual Meeting of Transportation Research Board of the National Academies, Washington, DC, January 13-17.

Marinos Tsigas, and Hugh Arce, 2008, "A general equilibrium analysis of effects of undocumented workers in the United States," draft prepared for presentation at the Eleventh Annual Conference on Global Economic Analysis, Helsinki, June 12-14, 2008.

Marinos Tsigas, John Giamalva, and Joseph Kowalski, "Commodity Trade Analysis in a General Equilibrium Framework," draft to be presented in a Session titled *Economic Research at the U.S. International Trade Commission* during the Southern Economic Association Meetings, Washington, DC, November 20-23, 2008.

Zhi Wang, Mark Gehlhar and Shunli Yao, "Reconciling Bilateral Trade Statistics in the Presence of Re-exports via Third Countries: The Case of China, Hong Kong and Their Major Trading Partners," 10th Annual Conference on Global Economic Analysis, West Lafayette, Indiana.

Alan Fox, William Powers, and Ashley Winston, "Textile and Apparel Barriers and Rules of Origin: What's Left to Gain After the Agreement on Textiles and Clothing?" Forthcoming in *Journal of Economic Integration*. (An earlier version was delivered at the 10th Annual Conference on Global Economic Analysis, West Lafayette, Indiana.)