

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

for
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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 (USTR) and Congress. In two separate studies for Congress, the GTAP model has been linked to partial equilibrium trade models to analyze U.S. food and agricultural exports at the HS 6-digit level. One study analyzed the economic consequences of BSE-related restrictions on U.S. exports and another study analyzes U.S. exports to India. In addition, the GTAP database was used to provide trade-policy related technical assistance to the House Ways and Means Committee and the USTR on a variety of topics ranging from the effects of energy shocks on the U.S. economy to the trade effects of the U.S.-Colombia and U.S.-Korea FTAs. Finally, USITC staff is estimating labor payments data to be included in the GTAP database. These data are more recent than the current data in GTAP and they include more than two labor categories.

As part of the USITC's mission of providing analytical support to executive and legislative branches, USITC staff will be working to extend our GTAP-based GHG model. We are currently updating the underlying data to version 7, and we are about to embark on a project to split certain energy-intensive sectors of the economy in order to more accurately model the industry-level effects of different GHG policies.

In collaboration with Monash University, the USITC continues work on the highly detailed dynamic USAGE-ITC model with additional sectoral and policy detail, including detailed treatment of sweeteners, ethanol, and biomass sectors, the modeling of land use in U.S. agriculture involving 72 types of land, and the explicit modeling of TRQ policies. Work on the USAGE-ITC model also influences the USITC's contribution of the U.S. data for the GTAP database. The USAGE-ITC model is currently applied in the forthcoming study of *Significant U.S. Import Restraints* that has been requested by the USTR. A documentation of the current model is expected

by the end of summer 2009. The USAGE-ITC model is easily linkable to the GTAP model, and will offer interested parties a new U.S. model with powerful capabilities. In December 2008, Peter Dixon and Maureen Rimmer gave a fourth short course at the USITC on the use of the model.

During the next phase of the USAGE project, the team aims to disaggregate households in the model to enhance welfare analysis and incorporate an investment/rate-of-return module for use in dynamic policy simulations. We are now redefining sectors and commodities in the model's database using the NAICS-based I-O accounts for 1997 and 2002, permitting the database to remain consistent with national income data into the future. Once this work is completed the USITC will supply to GTAP the 1997 and 2002 I-O data as balanced in USAGE.

In support of this and other USAGE developments, the USITC has established an informal consortium 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, though USAGE has also been used in studies for the Department of Homeland Security and the Federal Aviation Administration.

Quantitative analysis of nontariff trade measures remains important to the USITC's efforts in the modeling of trade, and this research continues to focus on quantification of NTM's for use in models such as GTAP and USAGE. We are exploring new quantitative techniques in the course of our Congressionally mandated study into Indian agricultural barriers. We continue to work on the related area of trade facilitation. An example of this is the paper on land transport costs by Nannette Christ and Michael Ferrantino, being presented at the Santiago conference. 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 USITC is also working on the development and exploitation of new sources of data on global trade patterns, with the emphasis on understanding better the contribution of trade to economic growth. This work has focused initially on estimating value-added exports in global supply chains. Thus far the USITC has estimated the value added in China and Mexico's exports, and has started construction of a global model incorporating detailed information on bilateral trade flows.

The USITC has developed 5 regional projects for focused research on China, India, Brazil, Africa, and NAFTA. An example of the initiatives is the China program. China's trade has important implications for model development. The USITC's 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 and IO tables. In addition to the Zhi Wang, Bob Koopman, and Shang-Jin Wei (Columbia U. and NBER) paper examining China's value added in exports, Judy Dean, K.C. Fung (U.C. Santa Cruz) and Zhi Wang are using their prior measures of vertical specialization to explain China's export sophistication, and to test property rights theories of fragmentation. Wang and Wei have also developed an international input-output method to measure Asian global supply chains.

The following USITC public studies or papers by USITC economists completed during 2008 and 2009 contain research based on, or relevant to, the GTAP model and database:

Monograms:

USITC, 2008, *Global Beef Trade: Effects of Animal Health, Sanitary, Food Safety, and Other Measures on U.S. Beef Exports*, USITC Publication 4033, September.

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

USITC, 2009, *India: Effects of Tariff and Nontariff Measures on U.S. Agricultural Exports*, forthcoming.

Manuscripts:

Nannette Christ and Michael Ferrantio, 2009, "Land Transport for Exports: The Effects of Cost, Time, and Uncertainty in Sub-Saharan Africa" paper prepared for presentation in the Twelfth Annual Conference on Global Economic Analysis, Santiago, Chile, June 10-12.

Judith M. Dean, K.C. Fung, and Zhi Wang, 2008, "Measuring the Vertical Specialization in Chinese Trade," Revised version of USITC Working Paper EC2008-09-D, September.

Alan Fox and Carolyn Fischer, 2009, "Comparing Policies to Combat Emissions Leakage: Border Tax Adjustments versus Rebates," Resources for the Future Discussion Paper RFF DP 09-02, February.

Alan Fox, William Powers, and Ashley Winston, 2008, "Textile and Apparel Barriers and Rules of Origin: What's Left To Gain after the Agreement on Textiles and Clothing?" *Journal of Economic Integration*, 23(3), September.

Tani Fukui and Marinos Tsigas, 2009, “U.S. Labor Employment Effects of Liberalization in Foreign Insurance Markets,” paper prepared for presentation in the Twelfth Annual Conference on Global Economic Analysis, Santiago, Chile, June 10-12.

Koopman, Robert, Zhi Wang, and Shang-jin Wei, 2008, “How Much Chinese Exports is Really Made in China – Assessing Foreign and Domestic Value-added in Gross Exports,” NBER Working Paper 14109, June.

Marinos Tsigas, John Giamalva, Nicholas Grossman, and Joe Kowalski, 2009, “An Analysis of BSE Restrictions on Beef Imports from the United States and Canada,” paper prepared for presentation in the Twelfth Annual Conference on Global Economic Analysis, Santiago, Chile, June 10-12.

Zhi Wang, Mark Gehlhar, and Shunli Yao, 2009, “A Globally Consistent Framework for Reliability-based Trade Statistics Reconciliation in the Presence of an Entrepôt.” Submitted to *China Economic Review* for publication consideration.

Zhi Wang, Robert Koopman, and Shang-jin Wei, 2009, “How Much of Chinese Exports is Really Made in China? Assessing Domestic Value-added when Processing Trade is Pervasive.” Submitted to *Economic Journal* for publication consideration.

Zhi Wang and Shang-jin Wei, 2009, “Value Chain in East Asia Production Network – An International Input-output Model Based Analysis”, USITC Working Paper, forthcoming.