

Report to GTAP Advisory Board, 2006

Economics and Research Department (ERD)
Asian Development Bank

ADB renewed its GTAP Consortium membership in 2005. During 2004-05, the following GTAP-related activities were conducted by ERD/ADB.

1. Development of the global CGE model

ERD/ADB has developed a global CGE with the help of David Roland-Holst and Dominique van der Mensbrugge. The model focused on Asian trade issues. It is built on the LINKAGE model of the World Bank and has the following features:

- detailed country disaggregation for Asia
- the benchmark GTAP v6 database was adjusted to make it consistent with the official national account data of major Asian countries
- the model incorporated some features of recent heterogeneous-firm trade models, such as monopolistic competition, fixed export costs and firm heterogeneity in productivity

2. Asian Development Outlook

The model was used extensively to provide context for the theme chapter of ADB's annual publication *Asian Development Outlook (ADO) 2006*. The theme of *ADO 2006* is "Routes for Asia's Trade" and we compared alternative scenarios of Asia's trade liberalization, including bilateralism, regionalism and globalism. The *ADO 2006* found that the proliferation of bilateral agreements in Asia, which is most likely to lead to a competitive hub-and-spoke configuration, may result in large trade diversion and marginalize the low-income countries in the region. The results underscore the principle that the more open and nondiscriminatory the trade agreement, the better it is. Moreover, the agreements with "deep integration" contents could be potential much more beneficial than traditional PTAs.

The model was also used in *ADO 2006* to evaluate the implication of Doha round trade liberalization for Asian countries. It drew on CEPII's 10 Doha scenarios in the GTAP 6 DDA database.

Both studies attracted considerable media attention and featured in the *Financial Times*, *International Herald Tribune*, and *Asian Wall Street Journal* as well as in numerous regional newspapers.

3. Long-term prospect of Asian food and agricultural production and trade

ERD/ADB supported a study on long-term prospects of Asia's food and agricultural trade pattern. It provided a base case projection of structural changes in consumption, production and trade patterns to 2025, with special attention to food and agricultural sector. It also explored the impact of China and India's rapid economic growth, as well as ASEAN's pickup in agricultural productivity growth. The work was carried out by Tom Hertel using Dynamic GTAP model.

4. Contribution to GTAP database

The 2002 Chinese I/O table has formally released. Fan Zhai is working with his collaborators in Development Research Center of the State Council, China to contribute this table to GTAP database.

5. Future Plans

In 2006-07, the following activities are planned:

- update the model to GTAP database v6.1, which includes Pakistan as a separate region
- prepare a detailed document on the specification of the newly developed CGE model with heterogeneous firms, which could be contributed to GTAP Technical Papers
- apply the model in the analysis of bilateral FTA, infrastructure, FDI and, possibly, commodity markets.

Publications based on GTAP model or database

Brooks, Douglas H., David Roland-Holst, and Fan Zhai (2005) "Asia's Long-term Growth and Integration: Reaching beyond Trade Policy Barriers," ERD Policy Brief No. 38, Asian Development Bank, September 2005

Roland-Holst, David, Jean-Pierre Verbiest, and Fan Zhai (2005), "Growth and Trade Horizons for Asia: Long-term Forecasts for Regional Integration," *Asian Development Review*, Vol. 22, No.2

Zhai, Fan.(2005) "Preferential Trade Agreements in Asia: Alternative Scenarios of Hub and Spoke." Paper prepared for the Experts' Meeting on Long-term Scenarios of Asia's Growth and Trade. 10-11 November. Asian Development Bank, Manila

Asian Development Bank (2006) *Asian Development Outlook*, Part I and Part III