

Report to GTAP Advisory Board, 2007

Asian Development Bank

During 2006-07, the following GTAP-related activities were conducted by ADB.

1. Development of the global CGE model

ERD/ADB has continued to develop the global CGE model – GEMAT - for studying Asian trade and other issues. The work has focused on incorporating firm heterogeneity in standard CGE model.

2. Asian Development Outlook

The GEMAT model was used to provide context for the theme chapter of ADB's *Asian Development Outlook Update (ADOU) 2006*. The theme of *ADOU 2006* is "Developing Asia's Imprint on Global Commodity Market". In this theme chapter, we investigate the implications of continued fast growth in developing Asia, particularly in the PRC and India, for global commodity markets and commodity prices over the next decade. It finds that commodity prices are likely to come off the high levels of 2006, but are unlikely to revert to the low levels seen at the turn of the millennium. Developing Asia is likely to be paying more in real terms for its oil and other fossil fuels, metals, forestry products, and selected agricultural crops than it did in decades past.

3. Study for Asia's long term scenarios

ADB organized a study on long-term scenarios of Asia's development over the next two decades. This study covers the topics of trade, infrastructure, agriculture, energy population and income distribution. It intensively uses the global CGE models as the tool for scenario building. The major models used in this study are: ADB's GEMAT model, GTAP-Dyn, World Bank's Linkage model and MIT's EPPA model. A book is being edited for this study and is expected to be published by the end of this year.

4. Study of Economic Implications of East Asia and South Asia Integration Scenarios

As a part of a project on East Asia-South Asia Economic Relations, OREI (Office of Regional Economic Integration) of ADB undertook a CGE model based study on the implications of several broad based trade initiatives bridging East and South Asian economies. The study indicates that East Asian economies can reap significant gains from an ASEAN+3 FTA but that the inclusion of South Asian economies in a broader agreement brings further gains to all parties. Furthermore, the impact on outside countries from an East Asia-South Asia FTA is negligible. The study will be published as a part of a book on East Asia-South Asia Economic Relations.

5. Contribution to GTAP database

Fan Zhai of ADB collaborated with Development Research Center of the State Council, China to contribute the 2002 Chinese I/O to GTAP database.

Publications based on GTAP model or database

Asian Development Bank (2006) *Asian Development Outlook Update*, Part III

Harrigan, Frank, William James, Michael Plummer and Fan Zhai (2006) "Regionalizing Bilateral FTAs in Asia," Paper presented at the ADB workshop on "Shaping the Future: Prospects for Asia's Long-term Development over the Next Two Decades", 11-12 December, Bangkok

Hertel, Thomas, Carlos E. Ludena, and Alla Golub (2006), "Economic Growth, Technological Change, and Patterns of Food and Agricultural Trade in Asia." ERD Working Paper No 83. Asian Development Bank, Manila

Plummer, Michael and Ganeshan Wignaraja (2006), "The Post-Crisis Sequencing of Economic Integration in Asia: Trade as a Complement to a Monetary Future". *Economie Internationale*, No. 107. Also published as ADB Working Paper Series on Regional Economic Integration No. 9, 2007 Asian Development Bank, Manila.

Zhai, Fan (2006) "Preferential Trade Agreements in Asia: Alternative Scenarios of Hub and Spoke." ERD Working Paper No 83. Asian Development Bank, Manila

Zhai, Fan (2006) "Unlocking the Trade Potential in Least Developed Countries," Paper presented at the ADB workshop on "Shaping the Future: Prospects for Asia's Long-term Development over the Next Two Decades", 11-12 December, Bangkok

Francois, Joseph and Ganeshan Wignaraja (2007), "Economic Implications of East Asia and South Asian Integration Scenarios" Paper to be presented at 2007 Annual Conference of Latin American Studies Council of Asia and Oceania (CELAO), 21-23 June, Seoul.

Roland-Holst, David (2007), "Infrastructure as a Catalyst for Regional Integration, Growth, and Economic Convergence: Scenario Analysis for Asia," ERD Working Paper No 91. Asian Development Bank, Manila

Zhai, Fan (2007) ""Armington Meets Melitz: Introducing Firm Heterogeneity in a Global CGE Model of Trade." Paper to be presented in the 10th GTAP Annual Conference, Purdue University, June 7-9