

Comments on
“Assessing the Economic Impacts of
Free Trade Agreement:
A Computable Equilibrium Model Approach”
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at RIETI Policy Symposium

Motivation : Quantitative Evaluation of FTA

- Current Issues :
Regional Trade Agreements: FTA, EPA
WTO Negotiations: Doha round
- Increasing Demand for Quantitative Analysis:
What would be the impact of FTA/EPA on
industries and economies?
How can we help design policy recommendation?

Tools for Quantitative Evaluation of FTA

- Applied Models:
From problem to model, from theory to data.
Incorporate empirical data about current
state of economy, focusing on policy relevance
- General Equilibrium Models:
Resource shifts among activities (multisector)
Feedback effects - income and expenditure
determined endogenously

What is CGE analysis?

- CGE (Computable General Equilibrium)
- Uses economywide simulation model
- Typically based on neoclassical theories of
firms and household behavior
- Often comparative static analysis, but
dynamic analysis are also used

What is GTAP

- Global Trade Analysis Project at Center for Global Trade Analysis, Purdue Univ.
- Publicly funded project, based in academia supporting a global economic data base and Computable General Equilibrium (CGE) model which are:
 - fully documented
 - publicly available
 - accessible to non-modelers

<https://www.gtap.agecon.purdue.edu/>

The screenshot shows the GTAP website homepage. At the top, there is a navigation bar with links for Home, Login, Account Info, Feedback, Special Access, and Search. Below the navigation bar is a horizontal menu with links for About GTAP, Data Bases, Models, Products, People, Resources, and Events. The main content area is divided into several sections: "About GTAP" with a brief description of the project, "Featured Member" featuring Mr. Kawamoto, "Featured Events" for the Tenth Annual Conference on Global Economic Analysis, and "Featured Product" for the GTAP 6 Data Package. The page also includes a sidebar with a search box and a "Special Access" dropdown menu.

Version 6 GTAP Database

- Coverage considerably expanded:
 - 87 regions and 57 sectors
 - (65 regions and 57 sectors in version 5)
- Corresponding to the global economy in 2001
- Improved domestic data base, government consumption, income taxes, service trade, domestic support, and elasticity estimates.

GTAP Models

- Core Model (Hertel 1997):
 - Relatively standard, multi-region GE model
 - PC/CRTS production
 - Armington treatment of import demands
 - Global transport sector supplies margins
- Current Model: gtap.tab version6.2
www.gtap.agecon.purdue.edu/models/current.asp

GTAP Models (cont.)

- Extensions:
 - Investment dynamics
 - Productivity linkages
 - Energy and environment
 - Income distribution for poverty analysis
 - Labor migration

“Replication” ASEAN10+6 FTA Sim.

- Regional FTA :
ASEAN, Japan, China, Korea, Australia,
New Zealand, India
- Complete removal of tariffs and export
subsidies in the region
- Comparative static simulation

Accumulation Effect of FTA

- Francois et.al. (1996)
“Liberalization and Capital Accumulation in the
GTAP Model,” GTAP Technical Paper No. 7
- Comparative static simulation captures increase in
investment because of FTA, but capital stock stays
same level.
- Francois et.al. incorporate a link between
investment and capital stock into the GTAP model.

Summary

- CGE model analyses can be utilized for
quantitative evaluation of FTA.
- Transparency of data and model facilitate
communications between policy makers and
economists
- CGE models need to keep up with theoretical
development.
- More work should be done to address the
current concerns: Rule of Origin,
Fragmentation of production etc.