Presentation Outline

• What is the GTAP Data Base?
• What’s New in GTAP 6?
• Construction Procedure
• Construction Practices
• Distribution & Pricing
## GTAP Data Base Releases

<table>
<thead>
<tr>
<th>Data Release</th>
<th>Release Year</th>
<th>No. of Regions</th>
<th>No. of Sectors</th>
<th>Reference Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTAP 1</td>
<td>1993</td>
<td>15</td>
<td>37</td>
<td>1990</td>
</tr>
<tr>
<td>GTAP 2</td>
<td>1994</td>
<td>24</td>
<td>37</td>
<td>1992</td>
</tr>
<tr>
<td>GTAP 3</td>
<td>1996</td>
<td>30</td>
<td>37</td>
<td>1992</td>
</tr>
<tr>
<td>GTAP 4</td>
<td>1998</td>
<td>45</td>
<td>50</td>
<td>1995</td>
</tr>
<tr>
<td>GTAP 5</td>
<td>2001</td>
<td>66</td>
<td>57</td>
<td>1997</td>
</tr>
<tr>
<td>GTAP 6</td>
<td>2005</td>
<td>87</td>
<td>57</td>
<td>2001</td>
</tr>
</tbody>
</table>
What is the GTAP Data Base?

- National I-O Tables
- FIT
- International Data Sets
- Fitted I-O Tables
- Assemble
- GTAP Data Base
National I-O Table

<table>
<thead>
<tr>
<th>Primary Factors</th>
<th>Production</th>
<th>Final Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported Inputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Inputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Demand</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
International Data Sets

- agricultural data set
- macroeconomic data set
- trade data set
- protection data set
- energy data set
GTAP Data Principles

• Public availability
• Regular upgrades: currently on GTAP 6.0
• Broad participation: GTAP pools data development efforts
• Comparative Advantage: get best person in world on any given task
• Documentation
• Replicability
GTAP 6: What’s New?

- Reference Year: 2001
- 87 regions / 57 sectors
  - 16 new regions
  - 15 updated I-O tables
  - more composite regions
- Updated international datasets (2001)
- New sources/type/coverage of some protection data
- Revised trade and demand parameters
- Income and factor taxes
- Population
- Various revised procedures
New and Updated Regions

• 16 new regions
  (ALB, BGR, HRV, CYP, CZE, MLT, ROM, SVK, SVN, EST, LVA, LTU, RUS, TUN, ZAF, MDG)

• 15 updated regions
  (AUS, NZL, KOR, TWN, IDN, MYS, PHL, THA, SGP, IND, ARG, BRA, COL, NLD, TUR)

• 18 composite regions (from 10) – no more XRW
  (XOC, XEA, XSA, XNA, XAP, XSM, XCA, XFA, XCB, XEF, XER, XSU, XME, XNF, XSC, XSD, XSS)

• (69 primary regions)
GTAP 6 Data Coverage
More on I-O Tables

• **Representative I-O Table**
  - GTAP 5: sum of I-O tables of 12 countries
  - GTAP 6: sum of I-O tables of 39 countries

• **I-O Disaggregation** – 18 of 69 I-O tables
  - 3 agricultural
  - 4 non-agricultural
  - 11 both

• **Agricultural Production Targeting**
  - OECD I-O tables
International Datasets

• **Macroeconomic Data**
  – 2001 GDP, C, I, G from World Bank and other sources
  – In GTAP 6: adjusted C, I, G to be consistent with GDP data

• **Agricultural I-O Data**
  – Based on FAO production, trade and producer prices data
  – Used in disaggregation of agriculture for some I-O tables
  – In GTAP 6: data extended to all countries

• **Energy Data**
  – 2001 IEA energy volumes data
  – 1995 or earlier price data index-adjusted to 2001
  – various data sources
International Data: Trade

- **Bilateral merchandise trade data**
  - COMTRADE and GTIS data from countries
  - reconciled and contributed by Mark Gehlhar (ERS/USDA)
- **Non-margin services trade**
  - IMF Balance of Trade Statistics (Robert McDougall)
- **International transport margins**
  - COMTRADE; IMF BTS;
  - modal shares: US Census Bureau Foreign Trade Statistics, Mark Gehlhar
- **Re-exports**
  - Hong Kong trade statistics, Yao & Feenstra
  - Netherlands trade statistics (CPB)
International Data: Protection

- **Agricultural Domestic Support**
  - Based on 2001 OECD PSE/CSE Data Base (Huang/OECD)
  - Disaggregated EU data (Jensen/FOI)
  - Calculate total domestic support as share of prodn value
  - Calculate shares in total support, classify according to: output subsidies, input subsidies, land-based payments, and capital-based payments
  - In GTAP 6: include data for NMEs

- **Agricultural Export Subsidies**
  - 2001 data from country notifications to the WTO (Elbehri/ERS)

- **ATC ETEs for textiles and clothing**
  - 2001 estimates (Francois and Spinanger)
International Data: Tariffs

• **Source**
  – GTAP 5: agricultural tariffs from AMAD, non-agricultural tariffs from UNCTAD-WB WITS
  – GTAP 6: Market Access Maps (MACMap) (CEPII/ITC) – based on UNCTAD, WTO, AMAD and country data

• **Bilateral tariff variation**
  – GTAP 5 agric.: no bilateral variation
  – GTAP 5 non-agric.: bilateral detail, MFN rates
  – GTAP 6: bilateral detail; preferential rates

• **Specific rates**
  – GTAP 5: ignored
  – GTAP 6: converted to AVEs
Presentation Outline

• GTAP 6: What’s New
• Construction Procedure
• Construction Practices
• Distribution & Pricing
Construction Process

- National I-O Tables
- FIT
- International Data Sets
- Fitted I-O Tables
- Assemble
- GTAP Data Base
Updating I-O Tables

- Use FIT procedure (James and McDougall, IC 1993)
- Update domestic data bases to base year using macroeconomic data
- Reconcile domestic data bases with other international data sets
Data Assembly

FITted I-O Tables → Parameters → Primary Factor Splits → Income / Factor Taxes → Assemble → GTAP Data Base
Data Assembly

• Fitted I-O Tables – updated & reconciled
• Parameters
  – Trade Elasticities
    • GTAP 6: revised econometric estimates (Hertel et al)
  – Demand parameters (CDE)
    • GTAP 6: revised econometric estimates (Reimer & Hertel)
  – Other Parameters
• Primary Factor Splits
• Income and Factor Taxes – new in GTAP 6
  – Data from IMF Government Financial Statistics
Construction Standards

• Regional Flexibility
  – standard countries (226)

• Complete Automation
  – Modular Structure
  – Build Management – using MAKE

• Replicability
  – Version Control
  – Common Tool Set
Data Releases

• Pre-releases (GTAP 6pre1, 6pre2, etc)
  – Start of data cycle, new reference year
  – Several pre-releases as we assemble international data
  – Useful for quality improvements
  – Available to GTAP consortium /data contributors

• Public release (GTAP 6)
  – When all updated international data are assembled
  – Available to data purchasers in CD-ROMs

• Interim releases (GTAP 6.1, 6.2, etc)
  – Add new/updated I-O tables on same reference year
  – Small bug fixes
  – Available to GTAP consortium /data contributors
GTAP Data Package

- **GTAPAgg**
  - GUI aggregation package (Horridge)
  - Constrained to 10 x 10; license relaxes constraint

- **FlexAgg**
  - Command line aggregation package
  - Amenable to customization by advanced users

- **RunGTAP**
  - GUI software for solving the GTAP model (Horridge)
  - Includes sample applications

- **Data Documentation**
  - Forthcoming – Dimaranan and McDougall, editors
  - Some chapters now available on GTAP website
Current Pricing*

- **New Subscription**
  - Government and Private Sector License $4,000
  - Multiple Academic User License $1,500
  - Single Academic User License $800

- **Upgrade from Version 5 Data Base**
  - Government and Private Sector License $2,500
  - Multiple Academic User License $800
  - Single Academic User License $400

* Prices are for full data package; half price for constrained data package; half price for subscribers from low-income economies; under review
Conditions on Data Use

- Purchaser signs a license agreement specifying license type, licensee, users
- GTAP Data Base, GTAPAgg, RunGTAP programs may be used by the licensed individual(s) or within licensed organization
- May distribute small aggregations / RunGTAP applications
- Should not be made available over a network
- Should cite reference to GTAP Data Base
Resources for Using the Data Base

- Data Documentation – available online
- Annual Short Course in Global Trade Analysis
- Hands-on documentation
- Published applications using GTAP data
- GTAP-L
- User support
GTAP Data Team: Center

Betina Dimaranan
- day-to-day management; overall construction; protection data; macroeconomic data; coordinate/edit doco

Rob McDougall
- special modules – I-O disaggregation; energy data; trade data; taxes data; I-O fitting;

Terrie Walmsley
- I-O tables - coordination and checking
Data Base Team: Center

Judy Conner
  • data base sales; GTAPAgg licences; doco formatting

Ginger McColley
  • Data-related web support

Tom Hertel
  Strategic Issues / Special Projects

Graduate students
  • sometimes asked to assist in various tasks
GTAP Data Team

• Domestic Data Base Contributors
  – Numerous country nationals
  – Special projects e.g. EU, CEECs, Southern Africa
  – Mark Horridge -

• International Dataset Contributors
  – Trade data - Mark Gehlhar (ERS/USDA)
  – Macroeconomic data – World Bank
  – Protection data – various
  – Energy -
  – Agricultural I-O – Everett Peterson
  – Parameters - various
Next Release

• GTAP 6.1 interim release (October 2005)
  – Same 2001 base year
  – New regions – Pakistan, Bolivia, Ecuador, Iran, Nigeria, Mauritius
  – Updated I-O table – Chile

• GTAP 6.2 interim release (~ March 2006)
  – Any available new/updated I-O tables
GTAP 7 Preview

- 2004 reference year
- more regional disaggregation (Africa, Latin America)
- international datasets for 2004
- incorporation of energy prices data
- bilateral content in services trade
- primary factor splits
- First pre-release – mid 2006
- Public release – mid 2007
Other Data-Related Projects

- Margins – E. Peterson
- CO2 and non-CO2 data – H. L. Lee
- Land-Use Data – H. L. Lee
- GTAP Dynamic – T. Walmsley
- Labor Migration – T. Walmsley
Other Various Software

- **GTAPinGAMS** - Tom Rutherford
  - Convert data to GAMS format / includes GAMS model

- **GView** - Mark Horridge
  - View GTAP Data

- **ShadeMap** - Mark Horridge
  - Report results in a world map

- **Splitcom (proposal stage)** – Mark Horridge
  - Split GTAP commodities
Concluding Remarks

• The GTAP Data Base
  – continues to evolve to provide support to quantitative economic analysis
  – depends on the network of contributors of domestic data bases and international data sets