

GTAP Africa Data Base

Presented by

Badri Narayanan G.

Center for Global Trade Analysis

Purdue University

Outline

- **Overview of Pre-releases of GTAP Africa Data Base**
 - Additions and Improvements carried out in each of the Pre-releases
- **Current Status and Release Schedule**
- **Issues Involved and Strategies Followed**
 - Availability and Quality of I-O Data Contributors, I-O Tables and Trade & Protection Data.
 - Review of the Data Base
 - Release of the Data Base
- **Future course of action**

Overview of Pre-releases of GTAP Africa Data Base

<i>Release</i>	<i>Date</i>	<i>Regions</i>	<i>Additions/Improvements</i>
Pre 1	Apr '07	40	New African I-O tables generated by matching them with the existing regions, starting with GTAP v6.2
Pre 2	Apr '08	40	Real I-O Tables replaced the generated ones for 6 regions
<i>Pre 3</i>	<i>Aug '08</i>	<i>40</i>	<i>Few more real I-O tables; New trade and protection data</i>

Overview of Pre-releases of GTAP Africa Data Base

- **Pre-release 1:**
 - All the I-O tables, trade and protection data are from GTAP v6.2
 - New African regions: Methodology to construct their tables → They are matched with one or more regions in v6.2 similar in Per Capita GDP, in the same geographical area:
 - North Africa : Algeria : Egypt, Libya: Tunisia
 - Sub-Saharan Africa : Angola: Zimbabwe, DR Congo : Malawi, Kenya and Sudan : Zambia, Ethiopia : Malawi, Cameroon: Zimbabwe
 - West Africa : Cote d'Ivoire : Senegal, Ghana : Nigeria

Overview of Pre-releases of GTAP Africa Data Base

- Pre-release 2:
 - Most of the I-O tables, trade and protection data are from GTAP v6.2
 - New African regions: Real I-O tables added for: Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Ghana, Kenya and Sudan. Contributors:
 - Kenya: IFPRI
 - Others: Five researchers from African countries awarded scholarship to pursue GTAP short course & I-O contribution course in June '07, contributed I-O tables and will present papers in Helsinki Conference
 - **Most of the new tables are very recent and detailed!**

Issues Involved and Strategies Followed

<i>Region</i>	<i>Base Year</i>	<i>No of Contrib. Sectors</i>	<i>Source</i>	<i>Contributor</i>
Cameroon	2003	57	NIS, CMR	Christian Emini
Cote d'Ivoire	1998	31	INS, CIV	Yousuf Kone
D. R. of Congo	1987	27	INS, Congo	Guyslain Ngeleza
Ghana	2005	41	IFPRI	Charles Adjasi
Kenya	2001	29	IFPRI	IFPRI
Sudan	2004	34	Many..	Khalid Siddig

Current Status and Release Schedule

- **Pre-release 3 is expected to be the final release candidate: likely to be ready by October '08.**
- **New regions that still require contributors:**
 - **Algeria**
 - **Libya**
 - **Angola**
 - **Ethiopia (2 SAMs recieved)**

Current Status and Release Schedule

- **Trade Data: Being revised by including the estimated missing intra-African bi-lateral trade flows.**
- **Agricultural Protection Data: Expected to be revised for the next pre-release.**
- **An important merit of this Data Base: Many of the new tables are very recent (2001+)**
- **Reviews by board members, African data contributors and data reviewers will be most useful.**

Issues Involved and Strategies Followed

- **Quality and Availability of I-O Table Contributors:**
 - **Standard GTAP Data Base - contributors must provide I-O tables in GTAP format (TP #1).**
 - **GTAP Africa Data Base – Substantially more work was required by the Center to convert SAMs to our format and fix errors.**
 - **We could not identify contributors who are available, for Algeria, Libya and Angola.**

Issues Involved and Strategies Followed

- **Some of the issues dealt with at the Center:**
 - Mandatory split conditions were met for just 2 new regional tables.
 - No USE matrix was available for Sudan: RAS had to be used on the production totals using representative IO table shares.
 - Problems with Kenya SAM for 2003 related to sector-labeling and diagonal use matrices for agricultural sectors, etc. 2001 SAM, used instead.
- **Remaining Issues**
 - Many intermediate usage shares for the IO tables are unusual.
 - Treatment of domestic margins in the IO tables is not clear

Issues Involved and Strategies Followed

- **Quality and Availability of Trade and Protection Data:**
 - There are numerous potentially non-zero intra-African bi-lateral trade flows missing due to the poor quality of trade data in many African countries: About 55% of the total number of transactions are missing!
 - Nelson Villoria and Thomas Hertel have estimated these missing trade flows using gravity model and sample selection. Nelson will present this exercise in the conference.
 - Protection data is also scarce/less reliable in our existing sources, so we expect to incorporate the agricultural protection dataset from Kym Anderson and Ernesto Valenzuela.

Issues Involved and Strategies Followed

- **Review of the Data Base**
 - **The African regional data in pre-release 2 are being reviewed by at least by 2 reviewers.**
 - **Other efforts to facilitate better reviews:**
 - **The African data base and the table in SAM format, based on GTAP Technical Paper No: 22, were sent to reviewers for easier review.**
 - **Report comparing the Pre-2 Data Base with Pre-1 was released to the reviewers and board members.**
 - **Documentation on the source of other non-contributed African IO tables has been posted.**

Issues Involved and Strategies Followed

- **Release of the Data Base**
 - The final release will be made available free of cost to the public in GTAP website.
 - Early access has already been given to board members, reviewers and contributors
 - The final public release will not have full detail in the rest of the world; its sectoral disaggregation will also be limited.

Future Course of Action

- Obtain reviews from the African Data Reviewers and board members by July '08. Incorporate them in August-September.
- Explore the possibilities of sponsorship for the potential contributors of Algeria and Libya, who have already been identified so far. Also look for a contributor for Angola.
- Continue to provide hands-on material for the I-O table contribution course to potential contributors.
- Incorporate the new trade and protection data.
- Try and include some “good” regions from this database in GTAP v7 or v8.

Thank you!

Questions and/or Comments?