

## **THE CONSTRUCTION OF A SOCIAL ACCOUNTING MATRIX TIME SERIES FOR GTAP-BASED MODEL**

Topic: World input-output modeling and databases III

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Global Trade Analysis Project (GTAP) is a global network of more than 9000 researchers who share a common interest of applying Computable General Equilibrium (CGE) framework and Social Accounting Matrix (SAM) to policy issues and business problems. The standard GTAP model developed by this network is one of the most well-known CGE models and has been modified to numerous extensions (e.g. GTEM, BAEGEM) to help analyse domestic and international issues on agriculture, resources, energy, trade and environment. The latest GTAP 8.1 global database, with a base year of 2007, is derived from individual country input-output databases supplemented by rigorous estimation processes covering 57 sectors and 131 countries or regions. While the GTAP database is capable to serve the needs of most economic analysis, there are growing demands for more recent data sets that may provide better insights into the latest dynamics of the world economy.

The purpose of this paper is to present some of the concepts involved with the transformation of the World Input-Output Database (WIOD) into a global SAM time-series compatible with GTAP-based models. The World Input-Output Database (WIOD), released in November 2013, provides time-series of world input-output tables for forty countries worldwide plus the rest-of-the-world, covering the period from 1995 to 2011. Some of the key issues arising from the transformation include: price reconciliation over market and agent prices in GTAP versus basic and purchaser prices in WIOD; indirect taxes are either aggregated or unavailable in WIOD; value-added disaggregation; and balancing income and expenditure for each SAM agent.