FAO REPORT ON ACTIVITIES AND RESEARCH PAPERS USING (OR RELEVENT) FOR GTAP:

June 2017

The FAO Global Perspectives Studies (GPS) team in the Economic and Social Development Department (ESD) has been involved in the following activities that are of potential interest to the GTAP community:

i. The GPS team extended its suite of models with the general equilibrium model ENVISAGE, which is used, in collaboration with Purdue University, together with the partial equilibrium model GAPS – Global Agriculture Perspectives System – (http://www.fao.org/3/a-i6112e.pdf). These models support its analytical needs for the preparation of the forthcoming FAO forward-looking exercise: World Food and Agriculture towards 2050-80. ENVISAGE is used complementary to GAPS so as to inform on sectoral patterns of production and employment, trends on labour and other factor markets, investment and capital accumulation as well as greenhouse gas emissions under different socioeconomic pathways and climate change scenarios.
ii. The GPS team is working on aligning the ENVISAGE and the GAPS model. There are definition issues related to commodities (GAPS defines commodities in primary equivalent) that need to be dealt with so as to align demand, technology patterns and trade positions between the two models.
iii. The team extended the GAPS model regarding the representation of multiple livestock production systems and the representation of food demand, namely updating income and price food demand elasticities following changes of income per capita.
iv. The GPS team coordinated a FAO corporate report on "The future of food and agriculture: Trends and Challenges" (http://www.fao.org/3/a-i6583e.pdf) which served as a background work for defining the scenarios to be analysed in the forthcoming FAO forward-looking exercise and was used as a background document to inform FAO's medium term plan for 2018-2021.

MAFAP Team reported the following study using GTAP:

Infrastructure Investments for Improved Market Access in Sub Saharan Africa: A CGE Analysis

Jean Balié, Badri Narayanan, Signe Nelgen, and Anna Strutt

Abstract: Many governments in the world adopt trade and domestic market policies that affect production incentives and disincentives in their agricultural sectors. In addition, factors other than explicit policies contribute to the pattern of production disincentives across commodities in Sub-Saharan Africa (SSA). Severe market failures in the form of high marketing margins lower the prices that farmers receive. Yet, the issue of excessive market access costs for farmers and other agents in key value chains has not been sufficiently analyzed, particularly in developing countries. In this paper, we use the newly available MAFAP dataset to augment the GTAP model with domestic support and border protection, as well as data on market development gaps in selected SSA countries. We perform several policy simulations to explore the impacts of changes in excessively high marketing costs. Our findings indicate that addressing market development gaps has the potential to bring positive overall benefits to the SSA region, with particularly strong gains accruing to the sectors and countries with the largest initial distortions.

Key words: policy distortions, market failures, infrastructure investments, welfare, Sub Saharan Africa, CGE modelling

Trade and Market Division produced the following study using GTAP:

Impacts of Services Trade Liberalization between the European Union and Africa Caribbean and Pacific Countries: A Dynamic Approach

Rakotoarisoa, Manitra A. (Ex-FAO, Trade and Markets Division)

Abstract: That the services sectors affect employment and welfare especially through their strong links to other sectors in the economy is firmly unarguable. Globally, the services sectors directly employ 70% of the unskilled labour and about 85% of skilled labour. Services produce 24% and 32%, respectively, of intermediate goods used in the key sectors of agriculture and manufacturing. In both developed and developing countries, many services such as communication, insurance, and transport remain, however, highly protected. In the trade negotiation between ACP and the EU countries under the Economic Partnership Agreement (EPA), the liberalization of the trade in services is stalled by numerous issues stemming mainly from fears of losing tax revenues and employment. Fear arises because of trade negotiators? uncertainties over the sectoral impacts and overall welfare and employment effects when trade liberalization in the goods markets is accompanied by trade in the services markets. The purpose of this paper is to contribute to filling the knowledge gap and estimate the welfare and employment effects of the liberalization of services trade between ACP and EU countries. Of primary importance is the timing of the liberalization of the service sector with respect to the liberalization of the goods sectors, especially for the impacts on and implications for employment and welfare. This paper uses a dynamic general equilibrium model (GDyn) and takes into account the differences in labour productivity trend among trading blocks and regions. The simulation includes varying the rates of productivity growth and technological progress and the timing and the rates of tariff cuts in the services sectors to examine the extent of welfare and employment effects. The findings are intended to provide policy implications especially to increase welfare and employment for countries for the ACP and EU trade.