

## GTAP Advisory Board Report 2020

### World Trade Organization

CGE-related research has been conducted in three different areas at the WTO. First, the WTO Global Trade Model, developed by the GTAP-Center in co-operation with WTO economists in 2018, has been intensively used. Second, together with DG Trade of the European Commission, the WTO is working on a project to bilateralize the services trade data by mode of supply. Third, the WTO Chairs, universities in developing countries cooperating with the WTO, have applied the GTAP-tools to a range of topics.

#### **Work with the Global Trade Model**

The Global Trade Model is a recursive dynamic CGE model, built as a dynamic extension to the facelift version of the core GTAP model, including a module with monopolistic competition and firm heterogeneity. The model has been employed since the last GTAP conference for projects on the following topics. The impact of the US-China trade conflict and the Phase One Agreement between the US and China; Reciprocity in tariff negotiations; The impact of macroeconomic closures on the outcomes of baseline projections and trade policy experiments; Covid-19 and trade effects.

#### **Trade in services by mode of supply (TISMoS)**

This dataset uses the WTO-UNCTAD-ITC dataset as starting point. Existing BOP and FATS data are collected. Estimates are added as well as individual country experiences. Additional data sources are used to derive estimates. Through reiterations, an allocation by mode of supply is achieved. It is based on the Manual on Statistics of International Trade in Services (MSITS) simplified approach and the scope of GATS. Work on "bilateralizing" the data has unfortunately not yet advanced due to funding issues.

#### **Planned CGE-Work 2020**

- Extension of the model with labour adjustment costs and unemployment
- Extension of the model with technology diffusion to study US-China de-coupling
- Extension of the model with affiliate sales to study investment facilitation
- Completion of baseline projections and policy scenarios
- Project with modelers and policymakers from developing countries on baseline projections

#### **Publications**

*A Global Trade in Services Data Set by Sector and by Mode of Supply (TISMOS)*

Steen Wettstein, Antonella Liberatore, Joscelyn Magdeleine, Andreas Maurer. WTO Report.

This paper describes in detail the approach to create an analytical dataset on trade in services by mode of supply (TiSMoS) at global level for the period of 2005 to 2017. The countries' balance of payments data are broken down into modes of supply using an "enhanced simplified approach". The sectors are based on the structure of the Extended Balance of Payments Services Classification (EBOPS 2010) in the Manual on Statistics of International Trade in Services (MSITS 2010). A worldwide Foreign Affiliates Statistics (FATS) dataset is constructed to complement the dataset, notably to estimate the size of the supply of services of foreign affiliates. The dataset is built in modular form with a transparent methodology. Its aim is to develop into an international benchmark, incorporating gradually any new available information.

*Modelling trade and other economic interactions between countries in baseline projections*

Eddy Bekkers, Alessandro Antimiani, Caitlyn Carrico, Dorothee Flaig, Lionel Fontagne, Jean Fouré, Joseph Francois, Ken Itakura, Zornitsa Kutlina-Dimitrova, William Powers, Bert Saveyn, Robert

Teh, Frank van Tongeren, Marinos Tsigas. *Journal of Global Economic Analysis* Forthcoming June 2020.

This paper examines the way trade and other economic interactions between countries are modelled in the construction of baseline projections with recursive dynamic computable general equilibrium (CGE) models. Simulations are conducted on the size of trade elasticities, the way the trade balance is modelled (macroeconomic closure), trade growth, and energy prices. Other topics scrutinized are the modelling of zeros, modelling of new technologies and new types of trade policies (trade in data and digitalization), phasing in of future trade policies, and migration and remittances. We conclude that there is relative consensus about the use of nested Armington preferences, whereas different scholars model the trade balance very differently. The discrepancy between baseline trade growth and historical trade growth is not considered in most models though highly relevant. Research efforts, both in terms of modelling and data collection, should be allocated to a better coverage of other items on the current account (capital income, remittances) and the inclusion of net foreign debt and asset positions, projecting trade growth based on historical patterns, and better tools to model the rapidly growing digital economy.

#### *An Economic Analysis of the US-China Trade Conflict*

Eddy Bekkers and Sofia Schroeter. WTO Staff Working Paper ERSD-2020-04

This paper provides an economic analysis of the trade conflict between the US and China, providing an overview of the tariff increases, a discussion of the background of the trade conflict, and an analysis of the economic effects of the trade conflict, based both on empirics (ex post analysis) and on simulations (ex ante analysis). Bilateral tariffs have increased on average to 17% between the US and China, and the Phase One Agreement signed in January 2020 between the two countries only leads to minor reductions in the tariffs to 16%. The trade conflict has led to a sizeable reduction in trade between the US and China in 2019 and is accompanied by considerable trade diversion to imports from other regions, leading to a reorganization of value chains in (East) Asia. The simulation analysis shows that the direct effects of the tariff increases on the global economy are limited (0.1% reduction in global GDP). The impact of the Phase One Agreement on the global economy is even smaller, although the US is projected to turn real income losses into real income gains because of the Chinese commitments to buy additional US goods. The biggest impact of the trade conflict is provoked by rising uncertainty about trade policy and the paper provides a framework to analyze the uncertainty effects.

#### *Reciprocity in multilateral tariff negotiations*

Eddy Bekkers and Alexander Keck.

Some countries have expressed concerns about imbalances in the level of tariffs applied by other countries. This has led to renewed interest in reciprocity of tariff levels and the implementation of reciprocity in tariff negotiations. The calls for reciprocal tariffs raise the question how distortionary tariff policies of different players in the global economy are and which players should change tariffs most in tariff negotiations. In this paper we analyze the spillover effects on other countries of countries' tariffs and propose different tariff liberalization rules based on this analysis, employing the WTO Global Trade Model, a quantitative trade model. The tariff liberalization rules explored are (i) reduction of tariffs to the lowest or average bound tariff rate in all G20 countries; (ii) reduction in proportion to initial tariffs; (iii) reduction in proportion to the share in global demand (both imported and domestic), such that larger players in the global market imposing larger terms of losses on other countries have to reduce tariffs more; (iv) reduction of tariffs based on all the determinants of the negative spillover effects on other countries. The simulations show that there are large differences in the per capita spillover effects of actual tariff levels and that a large share of the spillover effects can be explained by initial tariff levels and the share in global imports. The tariff liberalization rules lead to big increases in exports in some countries exceeding a 100% and positive GDP effects in most regions (between 0.74% and 2.62% for the different rules). Welfare does not increase in all regions because of negative terms of trade effects.

*Simulating the trade effects of the Covid-19 Pandemic. Scenario analysis based on quantitative trade modelling*

Eddy Bekkers and Robert Koopman. Methodology Paper on Trade Forecast April 2020

The WTO Global Trade Model, a quantitative trade model, is employed to project the impact on the global economy of the Covid-19 pandemic with quantitative trade modelling. Because of the profound uncertainty about the duration of the pandemic and the containment measures, three scenarios are constructed, V-shaped, U-shaped, and L-shaped recovery, corresponding with a duration of 3 months, 6 months and more than a year. The pandemic and containment measures are assumed to lead to a general reduction of labour supply, a rise in trade costs, and reductions in both demand and supply in sectors most affected by the containment measures. GDP and trade are projected to fall by respectively 5% and 11% in the V-shaped and L-shaped scenarios and trade by respectively 8% and 20%. The response of trade to the reduction in GDP, measured by the trade-to-GDP elasticity, is projected to rise as the crisis lasts longer. The reason is that a longer duration will lead to a larger drop in spending on durables which are highly tradable.