Trade-SCAN: an user-friendly Trade Supply Chain ANalysis tool

Topic: Classical IO applications: Trade, Tables and Tools
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The European Commission is currently expanding its capacity to conduct studies in the domain of Input-Output analysis (data and modelling) in support of policies focusing on industrial competitiveness, growth and jobs, internal market, and trade and globalisation (e.g. global supply chains). Furthermore, Input-Output data enable more precise and comprehensive empirical applications on global supply chains, labour productivity and value added decomposition of gross exports by the use of additional socio- economic and environmental layers.

Within this research context, the European Commission's Joint Research Centre has developed with BC3 and the University of Groningen a new user-friendly computer tool called Trade-SCAN allowing for disentangling the domestic value added, foreign value added and double counted components of bilateral gross exports across all of the different countries included in the latest release (2016) of the WIOD database (www.wiod.org) and across various dimensions (time, country, industryâ€¦). The same applies for employment, skill levels, gender and age groups combining the WIOD database with the EUKLEMS database (www.euklems.net) release 2018.

This tool combines:

1) a module for ad-hoc calculations in real-time for specific queries. The definition of the sets and subsets of regions, countries, industries, factors and years are done in MS Excel spreadsheets that GAMS automatically reads in order to be flexible to changes of input data.

2) a dashboard of employment and GVC indicators such as the breakdown of gross exports; bilateral and total trade balance in gross and value added terms; employment and labour compensation embodied in EU exports to the world, etc.

3) pre-defined calculations and their associated databases in the form of pocketbooks.

The methodology to produce these results is crucial and the one implemented is largely based on the various existing contributions to the academic literature (Daudin et al, 2011; Johnson and Noguera, 2012; Wang, Wei and Zhu, 2013; Foster-McGregor and Stehrer, 2013; Koopmans, Wang and Wei, 2014; Nagengast and Stehrer, 2014; Arto et al, 2015 and Los, Timmer and de Vries, 2016, among others).