

The Policy Space Dimensions of Trade in Value-Added

Topic: Global Value Chain Analysis

Author: Hubert Escaith

Thanks to an increasing international fragmentation of production networks, Global Value Chains (GVCs) have become a dominant feature of today's global economy. This phenomenon has variously been called fragmentation, unbundling, offshoring, vertical specialization, slicing-up of the value-added chain or trade in tasks. This new phase of the globalization process challenges conventional understanding on how to interpret trade and, therefore, trade policies. Some researchers even suggest GVCs, by undermining the old Ricardian law of comparative advantages, determined a paradigm change in international economics (Grossman and Rossi-Hansberg, 2006). Even if this remains an open question, the fact is that GVCs alter many of the stylised facts on which international economics models are based.

Yet GVCs are still an uncharted territory, from an empirical perspective. While anecdotic data were available through cases studies, aggregate level analysis have been more limited. It is not before the 2000s that systemic efforts to produce internationally consistent estimators were put in place, first in the academia (eg, Daudin et al., 2006, building on Hummels et al., 2001) then thanks to national and international statisticians. Building on the results of research projects, in particular from IDE-JETRO and WIOD, the first "official" databases fully dedicated to the measure of trade in value-added indicators was released in 2013 by OECD and WTO (see OECD-WTO, 2012 for a background and technical notes on the TiVA database).

The proposed essay intends to start filling this empirical gap on the policy dimensions of trade in value-added by building a typology of value-added traders according to their structural economic characteristics and their trade policy options. In this perspective, the approach adopted here differs and complements the research programmes aiming at mapping global value chains from the trade network geographical perspective (who trades what with whom?) as is most often intended (Ng and Yeats, 1999; Koopman et al., 2012; De Backer and Miroudot, 2012, to cite only a few) or derive, from a theoretical/normative perspective, implications for trade policy options.

In particular, the paper will look into the structural and trade policy determinants of vertical specialization and the domestic content of exports, two of the most common measure of trade in value added. This study will build on on-going research being done at WTO-Statistics in two directions: (i) Trade policy and Effective Protection Rates that derive from crossing input-output coefficients with tariff databases; and (ii) The TiVA trade profile of the various economies (based on the sectoral value-added composition of their exports) in relation with a series of economic and policy variables, including the tariff schedules mentioned in (i) but also covering characteristics that reflect the comparative advantages of each country and its level of development.

The methodology used is based on Exploratory Data Analysis and Graph Theory. To our knowledge, this is one of the first attempts (if not the first one) at this kind of empirical approach in the policy space. Exploratory data analysis does not pretend to identify causalities and models but aims at helping the analysts and decision makers in organizing their empirical knowledge by pointing at underlying patterns and stylised facts. In this sense, it is a contributing factor to further research. At the time of writing the report, the process obviously suffers also from a selection bias in the choice of the relevant variables, as the TiVA database is still very much focused on OECD and emerging countries.