

The role of exporters and domestic producers in GVCs: Evidence for Belgium based on heterogeneous national supply-and-use tables integrated into a global multiregional input-output table

Topic: National data in Global IOTs

Author: Bernhard MICHEL

Co-Authors: Bart HERTVELDT, Caroline HambÅe

Even in times of a slowdown in the pace of global trade growth, participation and optimal positioning in global value chains (GVCs) may yield substantial benefits for countries in terms of welfare gains and job creation. This holds true in particular for small open economies like Belgium. Therefore, in order to make informed economic policy choices, it is crucial to get a clear picture on how a country's firms participate and are positioned in GVCs. The aim of this paper is to refine this picture for Belgium by producing data on GVC participation and trade in value-added separately for two groups of manufacturing firms: those that are export-oriented and those that mainly serve the domestic market.

Traditionally, Belgium is highly integrated into GVCs: a large share of the country's value-added is driven by foreign consumers (De Backer and Miroudot, 2014) and Belgian service industries tend to be well integrated into GVCs indirectly, i.e. through intermediate input deliveries to exporting manufacturing industries (OECD, 2015a). As suggested in OECD (2015b), the analysis of the country's integration into GVCs could be further refined with IO tables that distinguish between firms according to their exporter status. Indeed, technology is likely to be better reflected by separating export-oriented firms and producers that mainly serve the domestic market at the industry-level. This would then allow to better map domestic value chains and measure the indirect contribution of non-exporters to exports through intermediate deliveries. However, observations on GVC integration are based on evidence derived from global multiregional input-output tables (GMRIOs). Therefore, to enhance the value of the analysis, it would be useful to integrate national tables into GMRIOs. In turn, this raises the issue of consistency with national data because, due to global balancing, country data in these tables is not necessarily entirely consistent with national data, i.e. national supply-and-use tables (SUT) and input-output tables (IOT), in particular regarding foreign trade. This is a drawback, especially for small open economies like Belgium and it may alter analytical results (see the carbon footprint calculations in HambÅe et al., 2017).

To address these issues, we have produced a national IOT with a split of manufacturing industries into export-oriented firms (exporters) and firms that mainly serve the domestic market (non-exporters) for the year 2010 and integrated it into the global multi-regional IOT of the WIOD project for that year. For the construction of the national IOT with the exporter split, we have used the full individual firm-level data resources that serve for the construction of Belgium's official tables (annual accounts, structural business statistics and extensions, survey on industrial production, VAT transaction data, exports and imports). The novelty of the approach is twofold: the disaggregation of the industry-level output, input and import structures in the SUT and IOT are data-based rather than just proportional, and the integration of the Belgian tables into the GMRIO table is such that these Belgian data are not modified. As a first step, we have identified exporters in manufacturing industries as firms that export more than 25% of their output. This yields a sample split into exporters and non-exporters. Based on this, we have split the national accounts aggregates for manufacturing industries according to these two categories of firms. In a second step, we have relied on the more restrictive sample of firms that declare output and intermediate input purchases by product (in an extension of structural business statistics) to disaggregate the columns in the supply table and in the use table. Moreover, firm-level import data has allowed us to disaggregate the columns of the import use table. The next step then consisted in deriving a heterogeneous national industry-by-industry IOT. Finally, as a last step we have integrated this heterogeneous Belgian IOT into the global multi-regional IOT from WIOD for 2010.

Based on these tables, we will compare the two categories of firms (exporters and non-exporters) in terms of the value-added intensity of their output and their use of imported intermediates. We will also evaluate the similarity of the input structure of exporters and non-exporters. Moreover, we will use the national heterogeneous industry-by-industry IOT to look at differences in multipliers between the two types of firms for the same industry, and we will determine to what extent non-exporters generate value added through the delivery of intermediates to exporters. Finally, based on the global multi-regional IOT from WIOD into which we have introduced industry heterogeneity for Belgium, we will look at the participation and position of Belgian exporters and non-exporters in GVCs.