

From micro to macro analysis: critical raw materials in CETA

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Trade policy analysis has become increasingly complex. The Russian invasion in Ukraine and COVID-19 pandemic had unprecedented impact on international trade, production and GDP worldwide. It had an important effect and in many cases disrupted the sourcing of foreign value-added along global supply chains and altered companies' decisions in respect to their preferred choice of optimal intermediate inputs composition with sometimes severe impacts on domestic production and exports. It also exposed many countries' vulnerabilities in respect to sourcing critical raw materials from abroad in order to sustain and ensure uninterrupted domestic production flows. In order to assess the impact of these developments a combination of micro and macro level approaches is necessary to be able to explore both the impact at product category and at a sectoral or industry level of an economy. This evokes often the need to carry out an analysis at disaggregate level and use the information obtained to improve macro level data such as Input-Output data feeding quantitative models for trade policy analysis.

Often, however, raw product-level trade statistics undergo several transformations to be able to reach a stage where they can be utilized in multi-regional input-output tables (MRIOs) that are the working horse databases of trade policy macro analysis. For example, often there is a (significant) difference in the magnitude and the bilateral/product-level distribution involved in moving from official trade statistics to the so-called balanced databases where bilateral product-level trade data is consistent in terms of imports matching the level of exports. And yet, further more important adjustments are undertaken to account for national accounts balancing rules and re-exports. In some cases, the discrepancy between the original trade data and MRIO data can be substantial.

Against this background, the current paper assesses the impact of CETA in respect to raw material imports into the EU, with trade statistics data at the HS6 level. In a second step, we compare such results with those obtained from the newly developed FIGARO HS6 level balanced trade database, which accounts for re-exports in an improved way, also combining EU Comext and UN Comtrade data. In a third step, the transformation of this data to meet national accounting rules in an MRIO context is assessed in respect to the magnitude of the changes to the data.