Treatment of the Intra-EU Trade Flows to Obtain Consolidated European Union and Euro Area Use Tables

Topic: Organized session: Estimation of the Carbon Footprint for the EU27
Author: Maaike Corinne Bouwmeester
Co-Authors: Jan Oosterhaven, José Manuel Rueda-Cantuche

A procedure consisting of a series of seven steps has to be performed to arrive at a consolidated EU use table when starting from a simple aggregation of individual EU country tables. A prerequisite of the latter table is the distinction between intra-EU and extra-EU trade flows, both for imports and exports. Due to the change in geographical detail from individual EU member countries to the EU level, the former international intra-EU trade flows now have to be interpreted as domestic transactions of the EU. The main objective of the procedure is to balance the intra-EU import matrix with the information on intra-EU exports. The fact that the mirror flows do not match is due to a range of issues. A structural discrepancy is caused by the difference in valuation as imports are valued in cost-insurance-freight prices, while the
exports in the table are recorded in basic prices. The first step of the procedure corrects for the taxes less subsidies incorporated in the value of imports. The second, third and fourth steps adjust the intra-EU and extra-EU import matrices or the intra-EU and extra-EU export matrices to correct for the double-counting of transit trade flows. In the fifth step all values of the intra-EU import matrix are rescaled to match the total of the intra-EU export vector – a requirement in order to be able to balance the intra-EU import matrix with the values of the intra-EU export vector. In the sixth step the matrix is balanced using the GRAS algorithm, which effectively redistributes trade and transport margins from the goods in which value they were included to the rows representing the trade and transport services. The final step consists of merging the balanced intra-EU import table with the domestic table, which can now be done without violating the accounting identities that reign supply-use frameworks.