Hybrid Interregional Input-Output Construction Methods: Applied to the Seven Region Spanish Input-Output Table

Topic: International Input-Output and Supply-Use models

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This paper searches for an optimal combination of non-survey methods when constructing a Spanish interregional input-output table for the region of Madrid and the five provinces of the region of Castilla-La Mancha (CLM), given thirteen Spanish regional input-output (IO) tables for the period between 1999 and 2005. Hence, we develop different regression analyses to obtain the trade submatrices of the table. These regression analyses are based on statistical data on the road transport of goods, on input-output interpolation and extrapolation techniques to calculate the necessary coefficients. After this a procedure is devised to tally the summation of the provincial and rest of Spain IO submatrices with the National IO table. Once the interregional IO table is finished the spillovers and multipliers are calculated. Then robustness tests are conducted to demonstrate that this method produces a table that is statistically different from other methods. This is done in Jensen's terms, holistic and partitive accuracy, and it is focused on the role the share estimators play. A set of final demand changes is generated and then the outcomes are evaluated using the alternative interregional IO table estimates. The transport data are used to generate alternative estimates of the regional flows to test if it is in the interregional rather than intraregional parts of the table that alternative estimates will generate the most differences in outcomes. It is explored how different are the estimated spillover/feedback effects from alternative IO tables on the one hand and uncertainties in the estimates of the share parameters.