Input-output micro-macro twins

Topic: Input-Output Theory and Methodology (2)
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This paper provides deeper insights into the internal structure and interdependencies of European households' consumption expenditures, and proposes an integrated input-output micro-macro model to assess the impacts of changes in consumer prices, incomes, and other final demand components.

In the first part of the paper, we estimate and analyze EU-wide and country-specific results of intra-budget regressions, which form the foundation of Taylor's (2014) consumer expenditure model. We modify the Taylor framework to account for the income effect when incorporating the household budget constraint and derive closed-form expressions for price and income elasticities.

In the second part, we integrate the modified household expenditure framework with an open input-output quantity model in a multi-regional setting. This integration enables us to capture the circular consumption-production-income multiplier effects. By further investigating the linearized version of the IO micro-macro twins model, we generalize the integrated micro-macro framework to accommodate any demand system. In addition, we provide both theoretical and empirical insights into an array of inter-regional income and consumption multiplier matrices, which show the corresponding impacts of changes in consumer prices, incomes, and other final demand components. As an empirical application, we analyse the effects of rising consumer prices in the EU, corresponding to a 55% reduction in EU greenhouse gas emissions by 2030 compared to 1990 levels.