

Mapping consumption impacts: combining IO models with consumption estimates for small areas

Topic: Micro data

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Household Surveys (HS) report consumption figures that can be used to calculate consumption impacts when used in combination with IO models, but the samples on which HS base are rarely representative to produce reliable estimates at a detailed (sub-regional) spatial scale. This implies that the use of IO analysis when quantifying the impacts derived of household consumption typically limits to estimate them at an aggregated regional or national scale. In this paper we apply an econometric procedure to estimate consumption figures at a highly disaggregated geographical scale, which would allow for calculating impacts of changes in the household consumption in particular sub-regional spatial units (i.e., cities, metropolitan areas or municipalities). First, we base in the methodology developed in Elbers et al. (2003) and Tazzoni and Deaton (2009), which predict spatially disaggregated economic indicators by combining data from HS[€]™s with the information contained in the Population Census (PC), since these datasets usually contain (non-economic) indicators observable at a highly detailed geographical classification. Then, a Generalized Maximum Entropy (GME) estimator is applied to adjust these initial estimates on consumption, making them consistent with the consumption aggregates reported on an IO table at industry level.

As an illustration, we study the micro-data of the Spanish Household Budget Survey and the Spanish Census of Population elaborated by the National Institute of Statistics (INE) in 2011. From these two databases we estimate consumption figures for more than 500 spatial units, which are subsequently adjusted to the consumption totals published in the Spanish IO table by applying a GME procedure. This estimation allows for identifying a considerable heterogeneity on the impacts derived of private consumption depending, not only on the administrative region, but also on the specific municipality within a given region.