

## **Using data from household surveys to calculate consumption impacts: why things can go wrong**

Topic: Linking micro-data from consumption surveys and IO models: from theory to practice

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The combination of consumption data from household surveys with the information contained in IO tables is a crucial step to conduct impact analysis related to the effects generated by consumption patterns on the generation of value added, CO<sub>2</sub> emissions or energy uses, to mention just some examples. The point of departure of these analyses consist, basically, on connecting the information on consumption made by households with the final demand vector

(or matrix) present in the IO tables, which is then conveniently modified to produce the multipliers of interest. This process requires the construction of a concordance or bridge matrix to make this connection possible, since several issues affect the combination of these two data sources: differences in price valuation between consumption surveys and IO tables, the influence of taxes and margins or the different product classifications between these two frameworks make this combination a challenge for the researcher. Apart from issues regarding correspondences between the two classifications, it is known that data directly obtained from household surveys suffer from other problems: households are inclined to under-report their consumptions of some specific products (the so-called sin consumption) while other consumptions are over-reported (e.g. food). These issues produce inconsistencies between the consumption totals reported in the household surveys with those estimated in the national accounts.

This paper investigate the consequences of not accounting for these issues when using consumption data on IO models. Basically, we quantify the impacts of final consumption in an IO model when these issues are not controlled and we compare them with those calculated when they are properly addressed. Additionally, we propose several alternative techniques that allow making the consumption totals in the household surveys and in the national accounts consistent. The specific technique applied depends on the amount of additional information at hand. Both research objectives are illustrated by means of numerical simulation and by its application to real-world cases.