Comparing the outcomes of multiple imputation and micro simulation

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Abstract

Item non response is a relevant issue for the estimation of the household and individual income distribution, with an impact on EU-SILC outcomes not to be disregarded. On one hand, the national EU-SILC questionnaire tend to include an extensive number of questions, to get detailed and exhaustive data on the various sources of income. However, this structure is burdensome and requests the interviewed to retrieve very specific data at a level usually not controlled by people in common circumstances, likely to originate missing data and reduced quality.

In Portugal, this issue is being overcome with the use of deterministic imputations applied component by component, either through policy defined external criteria or income averages for similar socio-demographic profiles.

The presentation will focus on defining and comparing alternative imputation procedures:

- compensating for the deterministic aspect through the use of multiple imputation, with the calculation of various values for one single missing data to recognise that any simple guess is uncertain;
- keeping the relations between variables through the use of a micro simulation model integrating the whole set of economic and fiscal rules and criteria as a determinant for the proposed imputed values;
- using longitudinal information with actualization procedures.