Improving the Quality of EU-SILC Survey Estimates

Diego Chianella, Michele D'Alò, Claudia De Vitiis, Stefano Gerosa, Marco Dionisio Terribili¹

Abstract

We propose a revision in the procedures for non-response adjustment and calibration used in the EU-SILC survey, with the double aim of correcting for income-dependent unit non-response and of meeting the standard error thresholds required by Eurostat at the NUTS-2 level. The revision of the set of calibration constraints leads to a substantial simplification of the process, allowing a shift from the previous two-step calibration—necessary because a single step did not converge—to a single convergent calibration step. This simplification makes it possible to include new constraints on tax-filers and income aggregates, improving the efficiency of the estimates and reducing standard errors. The impact of the new weighting procedure on key EU-SILC survey is also noticeable, with an increase in household net income and a slight reduction in inequality measures.

Keywords: Calibration techniques; Non-response adjustment; Unit-nonresponse bias; Administrative data.

¹Diego Chianella (Istat) e-mail: chianella@istat.it; Michele D'Alò (Istat) e-mail: dalo@istat.it; Claudia De Vitiis (Istat) e-mail: devitiis@istat.it; Stefano Gerosa (Istat) e-mail: gerosa@istat.it; Marco Dionisio Terribili (Istat) e-mail: terribili@istat.it.