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Titel: Calibration of EU-SILC longitudinal data. A suitable technique for the enhancement of coherence of social inclusion indicators with respect to constant and variable masses?

Abstract: EU-SILC is a survey on income and living conditions which is carried out in all EU countries and is based on EU regulations. The main purpose of this survey is the estimation of social inclusion indicators. The at-risk-of-poverty rate is the central indicator of EU-SILC and is estimated for all EU countries using EU-SILC data. Another indicator describes the persistence of the at-risk-of-poverty rate and is based on constant masses. It has to be estimated on the basis of a so called "balanced panel".

The EU regulation therefore requires that data from the cross-sectional and the longitudinal sample are being delivered. In most EU countries EU-SILC is implemented as a rotational panel in an integrated design. Although the samples of the longitudinal panel and the cross-section share a big overlap, there are considerably large discrepancies in some countries if indicators are estimated with data from the panel and the cross-section. This inconsistency of estimators based on constant and variable masses in the EU-SILC survey needs to be analyzed more closely.

This article presents the scope of these discrepancies in 21 EU member states (and Norway) and discusses possible causes. The analysis is carried out with the EU-SILC longitudinal and cross-sectional UDB datasets of 2008. In many cases observed differences in social inclusion indicators based on variable or constant masses cannot be explained by standard errors of the estimated indicators or structural differences between the panel and the cross-section. Finally various techniques for solving the problem by calibrating the longitudinal data on marginal distributions from the cross-section are being presented and the implications for the estimated social inclusion indicators are discussed.