ANTONIO DE LAS HERAS PÉREZ

Universidad de Cantabria, Spain

IGNACIO MORAL ARCE

Instituto de Estudios Fiscales, Madrid, Spain

STEFAN GENEVA SCHOOL OF ECONOMICS AND MANAGEMENT, UNIVERSITÉ DE GENÈVE SPERLICH

Geneva School of Economics and Management, Université de Genève, Switzerland

RECOVERING INCOME DISTRIBUTIONS FROM AGGREGATED DATA VIA MICRO-SIMULATIONS

Abstract:

For the studies of wealth, inequality and poverty, the analysis of income distribution of the individuals is a crucial issue. In practice, however, only aggregated data are available, either in groups or as a few quantiles of the distribution. These may be stratified along characteristics like gender, age, being immigrant, or education. For any scenario (for example to perform counterfactual exercises), it is then desirable to generate samples of micro income data corresponding to the same population structure. Evidently, such a method serves also for the imputation of income densities corresponding to the observed grouped data. If one is provided with quantiles or grouped data of different countries or regions, then this information can be aggregated with a proper weighting (to account for the corresponding population sizes) to obtain the joint income distribution. For the application of our method it is not required to observe the same quantiles or grouping for the different countries or provinces. As an example, this technique can be used to recover the actual or any synthetic world income distribution based on national aggregates.

Keywords:

Income distribution, grouped data, micro simulation, nonparametric density estimation.

JEL Classification: C49, C63, C81