Department SEMINARS

Computing Multidimensional Composite Indicators for Small Areas in Presence of Missing Variables: a Data Integration Approach

ANGELO MORETTI

Utrecht University

TUESDAY, 19 MARCH 2024
2:30 PM

Seminar Room Bruguier Pacini, DEM

A B S T R A C T

In this article, we evaluate data integration methods to estimate composite indicators for small areas, when some of the single indicators are completely missing. Particularly, the target parameter is a multidimensional poverty index, where some of the required variables are not available in the population Census, which is used as the main source in order to compute the indicator. Thus, we propose two approaches to generate these missing variables, considering an auxiliary sample survey. Specifically, the performance of an approach based on a generalized linear mixed model is compared to a two-step imputation technique. The measurement of multidimensional poverty, including also non-monetary dimensions is crucial and aligned with the Sustainable Development Goals defined by the United Nations. We use Colombia as a case study, which has a recent population Census providing most of the information necessary to compute the indicator at small area level. Although Colombia is used as an example, our methodologies can be greatly of interest of Latin American countries since they have similar deprivation indices. The approaches are evaluated via simulation studies and an application based on the Great Integrated Household Survey 2018 of Colombia.

For information: rachele.foschi@unipi.it