

# **SUBNATIONAL ESTIMATION OF FINANCIAL POVERTY INDICATORS BY HOUSEHOLD TYPOLOGY**

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In recent years, the measure of regional disparities on household poverty and social exclusion has received increasing attention by policy makers and this has produced a growing demand of sub-national statistical information on income parameters. Besides, many studies have shown a strong connection between poverty and some characteristics of the households such as their composition, highlighting the concentration of the greatest economic difficulties in particular household typologies. For this reason, the aim of the work is to provide estimates of some poverty indicators for domains defined by cross-classifying the household typology and the administrative region, on the basis of data collected for Italy by the new “European Union – Statistics on Income and Living Conditions” survey (EU-SILC). The necessity of simultaneously estimating more than one parameter is due to the multidimensionality of the studied phenomenon. In particular, for the moment we focus on three poverty rates based on three different thresholds, so to distinguish between very poor people, poor people and people who are at risk of becoming poor.

The considered source, EU-SILC, is a rotating sample survey on households’ income and social conditions, coordinated by Eurostat (Eurostat, 2005), which allows for the consistent estimation of income distribution parameters and poverty indicators across most of the member states. This survey was designed to provide reliable estimates of main parameters of interest for areas within countries that, obviously, do not correspond to our target domains. The number of units sampled from those domains are too scarce, in many cases, to obtain reliable estimates of the parameters of interest. To solve that problem, we suggest to use small area

estimators, based on multivariate area level models, that improve the reliability of estimates “borrowing strength” over areas and by exploiting the correlation between the considered indicators (Datta *et al.*, 1998). We compare different model specifications. As auxiliary information, since Census related or Administrative data are either not available yearly or not fully reliable, we use the estimates of the average annual unemployment rate, provided by the Italian National Institute of Statistics (ISTAT). As estimation method we use a Hierarchical Bayesian approach implemented by means of MCMC computation methods. The results obtained allow us to compare the incidence of poverty by household typology in the different Italian regions.

The suggested approach may be extended to the estimation of other indicators and could be used with data collected by EU-SILC in other countries.

## References

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