

## **Addressing the local dimension into EU Measures of Poverty: regional incomes and housing costs**

*Stefano Filauro (Università Bocconi), Zachary Parolin (Università Bocconi)*

Background: within-country variation in income levels and housing costs absent in official poverty measures

Relative poverty in the EU measurement framework is measured with the headline at-risk-of-poverty rate. This indicator is based on the headcount of individuals with disposable income below 60% of national median income. However, in countries with very large territorial disparities, this income threshold may fail to reflect real living conditions across regions. In high-income areas, the nationally-set income threshold may be inadequate and too low. Individuals in high-income regions may have reference income thresholds that take into account higher income levels compared to the country-level median individual. As a result poverty rates in these regions risks to be underestimated. Similarly, high-income regions tend to have higher living costs, therefore nationally-set income thresholds may also fail to capture the monetary needs to afford necessary items.

In this respect, the largest expenditure for most households is housing costs, including rents, mortgages, and utility bills. The median housing cost in the EU in 2020 amounted to around 13% of the median income, although this ratio can peak at over 30% in some countries (e.g. Greece) and this ratio is larger for low-income households. Recent analyses have shown to what extent relative poverty changes when housing costs are factored in an income concept, whether imputing rents for outright owners (Tormahleto and Sauli 2017) or subtracting housing costs (Raitano 2022). Moreover, housing costs vary extensively across regions, especially in countries with secular territorial disparities. Within the same country, the median housing cost in the highest-cost region can be as high as 200% larger compared to the lowest-cost region (in the case of Spain, the Madrid area as opposed to Extremadura). Housing costs also vary remarkably across regions in Germany, Italy and France.

Thus, both income levels and housing costs have large within-country variation but the official relative poverty measures do not take them into account.

### **Objective**

In this study we analyse local variation in income levels and housing costs and how it can be incorporated into EU measures of poverty to reflect more accurately local living conditions. In detail, we look at traditional relative poverty lines, such as the

60% of national median income, and we test their effectiveness against revised poverty thresholds that take into account the within-country variation in income levels and housing costs.

We discuss advantages, disadvantages, assumptions, and implications of incorporating local variation in incomes and housing costs into EU poverty thresholds. In practice, we define three alternative poverty thresholds and analyse the implications for the resulting poverty rates. The three poverty lines are: 1) income-based regional poverty lines; 2) regional poverty lines based on housing costs' deviation from the national average; 3) regional poverty lines based on housing costs' deviation from the national average in high-cost regions. We then evaluate whether such adjustments 'improve' poverty measures by reducing their mismatch against material deprivation and subjective poverty rates.

### Data and methods

We use EU-SILC data for all countries reporting income variables, housing costs and material deprivation and subjective monetary needs at regional level (NUTS1 or NUTS2). As some housing variables, such as housing quality and type of housing, have been recorded for a sufficient number of countries only since 2010, our analysis focuses on the last decade. In a vast majority of countries additional information on urbanisation is also available, allowing also for within-region variation between urban and rural areas. To make housing costs comparable across regions, we control for housing quality, house types, number of rooms, housing tenure and household composition.

### Preliminary results

First, dispersion indicators such as the coefficient of variation or max-min ratio shows quite large within-country variability in housing costs. Within-country variation in housing costs appears to be larger than for income levels or subjective monetary needs in a majority of EU countries.

Second, the first estimates show that correcting poverty lines at regional level for housing costs deviation from the national average improves the overlap between deprivation measures and relative poverty, although by a narrow margin. It does not seem necessarily the case for income-based regional poverty lines in many EU countries.