DB090: HOUSEHOLD CROSS-SECTIONAL WEIGHT

Topic and detailed topic: Technical items/Weights
Variable type: Annual
Unit: Household
Reference period: Current
Mode of collection: Derived
In use (period): Yes, since the first year of EU-SILC data collection
Series' differences: Yes, 2014

VALUES AND FORMAT

0 (format 2,5) Weight

Required format Household cross-sectional weights will be coded with at least one integer and five decimals. In the regular transmission (reconciled file format) these variables should only be filled in for the records related to the last year of operation.

FLAGS

From 2014 onwards

1 Filled
-7 Not applicable (DB010 ≠ last year of operation)

Before 2014

1 Filled

DESCRIPTION

The household cross-sectional weights are the final estimation weights. Only the households that are accepted into the database (DB135 = 1) have a cross-sectional weight; the others are assigned a weight of 0. The calibration is done taking all rotational groups together.

Units of the sub-samples appear in the EU-SILC sample only in situations where a rotational design is used. In this case, sample weights are called 'cross-sectional' weights. These weights are required for all the types of units considered in the EU-SILC survey.

The household cross-sectional weights (target variable DB090) will be used to draw inference on the population of private households at national and European levels *(see the weight for DB080 and then further).*

After adjustments for non-response and to external sources (calibration) of the household design weight, the cross-sectional household weight (DB090) is calculated. *DB090 is used to weigh household data and indicators produced at household level.*

More precisely, suppose that there are 'J' auxiliary variables $x_1 \ldots x_j \ldots x_J$, called calibration variables, with known population totals (for the numerical variables) or marginal counts (for the categorical variables). Without loss of generality, we can assume that all the calibration variables are numerical (otherwise, we consider the 0/1 variables for each category).

New household weights (DB090) are 'as close as possible' (as determined by a certain distance function) to the initial weights $DB080^{(N)}$. These new weights are calibrated on the totals X_j of the 'J' auxiliary variables; in other words, they verify the calibration equations:

$$\forall j = 1 \ldots J \qquad \sum_{k \in s} DB090_k \cdot x_{jk} \quad = \quad X_j.$$

Where $DB090_k = g_k \times DB080^{(N)}$

This process can be done using different statistical software and different methods (e.g., logit regressions through the SAS macro, CALMAR).