

**UNITED NATIONS
ECONOMIC COMMISSION FOR EUROPE
CONFERENCE OF EUROPEAN STATISTICIANS**

**Expert meeting on measuring poverty and inequality
29-30 November 2018, Vienna, Austria
Emerging issues: Individual level poverty measures**

Measuring material deprivation at individual level and measuring children material deprivation

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Abstract

As a part of the revision of EU-SILC, the contents of the survey as well as indicators are revised. The material and social deprivation indicator, based on new items (mainly at individual level) introduced in EU-SILC in 2016, was approved last year by the Indicators' Sub-Group (ISG) of the Social Protection Committee (SPC) and now the first data is available in the Eurostat database.

Moreover, a new indicator on child deprivation (the child deprivation rate) was agreed in March 2018. The indicator, based on 2014 module, will complement the data provided by other household-centred indicators of poverty and social exclusion. An additional complementary indicator on the depth of child deprivation has been agreed and will be published on Eurostat web in the near future.

During this presentation, Eurostat will explain how those indicators have been developed and what are the remaining methodological challenges.

Introduction

EU-SILC is a statistical data collection focused on income but also covering other domains of living conditions and their determinants, which enables the analysis of the multidimensional phenomena of poverty and social exclusion, and for the joint analysis of its different dimensions. It has been gradually implemented since 2003 and currently provides annual data for EU 28 member states, Iceland, Norway, Switzerland and some other countries¹.

EU-SILC, as an EU reference source for comparative statistics on income distribution and social inclusion, is used for monitoring various EU policies and in particular to monitor the poverty reduction headline target of the Europe 2020 strategy.

Together with the at-risk-of-poverty rate and the low work intensity rate, the severe material deprivation (MD) rate is one of the three indicators included in the Europe 2020 social inclusion target, which aims to lift at least 20 million people out of the risk of poverty or social exclusion (AROPE) in the EU by 2020.

The concept of MD is based on the affordability of a selection of items (goods or services) that are considered to be necessary or desirable for people to have an 'acceptable' standard of living in the country where they live. The analysis distinguishes between households that cannot afford a certain item (those materially deprived), and those that do not possess this item for another reason, e.g. because they do not want it. The EU material deprivation (MD) rate for the purpose of the Europe 2020 strategy was defined as the proportion of people living in households who cannot afford at least 3 (4 for severe deprivation) of the following 9 items:

- coping with unexpected expenses;
- one week annual holiday away from home;
- avoiding arrears (in mortgage or rent, utility bills or hire purchase instalments);
- a meal with meat, chicken, fish or vegetarian equivalent every second day;
- keeping the home adequately warm;
- a washing machine;
- a colour TV;
- a telephone;
- a personal car.

However, over time it became apparent that the material deprivation items, out of which the indicator is built, should be revised. The material deprivation indicator had some limitations,

¹ Montenegro, The Former Yugoslav Republic of Macedonia, Serbia and Turkey.

the most significant being the small number of items on which the indicator relied and the saturation of some other deprivation items that were no longer relevant.

For this purpose, in addition to the variables collected annually, an ad hoc module on MD with new items was included in the 2009 edition of EU-SILC and some of them were collected again in dedicated modules in 2013, 2014 and 2015.

Measuring material deprivation at personal level

The Luxembourg Institute of Socio-Economic Research (LISER), in partnership with the University of Bristol, has worked on the 2009 data (Guio et al 2012 – produced as part of the Net-SILC2 grant agreement) and then on the 2009, 2013 and 2014 data (Guio et al 2017 – produced as part of a subsequent Eurostat grant agreement) and performed an in depth analysis towards the construction of new deprivation indicators.

On this basis, from 2016 onwards, 7 new items which were previously collected in the ad hoc module are collected in the yearly SILC survey (replace worn-out clothes, two pairs of shoes, a small amount of money to be spent on oneself, get together for meal/drink, leisure and replace furniture - see below) and 3 old items were dropped² (TV, telephone and washing machine that are only voluntary from 2016 or imputed by countries).

The material and social deprivation indicator, based on the 13 items including the new ones (mainly at individual level) introduced in EU-SILC in 2016, was approved last year by the Indicators' Sub-Group (ISG) of the Social Protection Committee (SPC).

The new deprivation items, retained after a thorough study, are 6 at personal level and 1 at household level (in parentheses. e.g. [item short name]):

At personal level:

The person cannot afford (but would like to have, i.e. a lack is an 'enforced lack' and does not simply reflect a choice):

- To replace worn-out clothes by some new (not second-hand) ones. [clothes]
- Two pairs of properly fitting shoes, including a pair of all-weather shoes. [shoes]
- To spend a small amount of money each week on oneself without having to consult anyone. [pocketmoney]
- To get together with friends/family for a drink/meal at least monthly. [gettogether]
- To have regular leisure activities. [leisure]
 - Have an internet connection [internet]

At household level:

- The household cannot afford to replace worn-out furniture (but would like to). [furniture]

² These 3 variables were again collected once in the 2018, which is the reference year for the 2020 social inclusion target

Together with the new items, the new indicator consists of 13 items:

- face unexpected expenses;
- afford one week annual holiday away from home;
- avoid arrears (in mortgage, rent, utility bills and/or hire purchase instalments);
- afford a meal with meat, chicken or fish or vegetarian equivalent every second day;
- afford keeping their home adequately warm;
- afford a car/van for personal use;
- replace worn-out furniture;
- replace worn-out clothes with some new ones;
- have two pairs of properly fitting shoes;
- spend a small amount of money each week on him/herself (“pocket money”);
- have regular leisure activities;
- get together with friends/family for a drink/meal at least once a month;
- have an internet connection

Hence, all new deprivation items except "furniture" are measured at personal level. This is a major change from the previous situation where all items were collected at household level.

In addition, compared with the standard 9-item material deprivation indicator adopted in 2009, the new deprivation indicator also includes items related to social activities (leisure, internet, get together with friends/family, pocket money). It is therefore a measure of “material and social deprivation” (or, in short, “deprivation”), whose composition is different from that of the “(severe) material deprivation” (based on the 9-item list) used in the Europe 2020 Social Inclusion target. In order to avoid confusion, the indicator used in the Europe 2020 target should always be referred to as “severe material deprivation” (or, if space allows: “(9-item) severe material deprivation”); whereas the new indicator should be referred to as “deprivation” (or, if space allows: “(13-item) material and social deprivation”).

On the basis of the deprivations count (ranging from 0 to 13), the deprivation rate is defined as the proportion of people lacking at least five items in the whole population.

The choice of the threshold was data-driven. At EU level, this threshold results in a proportion of people deprived that is close to that of the 2009 standard material deprivation indicator (3+ deprivations out of 9).

The use of the new deprivation indicator opens many new possibilities for analysis, e.g. it allows cluster analysis, with two categories of deprivation items:

- “social inclusion items”: “gettogether”, “pocket money”, “leisure”
- “financial items”: “arrears”, “furniture”, “unexpected expenses” and “holidays”.

Allowing the calculation of deprivation for those two groups separately.

Children material deprivation

Seven out of the 13 deprivation items included in the new indicator are collected at the household level and are thus assumed to apply equally to all household members. The remaining six items are collected at the individual level; they are collected only for people aged 16 or over and have therefore to be “distributed” to children below 16. The rule applied for this distribution is the following: “if at least half the number of adults for which the information is available in the household lack an item, then the children living in that household are considered as deprived from that item”.

The same set of 13 items and the same threshold (5+) is used for both children and adults. However, when computing deprivation with regards to children, a lower weight is given to adult items, in order to avoid making the indicator of children too sensitive to adult deprivations; among the 5+ deprivations required to be considered as deprived, at least three need to be household deprivations (out of the seven household deprivations items included in the list).

Hence, when the 13-item indicator is broken down for children, it provides information on the proportion of children living in a “deprivation context”. It should be clearly mentioned that these children live in (socially and materially) deprived households. This information will be available annually.

Moreover, in March 2018, a new specific indicator on child deprivation (the child deprivation rate) was agreed at the EU level and will be included in the list of social indicators in addition to the material and social deprivation indicator. The child specific material deprivation, currently calculated on 2014 EU-SILC ad hoc module data, will be available every 3 years as some of the components of the indicator will be collected every 3 years as part of the rolling module on Children in the forthcoming revised EU-SILC.

The adoption of this child-specific indicator is an important step in the direction of the European Commission’s and Member States’ commitment to including (at least) one indicator on “child well-being” in the EU list of social indicators and to improving the EU toolbox needed for monitoring progress in the implementation of the EU Recommendation on “Investing in Children: breaking the cycle of disadvantage” endorsed by all EU countries in 2013.

The indicator will usefully complement the picture provided by other household-centred indicators of poverty and social exclusion that may not adequately reflect the specific situation of children. It should be analysed in combination with a complementary indicator on the depth of child deprivation (average number of items children are deprived of by country).

The child deprivation rate is the percentage of children aged between 1 and 15 years who suffer from the enforced lack of at least three items out of the following 17 (unweighted) items:

1. Child: Some new clothes
2. Child: Two pairs of shoes
3. Child: Fresh fruits and vegetables daily
4. Child: Meat, chicken, fish daily
5. Child: Suitable books
6. Child: Outdoor leisure equipment
7. Child: Indoor games
8. Child: Leisure activities
9. Child: Celebrations
10. Child: Invite friends
11. Child: School trips
12. Child: Holiday
13. Household: Replace worn-out furniture
14. Household: Arrears
15. Adults in the household: Internet³
16. Household: Home adequately warm
17. Household: Car

Only children lacking an item for affordability reasons (and not by choice or due to any other reasons) are considered deprived of this item. Those lacking the item “for other reasons” are treated, together with those who have the item, as not deprived.

Methodological challenges

Several methodological challenges had to be solved before using the new deprivation items. They concerned imputation of missing values, questionnaire, aggregation and how to consider the deprivation status of children.

As explained above, all new deprivation items except ‘furniture’ are measured at personal level. In EU-SILC the personal questionnaire is submitted only to people aged 16 or older. Therefore, there is no information regarding children for these items. Furthermore, most of the items are not adequate for children. For them, specific items are foreseen in the children deprivation module. It has been agreed that in order to provide a deprivation indicator for the whole population, it is necessary to impute the deprivation items to children. In addition every three years will be available a child-specific material deprivation indicator.

One of the remaining methodological challenges, the use of a proxy for absent members of the household when collecting material deprivation items at personal level is currently being discussed with the Member States. A study conducted by Guio and Van den Bosch (2018), as

³ If at least half of the adults in the household are deprived of this item, the child is considered deprived of the item.

well as studies conducted within Eurostat, shows that the use of a proxy influences the results. Namely, for some groups, when a proxy is used the deprivation is underreported. Currently, Eurostat, together with the Income and Living Conditions Working Group members, is trying to find the best solution to this problem.

Conclusion

The material deprivation indicator as defined for the Europe 2020 strategy had some limitations, the most significant being the small number of items on which the indicator relied and the saturation of some of the deprivation items.

Consequently, work was undertaken to develop a better measure of deprivation. As an outcome of this work, new indicators have been developed: “deprivation indicator” and child-specific material deprivation.

The new indicator which complements the “severe material deprivation indicator” is called “deprivation indicator” as to not create confusion with the existing “severe material deprivation indicator” and “material deprivation” that remain the same until the end of the EU2020 strategy.

The new deprivation indicator is not only of higher quality, but also allows more in-depth analysis with the use of additional breakdowns.

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