

# Indicator of child deprivation

## Technical note

In March 2018, a new indicator on child deprivation (the child deprivation rate) was agreed at the EU level and will be included in the portfolio of social indicators.

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 portfolio 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.

### Definition:

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: Internet<sup>1</sup>
16. Household: Home adequately warm
17. Household: Car

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<sup>1</sup> If at least half of the adults in the household are deprived of this item, child is considered deprived of the item.

## Policy relevance

The fight against child poverty and social exclusion and the importance of investing in children's well-being has been high on the EU policy agenda for more than a decade. A first significant step was the independent report on *Taking forward the EU Social Inclusion Process*, commissioned by the EU Luxembourg Presidency in the first half of 2005, subsequently updated and published as Marlier et al (2007). This report stressed the need for "children mainstreaming" and suggested a specific approach to child well-being at EU level. It also argued that simple age group breakdowns of EU social indicators were insufficient to adequately capture the multi-dimensional nature of poverty and social exclusion of children – child-specific measures are needed. Following this recommendation, the SPC decided to reserve a slot for (at least) one indicator on "child well-being" in the EU portfolio of social protection and social inclusion indicators<sup>2</sup> and to set up an *EU Task-Force on Child Poverty and Child Well-Being*. The report of this Task-Force and its 15 recommendations were endorsed by the European Commission and all EU countries in 2008 (Social Protection Committee 2008). Another step forward was taken in February 2013, when the European Commission published a Recommendation on "Investing in children, breaking the cycle of disadvantage", which was also endorsed by all EU Member States a few months later (European Commission 2013; see also Frazer and Marlier 2014 and 2017). The Commission's Recommendation builds on research commissioned by three EU Presidencies that took place between 2010 and 2012<sup>3</sup>, as well as research (commissioned) by the SPC and/or the European Commission (Belgian Presidency of the European Union 2010; Frazer, Marlier and Nicaise 2010; Táarki and Applica 2010; Táarki 2011; Frazer and Marlier 2012; SPC 2012).

The 2013 EU Recommendation calls on Member States to "(reinforce) statistical capacity where needed and feasible, particularly concerning child deprivation (MD)"<sup>4</sup>. The 2009 ad-hoc EU-SILC module included such information. In the first in-depth analysis of the 2009 EU-SILC data on deprivation carried out by Guio et al in 2012, an optimal set of children's MD items was identified and a child MD index was recommended for use by EU Member States and the European Commission. These child MD items were then included again in the 2014 ad hoc EU-SILC module on deprivation and well-being, allowing additional analysis and a refinement of the proposed indicator (Guio et al 2017).

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<sup>2</sup> The most recent EU objectives for social protection and social inclusion were agreed in 2011 (Council of the European Union 2011). A set of commonly agreed EU social indicators is used for monitoring progress towards these objectives. This set is continuously fine-tuned and complemented with new measures. The EU body in charge of developing these EU social indicators is the Indicators Sub-Group of the EU Social Protection Committee (<http://ec.europa.eu/social/main.jsp?catId=830&langId=en>). On the use of EU social indicators and the methodological EU framework under which these are developed, see also: Atkinson et al (2002) and Marlier et al (2007).

<sup>3</sup> After the 2005 Luxembourg EU Presidency, three EU Presidencies played an instrumental role in this context. These are the Presidencies held by Belgium (2010), Hungary (2011) and Cyprus (2012).

<sup>4</sup> These recommendations were grouped into six categories: setting quantified objectives, assessing the impact of policies on child poverty and social exclusion, monitoring child poverty and well-being, a common framework for analysing and monitoring child poverty and social exclusion, reinforcing statistical capacity, and improving governance and monitoring arrangements at all relevant policy levels.

## Population of reference and frequency

In EU-SILC, data relating to the living conditions of children are not collected from the children themselves but from the adult answering the “household questionnaire” (household respondent). According to the survey protocol to be followed by countries, if in a given household at least one child does not have an item, it is then assumed that all the children belonging to that household lack that item.

For most child-specific items, the information relates to children aged between 1 and 15 (i.e. these items are collected in households with at least one child in this age bracket). Therefore, the child MD indicator covers only children aged between 1 and 15. One item is collected only in households with at least one child attending school (school trips). Children living in households where no child is attending school, by definition, do not lack the item.

The indicator will be computed every three years, on the basis on the thematic EU-SILC module on children.

## Enforced lack

It is important to keep in mind that the retained items are based on an enforced lack concept. In the questions on child deprivation, three answer categories are proposed:

- the child(ren)/ child(ren)’s household has (have) the item;
- the child(ren)/ child(ren)’s household does (do) not have the item because it (they) cannot afford it;
- the child(ren)/ child(ren)’s household does (do) not have the item for any other reason.

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.

## Selection of items

The newly agreed EU deprivation indicator focused on the specific situation of children is the result of a large number of tests and in-depth analyses carried out on both the 2009 and 2014 EU-SILC data. These analyses draw extensively on the 1999 and 2012 Poverty and Social Exclusion Survey deprivation indicator construction methodology, which was used to develop robust and comparable measures of deprivation for various poverty surveys. Guio et al (2012) and Guio et al (2017) have tested the following criteria:

1. The *suitability* of each item, in order to check that respondents in the different Member States (as well as the different population sub-groups within each Member State) consider them necessary to have an “acceptable” standard of living in the country where they live. Here, “suitability” is understood as a measure of “face validity” amongst the EU population.
2. The *validity* of individual items, to ensure that each item exhibits statistically significant relative risk ratios with independent variables known to be correlated with deprivation.
3. The *reliability* of the scale, to assess the internal consistency of the scale as a whole - i.e., how closely related the set of items are as a group. This analysis is based on the

Cronbach's Alpha statistic as well as on the Beta and Lambda coefficients; it is conducted as part of a Classical Test Theory (CTT) framework. This reliability analysis of the deprivation scale as a whole is complemented with additional tests on the reliability of each individual item in the scale using Item Response Theory (IRT) and by a Hierarchical Omega Analysis.

4. The *additivity* of items, to test that the indicator's components add up – i.e. that someone with a deprivation indicator score of “2” is suffering from more severe deprivation than someone with a score of “1”. Additivity was measured for the items that successfully passed the suitability, validity and reliability tests.

The items that successfully passed these four steps with both the 2009 and 2014 datasets were considered to be robust candidates for being aggregated into a child-specific deprivation indicator. The detailed results of the tests are provided in Guio et al (2012) for the 2009 data and in Guio et al (2017) for the 2014 data.

### **The need for a holistic approach**

Besides the items relating directly to the MD situation of children, the list of items that successfully passed the robustness tests includes some household items; this is important as not only items directly impacting on the immediate children's standard well-being should be included in a child deprivation measure but also items likely to have an indirect impact on their well-being. In line with scientific evidence, this choice to also include robust household items is motivated by the fact that, in order to adequately measure children's deprivation, it is necessary to look not only at those items that solely affect children but also at those that affect the households in which they live and that are likely to impact on their (current and/or future) living conditions. The whole set of items affecting children's living conditions should then be included in a child deprivation indicator, regardless of the statistical unit it refers to (which, in many cases, primarily reflects a choice made on the basis of data collection rather than actual conceptual considerations). As highlighted by Atkinson et al (2002), the construction of indicators needs to follow a principle-based approach (see also Atkinson Commission on Global Poverty 2016); close links are required between the design of social indicators and the questions they are intended to answer. If the aim of the child deprivation indicator is to measure intra-household transfers or within-household differences in living standards, then all household-level items would need to be removed from the indicator. By contrast, if, as is the case for the EU child deprivation measure, the objective is to assess and compare the living standards of children in different households, then the relevant household-level items that have a direct effect on children's living conditions need to be included in the child deprivation indicator if they successfully pass the various robustness tests. This is particularly true where there is scientific evidence that these deprivations have worse or different effects on children than on adults (Marsh et al 2000).

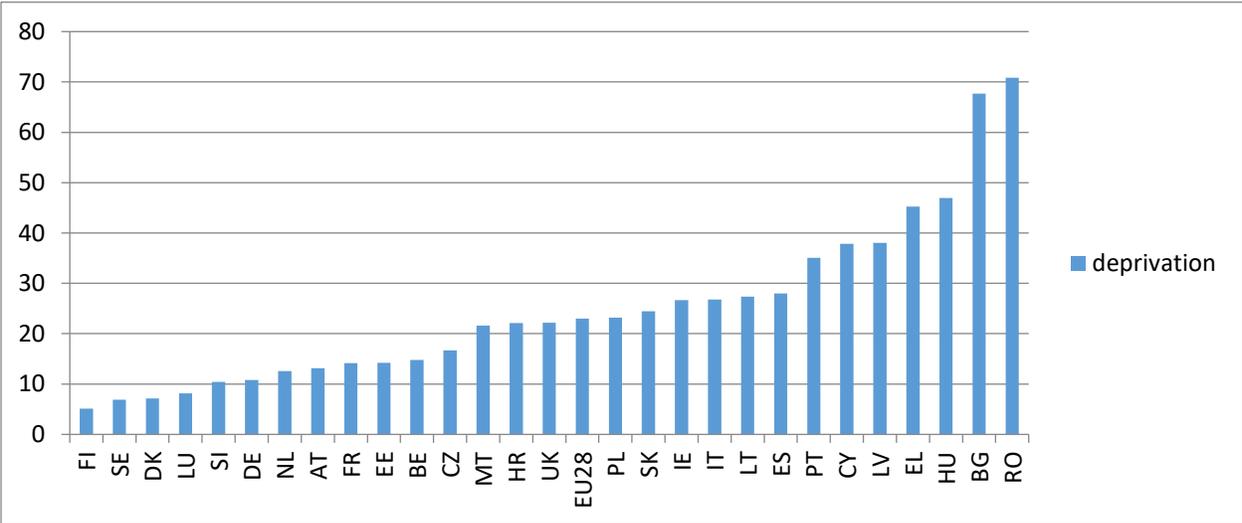
The inclusion of household items in a child indicator has to be interpreted from a holistic and life-cycle point of view. Relevant items include items which directly and also indirectly impact on children's living standards (e.g. direct items such as inadequate warmth in home, lack of durables etc.). Qualitative studies have also shown that children in households suffering from financial strain often do not ask their parents for the things they need which cost money in order to try to protect their parents from stress and feelings of guilt (Ridge 2002 and 2011; Observatoire de l'Enfance, de la Jeunesse et de l'Aide à la jeunesse & Sonocom 2010). Therefore, items of financial strain, such as arrears, are also relevant.

### Unweighted indicators

The new EU indicators are based on the unweighted sum of 17 items for each child aged between 1 and 15 years (Guio et al, 2012 and Guio et al, 2017). It is self-evident that some items are more important than others. However, the consistently high levels of reliability of both the 17 individual items and the indicator itself suggest that no set of item weights (even if error-free) would, when applied to these items, lead to an index that represents child deprivation more accurately (Kline 2005).

### National figures

**Proportion of children (aged between 1 and 15 years) who lack at least three items (out of 17) EU-28 Member States**



Source: EU-SILC 2014 cross-sectional data

## References

- Atkinson Commission on Global Poverty (2016). "Monitoring Global Poverty. Report of the Commission on Global Poverty", Washington: The World Bank.
- Atkinson, T., Cantillon, B., Marlier, E. and Nolan, B. (2002). "Social Indicators: The EU and Social Inclusion", Oxford: Oxford University Press
- Belgian Presidency of the European Union, in collaboration with UNICEF, Eurochild and the European Commission (2010). "Call for an EU Recommendation on Child Poverty and Child Well-Being", A background paper to the EU Presidency Conference: Child Poverty and Child Well-Being, Brussels: Belgian Public Planning Service on Social Integration.
- Frazer, H., Marlier, E. and Nicaise, I. (2010). "A social inclusion roadmap for Europe 2020", Antwerp/Apeldoorn: Garant.
- Guio, A.-C., Gordon, D. and Marlier, E. (2012). "Measuring Material Deprivation in the EU. Indicators for the whole Population and Child-Specific Indicators", Eurostat Methodologies and working papers, Luxembourg: Publications office of the European Union.
- Guio, A.-C., Gordon, D., Marlier, E., Najera, H. and Pomati, M. (2017). "Towards an EU measure of child deprivation", Child indicators research, <https://doi.org/10.1007/s12187-017-9491-6>.
- Guio, A.-C., Marlier, E., Vandenbroucke, F. and Verbunt, P. (forthcoming). "Micro- and macro-drivers of child deprivation in 31 European countries".
- Kline, T. (2005). "Psychological testing: A practical approach to design and evaluation", London: Sage.
- Marlier, E., Atkinson, A.B., Cantillon, B. and Nolan, B. (2007). "The EU and Social Inclusion: Facing the challenges", Bristol: The Policy Press.
- Marsh, A., Gordon, D., Pantazis, C. and Heslop, P. (2000). "Housing deprivation and health: A Longitudinal Analysis", Housing Studies, 15(3), pp. 411-428.
- Observatoire de l'Enfance, de la Jeunesse et de l'Aide à la jeunesse and Sonecom, (2010). "Recherche qualitative participative sur le vécu des enfants vivant dans la pauvreté de trente enfants âgés de 6 à 12 ans en Communauté française".
- Ridge, T. (2002). "Childhood Poverty and Social Exclusion: From a Child's Perspective", Bristol: The Policy Press.
- Ridge, T. (2011). "The everyday costs of poverty in childhood: a review of qualitative research exploring the lives and experiences of low-income children in the UK", Children and Society, 25(1), pp. 73-84.