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SOCIAL STATUS INEQUALITIES IN CHILD POVERTY IN THE EUROPEAN UNION

Analysis of the current situation and changes since the 2008 crisis by children's parental background

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### Abstract

The main objective of this report is to descriptively analyse child poverty and the relationship between parental background and material living conditions among children, across and within European Union (EU) Member States, while also capturing trajectories in the period of and following the Great Recession. The report provides descriptive statistics on main trends, while the focus of the analysis was on the changes in indicators over time and by parental education. We cover the EU-28 Member States, plus the three additional EEA member countries (Iceland, Norway and Switzerland). Our findings show that there is a considerable difference in the evolution of poverty and material living conditions of children within EU member states depending on what poverty concept and what measure is applied to monitor these trends. Also, the choice of the indicator not only affects changes over time, but also cross-country comparative results. Empirical results indicate that there are large disparities by social status (measured here by the highest education level of parents) behind the overall child poverty and material living conditions trends in most of the EU countries: at EU-28 level in 2016, relative income poverty rates among children with low educated parents were twice larger than among those with parents having completed secondary education and six time larger compared to children with parents having a diploma. When severe material deprivation rates are analysed, these inequalities are even more striking. Finally, changes in time in child poverty indicators were driven at first place by changes in the poverty outcomes of low status children: a large share of them saw severe variation in the material living conditions of their families.

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## 1. Executive Summary

While a key policy priority of the Europe 2020 Strategy was defined as *lifting 20 million people out of poverty and social exclusion by 2020*, the first period of the 2010s was marked by moving away from, rather than towards the target, especially when considering children. Overall in the EU, children are at higher risk for poverty than the total population. Children's at-risk-of-poverty or social exclusion rate peaked by 2012 to 28 per cent and stayed unchanged until 2014. Latest figures indicate a recovery since then, by 3 percentage points. As such, about 24.8 million children in EU were at risk of poverty or social exclusion in 2016. There is a considerable inequality across EU member states in child poverty: the at-risk-of-poverty rates among children varied between 9 and 37 per cent in 2016, while the severe material deprivation rates ranged between 1 and 36 per cent.

The main objective of this report was to descriptively analyse child poverty and the relationship between parental background and material living conditions among children, across and within European Union (EU) member states, while also capturing trajectories in the period of and following the Great Recession. We focused on five indicators. Two of them rely on the relative income concept of poverty (at-risk-of-poverty rate, relative median poverty gap), another two of them are close to an absolute poverty measurement concept (severe material deprivation rate, inability to make ends meet), while the fifth is a composite measure that is used by the European Union to monitor at-risk-ofpoverty and social exclusion. The analysis covered the period between 2008 and 2016, which was split into two sub-periods: (i) the immediate post-crisis period (2008-2013) and the (ii) recovery period (2013-2016). The report provided descriptive statistics on main trends, while the focus of the analysis was on the changes in indicators over time and by parental education. We covered the EU-28 member states, plus the three additional EEA member countries (Iceland, Norway and Switzerland).

We summarised our main findings as follows.

- 1. There is a considerable difference in the evolution of poverty and material living conditions of children within EU member states *depending on what poverty concept and what measure* is applied to monitor these trends. Child poverty overall worsened in the period following the outbreak of the crisis (2008-2013) and started to recover afterwards as indicated by the severe material deprivation rates and especially by the inability to make ends meet rates, while the situation of children levelled off or even worsened in the second period according to the at-risk-of-poverty rates and the relative median poverty gap. In other words, inequality has risen among children since the start of the crisis, while their material living conditions started to recover since 2013. The trend of the EU2020 poverty indicator (share of children living in poverty or social exclusion) is similar to what we observed for the non-income measures.
- 2. The *choice of the indicator* not only *affects* changes over time, but also *cross-country comparative results*. In regard to the severe material deprivation rates, the roller-coaster of the Great Recession mostly affected children in Southern and Central-Eastern Europe in the sense that the worsening-recovering pattern across the two periods is observed with a considerable amplitude in most of these countries. A similar cross-country pattern is observed for the inability to make ends meet indicator. Relative measures provide a more mixed picture in terms of welfare state type-differences: children from Sweden, Norway and France were as affected by the rise in poverty as much as their counterparts in some Southern or Central-Eastern European countries.
- 3. There are *large disparities by social status* (measured here by the highest education level of parents) behind the overall child poverty and material living conditions trends in most of the EU countries. At EU-28 level in 2016, relative income poverty rates among children with low educated parents were twice larger than among those with parents having completed secondary education

and six time larger compared to children with parents having a diploma. When severe material deprivation rates are analysed, these inequalities are even more striking.

Changes in these conditions were driven at first place by changes in the poverty outcomes of low status children: 4. a large share of them saw severe variation in the material living conditions of their families. They faced severe deterioration in their situation during and in the immediate aftermath of the 2008 financial and economic crisis, regardless of whether we look at relative of absolute measures of poverty. In some, mostly Southern and Central-Eastern European countries, there was a significant surge in the absolute measures of poverty among children with low educated parents during 2008-2013. In twelve countries, severe material deprivation rates among these children increased by at least 10 percentage points, and in four out of these twelve, even by more than 20 percentage points. A similar picture is provided not only by the inability to make ends meet indicator, but also by the composite measure of poverty and social exclusion. Nevertheless, in most of the countries, low status children faced the largest recovery in absolute poverty after 2013. There were some countries, however, where children with more educated parents were hit at a similar or even larger extent than their low status counterparts. For example, between 2008 and 2013, in Greece, Romania, Ireland and Cyprus, changes in severe material deprivation rates were larger among those in the former group.

## 2. Introduction

The main objective of this report is to analyse the relationship between parental background and material living conditions among children, across and within European Union (EU) member states. In addition to providing a snapshot of the latest data available on selected poverty and material living conditions indicators (overall and by parental background), it also captures countries' trajectories according to these measures during and after the Great Recession. As such, the report aims at establishing patterns of inequalities in children's material living conditions between and within countries.

In terms of its main topic, the report fits within earlier monitoring works, like EU Task-Force (2008), Social Protection Committee (2012), TÁRKI-Applica (2010), TÁRKI (2011), UNICEF (2007, 2013), OECD (2018). A major difference, however, is that this report only deals with poverty (although in a wider sense, incorporating different poverty concepts in the analysis), which is a narrow scope compared to these earlier works which all comprise multiple (both material and non-material) dimensions of child well-being. The novelty of this report lies in looking at inequalities in the situation of children by *parental education* as a proxy for the social status of the child's family. For each poverty indicator included in this report, we compare the changes in poverty outcomes of children with highly educated parents as opposed to those with less educated ones. Special focus is also given to the trajectories in time of indicators for the most vulnerable group of children in this framework, those whose parents' highest level of education is equivalent to ISCED levels 0-2. While focusing on inequalities, this report follows the important initiative of UNICEF (2016a), but instead of looking at inequalities in outcomes and focusing on the gap of low performers, it concentrates on the role of social and family background on these outcomes (similarly to UNICEF, 2016b on educational fairness). Nevertheless, the two are strongly interrelated: low performers are often low social status children - although with high variation across countries. From a policy point of view, the importance of the topic is given by the fact that educational policies aiming to improve averages in performance may be coupled with social inclusion policies to reduce the gap in school competencies of the most vulnerable children.

\* \* \*

Child poverty in EU remains a pertinent issue despite the developed state of these economies. About 24.8 million children in EU were at risk of poverty or social exclusion in 2016. In other words, these children were living in households with at least one of the following three conditions: being at risk of poverty after social transfers (income poverty), being severely materially deprived or living in a household with very low work intensity. While a key policy priority of the Europe 2020 Strategy was defined as *lifting 20 million people out of poverty and social exclusion by 2020*, the first period of the decade was marked by moving away from, rather than towards the target, especially when considering children – children's at-risk-of-poverty or social exclusion rate peaked by 2012 to 28 per cent and stayed practically unchanged until 2014. Eurostat figures indicate a strong recovery since then, by 3 percentage points. Nevertheless, there are contrasting trends across the EU Member States, which will be covered in more detail in the following parts of this report.

The importance of addressing child poverty has been duly acknowledged by the EU and its member states since the previous decade. Studies and conferences on child poverty were commissioned both by the European Commission (European Commission, 2008, TÁRKI-Applica, 2010) and in six consecutive Council presidencies (Belgium in 2010, Hungary in 2011, Cyprus in 2012, Ireland in 2013, Greece in 2014 and the Netherlands in 2016). The Social Protection Committee highlighted that social investment in children can contribute to preventing and alleviating poverty. Moreover, the European Commission adopted the Recommendation 'Investing in children – breaking the cycle of disadvantage' as part of its Social Investment Package (SIP) in February 2013 (SPC, 2013), which emphasises the importance of early intervention and preventative approaches. In 2015, the European

Parliament also approved a resolution on reducing inequalities with a special focus on child poverty. The main messages of this resolution were that Member States should make a real commitment to developing policies which fight child poverty and that the reduction of the latter and social exclusion should be made more visible and explicit at all stages of the European Semester. Recently, the introduction of a child guarantee scheme is under consideration within the EU, after the European Parliament called for such a policy initiative (2015) and requested the European Commission to implement a preparatory action on establishing a possible child guarantee scheme (2017). In this context, the Commission has commissioned a study on the feasibility of a child guarantee for vulnerable children.<sup>1</sup> An intermediate report (Frazer, Guio & Marlier, 2020) has been prepared and presented to stakeholders in a closing conference on 17 February 2020.<sup>2</sup>

Making children the high-priority group when tackling poverty has a long-term positive impact in the economy and society due to the multiplier effect of improving their current as well as future situation. It is, thus, an implicit investment for children to reach their full potential in the future. Fighting child poverty, thus, is not only about ensuring that children have acceptable living standards, but also about enabling them to live up to their full potential by investing in their health, education and social aspects. Research studies have consistently shown how children who grow up poor are more likely to face social exclusion and health problems in the future. One of the reasons for this is that, based on research in both psychology and neurology, the first three years of life are crucial for the brain as it develops faster during that period (Shonkoff & Phillips, 2000). Studies have found evidence of a gap in cognitive outcomes as early as age 5 based on the background and upbringing of children whereby those who grew up in richer families are more likely to have higher test scores in math and reading (Bradbury et al., 2011; Hansen & Hawkes, 2009; Dahl & Lochner, 2012). Early investment and intervention in children have proven to have significantly high returns to human capital formation later on (Heckman et al., 2010). Further, Carneiro and Heckman (2003) argue that the high returns of early intervention in children's lives reap more benefits than remedial or compensatory policies applied in later stages of life such as job trainings, tuition subsidies, etc.<sup>3</sup>

The socioeconomic status of the family a child grows up in also affects the health outcomes of children. For instance, research has shown that life is shorter and, physical and mental health problems are more prevalent in children of families with lower socio-economic classes than in those coming from higher socio-economic classes even after considering the public policies of a given country (Stegeman & Costongs, 2012). The impact of poverty on children is often linked to the higher incidence of neglect, deprivation and lack of education in poorer families (Bennet, 2012). Another way children's future is affected is not only linked to the actual skills that children acquire at that stage, but also to the expectations of their parents, which depend heavily on whether they come from a marginalised group – the effort and expectations they have on their children then shapes the outcomes and effort the children exert in their life (Carneiro et al. 2005). Thus, taken all together, children exposed to these situations find it harder to reach their full potential later in life. Consequently, fighting poverty at an early age may help towards breaking the cycle of disadvantage. Moreover, given that children are more likely to be at risk of poverty or social exclusion than the overall population in most EU countries, they should evidently be the priority of such fighting poverty initiatives.

Social trends in the period since the launch of the EU2020 inclusive growth strategy were highly affected by the immediate and long-run developments of the Great Recession. While negative GDP growth was experienced by most of the countries affected by the crisis only for a few-year period, recovery lasted longer and main social trends (e.g. unemployment, poverty and social exclusion)

<sup>1</sup> https://ec.europa.eu/social/main.jsp?catId=624&langId=en&callId=531&furtherCalls=yes

<sup>2</sup> https://ec.europa.eu/social/main.jsp?langld=en&catId=1428&eventsId=1570&furtherEvents=yes

<sup>3</sup> Heckman (2006) and Danziger and Waldfogel (2000) are two important studies summarising findings on the impact and benefits of early intervention and investment in children. The first one focuses on studies that show how the environment a child grows up in can predict his or her cognitive and non-cognitive skills later on in life. The second study provides a summary of literature that shows how investing in children is the key to breaking the cycle of poverty and inequality.

reached the bottom in many member states by 2012-2013 (e.g., European Commission, 2019, Cantillon et al., 2018, Gábos et al., 2019). The period since 2013 is marked by a recovery across Europe, in some countries even a very fast one when considering material living conditions. Children have been among the most hit by recession (Cantillon et al., 2017). This report aims to tackle the effect of the crisis on the situation of children and on the change in the inequality among them by distinguishing between two periods since 2008: 2008-2013 and 2013-2016. All figures are provided according to this delimitation of these two periods. When providing an analysis on the situation of children, the benchmark we use is a deterioration of their situation between 2008 and 2013, and levelling off or improvement during the second period of 2013-2016. Countries, however, strongly differ in whether they aligned to this trend or coped with that in a different way. Also, we consider as a benchmark that inequality in outcomes between children with low and highly educated parents increased between 2008 and 2013, and either levelled off or decreased afterwards.

Considering the importance of this issue for EU countries, it is essential to conduct further research and data analysis in this topic to inform policymaking efforts and initiatives. This report will, thus, contribute to such efforts by providing detailed information and analysis on children's material living conditions since the economic crisis. It is also a by-product of the integrated poverty and living conditions indicator system (IPOLIS), whose main goal is to build a platform which improves the infrastructure for monitoring, analysing and evaluating the situation of the most vulnerable groups. This report illustrates how the <u>IPOLIS</u> framework can help promoting research in this area as well as inform policymaking.

The report is organised as follows. Chapter 2 provides a description of our methodology. We analyse trends and inequalities in child poverty outcomes in Chapter 3, which is divided according to the type of indicators we use: Section 3.1 deals with relative income measures, Section 3.2 looks at indicators linked to the absolute concept of poverty, while Section 3.3 is devoted to the composite indicator of the EU2020 poverty and social exclusion target. Chapter 4 concludes.

## 3. Data and methods

#### Box 1 – Overview of IPOLIS

Integrated Poverty and Living Conditions Indicator System (IPOLIS) is part of the Innovative tools and protocols for poverty and living conditions research work package (WP20) of the first InGRID project. It is a system of indicators that provides monitoring background on the quality of life of three vulnerable groups: children, the youth and the elderly. The framework is established by the <u>Concept Paper for IPOLIS</u> (Gábos & Kopasz, 2014) as well as the module specific ones (Gábos & Kopasz, 2015; Schäfer, Zentarra & Groh-Samberg, 2015; Kopasz, 2016). The concept of quality of life is applied through six domains:

- material living conditions;
- labour market attachment and work-life balance;
- education;
- health and risk behaviours;
- social connectedness and civic participation;
- environmental quality and physical safety;
- policy and Context indicators.

The main reason behind this work package is to enhance the infrastructure provided for indicators of well-being which can then allow for improved analysis and assessment of the situation of society's vulnerable groups. The specific objectives of this package are provision of easy access to an organized and theoretically backed set of data on the specific well-being indicators of vulnerable groups, which can then in turn facilitate comprehensive research that reaches these at-the-riskof-poverty groups (Gábos & Kopasz, 2014).

- IPOLIS aims to improve infrastructure for analysing and monitoring the situation of vulnerable groups;
- Quality of Life (QoL) is chosen as the core concept of IPOLIS;
- IPOLIS relies on the existing data infrastructure, mainly on the European Statistical System (ESS);
- IPOLIS links the three vulnerable age groups;
- IPOLIS covers all EU-28 Member States for a time period between 2004 and 2013.

To capture the current situation and changes in children's poverty and social exclusion, we use a set of five indicators which consists of both relative and absolute measures, as well as both income and non-income indicators. The analysis is carried out in two steps. First, after providing a short overview of simple descriptive statistics (tables of the Appendix), we look at changes in the overall indicators for two time periods. The first period (2008-2013) aims to capture the immediate effect of recession on social outcomes, which hit bottom in most of the member states by 2012/2013. The second period (2013-2016) shows recovery and adjustments to the new conditions, with improvement in indicators, again, in most of the countries analysed. This general pattern (worsened outcomes between 2008 and 2013 and improved conditions between 2013 and 2016) is considered as a *benchmark* in the analysis and deviations from that will be screened. For three out of the five indicators used in our report, this benchmark pattern holds true for the EU-28 average: severe material deprivation, inability to make ends meet and at-risk-of-poverty or social exclusion. As far as the relative measures are concerned, at the level of the whole EU, children faced worsened conditions in both periods, especially in the second one.

In the second step, we analyse changes in children's poverty and social exclusion by parental background, hence shifting our attention to *inequalities in outcomes by social status.* We compare changes in indicators for two subgroups of children to capture the development of within-children inequalities: those with highly educated parents (at least one with ISCED 5-8 level) and those with less educated ones (at most one with ISCED 0-2 level). Results for children with parents having secondary education (ISCED 3-4) are provided in the Appendix.

There are several reasons for using parental background as a focal breakdown. First, there is considerable variation among EU countries in the contribution of the levels of education of the household head to inequalities in that country. For instance, in the EU-13 new member states, the importance of education tends to be relatively high, while it is of less significance in Northern European countries (Guerin, 2013). Parental background may also strongly shape early and late child educational outcomes, although there is a large variation across countries in this respect (OECD, 2016). Further, research has shown that there is a close link between the socio-economic status of adults and the status of their parents during their childhood. For instance, the results from the 2011 ad-hoc module of EU-SILC on Intergenerational transmission of disadvantage statistics showed that 34.2 per cent of low-educated adults also had low-educated parents in their childhood (Grundiza & Lopez Vilaplana, 2013). Some of the reasons which may explain this finding are that parents' low education hampers their abilities to financially support their children's studies and, perhaps, to also instil the value of education in them. Finally, parental education has been introduced in **IPOLIS** as a crosscutting breakdown exactly for the purpose of conducting comprehensive analysis on inequalities in outcomes.

In this report we aim to capture the trajectories of both relative and absolute measures of children's material living conditions since the economic crisis of 2008. By looking at the changes in the overall indicators, we provide information on absolute trajectories of the situation of children. When focusing on sub-groups instead, we offer an insight into the inequality in these conditions. Moreover, we also capture the role of parental background in poverty risk and social exclusion of children.

One of the *key limitations* of this report is its wide scope. It aims to cover a substantially broad set of

#### Box 2 – Statistically significant differences

The report provides descriptive analysis of indicators for children, based on the EU-SILC database. As such, it does not directly work with microdata and it does not test the statistical significance of the differences. In order to understand what differences can be considered as significant and not statistical happenstance, we use a 'rule of thumb' of differences higher than 3 percentage points. This decision is mainly based on the methodologies used for EU-SILC data collection.

The indicators are computed on data collected from each EU country on their population samples, which are nationally representative. Since the data is not collected over the entire population, the indicators will have a margin of error when generalising for the whole country or specific subgroups. Thus, to understand whether the difference in time or across countries is a significant one and not purely due to error margins, it is important to look at the confidence intervals, i.e. the lower and upper bound where the statistic for the whole population resides. While EU-SILC provides comparative data across countries, the computation of standard errors for EU-SILC estimates involves several statistical issues, such as complex sample designs involving stratification, geographical clustering, unequal probabilities of selection for the sample units and post-survey weighting adjustments (re-weighting for unit nonresponse and calibration to external data sources) and different methods of imputation used across countries. A detailed explanation of margins of error for the EU-SILC indicators of poverty and social exclusion can be found in Osier et al (2013). The estimations provided in the paper show that most countries' poverty and material deprivation indicators have estimated standard errors lower than 1.5 percentage points for years prior to 2013. Thus, we can think of the lower bound as a difference about 3 percentage points as sufficient to fall outside the margin of error interval at a 95% confidence level. For the EU-27 or EU-28 average figures, throughout the whole report, we apply a 1 percentage points rule: when the difference in these averages from the start of the analysed period (e.g. 2008) to the end of the same period (e.g. 2013) is 1 pps or higher, we consider it as a change in time.

issues: to better understand changes and inequalities in children's living conditions in all EU countries

and to catch the effect of the financial crisis on these outcomes and on inequalities in outcomes. This, in turn, does not allow for a thorough interpretation and understanding of the findings. As such, it must be noted that while reading this report, one should always keep in mind the different country contexts. Further, while the process of data collection and indicator for EU-SILC data is coordinated by Eurostat, member states may deviate from the process to some extent (e.g. sample selection, wording of the questionnaire). Hence, further in-depth research is needed in order to make any causal inference regarding the research questions.

Another limitation of this report is timely data, which leads to a lag in reporting. The report published in 2019 will refer to 2015/2016 data as the latest, which, albeit informative, does not address the changes in the past two years. However, this is a common issue among these types of research, and it has been noted by other reports as well. For instance, one mentioned that the recent economic and financial crisis has also provided numerous challenges to official and social statistics, where the time-liness of data and indicators has become a key issue in the debate (Di Meglio & Dupré, 2017).

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For the purposes of this research and also in line with IPOLIS framework, children are defined as individuals aged 0-17. While we provide the statistics for each country, we highlight in text those differences that are most striking (see box 2 for further explanations). The data for 2008, 2013 and 2016 for all the indicators covered in this report are provided in the Appendix.

# 4. The economic crisis and inequalities in material living conditions for children in the EU

#### 4.1 Poverty

#### At-risk-of-poverty rate

In 2016, at least one in five children was considered at risk of poverty in EU even after accounting for social transfers. Romania had the highest share of children *at-risk-of-poverty* (in what follows AROP refers to the child at-risk-of-poverty) at 37 per cent (see Table A1 in the Appendix). It was 5 percentage points higher than for Bulgaria, the country with the second highest AROP rate. The countries which have AROP rate above the EU average are mainly the Eastern and Southern countries together with the Baltic ones. Even in the Nordic countries, which have the lowest AROP rate, at least one in ten children lived in households with low income. There is a weak negative relation between the rate of children at risk of poverty and the At-risk-of-poverty (AROP) rate after social transfers measures the share of children (aged 0 to 17) living in households with an income below the AROP threshold, which is set at 60 per cent of the median equivalised disposable income (including social transfers). AROP rate is a relative measure and reflects the distribution of income in a country. As such, is a specific measure of income inequality and is not suitable to compare living standards across countries. It is, however, a powerful measure to help national level policymaking.

threshold of the country. In other words, countries with a higher threshold, which also indicates a higher income level, have lower AROP rates.

There was a slight increase in overall AROP rate during both periods of time shaped by the Great Recession (between 2008-2013 and 2013-2016, respectively - see Figure 1), which we do not consider a significant change in this report (see Box 2 for details). This means that AROP rate as a relative measure of income poverty, is not aligned with the benchmark: deterioration in the first period and recovery in the second one. Member States, however, display very different patterns of change in poverty in these two periods. UK is the only country which has experienced a substantial drop (by more than 5 percentage points) in this indicator between 2008 and 2013 (hereinafter referred as either period 1 or first period), while in the 2013-2016 period (hereinafter referred as either period 2 or second period) there was no change in AROP rates - with a drop of less than 1 percentage points. Greece witnessed the largest increase in the overall children's AROP rate in the immediate post-crisis period, close to 6 percentage points. There is a larger group of countries, members of which experienced a more than 3 percentage point increase in children's AROP rate between 2008-2013, but the rate either fell considerably (Greece, Luxembourg, Hungary, Malta, Slovenia) or levelled (Lithuania, Slovakia, Sweden) afterwards. In another group of countries, the second period was worse than the first from the child poverty point of view: in the Czech Republic, Spain, Cyprus, the Netherlands, Romania and Norway, AROP rate increased between 2013 and 2016, but levelled off between 2008 and 2013. Further, in Finland, the United Kingdom and Switzerland, child poverty rate decreased in the first period, while it levelled in the second one. Bulgaria is the only country in which AROP rate increased substantially in both periods.





Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

The overall increase in the AROP rates during the first period was mainly driven by considerable changes in the poverty rates of low social status children. Since 2008, there were twenty EU countries where the overall increase in the AROP rate was higher by more than 3 percentage points for children with low educated parents. Children whose parents have higher education levels have been relatively more isolated from the crisis; only nine countries (including Ireland, Greece, France, Italy, Cyprus, Lithuania, Hungary, Romania, Slovenia) witnessed an increase by more than 3 percentage points (see Table A1 in the Appendix) between 2008 and 2016.

Figure 2a displays changes during the first (immediate post-crisis) period. It complements the overall child AROP rate indicator with figures for two subgroups of children: those with highly educated parents and those with less educated ones. As shown in the figure below, changes in overall AROP rates were mostly driven by changes in the AROP rates of children with low educated parents: large overall increases in poverty rates are mainly due to large increase in the poverty rates of children with low educated parents and vice versa. The gap between these two subgroups of children grew in the immediate aftermath of the crisis in most Member States. Children with less educated parents became more likely to be at-risk-of-poverty (an increase in the indicator), while those with highly educated parents became less likely to face such risks (no change or a decrease in the indicator).

Also, one can observe that changes in the AROP rate of children with low educated parents were much more volatile within this period compared to children with highly educated parents. In particular, for the former group, the change in AROP rate between 2008 and 2013 increased by more than 20 percentage points in Sweden and Slovenia and by more than 10 percentage points in several other countries (Hungary, Slovakia, Lithuania, Greece, Bulgaria, France and Denmark). At the same time, there were countries where children with low educated parents witnessed a decrease in their poverty rates, especially in the United Kingdom (by more than 20 percentage points), but also in Croatia, the Netherlands, the Czech Republic, Switzerland and Germany – by more than 6 pps). Changes in the poverty rates of children with highly educated parents were less subject to such shifts: an AROP rate

increase higher than 3 percentage points only characterised children from Ireland, the Netherlands, Austria, Cyprus, Slovakia and Greece).



Figure 2a. Changes in child AROP rate by parental education (2008-2013)

Source own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Figure 2b presents the same indicators and subgroups, but for the second period. Patterns are less clear in this case, but the AROP rate for children with low educated parents again display larger differences across countries. Between 2013 and 2016, the largest drop in AROP rate for children with low educated parents was experienced in Hungary, more than 25 percentage points. A similar recovery trend can be observed in Slovenia and Lithuania. In other countries, the period between 2013 and 2016 is characterised by a large increase in the poverty rate of children of parents with low education. In some countries falling poverty rates in this group of children came after a decreasing trend in the preceding period (the Czech Republic, Croatia, the Netherlands and Germany), while in Denmark, Norway and Spain a further deterioration in the situation is observed. The risk of poverty of children with parents of high education shows less variation across countries in this second period, too. Their poverty rate increased by about 6 percentage points in Hungary and Romania, while it decreased by the same extent in the Netherlands and Croatia. All other countries are found within this range.





EU-SILC

At EU level, no significant change was observed in child poverty rates in either the first or second period, but low status children were affected in both periods.

Table 1 summarises the findings presented in Figures 1, 2a and 2b. Most importantly, one may conclude that children in most of the member states did not experience a deterioration of their situation in terms of poverty in the second (late post-crisis) period. Countries, however, differ in how child poverty evolved in the first (immediate post-crisis) period, and in most of them, there was no increase then either. Only Bulgaria was classified to confront a deterioration of overall child poverty in both periods, while there was no increase at all in poverty rates among children in a large group of thirteen countries, as well as the EU-28 average.

Overall in the EU-28 countries, while there was no detectable change in the poverty rates of all children in either of the periods, children with low educated parents witnessed a slight (about 1 percentage increase in their poverty rates in the first period and a more than 3 percentage point increase in their poverty rate between 2013 and 2016. When individual countries are counted, children of low educated parents experienced increase in their poverty rates in the majority of EU members states and EEA countries in both the immediate post crisis-period (20 countries) and the second period (18 countries) as well. There were only four countries with no increase for this group of children in any of the periods: Austria, Finland, the United Kingdom and Switzerland. On the contrary, there were only three EU members states in which the poverty rate of children of highly educated parents augmented in both periods: Greece, France and Slovenia. As the EU-28 average is concerned, it falls in the group of countries where children of parents with a diploma did not experience poverty increase in any of these two time periods between 2008 and 2016. These figures indicate that the inequality in poverty risk by social status among European children rose in the period in analysis.

Table 1. Qualitative summary for changes in children's AROP rate

Indicator	No increase between 2008-2013		Increase between 2008-2013 and	
	And no increase between 2013-2016 either	But increase between 2013-2016	But no increase between 2013-2016	And further increase between 2013-2016
AROP	BE, DK, DE, EE, IE, IT, LV, AT, PL, FI, UK, IS, CH, <i>EU-28</i>	CZ, ES, CY, NL, RO, NO	EL, FR, HR, LT, LU, HU, MT, PT, SI, SK, SE	BG
AROP (children with low parental education)	AT, FI, UK, CH	CZ, DE, HR, IT, LV, NL, IS	EE, EL, LT, LU, HU, PT, RO, SI, SE	BE, BG, DK, IE, ES, FR, CY, MT, PL, SK, NO, <i>EU-28</i>
AROP (children with high parental education)	BE, BG, CZ, DE, ES, FI, SE, UK, IS, NO, CH, <i>EU-28</i>	DK, EE, IT, LT, LU, HU, RO	IE, HR, CY, LV, MT, NL, AT, PL, PT, SK	EL, FR, SI

\* No increase: change between 2008-2013 or 2013-2016 is smaller than 3 percentage points (for EU-average: 1 percentage points). Increase: change between 2008-2013 or 2013-2016 is at least 3 percentage points (for EU-average: 1 percentage points). See Box 2 for more explanation.

**Source** Own calculations based on Figures 1, 2a and 2b

#### The relative median poverty gap

In 2016, the median income of children at risk of poverty in the EU lower than the poverty threshold by almost a quarter (24.3 per cent). This means that the poverty gap was by 3.2 percentage points larger in 2016 than in 2008. Similarly to the AROP rate, the relative median poverty gap was larger than average in some Eastern and Southern European countries in 2016. In Bulgaria and Romania, the income of children at risk of poverty was by 43 and 40 per cent lower than the threshold, respectively. Also, the poverty gap was about 30 per cent in Greece, Spain, Italy, Portugal and Slovakia (see Table A2 in Appendix). The lowest figures were observed in Finland (14 per cent) and Iceland (15 per cent).

Figure 3 below shows changes over time in the relative median poverty gap among children. Overall in the EU, there was an increase in the extent of the poverty gap in both periods, although not at a significant level between 2013 and 2016. One may also observe that the correlation between period-specific changes in poverty gap is negative: at the level of member states, a widening gap in the first period was likely to be followed by a decrease in that gap in the next period, and vice versa. In the first period, Norway experienced the largest 'catching up effect' (7 percentage points), while the gap widened the most in Greece (13 percentage points). However, the reverse happened in the second period in these two countries, practically annulling the magnitude of overall change between 2008 and 2016.

Figures 4a and 4b provide an overview of changes in the relative median poverty gap by periods and by parental education. The EU-28 average figures show us that in Period 1, widening average poverty gaps were mainly associated with large increase in the gap of children of low educated parents, Relative median poverty gap is defined as the difference between the median equivalised income of children below the at-risk-of poverty threshold and the threshold itself, expressed as a percentage of the at-risk-of poverty threshold. In other words, the measure expresses the income gap someone needs to bypass in order to leave the relative income poverty status. The use of relative median poverty gap is especially relevant for policy purposes, since it can give an estimate of the scale of transfers required to move households above the poverty threshold.

There can be four potential scenarios which explain changes in the relative median poverty gap. In the first, the threshold went up (implying that median income of population has increased) and the incomes of households with children did not catch up. The second case can be that the threshold did not move, but the income of children with parents of lower education have shrunk in this period. In the third scenario, it can be that both the threshold moved up and the incomes of households with children fell further below - an even larger increase in the relative median gap. The fourth case consists of both a decrease in the threshold and an even larger fall in the income of children.

while in the second period, recovery was again related to an improvement in the situation of children

with low educated parents. A more than 15 percentage points increase in the poverty gap of children of low educated parents was observed in a few Southern and Central-Eastern European countries (Estonia, Greece, Italy and Poland) in Period 1. In the second period, in all these countries but Greece, the poverty gap of low social status children tightened by at least 10 percentage points. Interestingly, in Austria the poverty gap of children with highly educated parents widened at an extreme magnitude (by close to 20 percentage points), without a recovery in the second period.



Figure 3. Changes in the relative median poverty gap of children: 2008-2013, 2013-2016

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC



Figure 4a. Changes in the relative median poverty gap of children by parental education (2008-2013)

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC



Figure 4b. Changes in the relative median poverty gap of children by parental education (2013-2016)

Source own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

At EU level, the poverty gap widened in both periods. In many countries, the poverty gaps of low status children.

Table 2 presents a qualitative summary of the data presented in Figures 3, 4a and 4b. On average in the EU-28, as detailed earlier, there was an increase in child poverty gap in the first period, but not a significant one in the second. In most of the member states there was a significant increase in the relative median poverty gap in either of the periods, with the exceptions of Bulgaria, German, Croatia, Latvia, Malta and Finland. On the other hand, only in Austria, Slovakia and Sweden there was a more than 3 percentage points increase in both time intervals. Children of low educated parents were affected mainly in the first period, while those of highly educated parents in the second one.

There can be four potential scenarios which explain changes in the relative median poverty gap. In the first one, the threshold went up (implying that median income of population has increased) and the incomes of households with children did not catch up. The second case can be that the threshold did not move, but the income of children with parents of lower education have shrunk in this period. In the third scenario, it can be that both the threshold moved up and the incomes of households with children fell further Severe material deprivation (SMD) rate measures the share of people living in a household which cannot afford at least four of the following items: their rent, mortgage or utility bills; keeping their home adequately warm; facing unexpected expenses; eating meat or proteins regularly; going on holiday; having a television set; having a washing machine; having a car; having a telephone. It aims to identify households which are not able to afford a standard of living that is generally considered acceptable in EU. The indicator distinguishes between individuals who cannot afford a certain good or service and those who do not have this good or service for another reason, for instance they do not want or do not need it. Therefore, severe material deprivation is a measure of the absolute poverty concept.

below, resulting in an even larger increase in the relative median gap. The fourth case consists of both a decrease in the threshold and an even larger fall in the income of children.

Indicator	No increase between 2008-2013		Increase between 2008-2013	
	And no increase between 2013-2016 either	But increase between 2013-2016	But no increase between 2013-2016	And further increase between 2013-2016
Relative median poverty gap	BG, DE, HR, LV, FI	CZ, DK, IE, LT, LU, NL, PL, RO, UK, NO, CH	BE, EE, EL, ES, FR, IT, CY, HU, MT, PT, SI, IS, EU-28	AT, SK, SE
Relative median poverty gap (children with low parental education)	DE, IE, HR, HU, FI	DK, LT, NL, SK, UK, IS, NO, CH	BE, CZ, EE, ES, IT, CY, LV, LU, MT, PL, PT, RO, SI, EU-28	BG, EL, FR, AT, SE
Relative median poverty gap (children with high parental education)	DK, EE, FR, PL, RO, IS, NO	BG, CZ, DE, IE, IT, LU, HU, NL, SK, CH, EU-28,	BE, EL, ES, HR, CY, LV, MT, SI, FI, UK	LT, AT, PT, SE

Table 2.	Qualitative summar	v for chanaes in	children's relative	median poverty aap
	Qualitative sufficient	y ior changes in	cilliaren stelanve	median poveny gap

\* For explanation on statistically significant differences see notes under Table 1.

Source Own calculations based on Figures 3, 4a and 4b

#### 4.2 Material deprivation

#### Severe material deprivation rate

Other aspects of poverty and living conditions have to do with elements beyond household income, such as housing conditions, nutrition, leisure, etc. The indicator primarily used at EU level to monitor

the absence of such aspects of material living conditions is the severe material deprivation (SMD) rate. The questions address the ability of households to afford certain consumer items that most households across the EU possess and their capacity to cover essential financial costs and to meet unexpected spending needs. Once the threshold (at least four items out of nine) is the same for all member states, it is expected that countries which have a low median level of income and low purchasing power, will have more households who cannot afford to have most of the listed items. Another important aspect is that while these items are generic and try to measure an overall standard of living, nonetheless, cultural and social context may differ throughout countries and so may the self-perceived well-being of people and what they are accustomed to.

In 2016, 9 per cent of children in the EU countries overall were exposed to severe material deprivation. However, the situation varies substantially across member states. On one extreme, in Bulgaria, Romania, Greece and Hungary, at least two in ten children lived in households affected by severe material deprivation in 2016 (see Table A3 in the Appendix), Bulgaria witnessing a 36 per cent SMD rate. Sweden is found on the other end of the rank: only one in 100 children faced similar circumstances there. Research shows that there are two items in particular - the ability to afford one week's holiday a year and the ability to meet unexpected expenses - which are among the common missing denominators across any European household. The third and fourth missing items vary across countries, ranging from inability to pay bills in time or heat the house to inability to afford a proper meal every other day (Gábos et al., 2011).

Figure 5 below shows the changes in the SMD rate of children for two time periods. The share of severely materially deprived children in EU-28 increased in the first period (by 1.3 percentage points on average), while it fell by more than 2 percentage points in the second one. Thus, the overall pattern in severe material deprivation was a slightly worsening situation throughout the EU right after the crisis, while the second period brought improvements in this respect – in line with our benchmark was set in Section 2.



Figure 5. Changes in child severe material deprivation rate (2008-2013, 2013-2016)

Source own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

When considering overall changes, there are several countries where the SMD rates grew by more than 3 percentage points in the first period, but it either decreased significantly (Hungary, Latvia, Bulgaria, Lithuania, Malta, UK and Ireland), or they remained more or less the same (Cyprus, Italy and Greece) in the second one. In the case of Latvia and Bulgaria, the drop in the second period was approximately double the magnitude of the increase in the first period. Poland stands out as the only country where the share of children living in severe material deprivation fell by more than 3 percentage points in both periods.

Focusing the on first period, Figure 6a shows that there were only a few countries (Hungary, Ireland, Cyprus, Latvia and Greece) where the increase in SMD rate was higher than 3 percentage points in both subgroups defined by parental education background. For the other countries where the overall SMD rates increased significantly between 2008 and 2013, the increase was mostly driven by the worsening situation of children of low educated parents (Bulgaria, Italy, Latvia, Malta and UK). In addition, the immediate post-crisis experiences of children of less educated parents was generally following the same pattern across EU member states: in 20 of them it increased by more than 3 percentage points, with several countries experiencing an increase of larger than 20 percentage points (Cyprus, Greece, Slovakia and Lithuania). Out of the 4 countries witnessing a fall in SMD rates larger than 3 percentage points in this subgroup (Finland, Switzerland, Poland and Netherlands), the drop was largest in Finland (at 14 percentage points). The changes were significantly less extreme in magnitude for children of highly educated parents: the largest increase in their SMD rate happened in Greece (8 percentage points), while the largest drop was in Bulgaria (2 percentage points).



Figure 6a. Changes in child severe material deprivation rate by parental education (2008-2013)

Source own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Figure 6b shows the same indicator and subgroups as the previous one, but for the second time period (2013-2016), in which the situation for children of low educated parents is almost the mirror image of the previous time interval. In 14 countries, the SMD rate for the aforementioned group fell by more than 3 percentage points, and for some by even more than 10 percentage points (Hungary, Lithuania, Romania, UK, Slovenia, Sweden, Latvia, Denmark and Poland). In Ireland, Denmark, and Greece, the situation for this subgroup worsened further in the second period, with increases of larger than 3 percentage points. In contrast, the situation for children of highly educated parents improved in six countries (Latvia, Hungary, Bulgaria, Slovakia, Ireland and Portugal), while it stayed more or less the same for the rest.



Figure 6b. Changes in child severe material deprivation rate by parental education (2013-2016)

Source own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

In general, the gap between the share of children of low educated parents and those of highly educated parents living in households affected by severe material deprivation grew significantly after the crisis, by 4 percentage points on average in EU. In 18 of the member states, the increase was higher than 3 percentage points, Greece standing out with a 29-percentage point score. Based on our methodology, countries such as Slovakia, Cyprus, and Czech Republic, also show signs of deepening inequality. In contrast, while Romania has the second largest share of children missing at least four out of the nine essential items, it has indeed seen the sharpest drop in inequality of this indicator for these two groups of children.

Severe material deprivation among children increased significantly in the first period at both EU level and in several MSs, while a recovery took place afterwards. Changes in this indicator for low status children were the drivers for both trends.

Table 3 below provides a qualitative summary of our findings presented in Figures 5, 6a and 6b. Most of the countries (16) lie in the box which include cases of no substantial increase in the overall indicator in both periods. For another large number of countries (13) there was an increase in the first period, but no further substantial deterioration in the second one. There were some exceptions to the former pattern, namely Greece and Switzerland. The SMD rate for children of low educated parents generally increased in the first period, while it levelled off in the second one. Exceptions to this trend were 4 countries (Denmark, Ireland, Greece and Italy), where the value of the indicator increased in both time periods. It is also striking to see that children of highly educated parents did not experience a hike in the severe material deprivation rate in any of the countries in the second period. In addition, severe material deprivation of this subgroup did not increase substantially for the majority of countries in any of the time periods.

Indicator	No increase between 2008-2013		Increase between 2008-2013	
	And no increase between 2013-2016 either	But increase between 2013-2016	But no increase between 2013-2016	And further increase between 2013-2016
Severe material deprivation rate	BE, CZ, DK, DE, FR, HR, LU, NL, AT, PL, RO, SI, SK, FI, SE, NO	СН	BG, EE, IE, ES, IT, CY, LV, LT, HU, MT, PT, UK, IS, EU- 28	EL
Severe material deprivation rate, w/low parental education	EE, LU, AT, PL, RO, FI	BE, NL, NO, CH	BG, CZ, DE, ES, FR, HR, CY, LV, LT, HU, MT, PT, SI, SK, SE, UK, IS, EU-28	DK, IE, EL, IT
Severe material deprivation rate, w/high parental education	BE, BG, CZ, DK, DE, ES, FR, HR, IT, LT, LU, MT, NL, AT, PL, SI, FI, SE, IS, NO, CH, EU-28		EE, IE, EL, CY, LV, HU, PT, RO, SK, UK	

Table 3 Qualitative summary for changes in children's severe material deprivation rate

\* For explanation on statistically significant differences see notes under Table 1. Source Own calculations based on Figures 6, 7a and 7b

#### Inability to make ends meet

In 2016, more than a quarter of children in the EU were living in households with the ability of making ends meet with difficulty or great difficulty. The highest share of children in this situation were found in Greece at about 78 per cent. Bulgaria, Cyprus and Italy were also countries with significantly high shares of children living in such vulnerable conditions (see Table A4 in the Appendix). There is a striking difference between the experiences of children in the aforementioned Southern countries as opposed to the Nordic ones. In Norway, for instance, where, for instance, only 6 per cent of children were living in households which had a hard time making ends meet.

Figure 7 shows the changes in the share of those with inability to make ends meet for two time periods, 2008-2013 and 2013-2016. In the first period, the share of children living in households which could make ends meet with 'difficulty' or 'great difficulty' increased by 5 percentage points overall in EU-28. In the next period, however, it fell by a larger magnitude, 7 percentage points. The pattern which can be observed is that in the follow-up of the economic crisis children's households became more likely to face difficulties to make ends meet in almost all EU countries apart from those living in Sweden, Finland

Inability to make ends meet is another indicator which captures the vulnerability and poverty of children beyond the income dimension. It includes the overall assessment of the household's financial situation by reflecting on income as a source, on expenditure, as well as on debts. This indicator is correlated with a higher change of being at risk of consistent poverty, which was defined as living at the risk of both income poverty and material deprivation (B. Kis and Gábos 2016). Inability to make ends meet is defined as the share of children living in households with the ability of making ends meet with 'difficulty' or 'great difficulty'. This indicator is a subjective assessment of objective circumstances and also part of the EU-SILC database, calculated based on the question of how well the households cover daily life expenses. The options for the answers are the following: 'with great difficulty', 'difficulty', 'some difficulty', 'fairly easily' and 'easily'.

and Malta. The share of children living in households unable to make ends meet increased by more than 3 percentage points in 20 out of 28 member countries in the first period. In eight of these countries, the increase was larger than 10 percentage points with the largest change noted in Greece at 30 percentage points.

The situation, however, took a completely reverse turn in the second period. Only Italy experienced a substantial increase in the share of children's in households facing inability to make ends meet rate during both periods – at about 4 and 19 percentage points in the first and second period, respectively. The rest of the member countries (20) mostly had significant drops in this indicator, while a smaller

number of them (10) experienced no significant change with respect to this indicator in the second period (2013-2016). Among the countries with significant reversal of the situation in the second period, the most notable ones were Latvia, Croatia and Hungary, all of which saw the group of children living in households unable to make ends meet first increase by more than 10 percentage points and then shrink by a similar magnitude in the second period. There were also less successful countries in this regard. For instance, Greece, Iceland and Ireland experienced a dramatic hike (more than 17 percentage points) in this indicator in the first period, but did not manage to significantly reverse their situation in the subsequent period, with drops of only 3 to 7 percentage points.



Figure 7. Changes in child inability to make ends meet rate (2008-2013, 2013-2016)

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Figure 8a presents the changes in the indicator for the first period (2008-2013), based on children's parental education background. Right after the crisis, the share of children living in households facing difficulties to make ends meet increased significantly in many member states and by a larger magnitude for children of less educated parents than those with more educated ones. Significant exceptions were Sweden and Finland, where the share of children of less educated parents and lived in households unable to make ends meet fell by 15 and 12 percentage points, respectively. Children of highly educated ones experienced smaller drops according to this indicator, roughly 1 percentage point for both aforementioned countries.

Overall, there were 22 countries in which the inability to make ends meet rate for children of less educated parents increased by more than 3 percentage points, with the highest score in Latvia (29 percentage points). Even the children of highly educated parents were affected by changes in this indicator. For example, in certain countries the share of them facing inability to make ends meet grew even at a larger magnitude than for those of less educated parents (Greece, Netherlands, Romania, Ireland and Cyprus). Whereas the group of children with more educated parents has been relatively more isolated from the impact of the crisis in the previous indicators, in this case there were

21 member countries which experienced an increase in the indicator of larger than 3 percentage points. Only one country had a decrease of larger than 3 percentage points for this indicator and subgroup (Malta at about 9 percentage points).



Figure 8a. Changes in child inability to make ends meet rate by parental education (2008-2013)

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Changes in this indicator for both subgroups of children in the second period (2013-2016) are presented in Figure 8b. For many of the member countries, the figure shows almost the mirror image of the situation of children of low educated parents in the first period. While the situation of children is still substantially diverse, there is a visible pattern of large drops in this indicator in most countries for both the subgroup of children of low educated parents (16 countries) and those of highly educated ones (18 countries). One notable exception is Italy, where even in the second period this indicator increased significantly for both subgroups of children (25 percentage points for those of poorly educated parents and 29 percentage points for those of highly educated ones). Another country with a similar experience in trends, but substantially smaller in magnitude, is Luxembourg.



Figure 8b. Changes in child inability to make ends meet rate by parental education (2013-2016)

Source own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Inability to make ends meet provides the most clean-cut picture on the effect of the crisis on child poverty: deterioration in the first period and recovery in the second one, all children being affected, almost independently from parental background (though at different levels of poverty). Table 4 summarises the findings of the previous figures. The bulk of countries are found in the box which indicates a significant increase in share of children living in households with difficulties in making ends meet right after the crisis, but no further increase in this matter in the subsequent period. This pattern is similar to that presented earlier for the severe material deprivation, but even clearer in how the trends within the two analysed periods differ from each other. This is also reflected by the incidence of EU-28 average figures: in none of the other indicators analysed in this report, the EUaverage fall in the same cluster for both the overall and the parental education-specific rates. One of the exceptions to this pattern is Italy, which faced a worsening situation in both time periods. There were other exceptions where the situation did not deteriorate significantly in neither of the periods: Belgium, Malta, Austria, Poland, Finland, Sweden and Norway. The only countries where there was a substantial increase in difficulty of making ends meet for children of low parental education were Belgium, Italy, Cyprus and Switzerland. Children of highly educated parents became noticeably more likely to live in households facing difficulty to making ends meet in both time periods only in Italy and Luxembourg.

Indicator	No increase between 2008-2013		Increase between 2008-2013	
	And no increase between 2013-2016 either	But increase between 2013-2016	But no increase between 2013-2016	And further increase between 2013-2016
Inability to make ends meet	BE, MT, AT, PL, FI, SE, NO		BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, CY, LV, LT, LU, HU, NL, PT, RO, SI, SK, UK, IS, CH, EU-28	IT
Inability to make ends meet, w/low parental education	AT, PL, RO	DK, NL, FI, SE	BG, CZ, DE, EE, IE, EL, ES, FR, HR, LV, LT, LU, HU, MT, PT, SI, SK, UK, IS, NO, EU-28	BE, IT, CY, CH
Inability to make ends meet, w/high parental education	BE, DE, FI, SE, NO	МТ, АТ	BG, CZ, DK, EE, IE, EL, ES, FR, HR, CY, LV, LT, HU, NL, PL, PT, RO, SI, SK, UK, IS, CH, EU-28	IT, LU

Table 3. Qualitative summary for changes in children's inability to make ends meet rate

\* For explanation on statistically significant differences see notes under Table 1. Source Own calculations based on Figures 7, 8a and 8b

#### 4.3 Poverty and social exclusion

We close our assessment on the role of the crisis and that of social background on changes in time in children's material living conditions by looking at the composite indicator of various poverty concepts, which is the share of children at risk of poverty or social exclusion (AROPE).

Almost a third of children in the EU were at risk of poverty or social exclusion in 2016. The Southern and some of the Central-Eastern European countries fare the worst in this respect. The share of children considered to be at risk of poverty or social exclusion in 2016 was as high as 49 per cent in Romania and 46 per cent in Bulgaria. At the same time, the Nordic countries, the Czech Republic, Germany, the Netherlands and Slovenia have lower rates ranging from 14 to 20 per cent of children in such conditions (see Table A5 in the Appendix).

Figure 9 shows the changes in this indicator for the period

The at risk of poverty or social exclusion (AROPE) indicators was set to measure progress towards the poverty target of the Europe 2020 strategy for smart, sustainable and inclusive growth. It is defined as the share children living in at least one of the following three conditions: at risk of poverty; in a situation of severe material deprivation; or living in a household with very low work intensity. Because these sub-indicators tend to overlap and people can be affected by two or even all three of these types of poverty, a person is counted only once in the headline indicator, even if he or she falls into more than one category (EC 2018).

right after the economic crisis and the subsequent years. One may observe that in most EU countries, children became more vulnerable in the period after the crisis, while their relative situation improved in the next period. However, countries such as Cyprus and Italy (same in Spain, the Netherlands and Norway, but not in a statistically significant way) experienced an increase in the AROPE rate in both periods. Only children in Poland were less likely to be at risk of poverty or social exclusion in both time periods.

Overall, one may observe that the stronger was the deterioration in child poverty and social exclusion between 2008 and 2013, the stronger was the recovery between 2013 and 2016. Most significantly, the AROPE rate among Hungarian children increased by close to 11 per cent in the first period, while decreased by the same amount in the second one. Similarly large amplitude in AROPE rates has been observed in Ireland, Bulgaria, Latvia and Malta, while somewhat lower in Lithuania, Luxembourg, the UK and Portugal. In some other countries (Belgium, Slovakia, the Netherlands and Germany, for example), there were no important changes at all in these periods.



Figure 9. Changes in child at-risk-of-poverty and social exclusion rate (2008-2013, 2013-2016)

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Similarly to previous findings, it is indeed the increase in the share of AROPE children of low educated parents that seems to be driving the overall changes in the first period. Figure 10a shows that in almost all countries, changes for this group of children are substantially larger than for those whose parents have a diploma. There are, however, some notable exceptions, like Switzerland, Croatia and Austria (significant decrease in the AROPE rates of children of low educated parents, but no decrease for children of highly educated parents). In other countries no significant differences were observed for these two groups of children (although at varying levels of differences): Poland, Finland, Germany, Norway, Latvia, Iceland, and Luxembourg.

The AROPE rate for children of low educated parents increased at the largest extent in Sweden (by 23 percentage points), while the same indicator for children of highly educated parents remained unchanged between 2008 and 2013. Lower, but still large increases characterised children of low educated parents in Slovenia, Ireland, Denmark, Slovakia, Lithuania, Malta, Greece and Hungary. In contrast, the most notable decrease in this indicator for both groups in this time period occurred in Switzerland: 11 percentage points for children of low educated parents and 2 percentage points for those of highly educated parents.



Figure 10a.Changes in child at-risk-of-poverty and social exclusion rate by parental education (2008-2013)

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

Figure 10b presents the same measures, but for period 2013-2016 instead. Again, the pattern is less clear than it was in the first period. Overall, it seems that the average change in child AROPE rates are mainly driven by changes related to children of low educated parents. This is the case in countries with either a decrease or increase in overall child AROPE rates. For example, a 2 percentage points increase in Finland in overall rates was mainly due to the 24 percentage points increase among children of low educated parents, while the same overall increase went together with 12 and 6 percentage points increase among children of low educated parents in Cyprus and Switzerland, respectively. In the case of Finland this means that the situation of children whose parents have a low level of education has significantly worsened in the aftermath of the crisis: 42 per cent of them were considered at risk of poverty or social exclusion in 2008, while in 2016 this figure stood at 65 per cent. Slovakia is another country where children with low parental background have had conditions worsen for them – but as of 2016, 93 per cent of them were considered at risk of poverty or social exclusion, which is much higher than the already high figure in Finland.

The picture is more diffused when the recovery period is analysed. The decrease in the overall child AROPE rates between 2013 and 2016 was the largest in Latvia (about 13 per cent) and Hungary (about 11 per cent). However, while in Latvia the increase in rates of children both of low and highly educated parents were smaller than the average (and thus the improvement came mainly from children of parents having secondary education), in Hungary children of low educated parents benefited most (16 pps), while those living with parents having tertiary degrees benefited less (1.5 pps). We need to mention, however, that this fall in AROPE rates of children of low educated parents in Hungary happened at a very high basis (93 per cent in 2013, highest in the EU, only similar to Bulgaria, Romania and Slovakia). The largest decrease of AROPE rate was found in UK for children of low educated parents (21 percentage points) and in Latvia for children with high parental education (10 percentage points).



Figure 10b. Changes in child at-risk-of-poverty and social exclusion rate by parental education (2013-2016)

Source Own calculations based on IPOLIS. Original source: Eurostat database (accessed on 16 July 2019) and EU-SILC

At EU level and in most of the member states, the situation of children in terms of poverty and social exclusion deteriorated in the first period, but recovered in the second period. In several countries, however, children of low status families did not experience this improvement. Table 5 presents a qualitative summary of the findings presented in the previous figures. Most countries experienced an increase in the share of children's AROPE rate right after the crises, but they did not face a further increase (or, in many cases, experienced an improvement) in the second period. This was less the case for children whose parents had lower levels of education: the share of those at risk of poverty or social exclusion among them grew in both time periods overall in EU and for the following ten countries: Belgium, Bulgaria, Denmark, Ireland, Greece, Spain, France, Italy, Cyprus and Slovakia. Only in Greece, Romania and Slovenia, the ROPE rate of children of highly educated parents increased in both time periods.

Table 4. Qualitative summary for changes in children's at-risk-of-poverty and social exclusion rate

Indicator	No increase between 2008-2013		Increase between 2008-2013	
	And no increase between 2013-2016 either	But increase between 2013-2016	But no increase between 2013-2016	And further increase between 2013-2016
Inability to make ends meet	BE, CZ, DE, HR, NL, AT, PL, RO, SK, NO	FR, FI, CH	BG, DK, EE, IE, EL, ES, IT, LV, LT, LU, HU, MT, PT, SI, SE, UK, IS, EU-28	СҮ
Inability to make ends meet, w/low parental education	PL, RO, UK	DE, HR, NL, AT, FI, NO, CH	CZ, EE, IE, LV, LT, LU, HU, MT, PT, SI, SE, IS, EU-28	BE, BG, DK, EL, ES, FR, IT, CY, SK
Inability to make ends meet, w/high parental education	BE, BG, CZ, DE, FR, PL, SE, UK, NO	DK, IT, LT, LU, FI, CH	EE, IE, ES, HR, CY, LV, HU, MT, NL, AT, PT, SK, IS, EU-28	EL, RO, SI

\* For explanation on statistically significant differences see notes under Table 1. Source Own calculations based on Figures 9, 10a and 10b

## 5. Conclusions

Child poverty remains a pressing issue in EU and, thus, conducting further research and informing policymakers will provide both short-term and long-term economic and social benefits. This is even more important due to the multiplier effect of improving children's current as well as future situation. This report was prepared with two research questions in mind. The first was to understand how the material living conditions of European children evolved between 2008 and 2016. The second was to further consider inequalities in changes in child poverty outcomes by parental background.

This report aimed to analyse the changes in several poverty and living condition indicators of the <u>IPOLIS</u> child module. We looked at changes in the overall indicators and their parental background breakdowns for two time periods: the first right after the economic crisis (2008-2013) and the second in subsequent years (2013-2016). The first period aims to capture the immediate effect, while the second show the adjustments to the new conditions.

The main findings are the following.

- 1. There is a considerable difference in the evolution of poverty and material living conditions of children within EU member states *depending on what poverty concept and what measure* is applied to monitor these trends. These difference is evident when income(resource)-based relative measures are compared to output and absolute indicators, assuming as a benchmark that social outcomes overall worsen in the period following the outbreak of the crisis (period between 2008-2013) and started to recover afterwards (from 2013 on). While severe material deprivation rates and especially the inability to make ends meet rates aligned to this pattern overall in the EU and most of the member states, the situation of children has levelled or even worsened in the second period according to the at-risk-of-poverty rate and the relative median poverty gap. In other words, inequality has risen among children since the start of the crisis, while their material living conditions started to recover since 2013. The trend according to the EU 2020 poverty and social exclusion indicator (share of children living in poverty or social exclusion) is similar to what we observed for the non-income measures.
- 2. The *choice of the indicator* not only *affects* the results of the time trend analysis, but also the *cross-country comparative results*. According to the severe material deprivation rates, the roller-coaster of the Great Recession mostly affected children in Southern and Central-Eastern Europe in the sense that the worsening-recovering pattern across the two periods is observed with a considerable amplitude in most of these countries. A similar cross-country pattern is observed for the inability to make ends meet indicator. Relative measures provide a somewhat more nuanced picture in terms of welfare state type-differences: children from Sweden, Norway and France were as affected by the rise in poverty as much as some Southern or Central-Eastern European counterparts.
- 3. There are *large disparities by social status* (measured here by the highest education level of parents) behind overall trends in children's poverty and material living conditions in most of the member states of the European Union. At EU-28 level in 2016, relative income poverty rates among children of low educated parents were twice larger than among those with parents having completed secondary education and six time larger compared to children of parents having a diploma. When severe material deprivation rates are analysed, these inequalities are even more striking.
- 4. Changes in these conditions were driven at first place by changes in poverty outcomes of low status children: a large share of them saw severe variation in the material living conditions of their families. They faced severe deterioration in their situation during and in the immediate aftermath of the 2008 financial and economic crisis, regardless of whether we look at relative of absolute measures. In some, mostly Southern and Central-Eastern European countries, there was a significant surge in the absolute measures of poverty among children of low educated parents during 2008-2013. In

twelve countries, severe material deprivation rates among these children increased by at least 10 percentage points, and in four out of these twelve, even by more than 20 percentage points. A similar picture is provided not only by the inability to make ends meet indicator, but also by the composite measure of poverty and social exclusion. Nevertheless, in the majority of the countries, low status children faced the largest recovery in absolute poverty after 2013. There were *some countries*, however, where *children of more educated parents* were *hit at a similar or even larger extent* than their low status counterparts. For example, between 2008 and 2013, in Greece, Romania, Ireland and Cyprus, changes in severe material deprivation rates were larger among those in the former group.

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## InGRID-2 Integrating Research Infrastructure for European expertise on Inclusive Growth from data to policy

Referring to the increasingly challenging EU2020-ambitions of Inclusive Growth, the objectives of the InGRID-2 project are to advance the integration and innovation of distributed social sciences research infrastructures (RI) on 'poverty, living conditions and social policies' as well as on 'working conditions, vulnerability and labour policies'. InGRID-2 will extend transnational on-site and virtual access, organise mutual learning and discussions of innovations, and improve data services and facilities of comparative research. The focus areas are (a) integrated and harmonised data, (b) links between policy and practice, and (c) indicator-building tools.

Lead users are social scientist involved in comparative research to provide new evidence for European policy innovations. Key science actors and their stakeholders are coupled in the consortium to provide expert services to users of comparative research infrastructures by investing in collaborative efforts to better integrate microdata, identify new ways of collecting data, establish and improve harmonised classification tools, extend available policy databases, optimise statistical quality, and set-up microsimulation environments and indicator-building tools as important means of valorisation. Helping scientists to enhance their expertise from data to policy is the advanced mission of InGRID-2. A new research portal will be the gateway to this European science infrastructure.

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More detailed information is available on the website: www.inclusivegrowth.eu

Co-ordinator Monique Ramioul

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