

Why is it so hard to reach the EU's 'poverty' target?

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Executive Summary

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- The Europe 2020 strategy for smart, sustainable and inclusive growth set a target of lifting more than 20 million people out of poverty, but European Union countries have struggled to make progress towards the target.
- We demonstrate both theoretically and empirically that the 'poverty' indicator in the Europe 2020 strategy essentially measures income inequality, not poverty.
- Our illustrative calculations show that even after taking into account the positive impact expected economic growth should have on material deprivation and low work intensity, the Gini coefficient of income inequality would have to fall by four points in each EU country if the Europe 2020 'poverty' target is to be reached. This would be a huge decline.
- Enormous differences between 'poverty' thresholds adopted by different EU countries make the EU-wide 'poverty' aggregate pointless.
- Even though 24 percent of EU citizens are deemed to be poor or socially excluded, we find that social issues receive little attention in the European Semester, which is supposed to support the achievement of Europe 2020 targets.
- The few relevant recommendations that have been made targeted poverty, employability and social exclusion, which are important goals. There have been no specific measures to reduce income inequality.
- The political agreement between EU member states clearly expressed the goal of reducing poverty, not inequality. It was a grave mistake to base the Europe 2020 poverty target on an indicator of income inequality and to speak about 'poverty reduction' in relation to that indicator.
- The European Council should meet again to discuss what social goals to pursue, and to adopt corresponding indicators and strategy.
- There are good reasons to aim for lower income inequality, which would require further measures such as more progressive income, wealth and inheritance taxes, better opportunities for disadvantaged and poorer families, with implications for education systems and labour market institutions, and the curtailing of unjustified rents enjoyed by certain segments of society.
- We suggest that the misleading label of the Europe 2020 target indicator 'at risk of poverty or social exclusion' be replaced with 'relative income poverty or income inequality or potentially social excluded', which may sound convoluted, but would be better than the current short but misleading name.
- We propose the development of new poverty indicators, such as considering the cost of a specific basket of goods and services as the threshold. Beyond headcount, the calculation of poverty gaps and other indicators that show the depth and severity of poverty would be important.
- We advocate that EU-wide poverty and income distribution indicators should consider the distribution of income within the EU as a whole.

1. Introduction

Europe 2020 – A strategy for smart, sustainable and inclusive growth was adopted in 2010 as the European Union’s landmark economic and social policy strategy. It formulated EU-wide targets for employment, research and development, climate/energy, education and poverty reduction/social inclusion. Progress towards the targets is encouraged and monitored throughout the European Semester, the EU’s yearly cycle of economic policy coordination.

The ‘poverty’ target set by the European Commission (2010) aims to lift “*over 20 million people out of poverty*” between 2008 and 2020 in the EU27¹. Progress to date against this target has been disappointing. Rather than declining, the number of people classified as at risk of poverty or social exclusion increased by 6.3 million from 2008-12, after which it fell by 4.7 million from 2012-15, leading to a figure in 2015 that was still above the 2008 value by about 1.6 million people. The EU’s apparent failure to reduce poverty has received great attention, with calls from many quarters for more effective measures.

Why is it so hard to reach the Europe 2020 ‘poverty’ target? What does the poverty indicator actually measure? What kind of social developments would enable the achievement of the Europe 2020 ‘poverty’ target? How effective is the European Semester in promoting progress towards the Europe 2020 ‘poverty’ target? In this policy contribution we answer these questions.

2. The Europe 2020 strategy poverty indicator

Historical precedents

There is a long-standing literature on social indicators, which have been used in various ways by the European Union and the preceding European Communities². The Lisbon Strategy, adopted in March 2000 by the EU heads of state and government, aimed to make Europe “*the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*” by 2010³. This strategy included six specific indicators for social cohesion, in addition to various indicators of employment, innovation and research, economic reform and general economic background indicators. A key social cohesion indicator was the ‘poverty rate’, which measured the share of the population below the poverty line, which was defined as (50 percent or) 60 percent of the median equivalised disposable income⁴ in each country (European Commission, 2000). While the development of this indicator was monitored, no target was set in the context of the Lisbon Strategy.

The Europe 2020 indicator: at risk of poverty or social exclusion

In its March 2010 publication of the Europe 2020 strategy, European Commission (2010) proposed that the same ‘poverty rate’ indicator should be used, though it was renamed the ‘at risk of poverty’ rate. In 2008 there were slightly more than 80 million people deemed ‘at risk of poverty’ in the then 27-member EU, and the Commission proposed to set the target in terms

1 The first 27 European Union members, predating Croatian membership.

2 See a nice historical overview in Atkinson *et al* (2002).

3 <https://portal.cor.europa.eu/europe2020/Profiles/Pages/TheLisbonStrategyinshort.aspx>.

4 The equivalised disposable income is the total income of a household, after tax and other deductions, that is available for spending or saving, divided by the number of household members converted into equalised adults; household members are equalised or made equivalent by weighting each according to their age, using the so-called modified OECD equivalence scale. See: http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised_disposable_income.

of this baseline: “the number of Europeans living below the national poverty lines should be reduced by 25%, lifting over 20 million people out of poverty”, where “the national poverty line is defined as 60% of the median disposable income in each Member State.”

However, in subsequent negotiations, the indicator was found to be too narrow. The final indicator adopted by the European Council in June 2010 was the ‘at risk of poverty or social exclusion’ indicator. The European Council allowed member states “to set their national targets on the basis of the most appropriate indicators, taking into account their national circumstances”. Nine countries adopted a different indicator (Box 1 on page 5)⁵.

The ‘at risk of poverty or social exclusion’ indicator is the combination of three indicators. It includes the total number of people that fall into one or more of three categories:

- **‘At risk of poverty’**: people with a disposable income below 60 percent of the national median equivalised disposable income;
- **‘Severely materially deprived’**: people unable to afford at least four of the following:
 1. rent, mortgage or utility bills
 2. adequate home heating
 3. a reserve against unexpected expenses
 4. regular meat or proteins
 5. a holiday
 6. a television set
 7. a washing machine
 8. a car
 9. a telephone;
- **‘Living in a household with a very low work intensity’**: total number of months that all working-age household members have worked relative to the total number of months the same household members theoretically could have worked is below 20 percent.

In 2008, there were about 116 million people in the EU27 ‘at risk of poverty or social exclusion’ according to these measures. The European Council retained the 20 million reduction target for this indicator and therefore the target for 2020 was set at 96 million.

It is also notable that while the European Council adopted the EU-wide 20 million person target, it did not share out this target among member states, but allowed them to set their own targets. The sum of member states’ targets is a reduction of about 12 million people, highlighting a major discrepancy between the EU-wide target and national commitments.

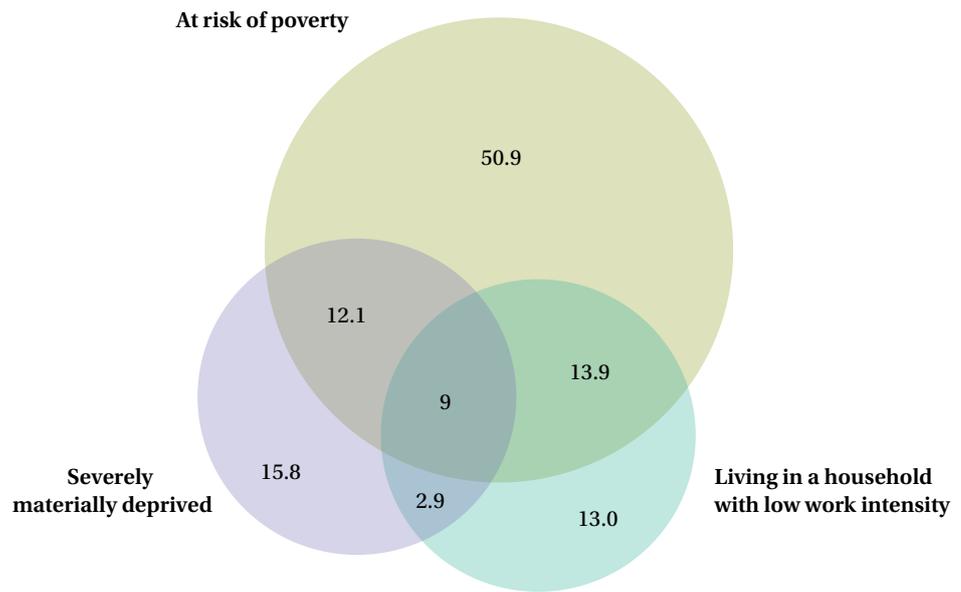
Progress to date has been disappointing. Instead of a decline, the number of people in the EU27 deemed at risk of poverty or social exclusion increased from 115.9 million to 122.2 million in 2012 and then declined to 117.5 million, still above the 2008 value and very far from the target of 96 million.

Figure 1 breaks down the ‘at risk of poverty or social exclusion’ indicator according to its components. Since a person can belong to one, two or all three of its components, the overlapping areas of the circles indicate the number of people who belong to more than one of the components.

We highlight that the aim agreed by the European Council was “*promoting social inclusion in particular through the reduction of poverty*” and income inequality was not mentioned in the European Council conclusions that adopted the Europe 2020 strategy (see European Council, 2010).

⁵ None of these nine countries made their choice on the basis of the near equivalence of the ‘at risk of poverty’ rate and the Gini coefficient of income inequality and in fact five of the nine countries adopted a version of the ‘at risk of poverty’ rate (Box 1).

Figure 1: People 'at risk of poverty or social exclusion' in the EU27 in 2015 (millions)



Source: the figure on page 26 of the Annex of European Commission (2014), updated using data from the Eurostat dataset 'Intersections of Europe 2020 Poverty Target Indicators by age and sex [ilc_pees01]'. I thank Konstantinos Efstathiou and Robert Kalcik for preparing this chart.

What are poverty, inequality and social exclusion?

There is an extremely voluminous body of academic and policy research on poverty, inequality and social exclusion⁶. These concepts are defined in many different ways.

A standard definition of poverty is whether “households or individuals have sufficient resources or abilities to meet their daily needs”, as argued by the World Bank⁷. This definition is in line with the everyday use of the word poverty⁸. Such a definition is sometimes considered as an ‘absolute measure of poverty’. Poverty has non-monetary aspects, such as health, education and subjective perceptions.

Relative poverty is usually defined as having little in terms of a specific aspect (like income, wealth, health, or education) compared to other members of society. The way individuals perceive their position relative to other people can be an important aspect of their welfare.

Inequality refers to the extent to which a specific aspect (like income) is distributed unevenly among the population. Similarly to the concept of relative poverty, in unequal societies poorer individuals might perceive that they have fewer means than richer individuals, which might affect their life satisfaction irrespective of their actual living standards.

A reasonable definition of social exclusion is “the failure of society to provide certain individuals and groups with those rights and benefits normally available to its members, such as employment, adequate housing, health care, education and training”⁹. The Commission of European Communities (1992) explained the difficulties in measuring social exclusion, which has different manifestations, such as homeless people on the streets, the marginalisation of the very long-term unemployed, persistent poverty in certain rural areas, and the rejection of refugees and minorities.

6 See nice overviews of various concepts and measurement issues in Coudouel *et al* (2002) and Marx *et al* (2015).

7 See for example the World Bank’s ‘Measuring Poverty’ page: <http://go.worldbank.org/0C60K5UK40>.

8 The Cambridge Dictionary (<http://dictionary.cambridge.org>) defines poverty as “the condition of being extremely poor,” and poor as “having little money and/or few possessions”.

9 <https://www.collinsdictionary.com/dictionary/english/social-exclusion>.

The simple definitions offered above underline that there are many overlaps between these concepts:

- Poverty might lead to social exclusion.
- For a given level of average income in a country, higher income inequality implies more poverty: consider two countries with the same average income but with different levels of income inequality; in the country with a higher inequality level there will be more poor (and also more rich) than in the country with a lower level of income inequality.
- Thereby, more inequality might also lead to more social exclusion.
- Relative income poverty is a very similar concept to income inequality. When income inequality is high, the gap between the incomes of people at the top and the bottom of the income distribution is wide and thus relative income poverty is high. A possible conceptual difference between relative income poverty and income inequality is that the former focuses on the lower part of the income distribution, while the latter considers the entire population.

Furthermore, a common factor might influence all indicators simultaneously. For example, unemployment, and especially long-term unemployment, might lead to more poverty, relative poverty, inequality and social exclusion.

The fact that poverty, relative poverty, inequality and social exclusion have many different definitions, and that there are various overlaps between these concepts, makes measurement especially difficult.

Box 1: National poverty target indicators that differ from the Europe 2020 'at risk of poverty or social exclusion' indicator

- Bulgaria: at risk of poverty
- Germany: long-term unemployed
- Denmark: persons living in households with low work intensity
- Estonia: at risk of poverty
- Ireland: combined poverty, defined as those severely materially deprived who are also at risk of poverty
- Latvia: at risk of poverty and/or living in households with very low work intensity
- Netherlands: people aged 0-64 living in a jobless household
- Sweden: percent of women and men aged 20-64 who are not in the labour force (except full-time students), the long-term unemployed or those on long-term sick leave
- United Kingdom: numerical targets from the 2010 Child Poverty Act and Child Poverty Strategy 2011-14, which are in turn different versions of the 'at risk of poverty' rate

Source: http://ec.europa.eu/europe2020/pdf/targets_en.pdf and the accompanying national documents.

Material deprivation and low work intensity

Two components of the Europe 2020 'at risk of poverty or social exclusion' indicator, the severe material deprivation rate and the share of the people living in households with a very low work intensity, have clear interpretations and can capture some of the above-mentioned aspects of social exclusion.

Thanks to Europe's generally high living standards and extensive welfare states, there are hardly any people below the standard poverty thresholds that are used globally. That means there are very few people in the EU living on less than \$1.25 or \$2 a day. The severe material

deprivation rate is therefore a useful indicator of poverty in the European context¹⁰. It might also reflect social exclusion if poor people face difficulties in terms of social integration.

People living in households with very low work intensity might face a significant risk of exclusion from the labour market, potentially leading to social exclusion too.

The ‘at risk of poverty’ indicator essentially measures income inequality

The main¹¹ component of the Europe 2020 social target indicator, the ‘at risk of poverty’ indicator, has a very misleading name.

One issue is the interpretation of ‘risk’ in the name of the indicator. In principle, everyone can be considered to be at risk; even a billionaire faces the risk of losing her/his wealth. The question is the degree of riskiness. The ‘at risk’ part of the indicator should refer to a significant degree of risk.

Someone with income below 60 percent of national median income is not necessarily at high risk of poverty. Even Eurostat’s glossary highlights that: “*this indicator does not measure wealth or poverty, but low income in comparison to other residents in that country, which does not necessarily imply a low standard of living*”¹². That is, Eurostat uses the word ‘poverty’ in the common sense of someone being poor and underlines that the ‘at risk of poverty’ indicator does not measure poverty.

For example in a rich country like Luxembourg, the bulk of the people below the 60 percent of the Luxembourgish median income have much higher living standards than, for example, a citizen in Romania earning the average Romanian income, who is in turn in a much better position than someone with an average income in Africa.

Conceptually, the definition of the ‘at risk of poverty’ indicator and the explanation provided in the Eurostat glossary resemble an indicator of income inequality. In more equal societies, more people have incomes closer to the median income and consequently the share of people with income below 60 percent of the median income is low. In the extreme case of a country with perfect income equality, everyone earns the same and therefore nobody is below (and nobody is above) the median income. In a country with some level of income inequality, there are (by definition) people with incomes both below and above the medium income, but when income inequality is very low, nobody may have an income below 60 percent of the median income. In a country with a rather equal income distribution, the ‘at risk of poverty’ indicator could therefore take the value of zero, even if everyone was extremely poor.

In contrast, in more unequal societies there are greater income differences and therefore more people below 60 percent of median income.

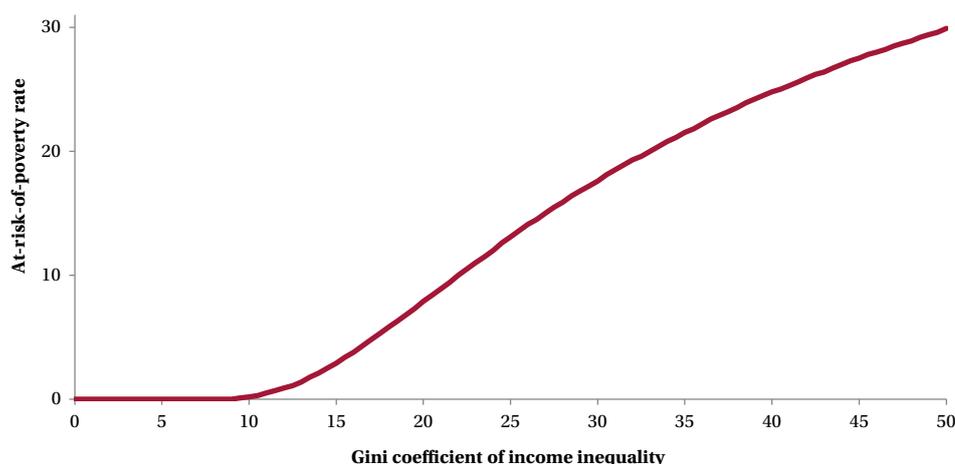
A mathematical relationship can be established between the Gini coefficient of income inequality and the ‘at risk of poverty’ rate if income distribution is assumed to be described by a certain statistical distribution function. Figure 2 shows the theoretical association between the two indicators when income distribution is described by the log-normal distribution, which is frequently found to be effective in describing income distributions (Darvas, 2016). In this case, nobody is deemed to be ‘at risk of poverty’ (that is, nobody has income below 60 percent of the median) if the Gini coefficient of income inequality is low, while at higher levels of inequality the ‘at risk of poverty’ rate increases in line with the increase in the Gini coefficient.

10 However, we note that it is surprising to find 18.7 million people in the EU27 (who reside in both ‘high wage’ and ‘low wage’ countries) who were severely materially deprived in 2015, but have income higher than 60 percent of the national median equivalised income (see the part of the purple circle which is outside the light brown circle in Figure 1). We would have expected severe material deprivation for people with very low incomes, yet there are 64.8 million people below 60 percent of the national median equivalised income who are not severely materially deprived (the part of the light brown circle which is outside the purple circle on Figure 1). This highlights that the material deprivation indicator measures perceptions, and we cannot exclude the hypothesis that this indicator carries large measurement errors.

11 The ‘at risk of poverty’ indicator dominates the overall indicator of ‘at risk of poverty or social exclusion’: 73 percent of people ‘at risk of poverty or social exclusion’ in the EU27 were flagged up by the criterion ‘at risk of poverty’ in 2015 (Figure 1).

12 http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty_rate.

Figure 2: The theoretical association between the Gini coefficient of income inequality and the 'at risk of poverty' rate when income distribution is log-normal



Source: Bruegel. Note: the 'at risk of poverty' rate is defined as the share of people with income below 60 percent of the national medium income.

In reality, actual income distributions differ from parametrised statistical distributions and therefore the association between the two indicators is not deterministic, but there is a very strong empirical association between them, as we demonstrate in Annex 1.

The use of the 'at risk of poverty' indicator in EU policy discussions

Apparently, nobody in EU policy circles is aware of the clear theoretical and robust empirical associations between the Gini coefficient of income inequality and the 'at risk of poverty' indicator. 'Poverty reduction' is very often referred to in connection with this indicator, but it is never mentioned that this indicator in fact measures income inequality.

For example, when the European Commission set the target of "lifting over 20 million people out of poverty" in March 2010, using the 'at risk of poverty' indicator, it did not include any reference to income inequality. The European Commission's *Social Protection & Social Inclusion* website¹³ continues to state that "the Europe 2020 strategy for smart, sustainable and inclusive growth sets targets to lift at least 20 million people out of poverty and social exclusion", without defining poverty or highlighting the near equivalence of the poverty indicator and the Gini coefficient of income inequality.

The European Parliament, meanwhile, adopted a resolution of 25 November 2014 on employment and social aspects of the Europe 2020 strategy, which stated that "the EU is far from having achieved the employment and poverty reduction headline targets of the Europe 2020 strategy", argued that "particular attention should be paid to poverty reduction" and used the term "poverty reduction" several dozen times throughout the resolution, based on information derived from the 'at risk of poverty' rate (European Parliament, 2014)¹⁴.

The European Confederation of Workers' Cooperatives, Social Cooperatives and Social and Participative Enterprises (CECOP – CICOPA Europe), which represents national organisations in 17 countries, expressed its position on the Europe 2020 Strategy Mid-Term Review by stating that "instead of progress in poverty alleviation as planned, a further 6.6 million people

¹³ <http://ec.europa.eu/social/main.jsp?catId=750&langId=en>.

¹⁴ Let us also note that European Parliament (2014) also called for better measurement: "43. Calls, therefore, for objective indicators of 'poverty' to be used for the measurement of Member States' poverty rates so as to help identify those at risk of exclusion; 44. Recalls, however, that a poverty indicator provides no direct evidence of the experience of social exclusion, and therefore calls for improved measurement of perceived social exclusion in order to reach a better understanding of the reasons for social exclusion and of which groups are particularly affected".

have actually fallen into poverty in the last 4 years". Similarly, the European Anti-Poverty Network (EAPN), the largest platform of anti-poverty organisations in Europe, talked about "*the unacceptable levels of poverty and social exclusion in the EU faced by 1 in 4 of the population*" and called for "*delivery on Europe 2020 goals, particularly the poverty target*", in a letter sent to European Commission president Jean-Claude Juncker about the Commission's 2017 *Annual Growth Survey*.

Many similar examples could be listed¹⁵. Sometimes even academic professors misunderstand these indicators.

At minimum, the extremely misleading indicator label 'at risk of poverty' should be replaced with 'relative income poverty or income inequality', to dispel any doubts about the correct interpretation of this indicator. Similarly, the name of the Europe 2020 target indicator 'at risk of poverty or social exclusion' should be replaced with 'relative income poverty or income inequality or potentially social excluded', which may sound convoluted, but would be better than the current short but misleading name.

Aggregation of country data to the EU level

Beyond the inherent difficulties of national 'at risk of poverty' rates, the differences between the national thresholds (which are used to calculate the 'at risk of poverty rate' in each country) are so huge that they further underline the inappropriateness of this indicator for assessing poverty trends. The question can also be asked of whether adding up the number of such people in different countries to arrive at an EU-wide number makes sense.

In Romania, for example, after correcting for differences in price levels, a disposable income of €2,613 a year (after taxes and social transfers) is considered to be the threshold in 2015, while in Luxembourg the price-level adjusted threshold is €17,571, but someone with an income slightly below the national threshold in Luxembourg is regarded as 'at risk of poverty', when she or he can consume seven times more goods and services than someone in Romania slightly above the national threshold and therefore not 'at risk of poverty'.

The difference between two less-divergent countries, Austria and the Czech Republic, is also substantial: after taking different national price levels into account, someone at the national threshold in Austria can consume twice as much in goods and services as someone at the national threshold in the Czech Republic. A two-fold difference is also huge: double income means that a person can live in a twice as large house, buy a twice as expensive car or spend twice as much on a holiday. Therefore, adding up the number of people 'at risk of poverty' in Luxembourg, Romania, Austria, Czech Republic and other EU countries leads to an EU-wide aggregate that is very difficult to interpret.

It is disappointing that 60 years after the Treaty of Rome set European integration in motion, EU-wide income distribution statistics are still derived by simply adding up country-specific data, instead of considering the distribution of income within the EU as a whole¹⁶. To address this problem, in Annex 3 we calculate poverty indicators for the EU as a whole.

15 See for example the speeches by European Commission Vice President Valdis Dombrovskis and European Commissioner for Employment, Social Affairs, Skills and Labour Mobility Marianne Thyssen, the 2016 report prepared by the European Parliament's Committee on Women's Rights and Gender Equality, the European People's Party action programme 2014-16, the declaration of the 2016 Council of the Party of European Socialists, the European Trade Union Confederation (ETUC) 2015-19 action programme, or Eurodiaconia's letter to labour ministers concerning the Europe 2020 mid-term review (see the references for details of these speeches and documents).

16 A similar problem emerges concerning the EU-wide Gini coefficient as we analysed in Darvas (2016).

3. How to meet the Europe 2020 ‘poverty’ target?

In its stock-taking report, the European Commission (2014) concluded that the recent economic crisis was primarily responsible for the divergence of the ‘at risk of poverty or social exclusion’ indicator from its target. While it is sadly true that the crisis increased unemployment and (properly measured) poverty, a more fundamental reason for the dismal performance is that the indicator used is more an indicator of income inequality than an indicator of poverty.

In order to check the likelihood that the Europe 2020 ‘poverty’ target will be met, we split the indicator into two parts:

1. All people considered ‘at risk of poverty’ by the respective indicator, that is, people with incomes below 60 percent of the national equivalised median income, irrespective of whether or not these people are also materially deprived, or whether they live in households with low work intensity;
2. People not ‘at risk of poverty’, who are severely materially deprived and/or live in households with low work intensity, but have income above the 60 percent of the median of the national equivalised income.

We expect that the ‘not-at-risk-of poverty’ component will be reduced as the economy grows and negative output gaps close. Our econometric analysis strongly confirms this (see the Annex).

Table 1 shows that the ‘not at risk of poverty’ component increased significantly from 2008-12, from 35.0 million to 39.2 million, a development in which the crisis likely played a role. However, with the gradual return of economic growth to Europe, this component declined from 39.2 million in 2012 to 31.7 million in 2015, and is well below its 2008 value. Given our estimated regression parameters and European Commission and IMF forecasts for 2016-20, we project that about 5.5 million fewer people will belong to this category by 2020.

Table 1: Illustrative scenario for the ‘at risk of poverty or social exclusion’ indicator to meet the Europe 2020 target (EU27, million people)

	2008	2012	2015	2020
At risk of poverty or social exclusion	115.9	122.2	117.5	95.9
of which:				
At risk of poverty	80.9	83.0	85.9	69.8
Not at risk of poverty	35.0	39.2	31.7	26.1

Source: Bruegel, Eurostat for 2008-15; see the annex. Note: earlier data indicated that there were 116.2 million people at risk of poverty or social exclusion in the EU27 in 2008. This number, along with the target of 96.2 million, appeared in several publications. Currently, the Eurostat database indicates 115.9 million people in 2008 and we related the 20 million reduction target to this starting value.

In contrast, the at-risk-of-poverty component, which as we have argued is an indicator of income inequality, increased from 2008-12 and from 2012-15, meaning that this component increased even during the recent period of economic recovery, in line with the increase in income inequality within many EU countries.

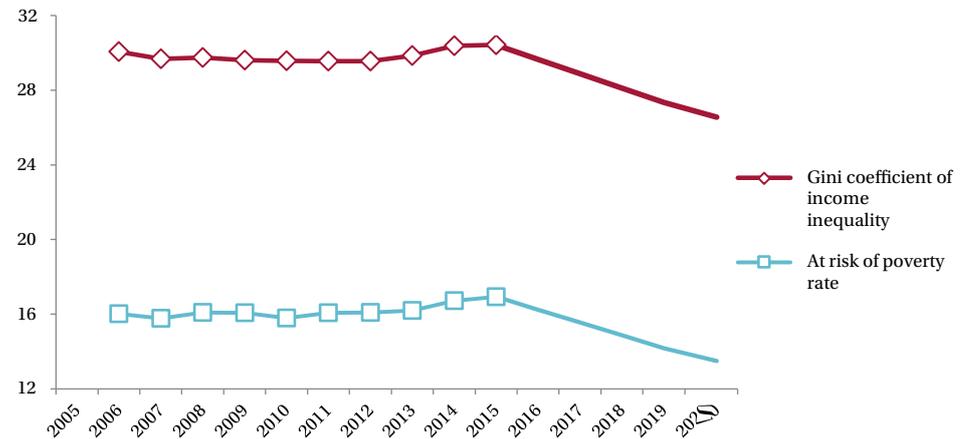
Given our projection for the ‘not at risk of poverty’ component, we illustratively calculate that the at-risk-of-poverty component should be reduced by 16.1 million between 2015 and 2020 in order to achieve the Europe 2020 target (see all details of the calculations in the Annex). Therefore, our calculation for the at-risk-of-poverty component is not a projection, just an illustration.

Given the strong association between the at-risk-of-poverty rate and the Gini coefficient of income inequality, we translate the necessary reduction in the at-risk-of-poverty rate to

a necessary reduction in the Gini. We find that an approximately 4-point decline in the Gini coefficient of income inequality would be consistent with reaching the Europe 2020 ‘poverty’ target (Figure 3).

Given relatively small historical variations in the Gini coefficient and a lack of strong policies to reduce income inequality, it is extremely unlikely that income inequality would fall to the level that would make the achievement of the Europe 2020 ‘poverty’ target realistic.

Figure 3: Illustrative scenario showing the necessary reduction in the ‘at risk of poverty’ rate and the Gini coefficient of income inequality to meet the Europe 2020 ‘poverty’ target in the EU27, 2006-20



Source: Bruegel, Eurostat for 2006-15; for the calculations for 2016-20 see Annex 2. Note: unweighted average of data of 27 member states.

4. The role of the European Semester in supporting progress towards the Europe 2020 ‘poverty’ target

The European Semester is the primary coordination mechanism to promote the achievement of the Europe 2020 targets. We assess the country-specific recommendations (CSRs) made at the end of each round of the European Semester. Table 2 summarises the instances when a discussion related to the ‘at risk of poverty or social exclusion’ indicator, or one of its components, was included in the report (denoted by ‘D’) and the instances when a related CSR was made.

Overall, relatively few recommendations were made that relate to the Europe 2020 ‘poverty’ target: the number of countries receiving such recommendations varied between three and eight each time and was on average 5.2. Such a low number suggests that reaching the Europe 2020 ‘poverty’ target is not a priority, which is surprising given that it is believed that 24 percent of EU citizens are ‘at risk of poverty or social exclusion’.

Countries with higher ‘at risk of poverty or social exclusion’ rates tend to receive more recommendations related to the ‘at risk of poverty or social exclusion’ indicator, which is reasonable. For example, Bulgaria, the country with the highest rate, received a related recommendation in each year between 2011-16.

Table 2: Issuing of European Semester country-specific recommendations related to the 'at risk of poverty or social exclusion' indicator or a variant of it, 2011-16

	2011	2012	2013	2014	2015	2016
Austria						
Belgium			D			
Bulgaria	D/CSR	CSR	D/CSR	D/CSR	D/CSR	D/CSR
Croatia	-----	-----	-----	D		
Cyprus	CSR	D/CSR	-----	-----	-----	
Czech Republic						
Denmark						
Estonia	D/CSR	D				
Finland						
France						
Germany						
Greece	-----	-----	-----	-----	-----	-----
Hungary			D/CSR	D/CSR	D	D/CSR
Ireland	-----	-----	-----	D/CSR	D/CSR	D/CSR
Italy			D	D/CSR	D	D/CSR
Latvia	-----	D/CSR	D/CSR	D	D	D
Lithuania		D/CSR	D/CSR	D	D	D
Luxembourg						
Malta						
Netherlands						
Poland		CSR	D/CSR			
Portugal	-----	-----	-----			D
Romania	-----	-----	D/CSR	D/CSR	D	D
Slovakia						
Slovenia		D			D/CSR	
Spain		D/CSR	D/CSR	D	D	D/CSR
Sweden						
United Kingdom		D	D/CSR	D/CSR		

Source: Bruegel based on Council conclusions submitted at the end of each European Semester cycle. Note: CSR: country-specific recommendation is issued. D: a topic related to the 'at risk of poverty or social exclusion' indicator is discussed in the preamble of the document setting the country-specific recommendations. Empty cells indicate that the topic was not mentioned at all in the document setting country-specific recommendations. "-----" indicates that recommendations were not issued because of financial assistance programmes and for Croatia before its EU membership.

However, countries do not receive a recommendation when this rate is between 15-23 percent (with the exception is Slovenia), though even 15 percent of a population is an extremely large number of people. If there were so many people at risk of poverty or social exclusion, policymakers should have acted.

The rate is even higher in Portugal at 26 percent, yet this country did not receive a recommendation (after it exited its financial assistance programme); neither did Croatia with a rate of 31 percent (after it joined the EU in 2013).

On the substance of the related country-specific recommendations, more than one third are not specific but make a general recommendation, such as "*Take steps to address the challenge of combating poverty and promoting social inclusion, especially for vulnerable groups facing multiple barriers.*"

Whenever specific recommendations were made, they included the following main areas:

- Reduce the tax and social security burden;
- Increase work incentives, strengthen the link between social assistance reform and activation measures, tapered withdrawal of benefits upon return to employment;
- Improve the effectiveness of active labour market policies to improve employability;
- Improve the effectiveness of social transfer systems/better targeting/better protection of the poor/better coverage;
- Combat labour market segmentation including through a better transition from fixed-term to permanent contracts;
- Facilitate female labour force participation by providing more affordable and quality child-care;
- Facilitate the transition of workers from public works schemes to the primary labour market;
- Increase the participation of disadvantaged groups, in particular Roma, in inclusive mainstream education;
- Implement relevant national strategies (such as national social inclusion and Roma integration strategies in Hungary and Romania and the national anti-poverty strategy in Italy);
- Reform the mechanism for setting the minimum wage in light of in-work poverty, job creation and competitiveness.

These specific suggestions aim to improve support provided to the poor, increase the inclusion of disadvantaged groups and facilitate labour force participation, and are therefore well made.

However, these measures help to reduce income inequality, the major determinant of the 'at risk of poverty' rate, only at the bottom of the income distribution, and their contribution to inequality reduction will likely be small. If the 'at risk of poverty' rate is to be reduced significantly in line with the Europe 2020 target, further measures are needed to reduce income inequality, such as more progressive income, wealth and inheritance taxes, better opportunities for disadvantaged and poorer families, with implications for education systems and labour market institutions, and curtailing unjustified rents enjoyed by certain segments of the society.

5. Concluding remarks

Increasing the awareness of the EU's social problems and finding solutions to these problems are crucial tasks. The European Commission, the European Parliament and national leaders deserve praise for focusing more and more on the social aspects of the European Union and for working towards certain social targets in the context of the Europe 2020 strategy and in the European Semester.

However, there is great confusion arising from the incorrect labelling of the key social target indicator, the 'at risk of poverty or social exclusion' rate, which stands at about 24 percent of the total EU population. This indicator, and variants of it such as the indicators applied to children, women or working age people, is widely understood a measure of 'poverty' or 'social exclusion,' whereas it is actually an indicator of income inequality. The EU faces several social challenges, including poverty and social exclusion among certain segments of the society, but it is not true that 24 percent of EU citizens face a high risk of poverty or social

exclusion, as the name of this indicator would suggest¹⁷. This relatively high rate is mostly the reflection of the level income inequality in EU countries, which, measured by the Gini coefficient, is about 30 on average.

Our illustrative calculations show that a very big fall in income inequality, by four Gini points, would be consistent with reaching the Europe 2020 'poverty' target, even after taking into account the expected reduction in material deprivation and low work intensity because of expected economic growth in the coming years¹⁸.

The political agreement on the Europe 2020 strategy refers to poverty and not to income inequality. It is a grave mistake to base the Europe 2020 poverty target on an indicator of income inequality and to speak about 'poverty reduction' in relation to that indicator.

There are good reasons to aim for lower income inequality, not least to foster upward social mobility, as we argued in our recent report on inclusive growth (Darvas and Wolff, 2016). But first, an EU-wide political agreement would be needed to set an income inequality goal, and second, the toolkit has to be adjusted to target income inequality reductions.

17 The misleading Europe 2020 target indicator name 'at risk of poverty or social exclusion' should be replaced by 'relative income poverty or income inequality or potentially social excluded,' which may sound convoluted, but would be better than a short but misleading name.

18 We propose the development of new social indicators. For example, Marx *et al* (2015) highlight that research to establish better poverty thresholds than 60 percent of the median income, such as the cost of a specific basket of goods and services, has had quite limited impact on policy formulation. Coudouel *et al* (2002) also provide many useful guidelines for the development of new indicators. And in the EU context, EU-wide indicators should consider the distribution of income within the EU as a whole, as we demonstrated for the Gini coefficient in Darvas (2016) and for poverty indicators in Annex 3 of this policy contribution.

Annex 1: The empirical association between the ‘at risk of poverty’ rate and the Gini coefficient of income inequality

Figure 2 in the main text depicted the mathematical (deterministic) correspondence between the ‘at risk of poverty’ rate and the Gini coefficient of income inequality when income distribution is described by the log-normal distribution. Certainly, there is a deterministic association between the two indicators only if we assume a certain statistical distribution to describe the distribution of income. In reality, however good an approximation, actual distributions differ from parametrised statistical distributions and therefore the association between the two indicators is not deterministic. Moreover, the ‘at risk of poverty’ rate considers only the bottom part of the income distribution, while the whole distribution matters for the Gini. Different Gini coefficients can therefore correspond to the same ‘at risk of poverty’ rate and a particular Gini coefficient might correspond to different ‘at risk of poverty’ rates, as also noted by Marx, Nolan and Olivera (2015).

We therefore look at the association revealed by data. Figure 4 highlights that the empirical association between the ‘at risk of poverty’ rate and the Gini-coefficient of income inequality across EU countries is indeed not deterministic, but there is a very strong empirical association between them¹⁹. Using average values from 2008 to 2015, the correlation coefficient between the two indicators is 0.91, which is a very high value. The correlation in yearly data is similarly high, before, during and after the crisis years. A simple linear regression suggests that a 1 point increase in the Gini coefficient is associated with a 0.89 point increase in the at risk of poverty rate – a result very similar to what we obtained when analysing the theoretical association between the two indicators using the log-normal distribution²⁰.

Data for non-EU OECD countries reveals a very similar relationship (Figure 5), though the at risk of poverty rate for Chile and Mexico is broadly similar to those of the United States and Turkey, even though income inequality is much higher in Chile and Mexico.

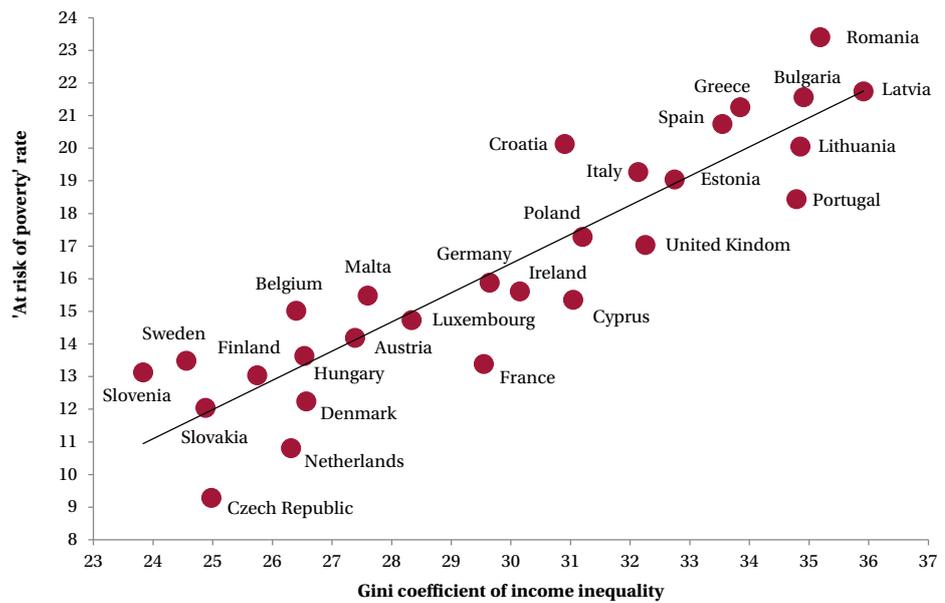
The evolution of the indicators for each country also highlights the strong co-movement of the two indicators. Figure 6 shows that the Gini coefficient and the ‘at risk of poverty’ rate moved in tandem in height selected countries. In contrast, the severe material deprivation rate (a useful available measure of poverty in the European context) developed in strikingly different ways in these countries, highlighting again that the at risk of poverty rate is rather distinct from poverty developments.

Therefore, the ‘at risk of poverty’ rate essentially measures the same phenomenon as the Gini coefficient of income inequality.

¹⁹ Figure 1 in Marx, Nolan and Olivera (2015) is a similar chart for OECD countries.

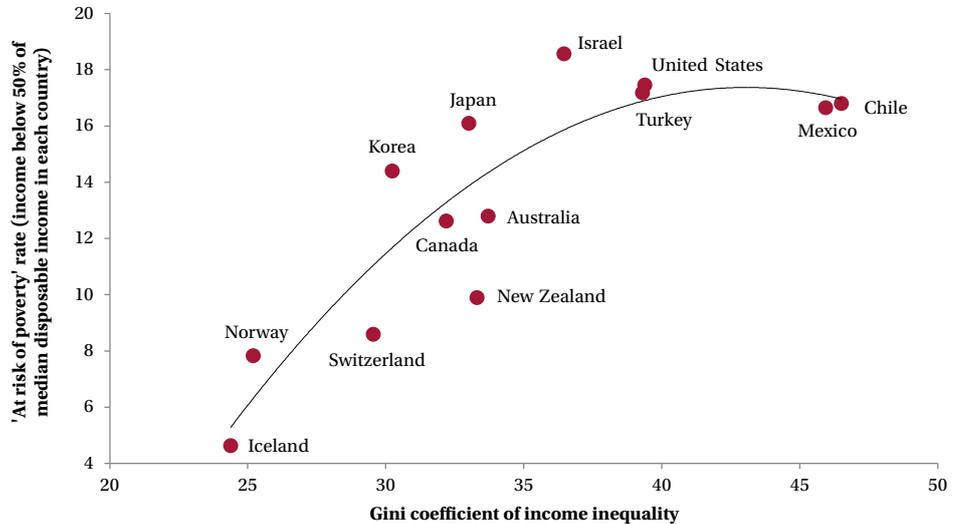
²⁰ While the theoretical association between the two indicators is slightly non-linear (Figure 2), it can be well approximated by a linear relationship when the Gini coefficient is in the range observed in EU countries, that is, in the range of 23-37. In this range, a linear approximation suggests that a 1 point increase in the Gini coefficient is associated with a 0.84 point increase in the ‘at risk of poverty’ rate.

Figure 4: The empirical association between the Gini coefficient of income inequality and the 'at risk of poverty' rate (EU countries)



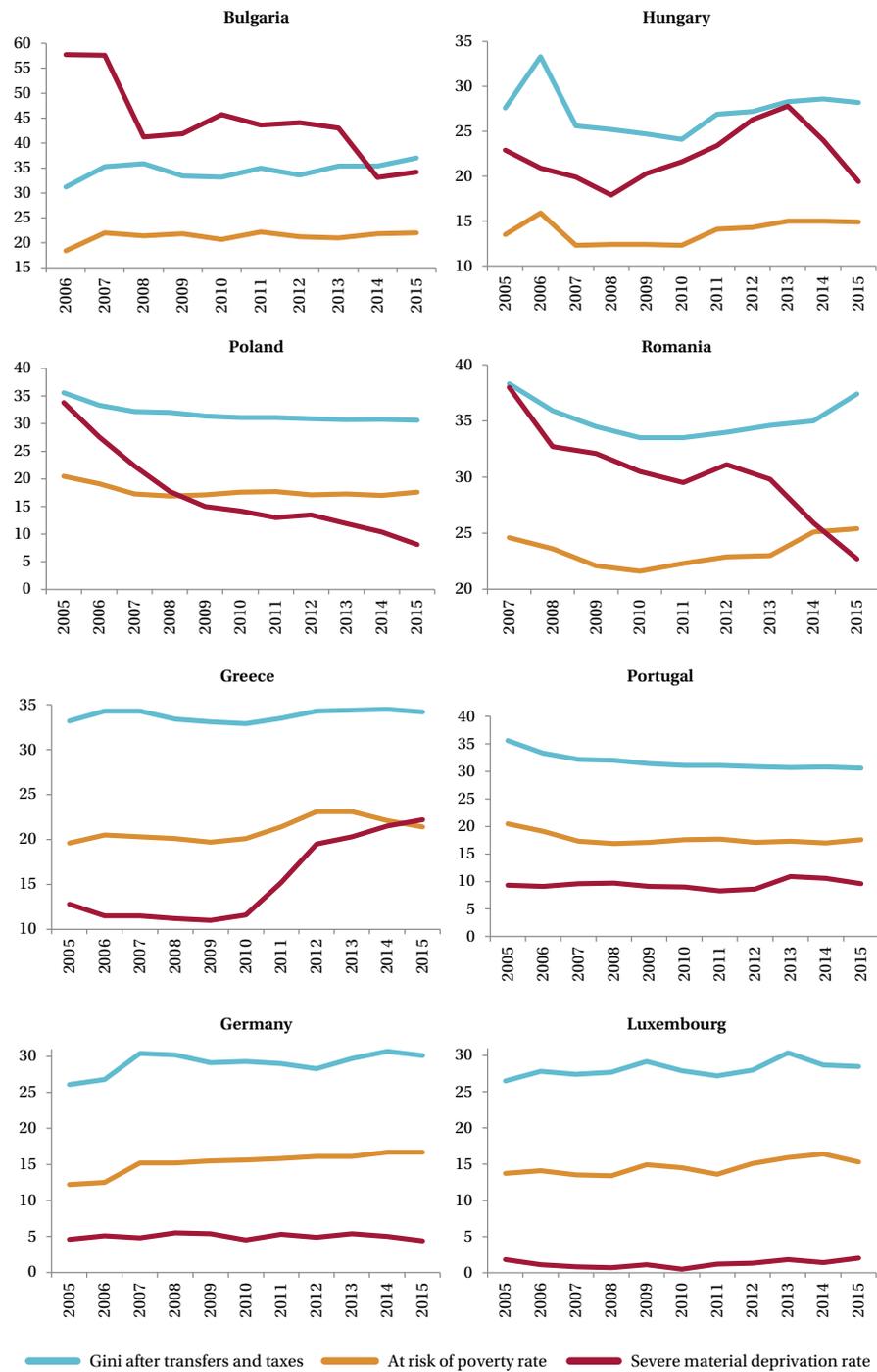
Source: Updated from Darvas and Tschekassin (2015) using data from Eurostat. Note: both indicators are averaged over 2007-15. The at risk of poverty indicator is 'At risk of poverty rate [cut-off point: 60 percent of median equivalised income after social transfers]', while the Gini coefficient is the 'Gini coefficient of equivalised disposable income'.

Figure 5: The empirical association between the Gini coefficient of income inequality and the at risk of poverty indicator (non-EU OECD countries)



Source: OECD: <http://www.oecd.org/social/income-distribution-database.htm>. Note: 2014 or latest data. Income distribution data refer to the total population and are based on equivalised household disposable income, ie disposable income adjusted for household size. The poverty threshold used by the OECD is 50 percent of median disposable income in each country, while it is 60 percent in the Europe 2020 framework. The OECD calls the indicator the 'poverty rate', but since it is calculated exactly the same way as the EU's at risk of poverty rate, we label the y axis correspondingly.

Figure 6: The Gini coefficient of income inequality, the 'at risk of poverty' rate and the severe material deprivation rate in selected countries



Source: Eurostat's 'Gini coefficient of equivalised disposable income - EU-SILC survey [ilc_di12]', 'At-risk-of-poverty rate by poverty threshold, age and sex - EU-SILC survey [ilc_li02]' and 'Severe material deprivation rate by age and sex [ilc_mddd11]' databases.

Annex 2: Calculating the reduction in the Gini coefficient of income inequality that would be consistent with reaching the Europe 2020 ‘poverty’ target

We split the Europe 2020 indicator of ‘at risk of poverty or social exclusion’ into two parts:

1. All people considered ‘at risk of poverty’ by the respective indicator, that is, people with income below 60 percent of the national equivalised median income, irrespective of whether these people are also materially deprived or not or whether they live in households with low work intensity or not;
2. People not ‘at risk of poverty’, who are severally materially deprived and/or live in households with low work intensity, but have income above the 60 percent of the median of the national equivalised income.

For these two groups of people we make the following projections:

- ‘Not at risk of poverty’ component: we estimate regressions for the determinants of this component in 2003-2015 and then use European Commission (2016-18) and IMF (2019-20) forecasts to project how much reduction is expected in this component by 2020.
- ‘At risk of poverty’ component: given our projection for the ‘not at risk of poverty’ component, we illustratively calculate how much reduction in the at-risk-of-poverty component is needed to achieve the Europe 2020 target. Therefore, our calculation for the ‘at risk of poverty’ component is not a projection, just an illustration.

Given the strong association between the ‘at risk of poverty’ rate and the Gini coefficient of income inequality (Annex 1), we then calculate the Gini reduction which is consistent with reaching the Europe 2020 ‘poverty’ target.

Our hypothesis is that the non-at-risk-of poverty component is expected to be reduced when:

- The economy grows (partly because growth typically creates jobs and thereby the long-term unemployed have a better chance of finding work, and partly because even if inequality widens with growth, the poorer segments of the society may receive a higher income and thereby material deprivation can be reduced); and
- Negative output gaps close (because when the economy is below potential, unemployment is higher than normal, which directly influences the spectre of living in households with low work intensity, while lower income due to weak economic conditions and unemployment increases material deprivation).

In order to test these hypotheses, we estimate regressions, both in a panel framework involving the first 27 EU member states and in a single equation framework for each member states separately. Regression results strongly confirm the hypotheses.

We use two functional forms: a linear form and a log-linear form. The panel versions of these two forms are the following:

$$noarop_{t,i} = \alpha + \mu_i + \delta_t + \beta_1 \cdot income_{t,i} + \beta_2 \cdot gap_{t,i} + \beta_3 \cdot noarop_{t-1,i} + \varepsilon_{t,i}$$

$$\log(noarop_{t,i}) = \alpha + \mu_i + \delta_t + \beta_1 \cdot \log(income_{t,i}) + \beta_2 \cdot gap_{t,i} + \beta_3 \cdot \log(noarop_{t-1,i}) + \varepsilon_{t,i}$$

Where δ_t is the difference between 'at risk of poverty or social exclusion' rate and the 'at risk of poverty' rate (both expressed as a percent of population) of country i in time t , α is the general intercept, μ_i is the country-specific fixed effect, δ_t is time-specific fixed effect, $income_{t,i}$ is mean income in country i in time t (expressed in constant-price purchasing power standards²¹), $gap_{t,i}$ is the output gap country i in time t (expressed as a percent of potential output), $\beta_1, \beta_2, \beta_3$ are parameters to be estimated, and $\varepsilon_{t,i}$ is the error term.

The log-linear version ensures that the fitted and forecast values are always positive, as they should be.

Table 3 shows that in our panel regressions estimates, the parameters of both mean income and the output are statistically significant with the correct sign, irrespective of (i) the use country and time fixed effects, (ii) whether the lagged dependent variable is included or not²², (iii) whether the untransformed variables are used or a logarithmic transformation is applied.

Table 3: Panel regression results for the 'not at risk of poverty' component of the 'at risk of poverty or social exclusion' rate

	Linear version				Non-linear version			
	Model A	Model B	Model C	Model D	Model E	Model F	Model G	Model H
Mean income	-0.57	-0.02	-0.96	-0.21	-0.91	0.00	-1.36	-0.41
[t-ratio]	[-11.2]	[-0.9]	[-7.5]	[-2.8]	[-19.8]	[0.1]	[-13.2]	[-3.2]
Output gap	-0.11	-0.21	-0.12	-0.21	-0.018	-0.021	-0.012	-0.022
[t-ratio]	[-1.5]	[-8.3]	[-2.2]	[-6.0]	[-2.6]	[-8.6]	[-2.6]	[-5.9]
Lagged non-AROP rate		0.85		0.62		0.94		0.68
[t-ratio]		[17.6]		[7.7]		[33]		[14.1]
	0.43	0.93	0.87	0.95	0.55	0.94	0.90	0.96
Countries	27	27	27	27	27	27	27	27
Years	13	12	13	12	13	12	13	12
Observations	312	285	312	285	312	285	312	285
Fixed effects	no	no	yes	yes	no	no	yes	yes

Source: Bruegel. Note: the dependent variable is the difference between 'at risk of poverty or social exclusion' rate and the 'at risk of poverty' rate, both expressed as a percent of population. Mean income is measured in constant price purchasing power standards, while the output gap is measured as percent of potential output. For better readability of the table, we multiply the estimated parameter of mean income by one thousand in the linear version. AROP = at risk of poverty.

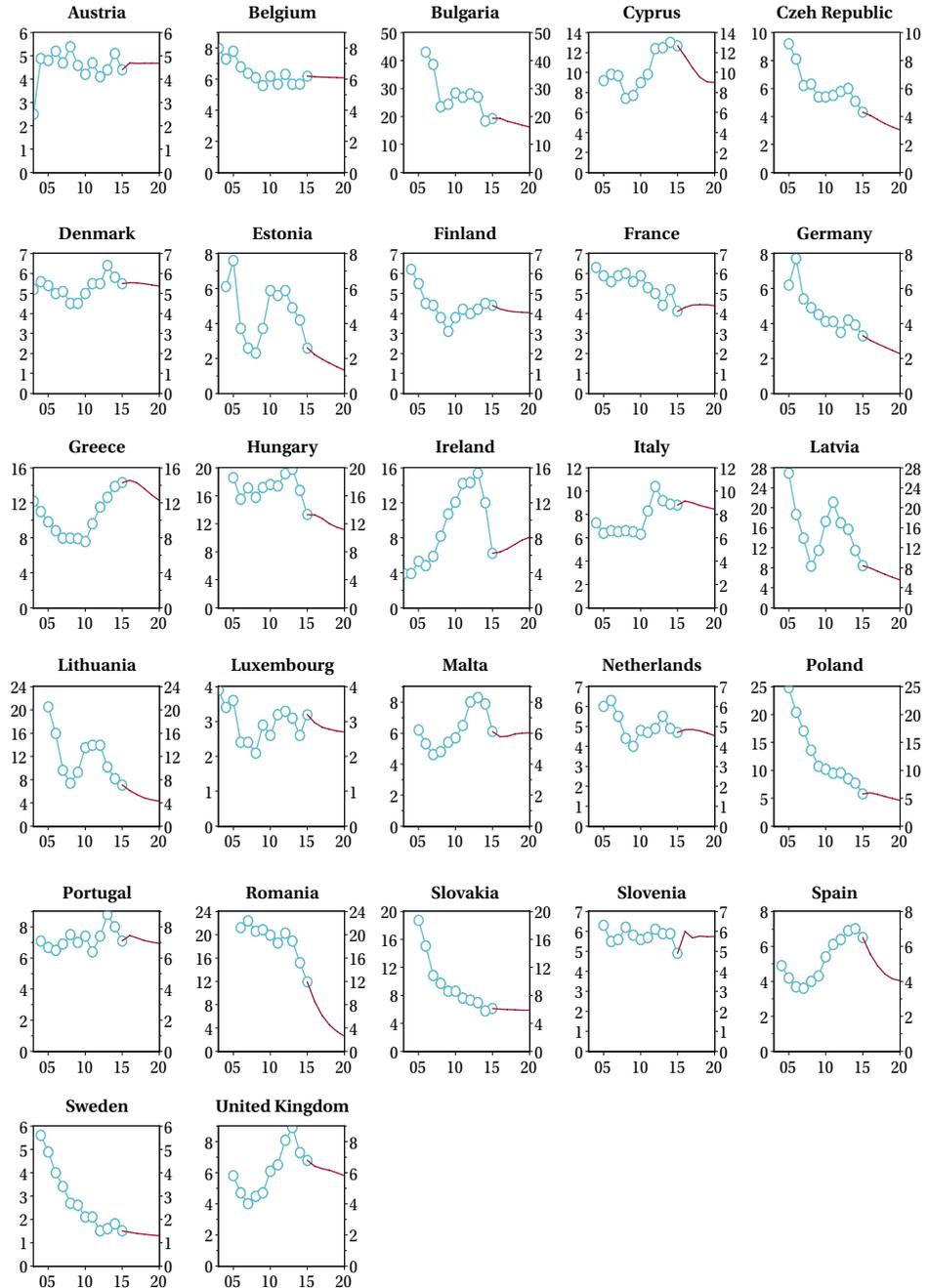
The country-specific regressions also largely confirm both hypotheses. There are only four countries, Austria, Belgium, Finland and Slovenia, for which none of the two variables are statistically significant. For the other 23 countries one or both of the variables are statistically significant.

21 Eurostat publishes data at current-price purchasing power standards (PPS). In order to approximate mean income at constant-price PPS, we deflated current-price PPS data with the EU28 harmonised index of consumer prices.

22 Mean income is not significant when lagged dependent variable is included and fixed effects are not included. It is significant in all other specifications.

For our projections, we use the country-specific regression to allow for different sensitivity of social indicators to economic developments. For these projections, we use the version of the model which is estimated on logarithmic values (to ensure that projections are always positive), include the lagged dependent variable, and include only those explanatory variables which were statistically significant. Therefore, for the countries for which neither mean income, nor the output gap was significant, we use a simple first order autoregressive model.

Figure 7: The difference between the 'at risk of poverty or social exclusion' indicator and the 'at risk of poverty' indicator, 2003-20 (% of population)



Source: Bruegel. Note: the blue lines indicate actual data, while the red lines indicate our projections.

For our projections to 2016-20, we make the following assumptions:

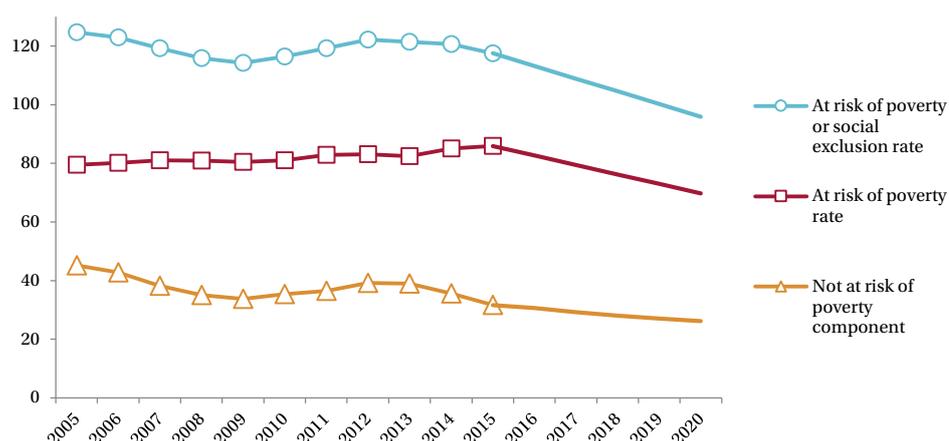
- Mean income growth in constant-price PPS in 2016-20: we approximate with the growth rate of real GDP per capita as it is projected by the European Commission November 2016 forecast for 2016-18 and the IMF October 2016 forecast for 2019-20.
- Output gap: we use the European Commission November 2016 forecast for 2016-18 and then estimate a simple autoregression to project the output gap for 2019-20.
- Population: we approximate with the growth rate of population as it is projected by the European Commission November 2016 forecast for 2016-18 and the IMF October 2016 forecast for 2019-20.

Mean income and output gap projections allow to project the ‘not at risk of poverty’ rate up to 2020. Figure 7 shows that the projections look sensible. There are only a few countries for which projections may look somewhat unrealistic, such as the in the case of Romania, where projected fall in the ‘not at risk of poverty’ rate may perhaps be too large, and Ireland²³, for which a bounce back is projected after a large drop in 2014-15.

Population projections allow translating the rate projections into number of people projections: in the EU27, 5.5 million people with income over the 60 percent of national median equivalised income are projected to be lifted from material deprivation and/or living in low work intensity households between 2015-20.

Given the projected decline in the ‘not at risk of poverty’ components of the ‘at risk of poverty or social exclusion’ indicator, we calculate the needed reduction in the ‘at risk of poverty’ component, which amounts to 16.1 million people (see Table 1). Given population projections, the necessary decline of 16.1 million in the number of people regarded to be ‘at risk of poverty’ is equivalent to a 3.4 points decline in the ‘at risk of poverty’ rate in each EU country. This is in turn consistent with a 3.9 points decline in the Gini coefficient of income inequality in each EU country, using the empirical association revealed by . Table 1 in the main text presented the number of such people in four key dates, 2008, 2012, 2015 and 2020, while Figure 8 reports the annual developments.

Figure 8: The ‘at risk of poverty’ and ‘not at risk of poverty’ components of the ‘at risk of poverty or social exclusion’ indicator in the EU27, 2005-20 (million people)



Source: Bruegel. Note: Actual data for 2005-15. For the ‘not at risk of poverty’ component, the projection for 2016-20 is based on our regression estimates and European Commission and IMF forecasts for 2016-20. Given the projected decline in the ‘not at risk of poverty’ component, the dark red dashed line shows the necessary decline in the ‘at risk of poverty’ indicator to reach the Europe 2020 target of 20 million reduction in “at risk of poverty or social exclusion” from 2008 to 2020.

23 At the time of writing, the ‘at risk of poverty’ and ‘at risk of poverty or social exclusion’ indicators are available only up to 2014 for Ireland from Eurostat. However, these indicators are available for all other EU countries and the EU as a whole for 2015, from which we calculated the 2015 Irish values.

Annex 3: Deriving income poverty indicators from the EU-wide distribution of income

A large number of income poverty indicators have been proposed in the literature. Many require access to household-level data that we do not have. We therefore derive two indicators of poverty, which can be constructed using publicly-available data from Eurostat:

- **Headcount:** share of people living on less than 2, 5, 10 or 20 euros a day (at constant 2007 purchasing power standards).
- **Poverty gap:** the total combined shortfall of income less than 2, 5, 10 or 20 euros a day (at constant 2007 purchasing power standards) as a share of GDP. This is obtained by adding up all the shortfalls of the poor, eg for all people with income less than 2 euros a day, we add up the gaps between 2 euros and their actual income.

As highlighted by Marx *et al* (2015), based on the seminal works of Amartya Sen, a head-count poverty target may provide a perverse incentive to policymakers to target those who are below but close to the poverty threshold (because those people can be lifted over the poverty threshold in a much easier way than the very poor). A poverty gap target may provide incentives to consider all the poor, including those who are very poor²⁴.

Beyond calculating these indicators for each country, we calculate these indicators for the EU27 as a whole, for which we approximate the EU-wide distribution of income. The main steps of the calculations are the following:

1. For each country, we approximate more detailed data on income distribution (ie all the 100 percentiles) than what is available (Eurostat publishes the following income shares data for each country: 1, 2, 3, 4 and 5 percentiles, deciles, quartiles, 95, 96, 97, 98, 99 and 100 percentiles).
2. For each country, we use a measure of mean income to approximate the income of households corresponding to the 100 percentiles.
3. Using population size, we combine approximated household incomes of each country to obtain the EU-wide distribution of income.

For the first step, we use the Lorenz curve regression method of Bhalla (2002) and Kakwani (1980), which Darvas (2016) found to be the most reliable method which is based on quantile income shares data.

In the second step, we use mean income at purchasing power standards (PPS), adjusted by the EU28 consumer prices. Eurostat published PPS data at current prices, which is comparable across countries in a given year, but not comparable in time. We wish to fix the thresholds at their 2007 real values, which is the first year for which income distribution data is available for the first 27 EU member states. Therefore, for later years, we increase the 2007 poverty threshold values (ie 2, 5, 10 and 20 euros a day) by the EU28 harmonised index of consumer prices. We then compare these current-price equivalents of the poverty thresholds at '2007 price PPS' to current-price PPS income data.

And in the third step we use population size to combine the national income distributions into the EU27 distribution of income.

We note that our Bhalla-Kakwani regression approximations can be a source of measurement error. Unfortunately, income share data published by Eurostat is rounded to one digit after the decimal. At very low levels of income such rounding prohibits to get sufficient

²⁴ There are also measures that focus even more on the very poor. For example, by adding up the squares of individual poverty gaps places a higher weight on those households that are further from the poverty line (see Coudouel *et al*, 2002).

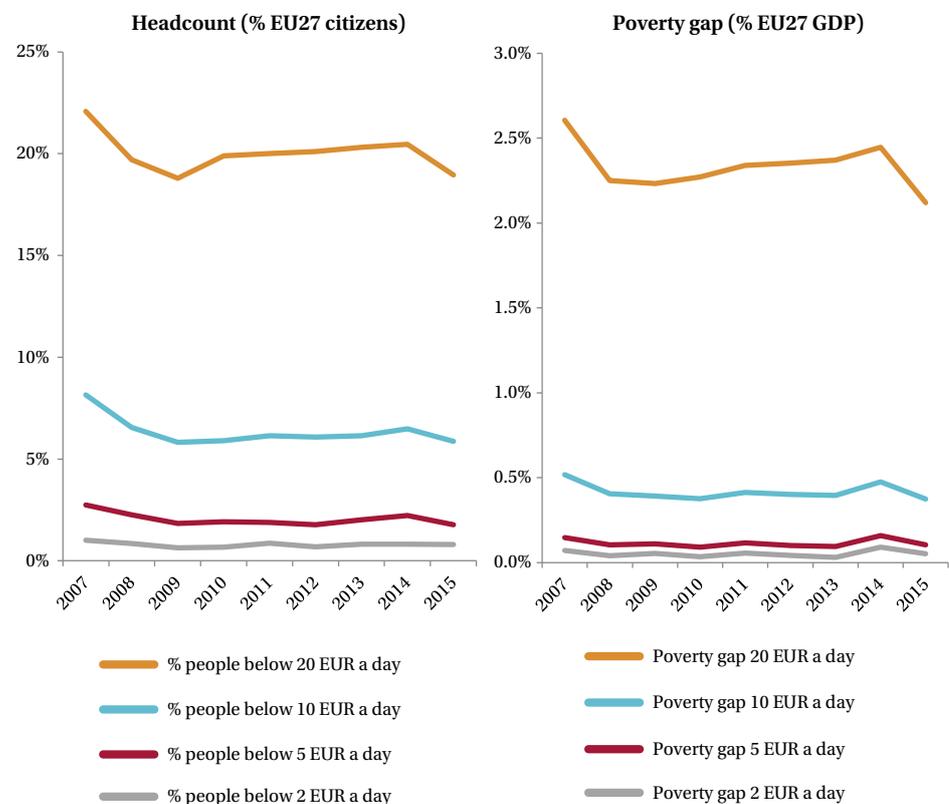
information about income shares²⁵. For example, Table 4 shows the income shares of the lowest five percentiles of Belgium in 2011 as published by Eurostat and as approximated by our regression:

Table 4: Income shares of the lowest five percentiles, Belgium, 2011

	Data published by Eurostat	Approximated our regression
First percentile	0.0	0.036
Second percentile	0.3	0.238
Third percentile	0.3	0.306
Fourth percentile	0.4	0.350
Fifth percentile	0.4	0.383

Source: Bruegel.

Figure 9: Our new poverty indicators, EU27



Note: the poverty thresholds are measured at 2007 constant-price purchasing power standards.

For the first percentile Eurostat provides the number zero (after rounding), while presumably the true value is not exactly zero. Our regression approximates this share as 0.036 percent, which is 0.0 after rounding. For the second and third percentiles Eurostat provides 0.3 percent (again, after rounding), while by definition the income share of the third percentile must be higher than that of the second percentile. The fourth and fifth percentiles also seem to have identical income shares according to the rounded data. In this particular case of

25 We recommend that Eurostat should revise its publication policy and report at least two significant digits, instead of rounding to one digit after the decimal, when publishing income shares data and other indicators with values close to zero.

Belgium's 2011 data, four of our approximations of the lowest five percentiles income shares correspond to Eurostat data after rounding, while our approximation for the second percentile does not correspond.

Therefore, our approximation for each country is burdened with a measurement error, which can be larger when the poverty threshold is close to the very bottom of the income distribution. Likely, the measurement error is smaller when the threshold is not too close to the bottom of the income distribution, given that more information is available to approximate those incomes. And for the EU as whole, the measurement error is likely smaller than for individual countries also for low income threshold levels, given the large income differences across countries. For example, very few people, if any, is at the bottom one percent of the EU-wide income distribution from Luxembourg, while six percent of Romanian citizens belong there, whose income is already measured with a reasonable degree of precision.

According to our calculations, less than one percent of EU citizens live on less than 2 euros a day (at 2007 PPS; Figure 9). The shares of people living on less than 5, 10 and 20 such euros are about 2 percent, 6 percent and 19 percent, respectively. The 2015 shares are all below the 2007 shares, yet there was a temporary increase in the early 2010s. The poverty gap indicator suggests that the combined income shortfall of people living on less than 2 or 5 PPS euro is very small as a share of EU27 GDP, while the poverty gap for 10 PPS euro is about 0.4 percent of EU27 GDP, and the poverty gap at 20 PPS euro is about 2.1 percent of EU GDP in 2015. The dynamics of poverty gap is similar to the dynamics of the head count, but, for example, in the case of the 5 euro threshold, the headcount fell more than the poverty gap between 2007-15, while for the 20 euro threshold the opposite result holds.

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