



closing gaps in European social citizenship

Developments in minimum income benefits levels in Europe

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András Gábos

Zsófia Tomka



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- i) to advance the knowledge base that underpins the formulation and implementation of relevant policies in Europe with the aim of exercising the EU social rights as an integral part of EU citizenship and promoting upward convergence, and
 - ii) to engage with relevant communities, stakeholders and practitioners in the research with a view to supporting social protection policies in Europe.
- Contributions to a dialogue about these results can be made through the project website euroship-research.eu, or by following us on Twitter: @EUROSHIP_EU.

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Authors

[András Gábos](#), Társi Social Research Institute, Hungary
[Zsófia Tomka](#), Társi Social Research Institute, Hungary

Abstract

This paper examines changes over time in minimum income benefit levels and their effects on the risk of poverty, as well as on unemployment (or poverty) traps. The analysis is carried out for different household types (single person, single parent with two children, couple, and couple with two children), during and after the Great Recession, in EU member states as well as the UK, Iceland, Switzerland and Norway. We use data from two sources, from the CSB Minimum Income Protection Indicators database (CSB-MIPI) based on the Hypothetical Household Tool (HHoT) of EUROMOD and from TaxBEN, the OECD tax-benefit simulation model.

We find - across all household types - that the guaranteed minimum income of out-of-work households does not reach the 60% national poverty threshold in almost any European country. Countries with a guaranteed minimum income below the 40% threshold are mostly Central, Eastern and Southern European ones. The trends over time for guaranteed minimum income benefits show a decline in relative benefit levels for most countries. The effect of the Great Recession is not really detectable in most European countries. Rather, changes around 2009-2013 seem to constitute a part of an overall trend of decline in benefit levels which already started before the crisis, and which might be related to the policies implemented in the social investment era.

Based on the CSB-MIPI data, in the aftermaths of the crisis, we find a general growth in minimum wage, net disposable income and financial incentive levels. When it comes to households *without* children, disposable income on social assistance and the welfare efforts were stagnating in most countries. For households *with* children, however, both social assistance and welfare efforts increased in several countries.

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List of abbreviations

Countries

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czechia
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom
IS	Iceland
NO	Norway
CH	Switzerland

1 Introduction

The aim of the paper is to provide new knowledge about changes in minimum income benefit levels and their effects on risks of poverty as well as on poverty or unemployment traps, for different household types (single person, single parent with two children, couple, and couple with two children), during and after the Great Recession in the EU member states.

Minimum income schemes are “(...) means-tested monetary transfers targeted to working age individuals with the aim to reduce poverty and social exclusion” (Jessoula 2021: 11). There are three main considerations why we focus on these in our paper. The first refers to its importance regarding social citizenship, which is at the core of the EUROSHIP project. The importance of minimum income schemes among welfare state provisions is provided by the fact that they “(...) effectively define what social citizenship entails” (Marchal et al. 2014: 6). In this respect, minimum income provisions may define the actual level of security as a dimension of social citizenship. Looking at these schemes allows us to assess both their adequacy against various benchmarks and their behavioural consequences.

The second reason is related to the role of the European Union in reducing poverty and social exclusion among its citizens. Minimum income schemes may play an important role in this respect. Cantillon et al. (2019: 269) argue that the EU may strengthen pan-European solidarity by “(...) binding input governance in the field of minimum income protection (...)”. We adopt a cross-country comparative approach, which allows us to draw some conclusions on the level of solidarity across member states.

Finally, in this paper, we emphasise changes that might be attributed to the Great Recession in the outcomes of minimum income schemes throughout the European countries. The financial and economic crisis occurred in 2008, following a period characterized by the social investment policy paradigm that prioritized activation measures and which period was coupled with improved labour market outcomes (Marchal et al. 2014). At the same time, in many welfare states, cost-containment measures eroded social protection systems (Bonoli and Natali 2012).- Accordingly, the break-out of the crisis that brought large-scale job loss and increased unemployment found weakened safety nets. By providing results for four separate years in the period between 2005 and 2017, we examine how minimum income provisions (as automatic stabilizers) functioned and what effect they had on poverty reduction during the crisis and in the times of recovery. Marchal et al. (2014) found that many countries introduced supportive measures as an immediate reaction to the crisis, but they also found little evidence for structural changes. In general, we expect that the main trends were not affected due to the lack of structural changes, but some countries could improve the adequacy of the MIS by their effective functioning as automatic stabilizers or by increasing the level of benefits. We also expect that there was a divergence in the adequacy of minimum income benefits across countries afterwards, depending on the initial conditions and implemented policy answers. The latter also seems to be supported by the findings of Jessoula (2021) for a restricted number of countries that the trajectories of countries following the crisis and up until most recently, are very heterogeneous. The analysis may identify countries, which seemed to be more resilient in the face of the crisis, because of either their existing policies or the measures they implemented. These results might be important in establishing hypotheses on what could have happened with social safety nets in the EU member states during the COVID-19 pandemic.

The paper is organized as follows. Section 2 describes the data and methods we used for our analysis. This will be done by providing a detailed overview of the two databases we explore: OECD's TaxBEN and Euromod-HHoT. In Section 3, we compare the adequacy of minimum income benefits in out-of-work households, based on the TaxBEN database, assessing their effects on the risk of poverty. In Section 4, we go further and extend our analysis also to in-work households, where one adult is employed on minimum wage. This exercise allows us to have a look at the effect of minimum income benefits on the poverty or unemployment trap. This section differentiates between comparative results by both countries and time periods. For the latter, we distinguish between two periods: the one of the Great Recession (2009-2013) and the one of recovery (2013-2017). Section 5 concludes. Annexes include graphs and tables that could not be inserted into the main text, providing information on additional years or family types, as well as background tables to the main graphs.

2 Data and methods

In our analysis, we used data from two sources, from the CSB Minimum Income Protection Indicators database (CSB-MIPI) based on the Hypothetical Household Tool (HHoT) of EUROMOD and from TaxBEN, the OECD tax-benefit simulation model. Instead of providing microdata, both databases include tax and benefit simulations for a number of hypothetical households with given characteristics. In this respect, a rights-based approach is applied. There are limits to the extent to which results from this approach can be generalised. However, by keeping as many characteristics of a household constant as possible during the analysis, minimum income protection schemes can be compared more easily across countries and the effects of policy changes can be tracked over time as well.¹

CSB-MIPI originated from a data collection on minimum income schemes in 15 European countries, covering the time period between 1992 and 2001. It included so-called 'model family simulations'. Later, the database was expanded to cover 27 countries and the time period up to 2009. This is when the CSB Minimum Income Protection Database was established. Most recently, in 2019, CSB-MIPI was updated to being based on the Hypothetical Household Tool (HHoT) of EUROMOD, the tax-benefit simulation model of the European Union. At the moment, it covers the period of 2009 until 2017. We include three years in our analysis, 2009, 2013 and 2017.

The current CSB-MIPI database includes simulations for four different household types: 1. a single, 35-year-old man (referred to in the analysis as *Single*); 2. a divorced 35-year-old woman with two children - a boy aged 14 and a girl aged 7 (*Lone parent, 2 children*); 3. a married heterosexual couple, both 35 years old (*Couple*); 4. a married heterosexual couple, both 35 years old, with two children - a boy aged 14 and a girl aged 7 (*Couple, two children*). The main indicator, *household net disposable income* was included in the analysis for two income cases: 1. households with one adult earning the equivalent of full-time minimum

¹ There is a third database which could have been included as it also contains information on benefits in low-income households: the Social Assistance and Minimum Income Protection Interim Dataset (SAMIP). SAMIP is part of the SPIN database, which contains comparative data on the social rights and duties of citizens, with a focus on institutions (by looking at social policy legislation). SAMIP covers 34 countries and the 1990-2019 period. We did not include the database in our analysis due to the fact that combined, the OECD and MIPI data are suitable for answering our research questions. More information is available about SPIN and SAMIP at <https://www.sofi.su.se/spin/>.

wage, and where other adults are economically inactive (i.e. not seeking work) (referred to in the analysis as *net disposable income*); 2. households where no adult is in work, and all adults are seeking work (*social assistance*). In both cases, income is expressed in monthly national currency. The minimum income provisions relevant for the analysis included in the database are minimum wages, applicable taxes and social insurance contributions, housing and heating allowances, minimum income protection benefits for the able-bodied of active age, child benefits and other benefits. Incomes are not equivalized for household size as they are not expressed as income per capita, but as the total household income. The two thresholds which minimum income provisions can be measured against are 1. the *average national monthly currency*, which was retrieved from EU-SILC (converted from EUR to national currencies using the 2017 fixed exchange rate for every year, using data from Eurostat²); as well as the *at-risk-of-poverty rate* calculated as the share of persons with an income below the national poverty threshold (defined as 60% of the national median income). This threshold is equivalized for household size in order to make it possible to compare it with the household income indicators. The equivalence scale is 1 for the first adult, 0.5 for the second adult and children older than 13, and 0.3 for each child aged below 14.

The OECD TaxBEN data portal provides indicators to make it possible to monitor policy developments, benefit generosity and work incentives which influence the disposable income of households over time and across countries. For our analysis, we used data for 31 European countries: the EU-27 as well as the UK, Iceland, Norway and Switzerland. Data is available for each year of the time period 2001-2020. In order to be able to monitor the effect of the Great Recession as well, we chose to include the years 2001, 2005, 2009, 2013 and 2017.

The main indicator from the OECD TaxBEN model used for the analysis is the *adequacy of guaranteed minimum income benefits*. According to the OECD definition:

“It measures the income of selected jobless families that claim Guaranteed Minimum Income (GMI) benefits. Values are expressed both in national currency and as a percentage of the median disposable income in the country. When the country's poverty line is defined as a fixed percentage of the median disposable income, the normalization of GMI amounts in terms of the median disposable income allows measuring the gap between benefit entitlements and the poverty line. For instance, if the poverty threshold is 50% of the median disposable income, a value of the indicator of 30% means that benefit entitlements are 20 percentage points below the poverty line.”

Similarly to the CSB-MIPI database, simulations are done for four different household types: 1. one jobless, single 40-year-old person (referred to in the analysis as *jobless person without children*); 2. one jobless, 40-year-old person with two children aged 4 and 6 (*jobless person with two children*); 3. a jobless married couple, both 40 years old (*jobless couple without children*); 4. a jobless married couple, both 40 years old, with two children aged 4 and 6 (*jobless couple with two children*). The values of the indicator are equivalised using the square root of family size. Additionally, the net household income includes only cash benefit entitlements and no other income sources. It is assumed that the household members are not entitled to unemployment benefits. In our analysis, we included housing benefits as well,

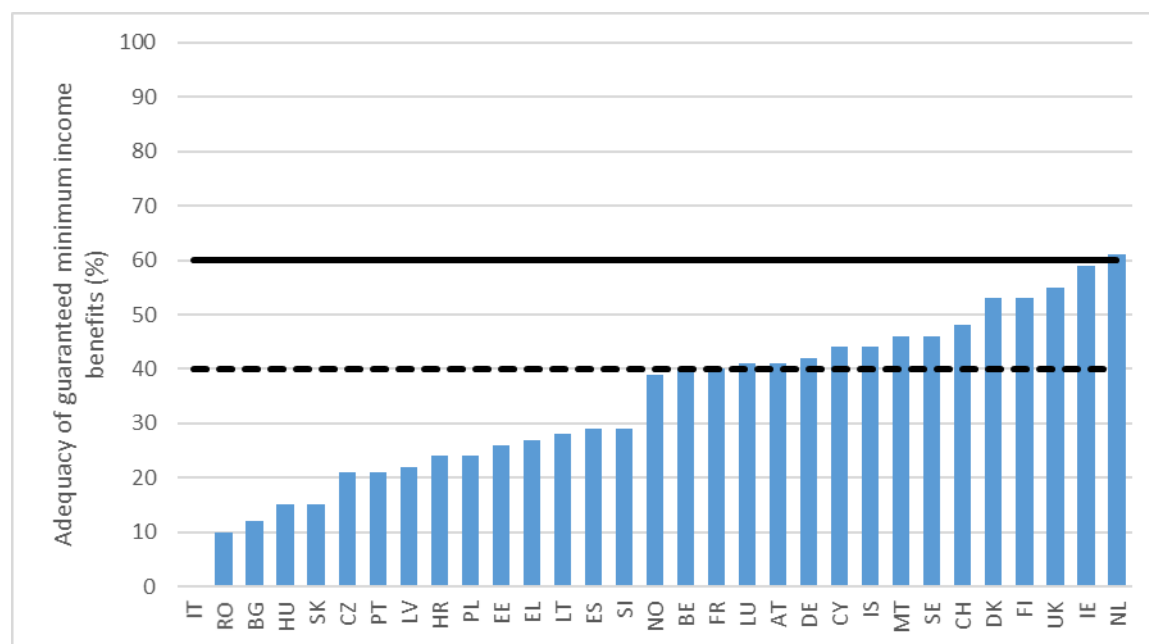
² Source data for 2017 exchange rates: https://ec.europa.eu/eurostat/web/products-datasets/product?code=EI_MFRT_M

which are calculated by assuming a household renting in the private market paying rent that is equal to 20% of the average wage in the given country. Rent levels are the same for all family types.

3 Social protection and poverty in the EU: minimum income in out-of-work households

When examining trends in minimum income benefits in out-of-work households, we used data provided by the OECD TaxBEN database, specifically the indicator *adequacy of guaranteed minimum income benefits*. As mentioned above, we looked at five years (2001, 2005, 2009, 2013 and 2017) and 31 countries (the EU-27 as well as the UK, Iceland, Norway and Switzerland). All four available household types were included in the analysis. This chapter describes the main findings regarding the differences (i) across household types (especially between those with and without children) and countries at one specific point in time (2017), and (ii) over time, with a focus on the effects of the economic crisis.

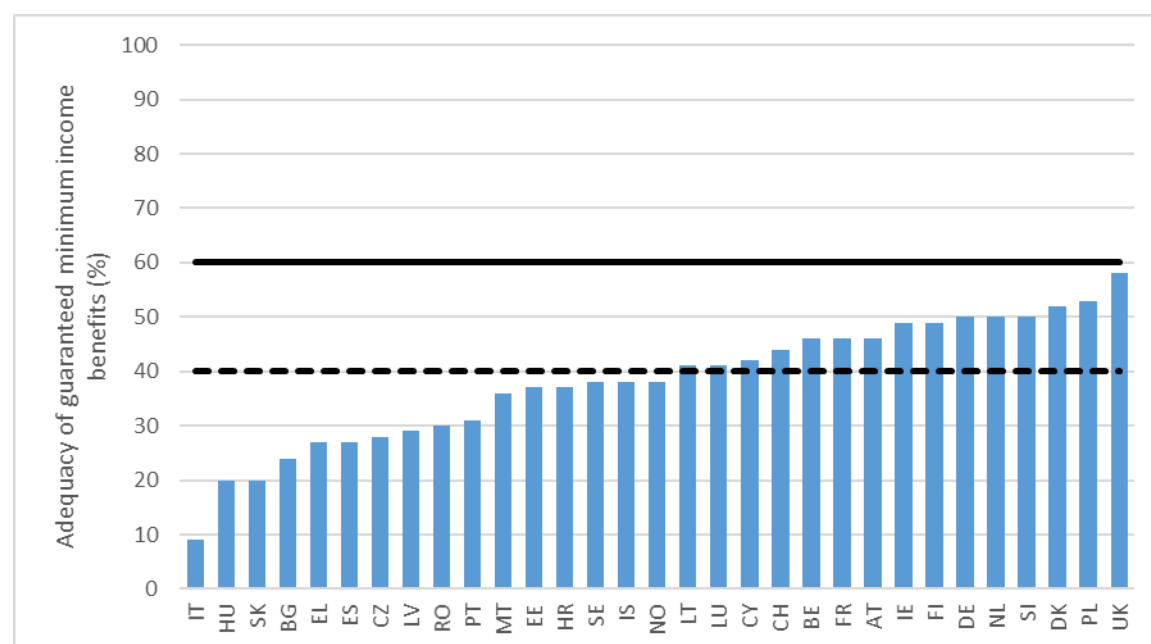
Figure 1. Adequacy of guaranteed minimum income benefits in Europe – Jobless person without children, 2017



Source: OECD TaxBEN database.

Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).
 — : 60% poverty threshold; - - - : 40% poverty threshold.

Figure 2. Adequacy of guaranteed minimum income benefits in Europe – Jobless person with two children, 2017



Source: OECD TaxBEN database.

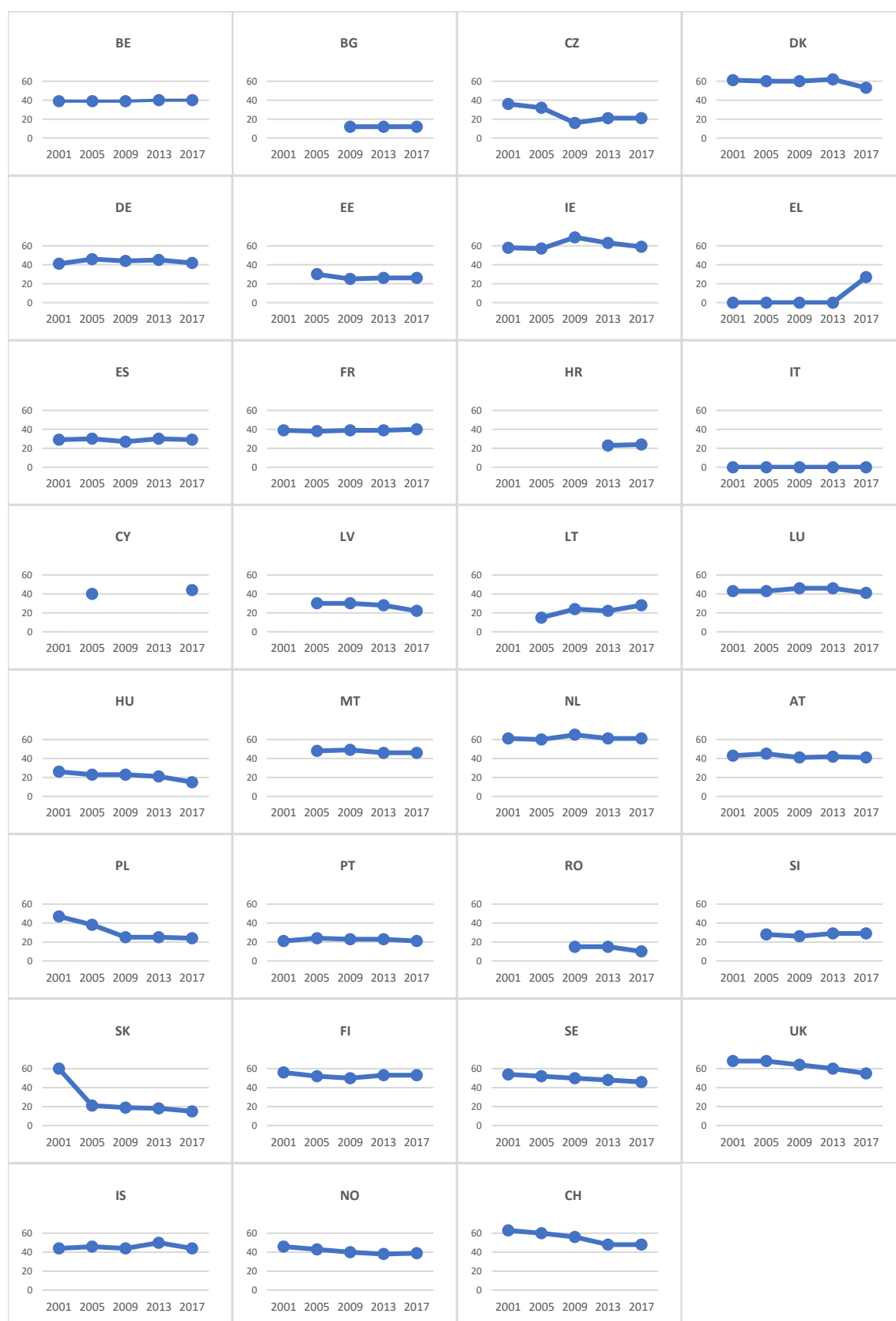
Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).
 — : 60% poverty threshold; - - - : 40% poverty threshold.

Figures 1 and 2 depict the adequacy of minimum income benefits in the selected countries in 2017, expressed as a percentage of the national median income in the *jobless person without children* and the *jobless person with two children* household types. The continuous line represents the poverty threshold defined as 60% of the median income, the dashed line is the poverty threshold at 40% of the median income. The respective figures for the other two household types (*jobless couple without children*, *jobless couple with two children*) are included in the annex (Figure A1 and A2). We can see across all household types that the GMI of out-of-work households does not reach the 60% threshold in almost any country. There are only two exceptions to this: the Netherlands (in the single person, no children case, 61%) and Ireland (in the couple, no children case, 60%). In every household type, about half of the countries reach the 40% threshold. These are almost exclusively Western European countries. Consequently, the ones below the 40% threshold are mostly Central, Eastern and Southern European countries. The two household types without children are very similar to each other. We find only small differences between them. In these simulations, benefit levels are lower than in the other household types. In Italy, for example, it does not exist any minimum income benefit at all, while Hungary, Romania and Bulgaria do have minimum income benefits, but only at very low levels (15% or less). In households with two children, minimum income benefit levels are mostly higher. The differences are especially large in the case of CEE and SE countries, but the benefit levels still do not reach the 40% threshold in most cases (exceptions to this are Slovenia and Poland). We can observe the most striking differences in the case of Hungary, Bulgaria, Romania and Poland, where households with two children receive approximately twice as much as those without children. Poland is particularly interesting in

this regard: minimum income benefit levels for the no children scenarios are around 25% whereas for the two children scenarios, they are around 55%. One more noteworthy trend is that, as is to be expected, couples with children receive a bit less benefits in most countries than do single parents. However, there are a few examples of the opposite situation: in Italy, Portugal and Poland, couples are entitled to a bit more.

The time trends for single persons with and without children between 2001 and 2017 can be seen on Figures 3 and 4. Graphs for the other two household types can be found in the annex (Figure A3 and A4). Overall, we can say that the data mostly shows a decline in the relative benefit levels. In the case of *jobless persons without children*, there are only a few big changes. The largest decline over time can be observed in Slovakia (a sharp decline from 60 to 21 percent between 2001 and 2005, and then further shrinking, to 15 percent in 2017), in Czechia (from 32 to 16 percent between 2005 and 2009 and then a bit of an increase, to 21 percent in 2017), in Poland (47% in 2001 and only 24% in 2017), in Switzerland (from 63 to 48 percent over the given time period), in Hungary (with a steady decline from 26 to 15%) and in the UK (from 68% in 2001 to 55% in 2017). There are only two countries with substantial growth in the relative levels. One is Greece where there were no benefits available at all until recently, but the 2017 data already reflects the newly introduced benefits, which are at 27% of the national median income. The other example is Lithuania, with a 13 percentage point increase between 2005 and 2017 (from 15 to 28%). Finally, Ireland stands out with a fluctuating trendline: first, an 11 percentage point increase in the already quite high level, from 2001 to 2009, and then a 10 percentage point decrease between 2009 and 2017. Trends for the *couple without children* households are very similar to the single person case. We can see bigger changes when it comes to the *single parent with two children* case. These mostly reflect a decline in benefit levels, in the same countries as mentioned in the no children scenario: Slovakia, Hungary, Czechia and Latvia, for example. It is also telling that in 2001, 7 countries had a benefit level of least 55% of the national median income, whereas in 2017, only 3 did. However, in the case of the households with children types, growth took place in a few countries as well, in Poland, Greece, Slovenia and France, for example. Furthermore, by 2017, benefits (albeit at low levels, 9 and 10 per cent, respectively) were introduced in Italy, which had had no available support before. Ireland has a similarly fluctuating trendline in these household types as well. Another striking case is that of Poland: while it is among the countries with the largest declines when it comes to households without children, the opposite has occurred for households with children. There was a 15 percentage point increase between 2013 and 2017.

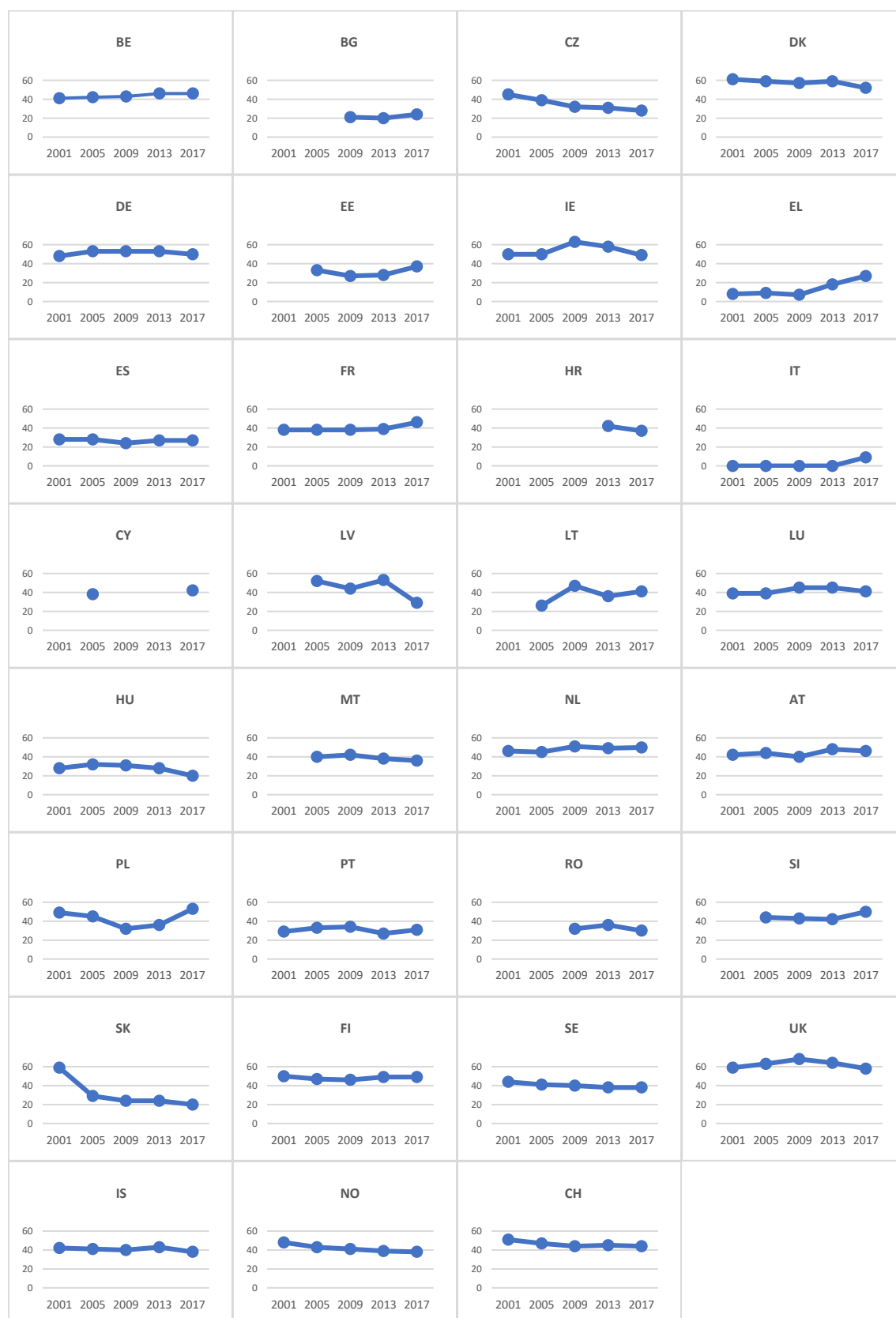
Figure 3. Adequacy of guaranteed minimum income benefits in Europe – Jobless person without children, 2001-2017



Source: OECD TaxBEN database.

Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).

Figure 4. Adequacy of guaranteed minimum income benefits – Jobless person with two children, 2001-2017



Source: OECD TaxBEN database.

Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).

Based on the trends outlined above, the effect of the economic crisis is not really detectable in most countries. Instead, changes around that time seem to constitute a part of a bigger overall trend of decline in benefit levels, which already started before the crisis. Countries where we can see a trend are Ireland, the Netherlands and Lithuania where there was some growth immediately after the beginning of the crisis (from 2005 to 2009). In contrast, in Czechia, there was a large decline during this period.

What factors can influence the trends we observe? It is important to note here that in some cases, this might not even be a change (or stagnation) in the amount of absolute benefits. Indeed, we know that in many countries, during the crisis, there was a reduction in the national median income (Gábos et al. 2021). In countries like this, for example, even if absolute benefit levels were reduced, relative levels (expressed as a percentage of median income) stayed the same. Changes in median income can lead to trends of growth, decline and stagnation in other time periods as well. Another influencing factor is, of course, if there are new regulations in the tax-benefit system of a given country, thus changing the net disposable income of jobless households. These changes can also be due to shifts in unemployment levels.

4 The adequacy of minimum income schemes in in-work and out-of-work households

Two major aspects should be considered when assessing the performance of the minimum income schemes in combatting poverty in Europe: what is the adequacy of these provisions and how effectively do they avoid unemployment traps (or: maintain the incentive to take up work)³? When assessing their performance to avoid unemployment traps, we examine whether the minimum income benefit is higher or lower (and if so, to what extent) than the net disposable income from paid work. In other words: is the level of social assistance provided through these schemes high enough compared to the at-risk-of-poverty threshold to reduce poverty and low enough compared to the net disposable income for in-work households to protect against labour supply disincentives. From a policy point of view, Cantillon and Vandenbroucke (2014) suggest that governments should simultaneously fight unemployment traps and raise income packages for those in need.

In our paper, these questions are measured by five indicators that are either derived or calculated from the CSB-MIPI database (using Euromod-HH data). These indicators, as well as the method and the overall context used in this section largely follows Cantillon et al. (2019). The five measures reflect and compare two distinct cases. The out-of-work case reflects the situation when – in the case of single person households and single parents with two children households – the adult has no income from employment and the household relies only on minimum income provisions. When we consider households with a couple and

³ While the concept of unemployment trap is widely used in economics and there is a large amount of evidence on the negative correlation between the level of unemployment benefit and unemployment duration (e.g. Rotar and Krsnik 2020), there is more debate on the topic in the sociological literature. For example, Gebauer and Vobruba (2003), for Germany, found that most people re-enter the labour market after a relatively short period of receiving social benefit (Sozialhilfe). Contrarily, Pedersen and Smith (2002), for Denmark, reported large effects of financial disincentives on labour market participation, especially among low paid women.

a couple with two children, both adults are out of work. In the in-work case, the adult, either living alone or with two children, is employed at the minimum wage. In the case of the households consisting of respectively a childless couple and a couple with two children, one adult is employed full-time and earns the minimum wage⁴ and the other is economically inactive.

First, net disposable income shows the level of income a household can obtain under the above specified conditions. The term *net disposable income* is used for the in-work case. Second, in the out-of-work case, the indicator is called net income social assistance, or in short, *social assistance*. Third, the gross *minimum wage* is always shown in our analysis. It provides the basic information on minimum income available from employment, as well as serves as an input to calculate welfare effort. Fourth, the *welfare effort* indicator is calculated as the difference between the gross minimum wage and the net disposable income. Fifth, the *financial incentive to work* is the difference between net disposable income available in the in-work case and the out-of-work case (social assistance).

All five indicators are expressed as the percentage of the at-risk-of-poverty threshold calculated for each household type, which is set at 60 per cent of the monthly net household income.

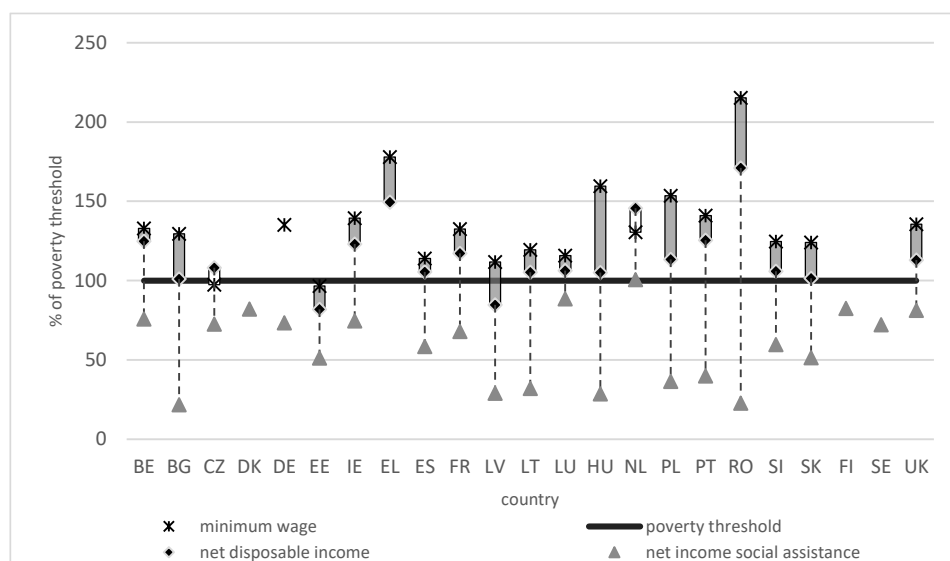
These indicators serve as main inputs for our analysis. Sub-section 4.1 describes the main results regarding poverty reduction and unemployment traps for various household types for year 2017, while sub-section 4.2 presents the cross-time findings, with a specific focus on the consequences of the Great Recession.

4.1 Poverty reduction and unemployment trap

In the main text, we display results from 2017 for two household types, as they are the most suitable for interpretation: singles and single parents with two children (Figures 5 and 6). Additional figures for years 2009 and 2013, as well as for couples and couples with two children are presented in the Annex (Figures A5-A14). We detail our findings following the five indicators we defined previously (minimum wage, net income social assistance, net disposable income, financial incentive and welfare effort).

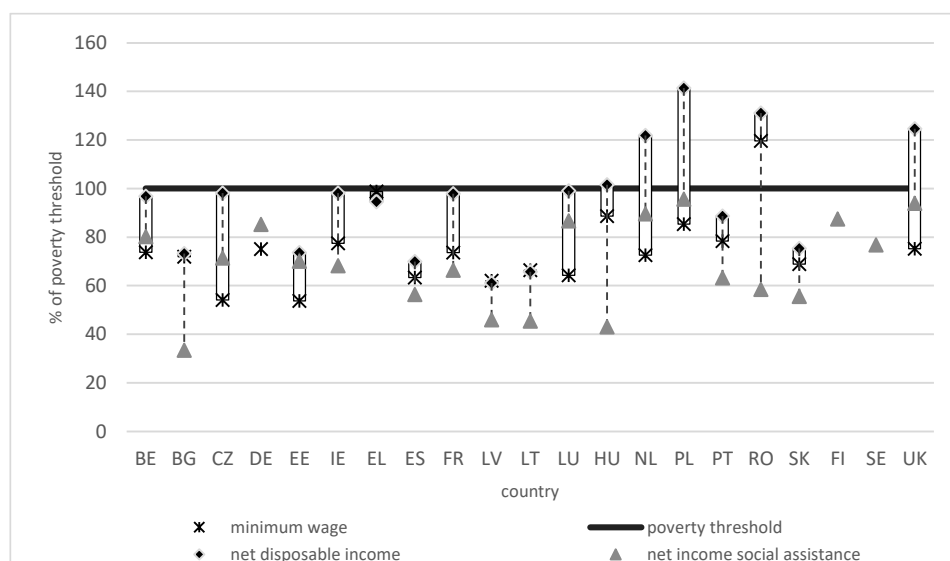
⁴ The Nordic countries do not have a statutory minimum wage in place. “Denmark and Sweden use collective agreements as their only mechanism for setting minimum wages, while Finland, Iceland and Norway have also started to use extension mechanisms to cover all workers at industry level. “ [Minimum wages through collective bargaining: Minimum wages in Nordic countries \(https://www.ilo.org/global/docs/WCMS_460934/lang-en/index.htm\)](https://www.ilo.org/global/docs/WCMS_460934/lang-en/index.htm)

Figure 5. Main indicators of the minimum income packages – Single person, 2017



Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Figure 6. Main indicators of the minimum income packages – Single parent with two children, 2017



Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Minimum wage

In 2017, in almost all member states, the amount of the gross minimum wage reached or exceeded the poverty threshold for single households (Figure 5). Only in Czechia and Estonia was the minimum wage slightly below the threshold. In some other Central-Eastern European countries (like Romania, Hungary and Poland), however, the amount of the minimum wage

was higher by at least 50 per cent than the value of the poverty threshold and the same was true for Greece.

When it comes to single parents with two children households, however, only in Romania and Greece did the amount of the minimum wage reach the poverty threshold (Figure 6). In the case of couples, again there are four countries for which the level of minimum wage exceeded the 100 per cent of the poverty threshold: Romania, Greece, Hungary and Poland (Figure A11). By definition, the lowest levels can be observed for couples with two children: not even Romania, the country which shows the highest relative level of minimum wage, reached the poverty threshold in 2017, while the lowest value was near 40 per cent (Figure A14).

Net income - social assistance

While the amount of gross minimum wage reached the level of the poverty line for singles in almost all member states in 2017, the social floor for out-of-work single persons did not in any country, except for the Netherlands (Figure 5). The share of the amount of social assistance expressed as a percentage of the poverty threshold exceeded 80 per cent in Denmark, Luxembourg, Finland and the United Kingdom. The lowest shares, below 30 per cent, were registered in Bulgaria, Latvia and Romania.

In the case of single parents with two children, these shares are generally similar or somewhat higher compared to single persons (Figure 6). A higher share characterizes mainly the Central and Eastern European countries. Among them, Poland is a special case: while in the case of single persons the level of social assistance stayed below 40 per cent of the poverty threshold, this share is close to 100 when it comes to single parents with two children. Large differences in the favour of single parents with children households are also observed in Romania and Finland, while social assistance for the latter family type is lower compared to single persons in Ireland, the Netherlands, Sweden and Slovakia.

The level of social assistance expressed as the share of the poverty threshold in the case of couples was the highest in Denmark in 2017, the only country where it exceeded 100 per cent (Figure A11). In other Continental and Nordic countries, this share was still fairly high (above 80 per cent) in a comparative perspective: Ireland, Luxembourg, the Netherlands and Finland. By contrast, the lowest relative amounts (below 40 per cent) were observed in the Central and Eastern European countries: Bulgaria, Latvia, Lithuania, Hungary, Romania.

In the vast majority of the countries, the level of social assistance relative to the poverty threshold was between 40 and 80 per cent (Figure A11). Higher than 80 per cent figures were observed in Denmark, Luxembourg, Finland and the United Kingdom, while only in Bulgaria this measure stayed below 40 per cent.

These results are in line with those presented in Section 3 based on the OECD TaxBEN database.

Net disposable income of in-work households

The total net income earned by a hypothetical in-work single person household in 2017 relative to the poverty threshold exceeded 150 per cent only in Greece and Romania, while it stayed below 100 per cent only in Estonia and Latvia (Figure 5). In the case of single parents with two children, as shown in Figure 6, the levels of the net household income of in-work

households relative to the poverty threshold were lower compared to single persons, being the highest (above 120 per cent) in the Netherlands, Poland and Romania, and lowest in Latvia and Lithuania (near 60 per cent).

For in-work hypothetical couples, one member being employed full-time and earning at the minimum wage, while the other being economically inactive, Greece and Romania again scored the highest in terms of the net income, while Estonia and Latvia the lowest (Figure A11). When comparing these levels to the minimum wage, the picture is mixed, in most of the countries the latter exceeds the former.

Among all the four hypothetical households in our analysis, the net (equalised) income is lowest for in-work couples with two children (Figure A14). Only in Poland, Romania and the United Kingdom did its amount reach (at the margin) the value of the poverty threshold in 2017, while in Spain, Latvia and Lithuania it only stayed at around half of it.

Welfare effort and financial incentive

After presenting the main income elements of the minimum income schemes, we now turn our attention to two outcome indicators: welfare effort and financial incentive. Welfare effort indicates the amount of direct financial support to in-work families that earn at minimum wage, while the financial incentive measure provides information on the capacity of the minimum income benefit scheme to avoid the unemployment/poverty trap.

In the case of in-work single person households, the extent of the welfare effort measured as the difference between the net disposable income and the gross minimum wage was negative in all cases but Czechia and the Netherlands (Figure 5). This indicates that the amount of income benefits provided for single persons do not reach that of taxes and contributions. At the same time, financial incentive measured as the gap between the amounts of net disposable income and social assistance is large in several Central and Eastern European countries (Bulgaria, Czechia, Hungary, Poland and Romania), mainly but not exclusively due to the low level of benefits for out-of-work households. The incentive to take up employment is also high in the Netherlands and the United Kingdom, where both the level of benefits and the amount of the net disposable income is high compared to other countries. Large effort and large incentive were jointly observed in Hungary, Poland and Romania. Importantly, in the majority of the countries, the grey bars in Figure 5 that illustrate welfare efforts are positioned in the area above the poverty line. This is the result of the fact that the value of both the minimum wage and the net disposable income for in-work households represents more than 100 per cent of the poverty threshold for single persons.

The picture is very different when the in-work single parents with two children households are analysed (Figure 6). Almost everywhere, the effort was positive in 2017: the net income exceeded the level of the gross minimum wage. This seems to point to the fact that these households received important financial support. The highest efforts were calculated in Czechia, Luxembourg, the Netherlands, Poland, and the United Kingdom. In most of these countries (with the exception of Luxembourg), high welfare effort is coupled with high financial incentive. High financial incentive with medium size welfare effort characterized Ireland and France, while large incentive with low welfare effort could be observed in Hungary and Romania. There are only three countries with negative welfare effort: in Greece, gross minimum wage is higher than the net disposable income at the margin, while in Latvia and Lithuania the two measures were at the same level.

Welfare efforts in the case of in-work couples were negative and low in most of the member states. Only in Hungary and Romania did it represent more than 20 per cent of the value of the poverty threshold of couples. Another country with a higher than 20 per cent welfare effort relative to the poverty threshold is Luxembourg, where, however, net disposable income surpasses gross minimum wage (as well as in France and the UK, but with much lower welfare effort). In Bulgaria, Poland and especially in Romania, the financial incentive is high.

In the case of couples with two children, welfare efforts were positive in all member states in 2017, with higher values than 30 per cent of the poverty threshold in Ireland, Luxembourg, Poland and the United Kingdom. These figures also exceed 20 per cent in several other countries: Belgium, Estonia, France, the Netherlands, and Slovenia. Financial incentives are especially high where welfare efforts are low: in Bulgaria, Hungary and Romania. In other countries, like Spain, Latvia and Lithuania, both measures (welfare effort and financial incentive) have low values.

4.2 Changes over time

Tables 1 and 2 depict the changes in the indicators (minimum wage, net income social assistance, net disposable income, financial incentive and welfare effort) for both the single person and single parents with two children households over time, for the time period between 2009 and 2013 as well as 2013 and 2017. The tables for the two couple households, as in the other cases, are in the annex (Table A15 and A16). In the tables, the direction and extent of the changes that took place in each country are indicated both by a colour code and a symbol. No change is indicated by the colour yellow (and the symbol “=”), negative changes by different shades of red (“-“, “- -“, “- - -“) and positive ones by shades of green (“+“, “++“, “+++“).

If we look at the indicators separately, we can see that in both time periods, the largest positive changes have taken place in the case of the minimum wage, the net disposable income and the financial incentive. Countries with trend lines like this are, for example, Bulgaria and Romania. The connection between the amount of *minimum wage* and the *net disposable income on minimum wage* people receive is not surprising. These numbers go hand in hand with the growth in financial incentive. At the same time, net incomes on social assistance have usually either remained the same or even declined. This finding is in line with the OECD data presented in the previous chapter. Finally, trends related to the levels of welfare effort vary in their nature according to household types (between those with and without children).

When it comes to comparing household types, we can see the most positive changes in the case of *single persons without children*. In the *couples without children* scenario, these trends are less strong, especially when it comes to the net disposable income: in their case, a growth in the minimum wage does not translate to such a big change in disposable income. This is mostly due to the fact that in the simulation, there is only one economically active person in the household and that levels are expressed as a percentage of the poverty threshold, which is, in turn, weighted according to household size. In the *lone parent, two children* and *couple, two children* cases, especially in the 2013-2017 period, there are also positive changes in *disposable income on social assistance* (in Estonia, Poland, Portugal, Romania, and Finland) and in *welfare effort* (e.g. in Estonia, Poland and Romania).

Table 1. Over time changes in MIPI-HHoT indicators, 2009-2017 – Single person

	2009-2013					2013-2017				
	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort
BE	-	=	-	-	=	--	+	+	=	++
BG	+++	=	+++	+++	-	+++	=	+++	+++	--
CZ	--	++	+	-	++	+++	--	+	+++	---
DK		=					=			
DE		=				+++	-			
EE	--	=	---	---	=	++	=	++	++	=
IE	+	--	=	++	-	--	--	--	=	-
EL	+++		+++		---	=	=	=	=	=
ES	+++	++	+++	++	=	=	--	=	++	=
FR	=	=	=	-	-	-	=	++	+	++
LV	-	=	---	---	--	+	--	+	+++	+
LT	++	-	=	+	-	=	--	++	+++	++
LU	++	=	=	=	--	++	+	++	+	=
HU	+++	---	=	+++	---	++	---	++	+++	=
NL	+	+	++	+	+	---	--	+	++	+++
PL	+++	=	-	-	---	++	-	=	+	--
PT	+++	---	+++	+++	=	+	-	+	++	=
RO	+++	=	+++	+++	=	+++	-	+++	+++	-
SI	+++	++	+++	+++	+	--	+	--	---	=
SK	+	-	=	+	-	+++	=	+++	+++	--
FI							+++			
SE		-					-			
UK	=	---	---	=	---	++	-	=	=	--

Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Notes. „+++” – >10 pps; „++” – >5 pps and <10 pps; „+” – >2 pps and <5 pps; „=” – >2 pps and <2 pps; „-” – >5 pps and <-2 pps; „--” – >-10 pps and <-5 pps; „---” – <-10 pps.
Empty cells represent missing data.

Comparing trends by time periods, as mentioned before, we can observe a positive change in minimum income, net disposable income and financial incentive levels in both time periods. Social assistance levels are also not really dependent on the time period but rather on household type, as outlined above. The only indicator where we can detect a difference between the two time periods is the welfare effort: from 2009 to 2013, it mostly stagnated or declined, but from 2013 to 2017, there are a handful of countries where it increased for one or more household types (Belgium, France, Latvia, Lithuania, the Netherlands, Estonia, Spain, Poland, Romania, Slovenia). Here, too, households with children were more positively affected.

Unfortunately, in the case of CSB-MIPI, data from before the economic crisis is not available, therefore, it was not possible to assess the effects of the Great Recession by comparing indicator levels before and after the crisis. What we can say, however, is that following the crisis, the general trend is a growth in minimum wage, net disposable income and financial

incentive levels. When it comes to households without children, disposable income on social assistance and the welfare effort are stagnating in most countries, signalling a focus on in-work households. We cannot say the same for households with children: in those cases, both social assistance and welfare effort levels increased in more countries.

Table 2. Over time changes in MIPI-HHoT indicators, 2009-2017 – Lone parent, two children

	2009-2013					2013-2017				
	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort
BE	-	=	-	-	=	-	=	=	=	+
BG	++	-	++	++	=	+++	-	+++	+++	--
CZ	-	++	++	=	++	++	--	--	+	---
DK										
DE		++				+++	-			
EE	-	=	--	--	-	+	+++	+++	=	+++
IE	=	-	=	++	=	-	--	-	=	=
EL	+++		+++	=	++	=		=		=
ES	++	++	++	=	=	=	--	++	+++	++
FR	=	=	=	=	=	=	=	+	=	+
LV	-	--	--	-	--	=	--	+	++	=
LT	+	---	---	+	---	=	---	-	+++	=
LU	+	=	=	=	-	+	+	++	=	=
HU	++	--	=	++	--	+	---	+++	+++	++
NL	+	+	++	+	+	--	-	++	+++	+++
PL	++	+	=	=	--	++	+++	+++	+	+++
PT	++	---	---	+++	---	=	++	+	-	=
RO	++	+	++	+	=	+++	+++	+++	+++	+++
SI										
SK	=	-	--	-	--	+++	-	=	=	---
FI							+++			
SE		=					-			
UK	=	--	-	+	-	+	--	--	=	---

Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Notes. „+++” – >10 pps; „++” – >5 pps and <10 pps; „+” – >2 pps and <5 pps; „=” – >-2 pps and <2 pps; „-” – >-5 pps and <-2 pps; „--” – >-10 pps and <-5 pps; „---” – <-10 pps.

Empty cells represent missing data.

In their paper, Cantillon et al. (2019) suggested a clustering of European countries according to the adequacy of the minimum income provisions and their capacity to provide financial incentive to out-of-work household members. Table 3 provides a comparative overview of findings in Cantillon et al. (2019) and of our analysis at the level of countries, for single parent with two children households. This exercise is also a comparison between two points in time (2013 and 2017), using the same database. We have not proceeded with the country grouping suggested by Cantillon et al. (2019), but a summary based on the five indicators is provided.

The comparative assessment is hampered to some extent by the lack of information in both of the analyses. In total, there are nine countries for which we lack data either fully or partially in one of the years. According to our comparison, while there are six countries where no relevant change in the structure of the minimum income schemes took place between 2013 and 2017, some noticeable shifts happened in ten other member states. Most notably the Netherlands, Poland and the United Kingdom changed their “road” from moderate to high, according to the term used by Cantillon et al. (2019). This means that in Poland and the United Kingdom incomes (minimum wage, social assistance and net disposable income) for in-work single parent with two children households increased between the two years, while welfare effort and financial incentive stayed high. In the case of the Netherlands, a previously moderate welfare effort and financial incentive have increased until 2017. Similarly, there was an increase in all income measures relative to the poverty threshold in Romania, with low welfare effort and high financial incentive unchanged. In contrast, in Ireland, incomes decreased relative to the poverty threshold, while both the welfare effort and the financial incentive stayed high. In Spain and Portugal, financial incentive decreased in the post-crisis period due to an increase in social assistance. The case of Hungary is special to some extent: considerable increase in the minimum wage was coupled with a significant decrease in the level of social assistance, which resulted in a reduced welfare effort and a significantly increased financial incentive.

Table 3 Country clusters based on the adequacy of minimum income schemes in Europe – Single parent with 2 children households

Country	Year 2013 according to Cantillon et al.	Year 2017- present paper	Main trend
Belgium	Panel C: Low road – Moderate MW & E & I	Moderate NDI; High SA; Moderate MW & E & I	No important change
Bulgaria	Panel D: Low road – Low MW & E, Moderate I	Low NDI & SA; Moderate MW, Low E, High I	Still low income, but increased MW, NDI and I
Czechia	Panel B: Middle road – High E & I	Moderate NDI & SA; Low MW; High E & I	No important change
Denmark	Panel A: High road – Moderate E, Low I	-	-
Germany	Panel B: Middle road – Moderate E & I	High SA, Moderate MW	Not enough data to compare
Estonia	Panel C: Low road – High E, Low MW & I	Moderate NDI & SA; Low MW; Moderate E, Low I	No important change
Ireland	Panel A: High road – High E & I	Moderate NDI & SA; Moderate MW; Moderate E, High I	Decreased level of NDI and SA
Greece	Panel D: Low road – Low E, High MW & I	Moderate NDI; High MW; Low E	Not enough data to compare
Spain	Panel D: Low road – Low MW & E, Moderate I	Low MW & NDI; Moderate SA; Low E & I	Increased SA and decreased I, accordingly
France	Panel C: Low road – Moderate MW & E & I	Moderate NDI & SA & MW & E & I	No important change
Italy	Panel D: Low road – Low E, High MW & I	-	-
Latvia	-	Low NDI & SA & MW & E & I	-
Lithuania	Panel D: Low road – Low MW & E, Moderate I	Low NDI & SA & MW & E; Moderate I	No important change
Luxembourg	Panel C: Low road – High E, Low MW & I	Moderate NDI, High SA; Low MW; High E, Low I	No important change
Hungary	Panel C: Low road – Moderate MW & E & I	Moderate NDI, Low SA; High MW; Low E, High I	Increased MW and lowered SA coupled with decreased E and increased I
Austria	Panel C: Low road – High E, Low MW & I	-	-
Netherlands	Panel B: Middle road – Moderate E & I	High NDI & SA; Moderate MW; High E & I	Increased effort, while incentive also improved
Poland	Panel B: Middle road – High E & MW & I	High NDI & SA; High MW; High E & I	Increased income, while E and I stayed high
Portugal	Panel D: Low road – Low E, High MW & I	Moderate NDI & SA; Moderate MW; Low E, Moderate I	Increased SA, decrease MW, decrease in I
Romania	Panel D: Low road – Low E, High MW & I	High NDI, Low SA; High MW; Low E, High I	Increase in NDI, MW, SA; E still low, while I high
Slovenia	Panel C: Low road – Moderate MW & E & I	-	-
Slovakia	Panel D: Low road – Low MW & E, Moderate I	Low NDI, Moderate SA; Moderate MW; Low E, Low I	Increase in MW, decrease in I
Finland	Panel B: Middle road – Moderate E & I	High SA	Not enough data to compare
Sweden	-	Moderate SA	-
United Kingdom	Panel B: Middle road – High E & I	High NDI & SA; Moderate MW; High E & I	Some increase in NDI, SA, MW; both E and I high

Notes. MW – minimum wage; E – welfare effort; I – financial incentive; NDI – net disposable income; SA – social assistance.

5 Conclusions

This paper has examined changes over time in minimum income benefit levels and their effects on risks of poverty as well as on poverty or unemployment traps, for different household types, during and after the Great Recession, in Europe.

When examining trends in minimum income benefits in out-of-work households, we used data provided by the OECD TaxBEN database, specifically the indicator *adequacy of guaranteed minimum income benefits*. We looked at five years (2001, 2005, 2009, 2013 and 2017) and 31 countries (the EU-27 as well as the UK, Iceland, Norway and Switzerland).

We found - across all household types - that the GMI of out-of-work households does not reach the 60% national poverty threshold in almost any European country. In every household type, about half of the countries (almost exclusively Western European ones) reach the 40% threshold. The ones below the 40% threshold are mostly Central, Eastern and Southern European countries. The two households *without* children cases are very similar to each other: in these simulations, benefit levels are lower than in the others. The differences are especially large in the case of Central European and Southern European countries. Finally, in most European countries couples *with* children receive a bit less benefits than do single parents.

The time trends for guaranteed minimum income benefits mostly show a decline in relative benefit levels. In the case of *jobless persons without children* and *couples without children*, only a few of these changes are significant. However, a decrease in benefits levels occurs in more countries in the *single parent with two children* case. When it comes to households with children, while the main overall trend was also that of decline, growth took place in a few countries. The most striking country case is that of Poland: while it is among the countries with the largest declines when it comes to households without children, the opposite has occurred for households with children.

Based on the findings we have reported above, the effect of the Great Recession is not really detectable in most European countries. Rather, changes around 2009-2013 seem to constitute a part of an overall trend of decline in benefit levels which already started before the crisis and which might have been related to the policies implemented in the social investment era. The factors which can influence the observed trends may be a change in national median income levels, new regulations in the tax-benefit system of a given country, or shifts in unemployment levels. This result supports the hypothesis that, in general, main trends were not affected (possibly due the lack of structural changes). There are a few countries, however, where the adequacy of the guaranteed minimum income benefits improved: e.g. Ireland, Lithuania and the Netherlands between 2005 and 2009 for jobless person without children families (accompanied by Belgium, Luxembourg and the United Kingdom for jobless person with two children families), as well as Czechia, Spain, Slovenia, Finland and Iceland between 2009 and 2013 for person without children families and Belgium, Latvia, Austria, Poland, Romania, Finland and Iceland for person with two children families.

When it comes to change over time examined through the CSB-MIPI database, in both time periods, the largest positive changes have taken place in the case of the minimum wage, the net disposable income and the financial incentive. Social assistance levels are also not really dependent on the time period but rather on household type. The only indicator where we can detect a difference between the two time periods is the welfare effort: from 2009 to

2013, it mostly stagnated or declined, but from 2013 to 2017, there are some countries where it increased. Here, too, households with children were more positively affected.

In the case of CSB-MIPI, data from before the economic crisis is not available, therefore, it was not possible to compare indicator levels before and after the crisis. What we can say, however, is that in the period of recovery following the financial crisis, the general trend is a growth in minimum wage, net disposable income and financial incentive levels. When it comes to households without children, disposable income on social assistance and the

Box 1 Comparison of results with project deliverable D4.1

Jessoula (2021), as deliverable D4.1 of the EUROSHIP project looks at minimum income schemes in the seven countries participating in the project. For this restricted set of countries, our findings are in line with its conclusion that the trajectories of countries following the crisis and up until most recently, are very heterogeneous. The findings of the two papers are also very similar if we look at the trajectories of the individual countries.

Jessoula (2021: 19) highlights the path of Norway as one of increased activation and limited expansion. We found that the OECD GMI indicator shows little change during the examined period, apart from a slight decline. MIS in Estonia underwent a process of increased residualization and activation, with a minimum wage below the poverty threshold (Jessoula, 2021: 20). This is in line with our findings that the minimum wage increased but stayed below the poverty threshold, with the caveat that it only did so for the period of 2013-2017. The financial incentive only increased for single parents and only between 2013 and 2017. In Hungary, conditionality became stricter and the already low benefit levels declined significantly (Jessoula, 2021: 20-21). We outlined the same trend for Hungary. Spain had had several regional MIS schemes in place but introduced the first national one only recently, in 2020 (Jessoula, 2021: 21). Our data, covering years up to 2017 is not able to measure its effects yet, but we do see that the minimum wage was and is still below the poverty threshold. Similarly to Spain, in Italy, full institutionalization of MIS was achieved only recently, in 2019, with increased activation and conditionality compared to the previous scheme (Jessoula, 2021: 22). This is why we did not have any data for Italy. Germany represents a case of softened conditionality, better access to activation measures, and less sanctionary measures (Jessoula, 2021: 24). Our data cannot really reflect on this, but in line with the referenced paper, it does show that the minimum wage is below the poverty threshold in Germany and that there were only small changes in benefit levels. Finally, the UK's trajectory was one of system restructuring, increased activation and conditionality, with a reduction in in-work benefits and an increase in the minimum wage (Jessoula, 2021: 24-25). The MIPI-HHoT data reflects this perfectly over time, with a reduction in welfare effort for both examined time periods and a higher minimum wage for the period between 2013 and 2017.

welfare effort are stagnating in most countries, signalling a focus on in-work households. We cannot say the same for households with children: in those cases, both social assistance and welfare effort levels increased in more countries.

When comparing our results to the findings of Cantillon et al. (2019) at country level, we found that in Poland and the United Kingdom incomes (minimum wage, social assistance and net disposable income) for in-work single parent with two children households increased

between 2013 and 2017, while welfare effort and financial incentive stayed high. In the case of the Netherlands, a previously moderate welfare effort and financial incentive have increased during this period. In Spain and Portugal, financial incentive decreased due to an increase in the level of social assistance. The case of Hungary is special to some extent: considerable increase in the minimum wage was coupled with a significant decrease in the level of social assistance, which resulted in a reduced welfare effort and a significantly increased financial incentive.

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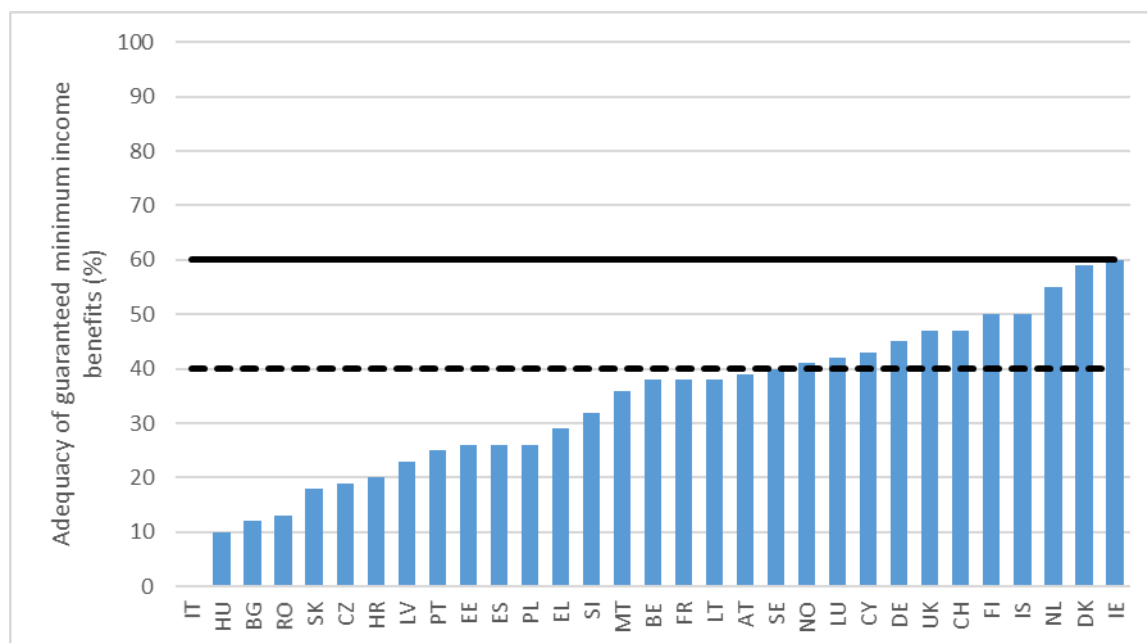
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Annexes

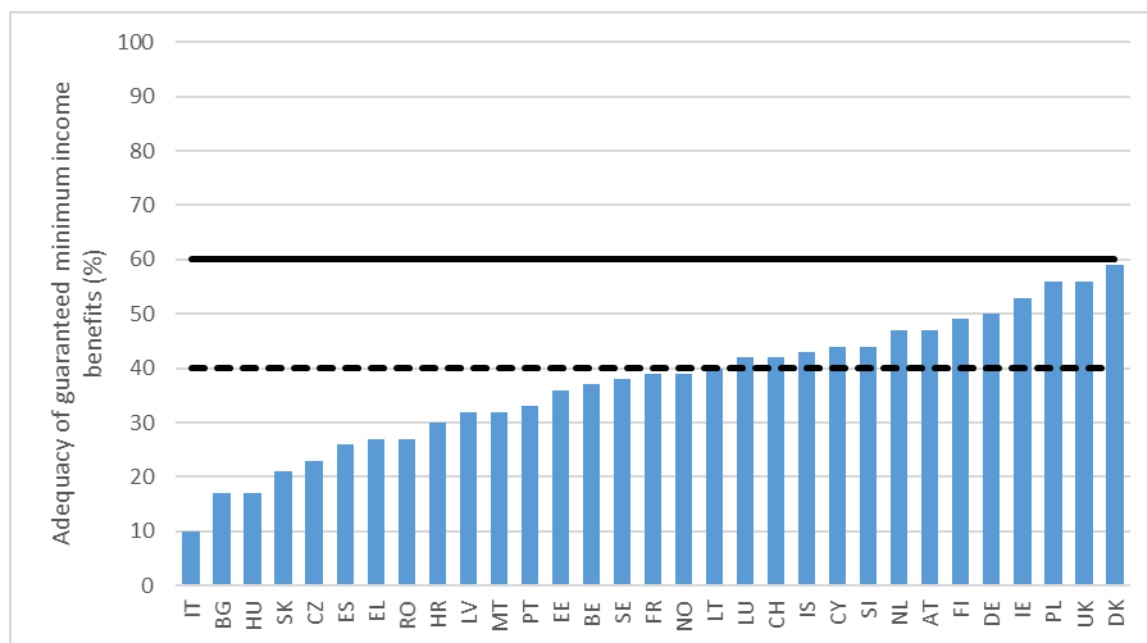
Figure A1. Adequacy of guaranteed minimum income benefits – Jobless couple without children, 2017



Source: OECD.

Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).
 — : 60% poverty threshold; - - - : 40% poverty threshold.

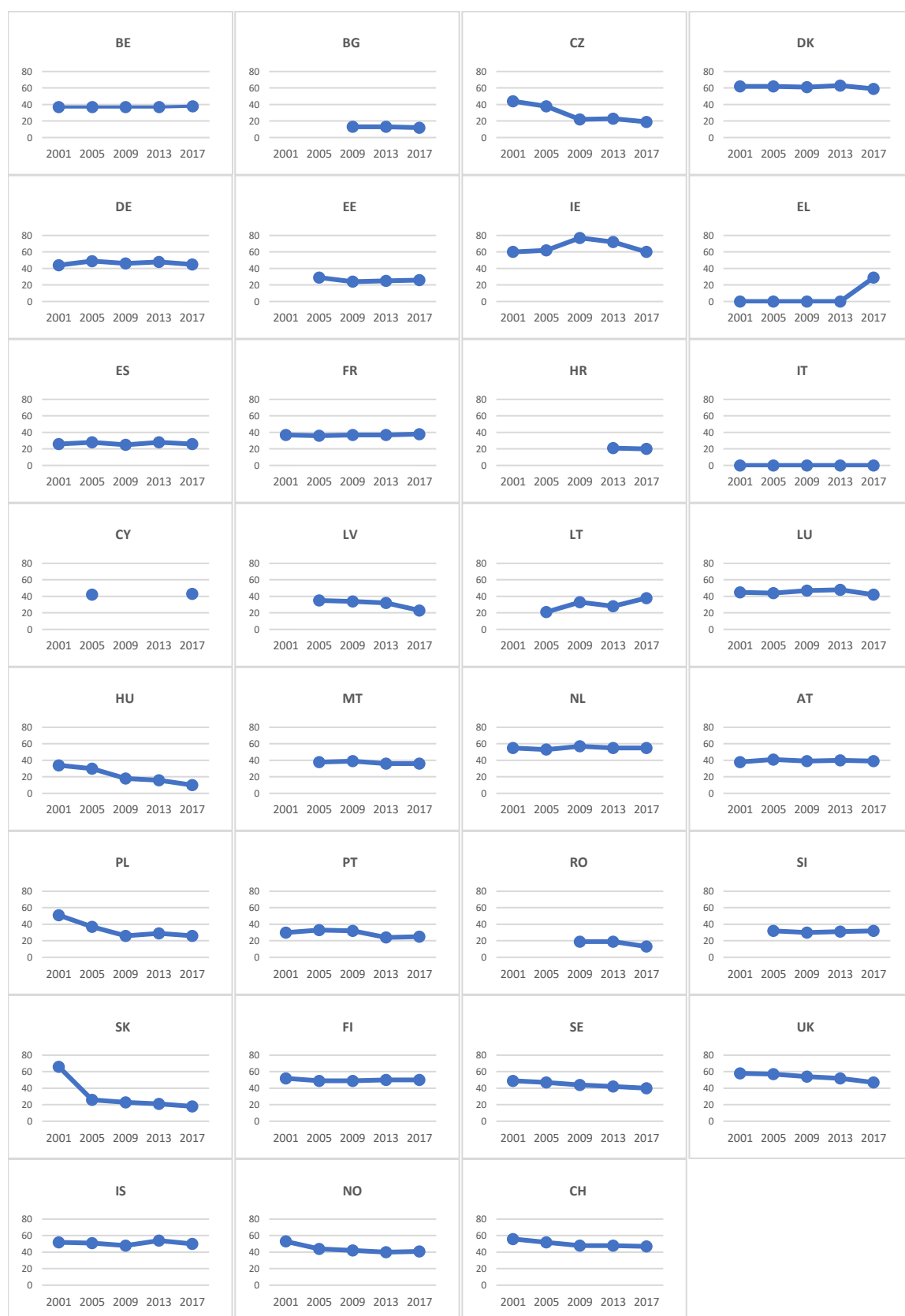
Figure A2. Adequacy of guaranteed minimum income benefits – Jobless couple with two children, 2017



Source: OECD.

Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).
 — : 60% poverty threshold; - - - : 40% poverty threshold.

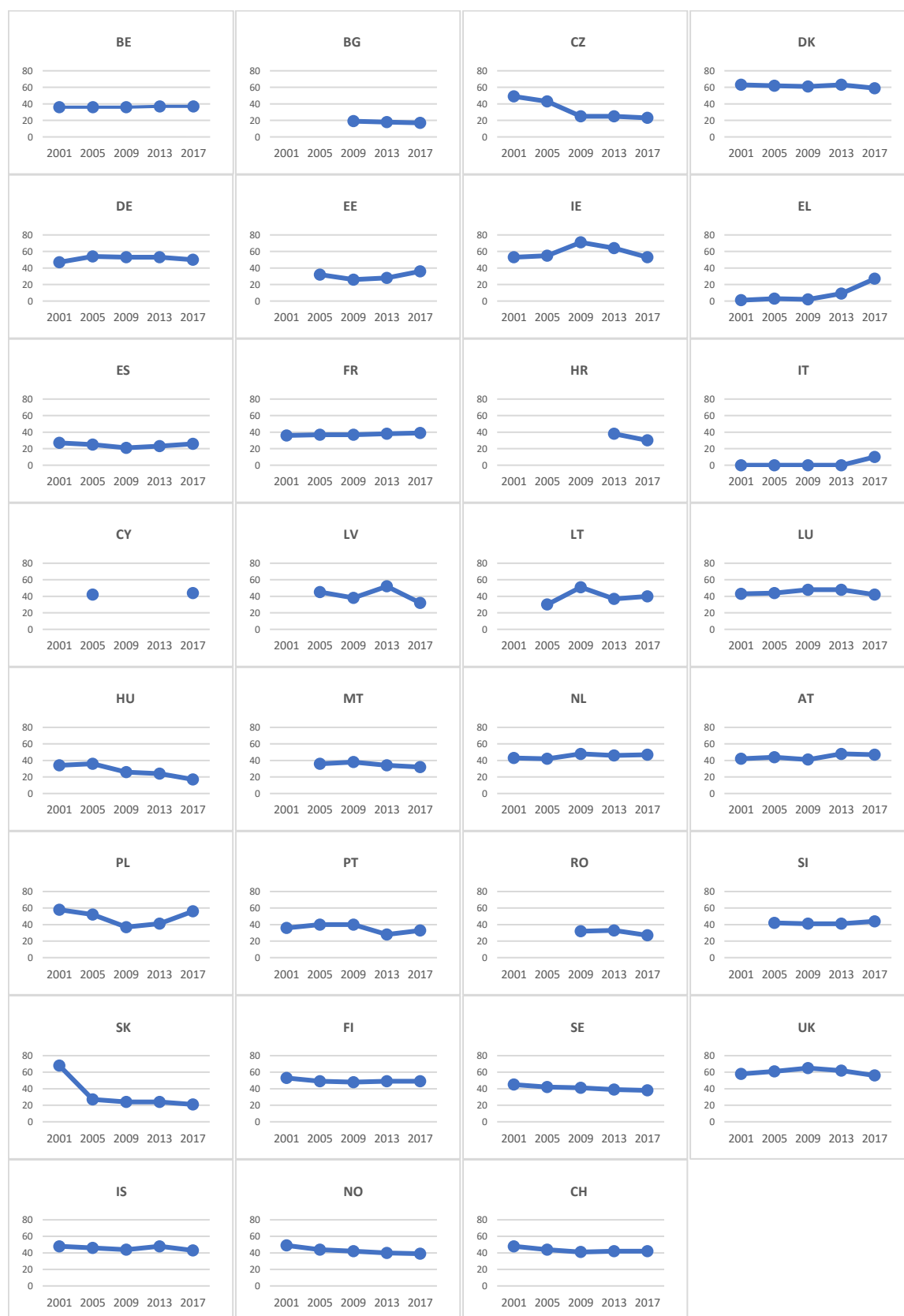
Figure A3. Adequacy of guaranteed minimum income benefits – Jobless couple without children, 2001-2017



Source: OECD.

Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).

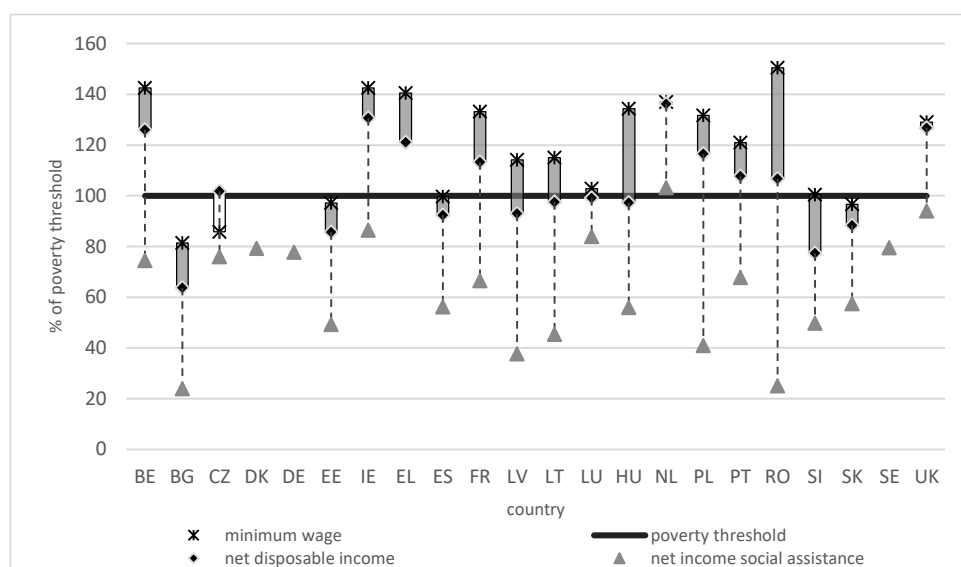
Figure A4. Adequacy of guaranteed minimum income benefits – Jobless couple with two children, 2001-2017



Source: OECD.

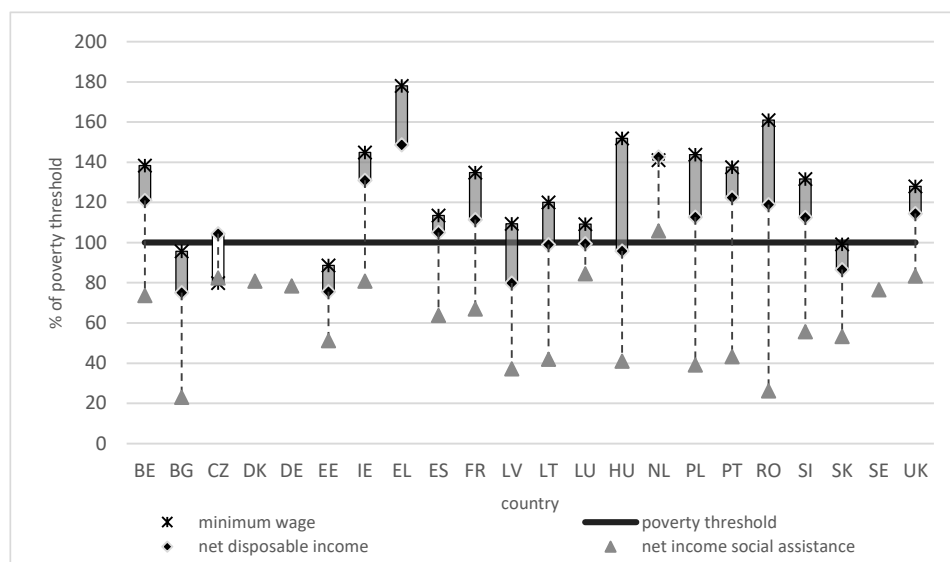
Notes. Y axis: adequacy of guaranteed minimum income benefits (GMI expressed as a percentage of national median disposable income).

Figure A5. Main indicators of the minimum income packages – Single person, 2009



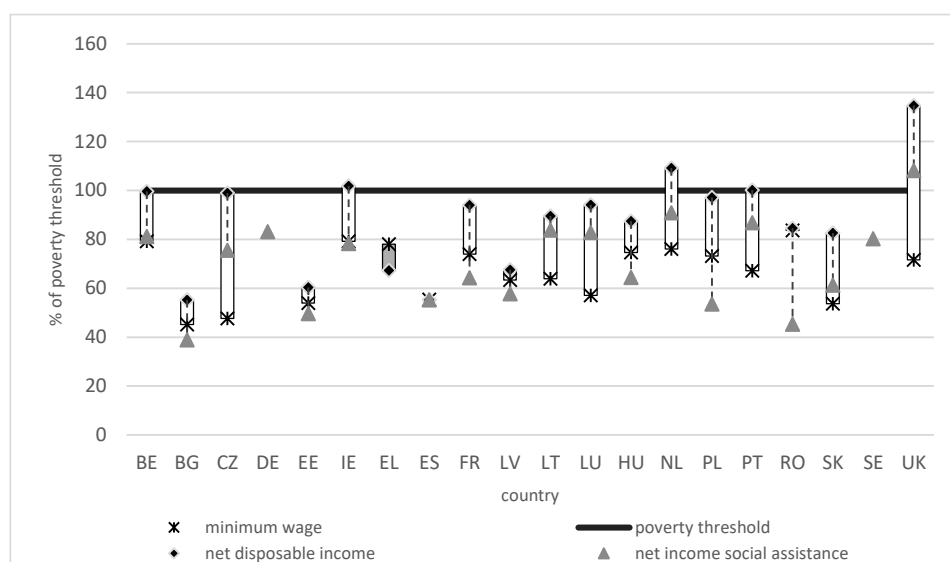
Source: own calculations based on the Euromod-HHoT data.

Figure A6. Main indicators of the minimum income packages – Single person, 2013



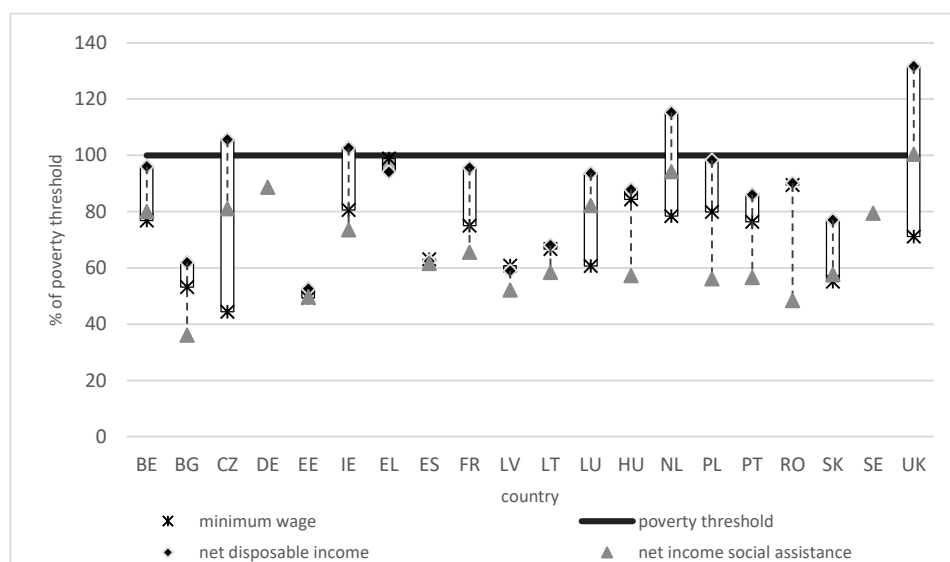
Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Figure A7. Main indicators of the minimum income packages – Single parent with two children, 2009



Source: own calculations based on the Euromod-HHoT data.

Figure A8. Main indicators of the minimum income packages – Single parent with two children, 2013



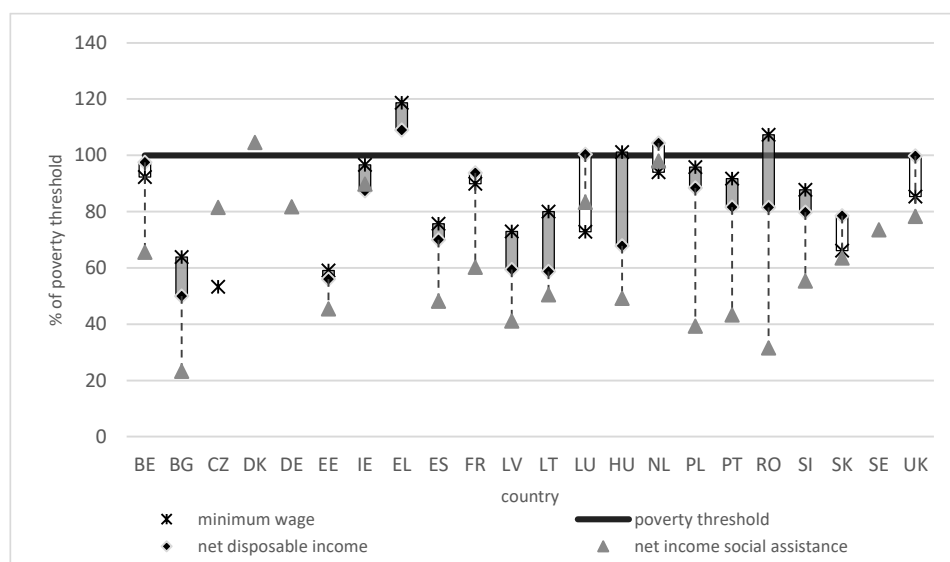
Source: own calculations based on the Euromod-HHoT data.

Figure A9. Main indicators of the minimum income packages – Couple, 2009



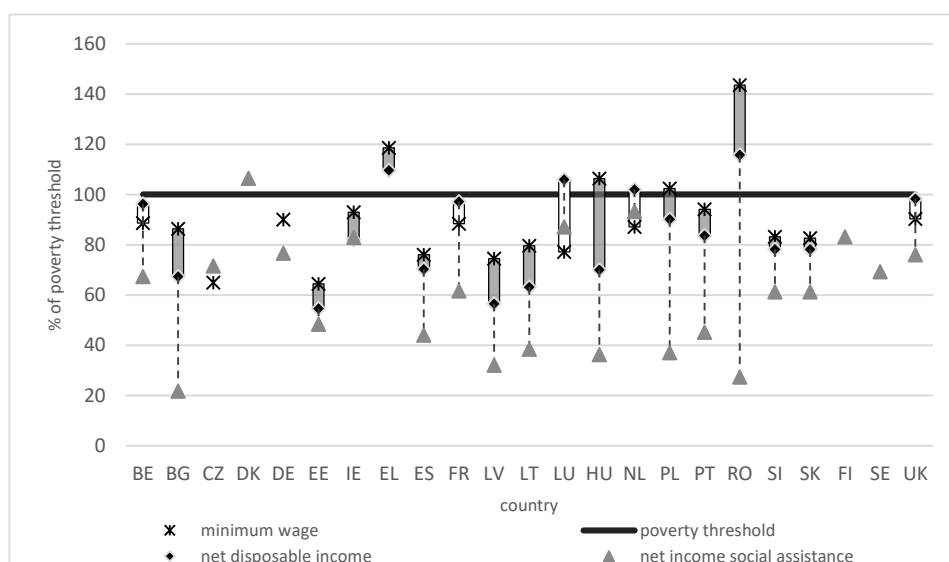
Source: own calculations based on the Euromod-HHoT data.

Figure A10. Main indicators of the minimum income packages – Couple, 2013



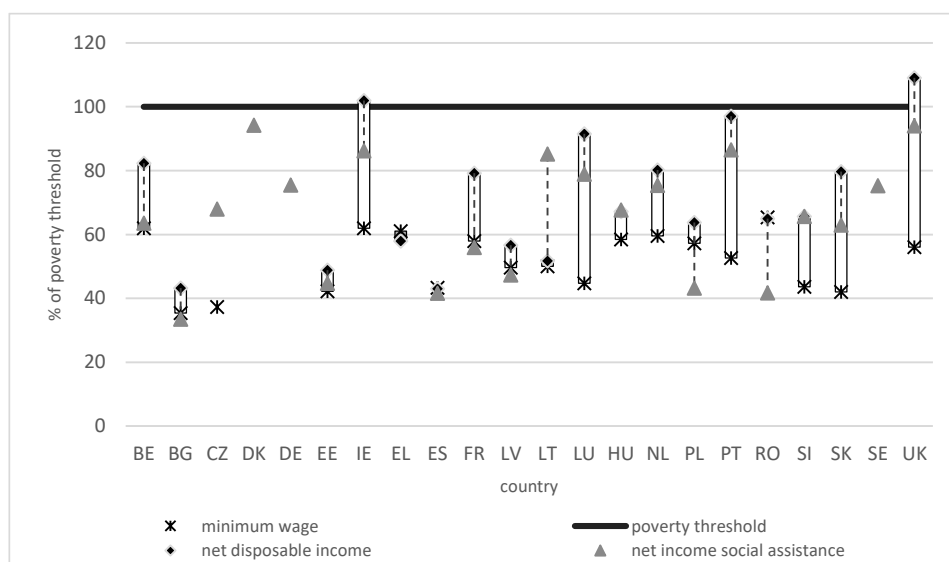
Source: own calculations based on the Euromod-HHoT data.

Figure A11. Main indicators of the minimum income packages – Couple, 2017



Source: own calculations based on the Euromod-HHoT data.

Figure A12. Main indicators of the minimum income packages – Couple with two children, 2009



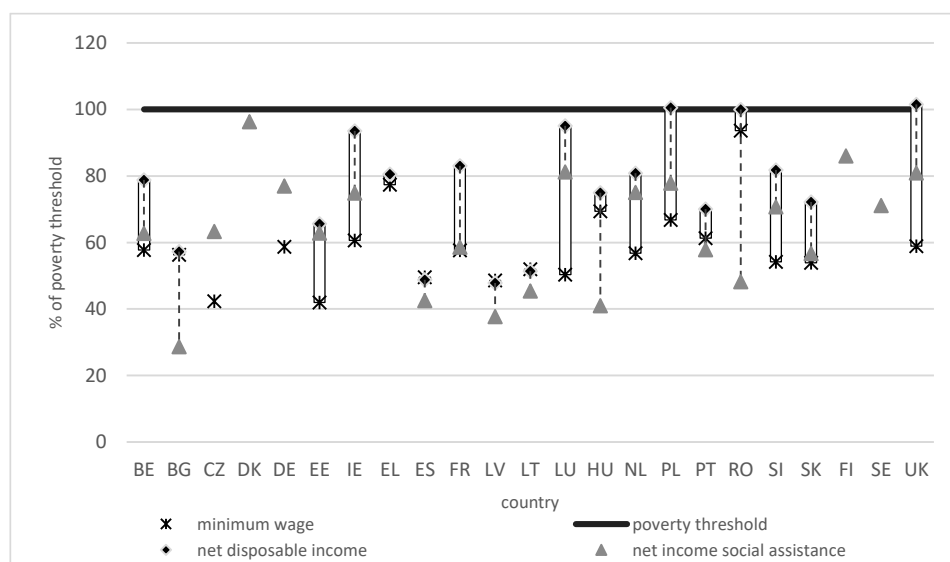
Source: own calculations based on the Euromod-HHoT data.

Figure A13. Main indicators of the minimum income packages – Couple with two children, 2013



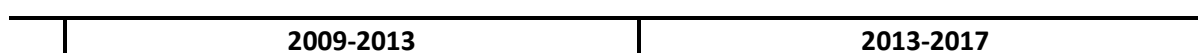
Source: own calculations based on the Euromod-HHoT data.

Figure A14. Main indicators of the minimum income packages – Couple with two children, 2017



Source: own calculations based on the Euromod-HHoT data.

Figure A15. Over time changes in MIPI-HHoT indicators, 2009-2017 – Couple



	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort
BE	-	=	-	-	=	-	=	=	-	+
BG	++	=	+	+	--	+++	=	+++	+++	--
CZ	-	++				+++	--			
DK		=					=			
DE		=				+++	--			
EE	--	=	--	--	=	++	+	=	-	--
IE	=	--	=	++	=	-	--	--	=	=
EL	+++		+++		-	=		=		=
ES	++	++	++	+	=	=	-	=	+	=
FR	=	=	=	=	=	=	=	+	+	+
LV	-	=	--	--	--	=	--	-	++	-
LT	+	--	--	+	--	=	---	+	+++	+
LU	+	=	=	=	-	+	+	++	=	=
HU	+++	---	=	+++	---	++	---	+	+++	-
NL	+	+	=	=	=	--	-	-	+	+
PL	++	=	=	-	--	++	-	=	+	-
PT	+++	---	---	+++	---	+	=	+	=	=
RO	++	=	++	++	=	+++	-	+++	+++	=
SI	+++	=	+++	+++	-	-	++	=	--	+
SK	=	--	--	-	--	+++	-	=	=	---
FI							+++			
SE		-					-			
UK	=	--	--	=	--	+	-	=	=	--

Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Notes. „+++” – >10 pps; „++” – >5 pps and <10 pps; „+” – >2 pps and <5 pps; „=” – >-2 pps and <2 pps; „-” – >-5 pps and <-2 pps; „--” – >-10 pps and <-5 pps; „---” – <-10 pps.

Empty cells represent missing data.

Figure A16. Over time changes in MIPI-HHoT indicators, 2009-2017 – Couple, two children

	2009-2013	2013-2017
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	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort	minimum wage	net income social assistance	net disposable income	financial incentive	welfare effort
BE	=	=	=	=	=	-	=	=	=	=
BG	++	-	++	++	=	+++	-	++	+++	--
CZ	-	+				++	--			
DK		=					=			
DE		++				+++	-			
EE	-	=	=	=	+	+	+++	+++	=	+++
IE	=	--	=	+	-	-	--	--	=	-
EL	+++		+++		++	=		=		=
ES	++	+	++	=	=	=	-	=	+	=
FR	=	=	=	=	=	=	=	+	=	+
LV	-	-	---	--	--	=	--	=	++	=
LT	+	---	--	+++	--	=	---	++	+++	++
LU	+	=	=	=	-	+	+	+	=	=
HU	++	---	=	+++	--	+	---	++	+++	+
NL	=	+	+	=	=	-	-	=	=	+
PL	++	+	+	=	=	+	+++	+++	=	+++
PT	++	---	---	+	---	=	++	++	=	+
RO	+	=	+	+	=	+++	++	+++	+++	++
SI	+++	+	+++	+++	=	-	+	+	=	++
SK	=	-	--	=	--	+++	-	=	=	---
FI							+++			
SE		=					-			
UK	=	--	-	+	=	+	--	--	=	--

Source: own calculations based on the CSB-MIPI database using Euromod-HHoT data.

Notes. „+++“ – >10 pps; „++“ – >5 pps and <10 pps; „+“ – >2 pps and <5 pps; „=“ – >-2 pps and <2 pps; „-“ – >-5 pps and <-2 pps; „--“ – >-10 pps and <-5 pps; „---“ – <-10 pps.

Empty cells represent missing data.