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The Prospects of Achieving the European Social Inclusion Targets through Employment Growth: Lessons for the European Social Agenda

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Sümeyra Akarçeşme[1]*, Bea Cantillon[2], András Gábos[3], Brian Nolan[4], István György Tóth[5]

[1,2] Centre for Social Policy, University of Antwerp, Belgium

[3,5] TÁRKI Social Research Institute, Hungary

[4] Nuffield College, University of Oxford, UK

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Abstract

The European Pillar of Social Rights Action Plan proposes, among others, specific targets for poverty reduction (by 15 million) and employment growth (to 78%) to be reached by 2030. Utilising data from Eurostat and EU Statistics on Income and Living Conditions (EU-SILC) the paper presents analysis and empirical evidence to contribute towards an improved understanding of the relationship between the EU's employment and social target (AROPE) indicators, including the implications of how the latter may be attained. Simulation models are applied to assess the instrumentality of further employment growth for reaching the AROPE targets in 2030. The paper finds that whether and to what extent employment growth leads to lower relative poverty levels largely depends on the distributional dynamics of job growth. For employment growth to effectively mitigate poverty, priority in job allocation should be given to individuals living in very low work-intensity households. Otherwise, the likelihood of employment growth translating into relative poverty reduction diminishes, a finding which aligns closely with empirical evidence from the past decades. However, even if jobs are primarily allocated to individuals in low-work-intensity households, attaining the employment targets alone is unlikely to be sufficient for the achievement of the 2030 poverty targets, calling for policies that improve the transmission mechanisms between individual employment and poverty.

*Corresponding Author: Sümeyra Akarçeşme, sumeyra.akarcesme@uantwerpen.be

1   Introduction

Reaching the three social and employment targets of the European Pillar of Social Rights (EPSR) Action Plan endorsed by European Union (EU) leaders in Porto — an employment rate of at least 78%, at least 60% of adults attending training courses every year, and a number of persons at risk of poverty or social exclusion (AROPE) at least 15 million lower than in 2019 — is often considered as a test for the success of the EPSR. However, questions arise about the feasibility of these targets, particularly the AROPE target. How realistic are they? To what extent might the employment target be instrumental for achieving the poverty target? And what other factors are likely to determine success?

In this paper, we analyse the developments of the relevant indicators set for the monitoring of social cohesion in the EU, analyse past trends in the evolution of the employment and social targets of both the EU 2020 and EU 2030 strategies and their relationships and interactions at the EU and at Member States' level. In addition, using simulation models we assess the instrumentality of further employment growth for reaching the AROPE targets in 2030.

Our analysis builds, for the most part, on quantitative data collected by Eurostat. We mainly use cross-sectional and cross-country comparative data on the 27 EU countries retrieved from the Eurostat database, but also data from the secondary analysis of the EU Statistics on Income and Living Conditions (EU-SILC) micro-data, where the already published indicators are not available or when they are insufficient for our purposes. As the relationship between employment and income poverty is a major topic of this paper, the population at working age is the focus of the core part of the analysis. The definitions of indicators used in the analysis are presented in Annex 1.

In what follows, we first introduce the employment and the social target indicators, together with their empirical trends between 2005 and 2021 and an analysis of the extent to which these targets were achieved, as well as the country-level incidence of the achievements. In Section 3, we then explore how the individual employment levels, AROPE and its components moved over time and correlated with each other. Section 4 focuses on why employment increase per se cannot sufficiently contribute to the poverty reduction target and explores the role of other factors identified in the literature. Section 5 presents simulation models to explore these factors that mediate employment and income poverty by employing shift-share analysis and logistic regression analysis and compares the results to the EU-level 2030 targets. Section 6 is devoted to conclusions and the implications of our analysis.

The paper explicitly considers that the European policy process (including EPSR) is realised via interactions between EU-level guidance and national policies framed by global economic trends. This conceptualisation allows us to see the community of Member States as a large policy lab, in which various policy combinations at national and EU levels yield different results, from which Member States can learn from each other. It is essential to keep this nature of the EU policy process in mind when we summarise our conclusions and the lessons learned.

# 2   The employment and the social target: Overview and trends

2.1   *The employment target*

The Europe 2020 strategy aimed for at least 75% employment among people aged 20-64 by the end of the period, which, for the ongoing EU 2030 strategy set out in the European Pillar of Social Rights Action Plan, was later raised to 78%. In the Action Plan, the Commission also called on the Member States to define national targets, and these, taken together, marginally exceed the EU headline target, aggregating to an EU- wide 78.5% employment rate. The employment rate for this purpose is measured in the standard way as the number of employed persons as a percentage of the total population of working age. As measured in the European Union Labour Force Survey (EU-LFS), the principal condition for being counted as an employed person is to have worked for at least 1 hour for pay or

profit during the reference week, including contributing family workers[11].

Overall, at the EU level, we witnessed a considerable 5 pp increase in employment among persons aged 20-64 between 2008 and 2020, and the employment target of the Europe 2020 strategy was close to being met (European Union, 2019). Finally, it was not achieved. However, there was a large cross-member State variation in employment trends. The largest employment growth was produced in Malta (18.1 pp) and Hungary (13.5 pp). Some countries were able to surpass their national targets substantively (like Malta, Poland, Lithuania, Czechia, Slovenia and – to a lesser extent – Germany), while for some of them the plan proved to be too ambitious: this was clearly the case in Italy, Greece, Belgium, Spain, and, to a lesser extent, Luxemburg, Bulgaria, Austria, and Denmark (see Figure 1).

Figure 1   Employment rates in 2008 and 2020, national and EU level employment targets for 2020.
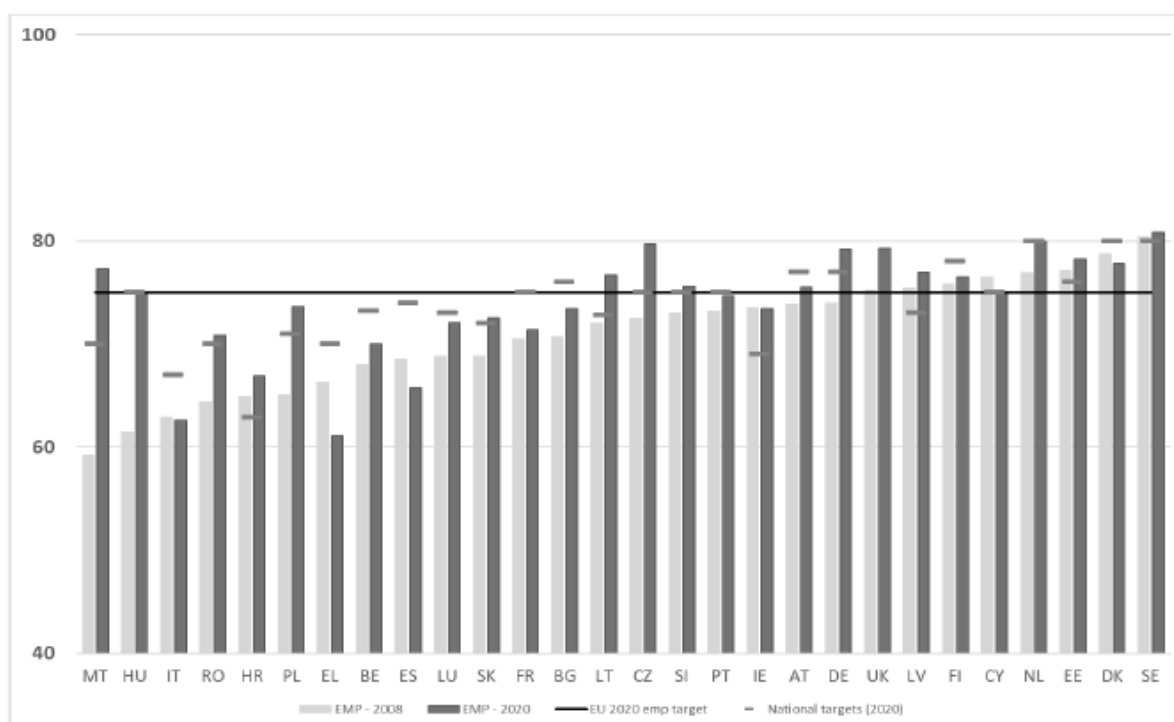
Source: Employment rates were retrieved from the Eurostat database on 31/07/2023. National and EU target values are from Paľová and Vejačka (2018).

2.2   *The social target*

In 2001, the EU adopted a portfolio of 18 social indicators known as the Laeken indicators (see Atkinson et al., 2002; Marlier et al., 2007), focusing on poverty and social exclusion. Over time, these indicators evolved to align with EU social objectives. The Europe 2020 strategy introduced the AROPE-2020 target, which includes the at-risk-of-poverty rate, severe material deprivation rate, and (quasi-)joblessness rate (Marlier et al., 2010). With the adoption of the Action Plan of the EPSR and the EU 2030 strategy targets, AROPE-2020 was modified to include a new indicator for severe material and social deprivation and expanded the age range for the jobless indicator. We refer to this modified indicator and the targets based on it as "AROPE -2030" and "AROPE 2030 target" respectively.

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[1] Those who had a job or business from which they were temporarily not at work in the reference week but had an attachment to their job, and those producing agricultural goods for sale or barter, are also counted as employed.

Parallel to the progress in developing indicators and the monitoring system, there were also important steps taken to strengthen economic and social governance in the EU, first via the introduction of the Open Method of Coordination (OMC) in 2001, and then via the institutional innovations of the Europe 2020 strategy in 2010 and the EPSR Action Plan in 2019 introducing and extending thematic programs and country reporting, integrated into the broader framework of the European Semester (Marlier et al., 2010; Zeitlin & Vanhercke, 2014). The general operational model is simple in principle and complex in practice: The Council, based on proposals by the European Commission, issues Country Specific Recommendations to the Member States. Member States report on measures to respond to these recommendations and track progress in their National Reform Programme reports and continue to coordinate social policies via the OMC.

While the overall EU target is based on the AROPE indicators defined at the EU level, in terms of setting their national targets, Member States were free to choose the most appropriate indicator (or any combination of them) and to choose the path to evolve towards that. In practice, this means that the evaluation of their performance is relative to their own targets, measured by the indicator of choice.

The OMC contributed positively to Europe 2020 objectives, but its impact was limited due to voluntary take-up by Member States and the effects of the Great Recession (European Commission 2019). There were also demands for better dissemination of lessons learned and greater involvement of civil society and civil partners especially in the areas of health and long-term care. It was this background which led to the proclamation of the EPSR at the Gothenburg Summit in 2017.

The assessment of the Europe 2020 strategy (European Commission, 2019) noted strong employment growth despite setbacks during the crisis years, with the employment rate target nearly met before the pandemic. However, the poverty and social exclusion target was missed, as the decline in AROPE fell short of expectations. Employment rates fluctuated across Member States after the Great Recession. However, income poverty remained stagnant (Cantillon and Vandenbroucke, 2014).

The decline in the number of persons affected by AROPE amounted to 7.8 million between 2008 and 2020 overall in the EU, as contrasted to the planned decline by 20 million. The distribution of this amount was very uneven between countries. Poland, Romania, Bulgaria and Hungary contributed to the decline in AROPE by a combined 10.5 million persons (out of which Poland alone by more than 5 million), while Spain, Germany, the UK, France, Netherlands and Sweden contributed negatively, as they witnessed an increase in the number of persons affected by AROPE in their countries by 5.3 million (out of which Spain and Germany were the largest with 1.6 million and 1.4 million, respectively). The all-European balance of these Member State level drops and increases, adding up to 7.8 million mentioned above.

In their analysis, Tóth et al. (2024) show that this decline in AROPE from 2008 to 2020 is largely due to reductions in severe material deprivation, especially in East Central Europe, as well as in France, Italy, and Portugal. Contrarily, changes in the number of persons affected by AROP contributed negatively to the improvement in AROPE figures in almost all countries, except Greece and Spain. The largest increases in AROP are found in Germany and the UK, where no decline in those living in (quasi-)joblessness or in severe material deprivation could compensate for.

3 How have individual *employment* levels, AROPE, and its components moved together over time?

Identifying interactions between employment and poverty requires a careful definition of the population segment for which it is meaningful to carry out such an analysis. The direct effects of employment on poverty are better seen by an analysis limited to active-age individuals (Gábos et al., 2019; Cantillon et al., 2018; Cantillon & Vandenbroucke, 2014). Therefore, Figure 2 displays the indicators for the active age population. A negative association with employment rate and a co-movement with AROPE(a) is visible in the case of SM(S)D(a) and QJ(a) rates, while the EU-27 average figures of the relative income poverty measure AROP(a) show little variation in this period. However, when the anchored AROP(a) threshold (fixed in 2008) is considered, the negative association between employment and income poverty seems to be even stronger than for the two other indicators (SM(S)D and QJ). Overall, visual observation of these co-movements at the EU level indicates that trends in AROP, both for the overall and the active age population, do not reflect employment trends. This empirical observation stays at the base of an important strand of the social policy literature in the last two decades, which criticised the declining capacity of welfare states to address relative income poverty, especially in the case of vulnerable households (Cantillon and Vandenbroucke, 2014), pointed to the limited capacity of jobs to fully protect against income poverty (Crettaz, 2013; Hick and Marx, 2022), emphasized the role of wages (Marchal and Marx, 2018; Salverda, 2019), precarious forms of work (Eurofound, 2017; Horemans, 2019), long-term unemployment spells (Halleröd et al., 2015), and questioned the efficiency of social investment policies (Cantillon, 2011; Vandenbroucke and Vleminckx, 2011).

Figure 2   **Trends in the employment (left axis), the social target (AROPE) indicator and its components, and anchored AROP rate (right axis), active age population (18-64), EU-27 average, 2005-2021.**
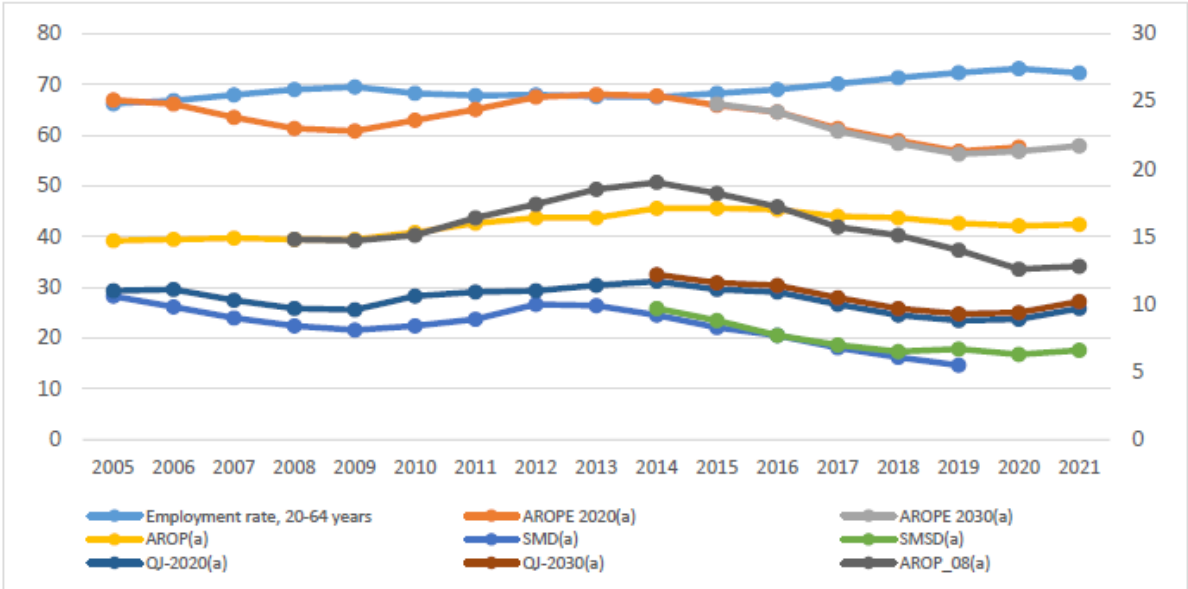
Source: Eurostat database, retrieved on 31/7/2023.
Notes. The explanation of indicators is provided in the Annex. All measures in this figure refer to the population aged 18-64.

Furthermore, a comprehensive correlation analysis by Tóth et al. (2024) between employment rates, AROPE (at-risk-of-poverty-or-social-exclusion) and its components from 2005-2020 at both the EU and national levels reveals that employment levels and fluctuations are markedly and adversely associated with poverty outcomes, especially among working-age adults. However, they also find that

AROP is notably less reactive to employment than the other two AROPE components are. This observation does not hold in the case of the anchored AROP, though, as they find that employment rate has a significantly stronger correlation with anchored AROP than with any individual AROPE component, suggesting that anchored AROP may serve as a more responsive indicator of employment dynamics within this context.

4 Beyond Job Creation: Exploring Other Key Factors in Combating Poverty and Social Exclusion

This observation raises a crucial question: Why is AROP less responsive to employment changes, and what underlying factors contribute to the persistence of relative income poverty in the EU, even in the face of rising employment levels? The relationship between employment growth and income poverty is complex and multifaceted, with research identifying five key interrelated mechanisms that mediate this dynamic (see Figure 3). These mechanisms do not only shed light on why increases in employment may have a limited impact on poverty reduction but also highlight the nuanced ways in which economic growth intersects with social policies, labour market conditions, and structural inequalities.

Figure 3   Core factors that may mediate the impact of employment growth on income poverty.
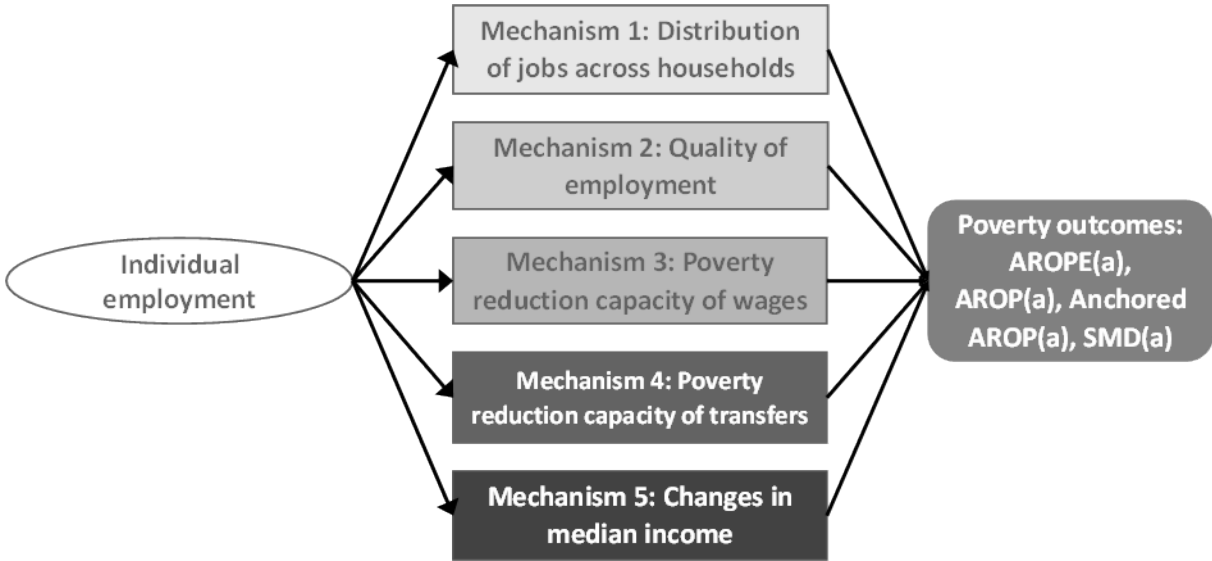
Source: (Gábos, Binder, Branyiczki, & Tóth, 2024).

The first mediating factor concerns who benefits from job growth and how job growth is distributed among households (Corluy and Vandenbroucke, 2014; Gábos et al., 2019). If job growth is polarised and thus mainly benefits households that already have multi-earner status while it benefits households with low work intensity only to a limited extent, then rising employment will not cause commensurate drops in poverty. Evidence on the pre – financial crisis period (Corluy and Vandenbroucke, 2014; Gábos et al., 2019) substantiates this perspective, indicating that job growth mostly favoured families already engaged in the labour market, whilst those in low work-intensity households were generally overlooked by governmental activation initiatives. More generally, recent analyses showed that there is a positive correlation between household joblessness and poverty: the higher share of persons living in very low work intensity households, the higher the risk of poverty is in most of the cases, specifically when poverty is measured by AROPE(a) and AROP(a) (Gábos et al. 2024; Tóth et al.

2024).

The quality of the new jobs represents the second factor. Structural labour market changes increased non- standard and precarious employment, such as part-time, fixed-contract or pseudo-self-employment arrangements, contributing to labour market polarisation and rising in-work poverty (Alper et al., 2021; Brülle et al., 2019; Valaavuo and Sirniö, 2022). From an anti-poverty perspective, the challenge extends beyond merely incentivizing individuals to transition from dependency to employment; it also involves ensuring that employment offers a sufficient income to lift people out of poverty and provide an adequate standard of living. Poor households with weak or no labour market attachment, such as single-parent and large families, often live far below the poverty threshold. For these households, even a job that pays significantly above the minimum wage may not be enough to lift them out of poverty (Immervoll, 2007; Marx et al., 2012).

Third, the evolution of low wages, related to minimum wage policies, and relative to median income, play a crucial role. Nolan (2018) highlights the significance of fostering low wage growth as a means to alleviate income poverty via economic expansion, whereas Cantillon et al. (2020) emphasize the downward pressure on low wages relative to median household incomes. The impact of minimum wages on poverty reduction has also been widely discussed in the literature (e.g. Burkhauser et al. 2023; Collado et al., 2017; Gábos and Tomka, 2022¸ Gindling, 2018). While higher minimum wages may displace unskilled workers, increasing their risk of poverty, they may also provide stronger incentives for the unemployed to take up work. However, due to the lack of reliable yearly and comparative data for all Member States, the analysis below addresses this mechanism only partially.

Fourth, the declining effectiveness of redistribution (Caminada et al., 2012; Holler et al., 2003; Nolan and Marx, 2009; Marx et al., 2015; Notten and Guio, 2019) may also have contributed to the income poverty standstill (Cantillon, 2011; Cantillon et al., 2020; Chen et al., 2018), adding to the declining adequacy of minimum income and social protection schemes in many Member States since before the Great Recession (Gábos and Tomka, 2022; Causa and Hermansen, 2017). Comparative research on minimum income schemes indicates an ongoing general retrenchment of their adequacy (e.g. Gábos and Tomka, 2022), but also highlights a stronger link between employment and social transfers in the recovery period through increased conditionality of benefits on taking up work, especially in Central-Eastern Member States (Knotz, 2018; Weishaupt, 2013). The difficulty of reducing income poverty through social transfers while not discouraging work nor running large public deficits is exacerbated when wage floors decline relative to median household incomes (Cantillon and Vandenbroucke, 2014; Collado et al., 2019). Higher public social spending is associated with lower income inequality and poverty but tends to benefit the elderly more than the working-age population, especially in Western and Southern Europe (McKnight et al., 2016; Chen et al., 2018; Chzhen et al., 2017; Jaumotte et al., 2013).

The fifth intervening factor concerns the trajectory of median income and its impact on relative income poverty thresholds (Marx and Nolan, 2012; McKnight et al., 2016; Jenkins, 2020). When incomes near or below the income poverty line do not keep pace with overall income growth, income poverty stagnates or increases. Conversely, during recessions, a decreased threshold may result in reduced levels of relative income poverty.

5 Future Scenarios: The Projected Impact of Employment on Poverty and Social Exclusion Targets

Building on the mediating factors outlined in the previous chapter, we now turn to an in-depth simulation study to explore how these mechanisms might influence future poverty dynamics in the context of the European Pillar of Social Rights Action Plan's employment and poverty reduction targets. We aim to provide insights into these dynamics through the simulation of several employment growth scenarios. More specifically, we apply simulation techniques to analyse what we might expect for the future developments of the at-risk-of-poverty rates and of the poverty and social exclusion objectives by increasing the employment rate of the active-age population to the 2030 employment rate target of each country under different scenarios, each based on different assumptions regarding the mediating factors. These are explained further below.

5.1 Methodology and Data

We use EU-SILC data from 2019, the income reference year of which is 2018, to simulate the impact of employment growth on relative poverty under different scenarios. 2019 is also the year against which progress in terms of the 2030 targets will be measured. Through our simulations, we aim to model the impact of employment growth on relative income poverty under different assumptions, each reflecting at least one mediating mechanism identified in the literature.

The first scenario aligns with the first mediating factor which considers the allocation of new jobs and who benefits most from employment growth. For this, we first present a shift-share analysis by increasing the employment rate of all 27 EU countries to the level of the 2030 country-specific employment rate target for the working-age population. The at-risk-of-poverty rate for 2030 is simulated under two different job allocation scenarios: Scenario i: Additional jobs are allocated first to unemployed individuals and the remaining part, if any, is allocated to the inactive population. Scenario ii: Additional jobs are allocated first to individuals living in very low-work-intensity households, the remaining part, if any, is allocated to individuals in low-work-intensity households.

For the different groups, including (quasi-)jobless households, at-risk-of-poverty rates (AROP(a)) observed in 2020 (income reference year 2019) are used.

Secondly, the same job allocation scenarios are used as described above, but instead of keeping the income poverty rates constant when adjusting the shares of the unemployed/inactive/individuals living in (quasi-)jobless households, we assume that the within-group AROP(a) trends of the past (between the income years 2009-2019) were continued (see Figure 5). This scenario corresponds to the fourth mediating factor which examines the role of redistribution and social protection systems. The rationale for this sensitivity test is that in the past, in many countries, a simultaneous increase in employment and the risk of poverty among job-poor households was observed, suggesting a link between the way new jobs were created and the social protection available for those who did not benefit from job growth (Cantillon & Vandenbroucke, 2014; Akarçeşme et al., 2024).

The limitation of the shift-share analysis is, however, that it cannot account it account for wage dynamics and, hence, disregards the mechanism of increase in median incomes resulting from job growth. Furthermore, it is not possible to distinguish between individuals' employment chances when simulating employment growth with this method. Therefore we follow Marx et al. (2012a) and also perform a regression-based analysis to simulate an increase in employment growth by considering more detailed assumptions about the mechanisms described previously.

To be able to better explore the 1st mechanism, namely the distribution of jobs across households, we employ a multinomial logit model to estimate the probability that an unemployed person of working

age will work full-time, part-time, or remain unemployed. The following independent variables are used: gender, age, age squared, a dummy for the presence of a partner, the number of children, the logarithm of all other incomes in the household other than the individual's labour income, the highest education obtained (in four categories), a dummy for the country of birth (EU as a reference), and a dummy for limitations in daily activities (yes/no). To capture the variance of the dependent variables for men and women, we incorporate interaction terms between sex, age, the presence of a partner, the number of children and the country of birth.

Furthermore, with our RB model, we are not only able to account for wages in our calculations but also to explore the sensitivity of our results to the job allocation mechanism by allocating the jobs to individuals living in (quasi-) jobless households first according to their employment chances (Figure 7) but we are also able to evaluate the sensitivity of our results to changes in the simulated wage level by imputing a low wage (Figure 8), reflecting on the 2nd and 3rd mechanisms, namely the quality of jobs (by imputing a precarious wage level) and the poverty reduction capacity of wages. Low wages are defined following Lucifora and Salverda (2011) as two-thirds of the econometrically estimated median full-time wage. We evaluate the impact of changing employment rates on at-risk-of-poverty rates using two different benchmarks: In the first scenario, we recalculate the at-risk-of-poverty threshold, taking into account the increased employment rates. In a second scenario, we use a fixed income poverty line.

The following definitions are used: Persons at work are those who are either part-time or full-time work. Unemployed individuals are those who indicated not to be working at the time of the interview, that they are available for work in the next two weeks and that they have actively been looking for work in the last four weeks. Inactive persons are all other persons who are not at work or unemployed. Relative income poverty is measured following the AROPE2030a indicator and its constituent parts AROPa, SMDa and QJ- 2030 (a) further specified in Annex 1.

In our simulations, the severe material deprivation (SMD) rate is kept constant when simulating job growth. While increases in employment rates have a direct impact on household work intensity and incomes, the impact on SMD is indirect and, therefore, difficult to model. It is likely that in countries with high SMD, our simulations underestimate the impact of employment growth on AROPE. This is further supported by the evidence that the SMD component was rather more responsive to employment changes as well as more highly correlated with the AROPE aggregate than the other two components (Tóth et al., 2024).

5.2   Results

Overall, AROP(a) decreases when the weight of the working population is increased to the level of the 2030 employment target (see Figure 4). Not surprisingly, countries with a current employment rate very close to their Europe 2030 target experience the smallest drop in income poverty. Income poverty decreases are strongest if job growth is assumed to reach the (quasi-)jobless households first, reaching a decrease of up to 8.2 percentage points in Germany and Cyprus. Assuming the continuation of AROP(a) trends within the groups of very low and low work-intensity households observed in the past, in most countries, the expected decrease of AROP(a) rates would be overall smaller compared to the first set of scenarios suggested above, due to, among other things, the potential impact of social protection. Under this scenario, in the Netherlands, Slovakia, Germany, Cyprus, Austria, Hungary and Croatia, the simulated at-risk-of-poverty rates for 2030 are even higher than the baseline AROP(a) rate in 2020, even if individuals in (quasi-)jobless households are simulated into work first.

Figure 4 **AROP(a) before and after increasing the employment rate to the 2030 country-specific employment rate target for the population aged 20-64 versus simulated AROPa if within-group income poverty trends between 2009-2019 were continued, using shift-share (SS) in two different scenarios of job allocation, EU-27 (excl. Sweden).**
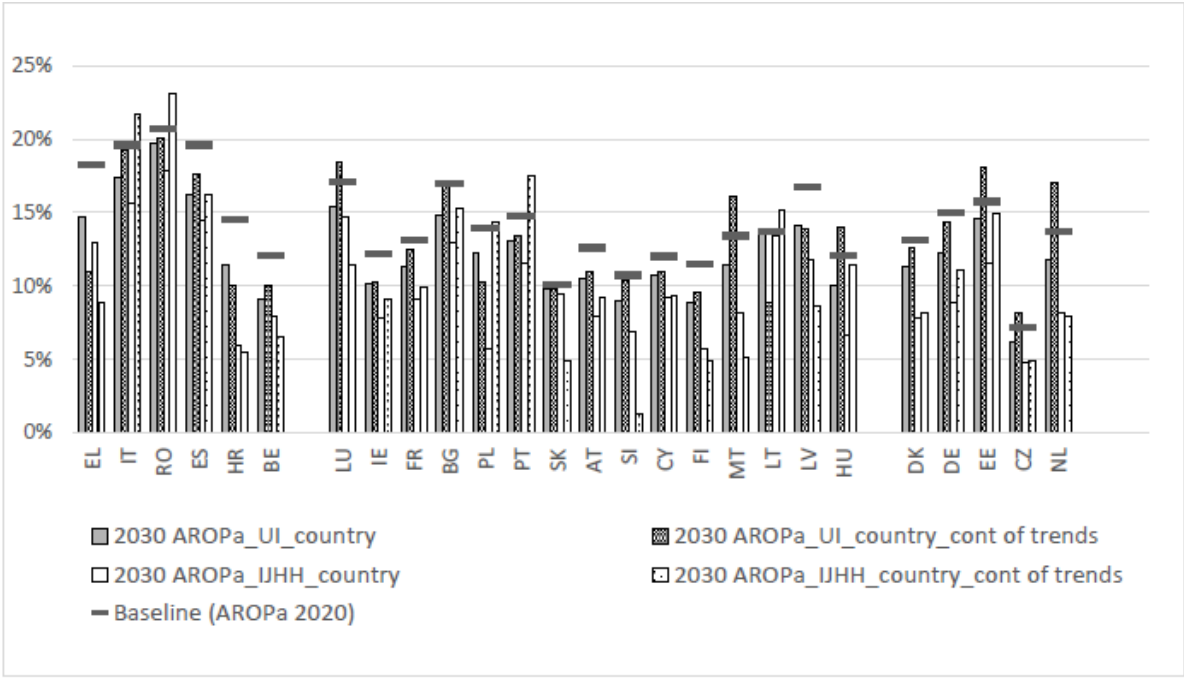
Note. Baseline: 2020 poverty rates of the active-age population. 2030 AROPa_UI_country: Poverty rates after an increase in employment rate to the country-specific 2030 employment rate target (see Table A4) prioritising the unemployed and the inactive when allocating jobs; 2030 AROPa_UI_country_cont of trends: Poverty rates after an increase in employment rate to the country-specific 2030 employment rate target (see Table A1) assuming the continuation of past poverty trends and prioritising the unemployed and the inactive when allocating jobs; 2030 AROPa_IJHH_country: Poverty rates after an increase in employment rate to the country-specific 2030 employment rate target prioritising the individuals living in jobless households when allocating jobs; 2030 AROPa_IJHH_country_cont of trends: Countries are ranked from low to high 2020 employment rates. Calculations are based on EU-SILC 2020.

When the allocation of jobs is simulated taking into account the statistical likelihood of individuals to move into employment (RB approach) as in Figure 5, the impact on AROP(a) is generally smaller than in the previous shift-share analyses, where jobs were allocated first to the unemployed and the (quasi-)jobless households (Figures 4). In high-employment countries, the hypothetical impact is very small or non-existent. In low-employment countries, the impact remains significant when the at-risk-of-poverty threshold remains fixed. If we assume that the income poverty threshold increases when employment rises, the theoretical impact of increasing employment rates is, however, negligible (or negative) in more than half of the countries (where the baseline employment is moderate or high). In this scenario, only in countries with low employment rates a significant positive impact on AROP(a) is observed.

Figure 5   AROP(a) before and after increasing the employment rate to the country-specific 2030 employment rate target for the population aged 20-64 using the RB approach (fixed and floating income poverty line, job allocation according to individual's job chances, EU-27.
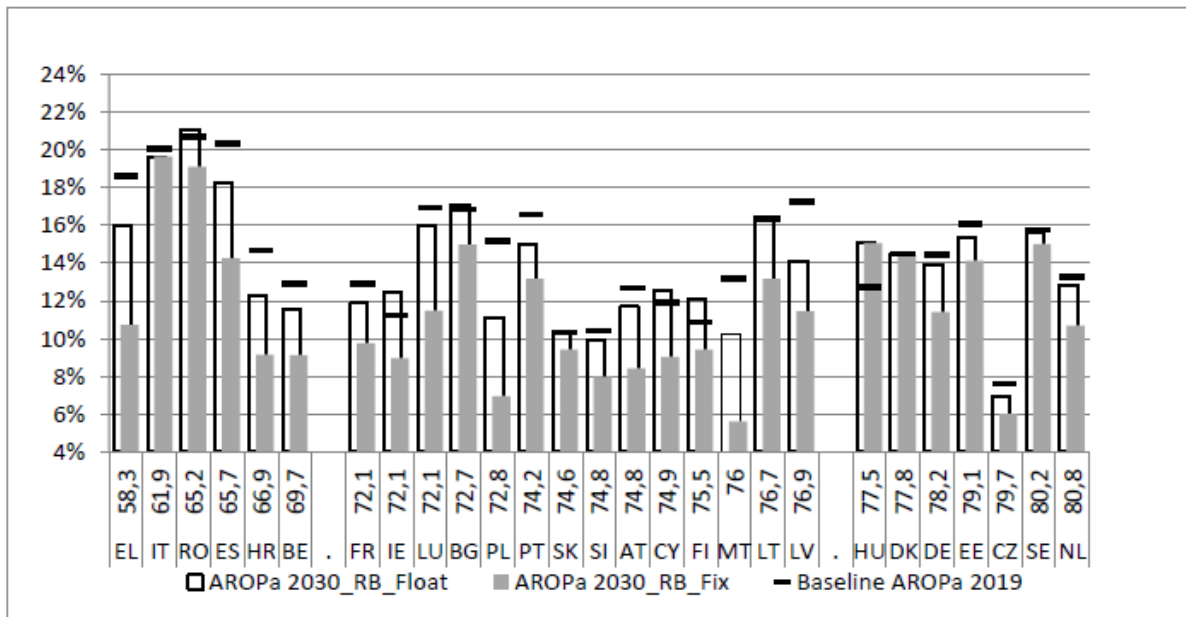
Baseline: 2019 poverty rates of the active-age population; 2030_RB_Fix: poverty rates after an increase of employment rates with RB methodology to 78% prioritising the unemployed and the inactive in job allocation and poverty line fixed; 2030_RB_Float: poverty rates after an increase of employment rates with RB methodology to 78% prioritising the unemployed and the inactive in job allocation and poverty line recalculated. Countries are ranked from low to high 2020 employment rates. Calculations are based on EU-SILC 2019.

Figure 6   Changes in the number of earners in the household after increasing the employment rate to the country-specific employment rate target for the population aged 20-64 using the RB approach and job allocation to individuals with the highest statistical chance of employment, EU-27.
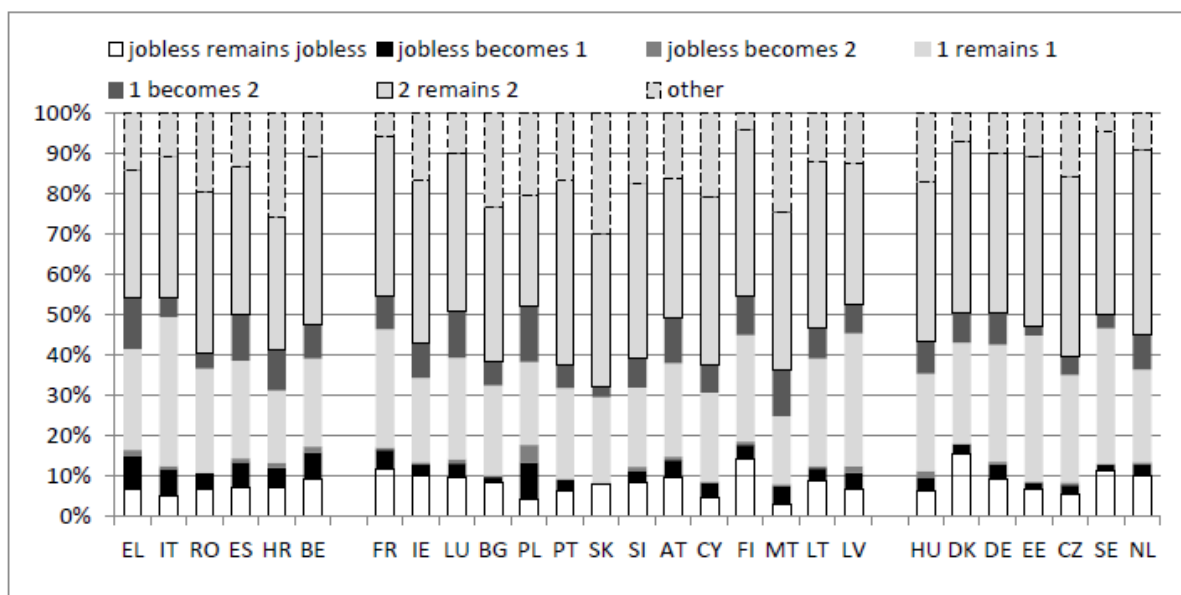
Countries are ranked from low to high 2020 employment rates. Source: EU-SILC 2019.

Figure 6 shows the impact of job growth on the number of earners in the household. When jobs are econometrically distributed according to individuals' employment chances, the share of households with no earner moving to one-earnership is rather limited. Moves from jobless to two earners are even less frequent. Most of the changes involve moving from one to two earners in the household. In low-employment countries, the theoretical impact of job growth on the low work intensity indicator is significant, although new jobs disproportionately benefit households where someone is already employed. This pattern is most pronounced in Italy. These patterns point yet again to the finding that poverty outcomes may depend on the job allocation mechanism. Hence, in Figure 8, we test the sensitivity by allocating jobs to individuals in (quasi-) jobless households first.

Figure 7   **AROP(a) before and after an increase of employment to the country-specific employment rate target for the population aged 20-64 using the RB approach (fixed and floating income poverty line), job allocation to individuals in (quasi-)jobless households first, EU-27.**
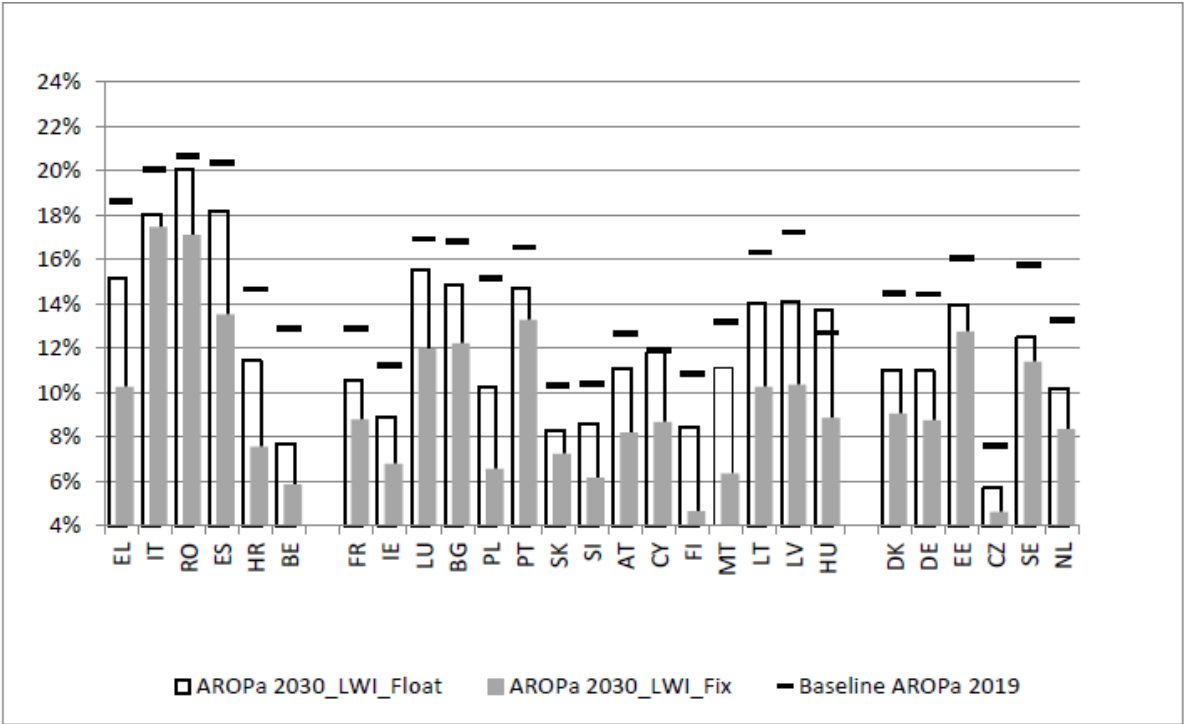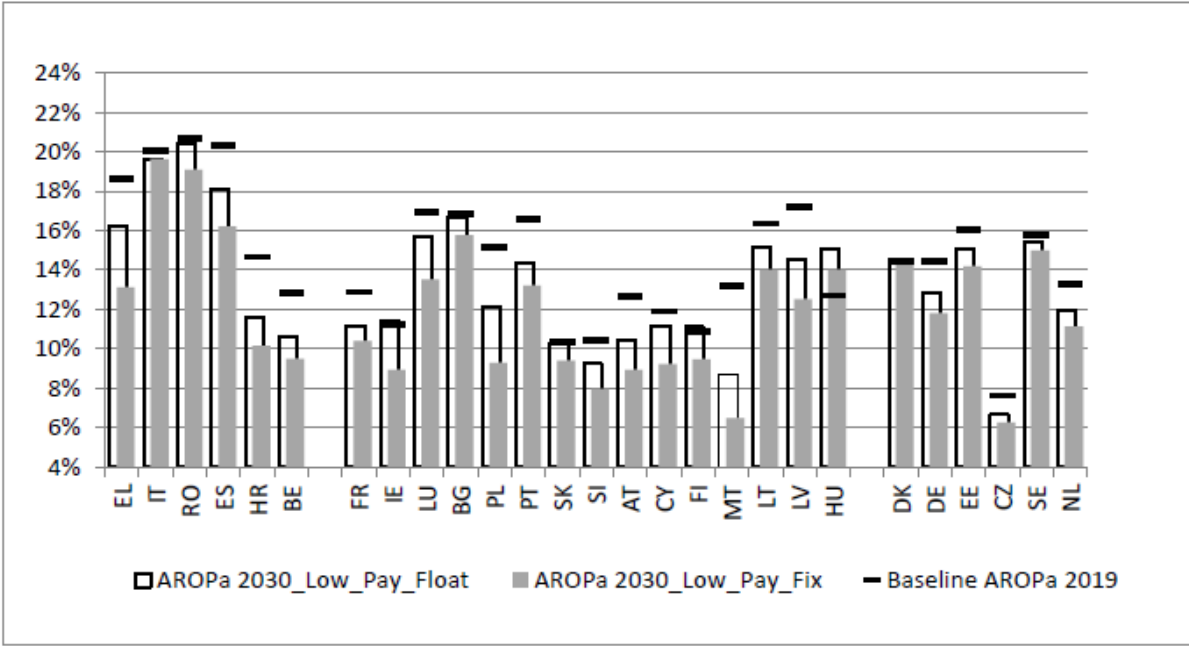

Baseline: 2020 poverty rates of the active-age population. 2030; 2030_RB_Fix: poverty rates after an increase of employment rates with RB methodology to 78% prioritising individuals living in (quasi-) jobless households when allocating jobs and poverty line fixed; 2030_RB_Float: poverty rates after an increase of employment rates with RB methodology to 78% prioritising individuals living in jobless households when allocating jobs and poverty line recalculated. Countries are ranked from low to high 2020 employment rates. Source: EU-SILC 2019.

The results in Figure 7 show that in all countries except for Hungary, allocating jobs to individuals in jobless households results in lower poverty rates compared to prioritising the unemployed and the inactive when allocating jobs. This is true for both, the fixed and the floating poverty line.

Figure 8 shows the impact of employment growth on AROP(a) when, instead of using econometrically estimated wage levels, low wages defined as two-thirds of the full-time wage are imputed (Lucifora and Salverda, 2011). With a fixed poverty rate, the low-wage imputation results in either lower or similar rates of poverty reduction compared to the wage imputation following the econometrically estimated wage level. However, with a floating poverty line, the poverty results are significantly affected in some countries. Imputing lower wages prevents the poverty line from rising as much as it does with econometrically estimated wages, leading to more favourable poverty outcomes. Here we

are, of course, touching on complex issues due to the intrinsic connections between wages, job creation, and the level of social protection for jobless households.

Figure 8 **AROP(a) before and after increase of employment to the country-specific employment rate target for the population aged 20-64 using the RB approach (fixed and floating income poverty line), sensitivity test for changing the imputed wage level, job allocation to the unemployed and the inactive according to their job chances, EU-27.**

Baseline: 2020 poverty rates of the active-age population; 2030_low-pay_Fix: poverty rates after an increase of employment rates with RB methodology to 78% prioritising the unemployed and the inactive in job allocation and imputing a low-wage (poverty line fixed); 2030_low-pay_Float: poverty rates after an increase of employment rates with RB methodology to 78% prioritising the unemployed and the inactive in job allocation and imputing a low-wage (poverty line recalculated). Countries are ranked from low to high 2020 employment rates. Calculations are based on EU-SILC 2019.

Figure 9 shows the simulated effect of employment growth on two out of the three dimensions of AROPE (at-risk-of-poverty and (quasi-)joblessness). The results are compared with the national AROPE targets. Assuming that the income poverty thresholds will increase due to employment growth (floating income poverty line scenario) and that additional jobs are allocated according to individual's job chances without affecting the severe material deprivation rate, the findings indicate that none of the countries attain the 2030 AROPE target. In the fixed-income poverty line scenario, the target is met only in Austria, Belgium, Spain, France, Ireland, Luxembourg, Malta, the Netherlands, Poland, Sweden and Slovenia.

Figure 9   **AROPE(a) rates before and after increasing the employment rate to the country-specific employment rate target of the population aged 20-64 compared to national 2030 AROPE targets (fixed and floating income poverty line, SMD kept constant) using the RB approach, job allocation according to individuals' job chances, EU-27.**
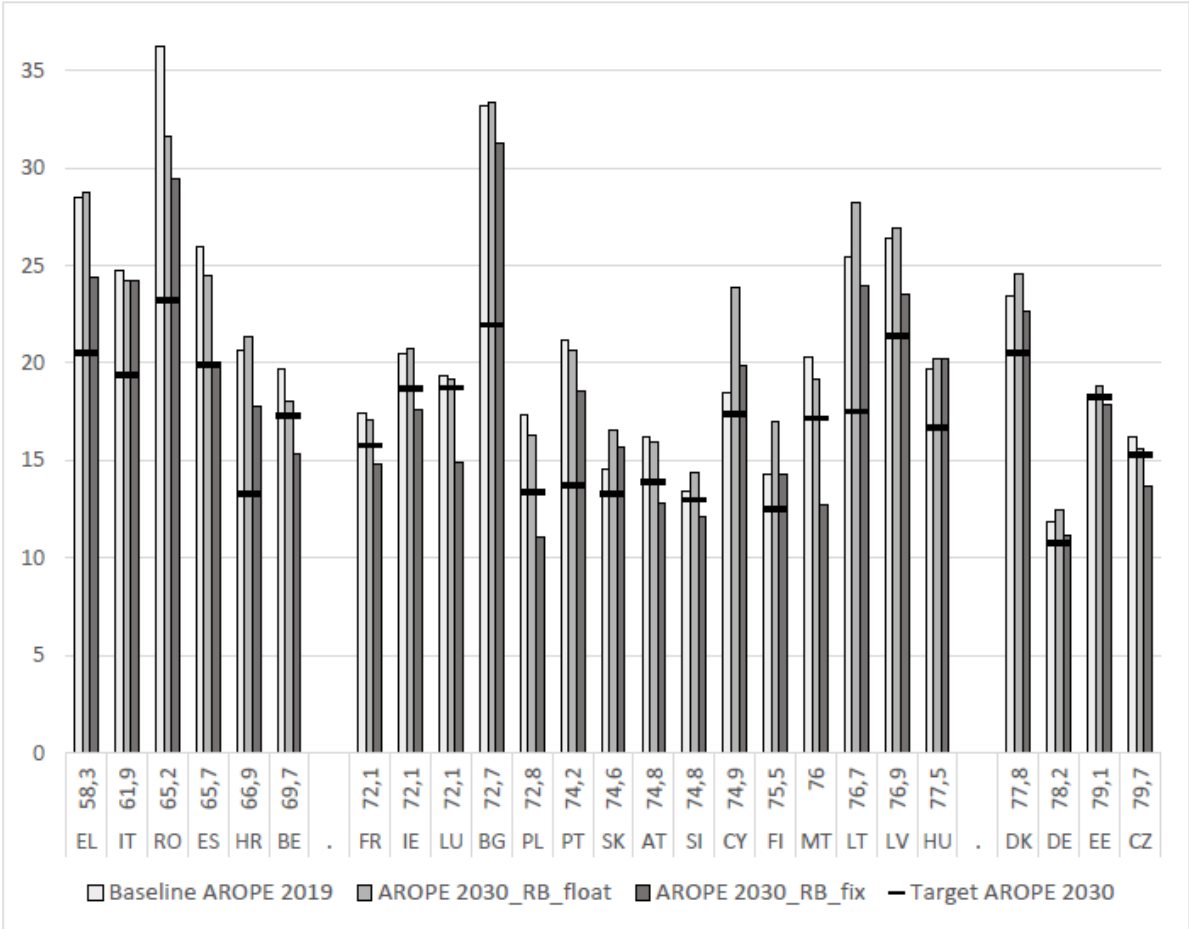
Note: Calculations are based on EU-SILC 2019. Germany and Denmark are excluded as they express their 2030 income poverty reduction targets as a reduction in the number of persons living in (quasi-)jobless households. SMD is kept constant. Countries are ranked from low to high 2020 employment rates.

When assessing the EU-wide objective of reducing the number of persons at risk of poverty or social exclusion by 15 million by 2030, including a reduction of 5 million children, the simulations present the following results: Under the floating poverty line scenario, where median wages increase due to employment growth, as do the poverty thresholds, the number of people at risk is projected to increase by 14,170,773— a significant deviation from the targeted reduction.

Figure 10   Differences between the targeted and simulated AROPE (in thousand persons) by country after increasing the employment rate to the country-specific employment rate target of the population aged 20-64 compared to national 2030 AROPE targets (fixed and floating income poverty line, SMD kept constant) using the RB approach, job allocation according to individuals' job chances, EU-27.
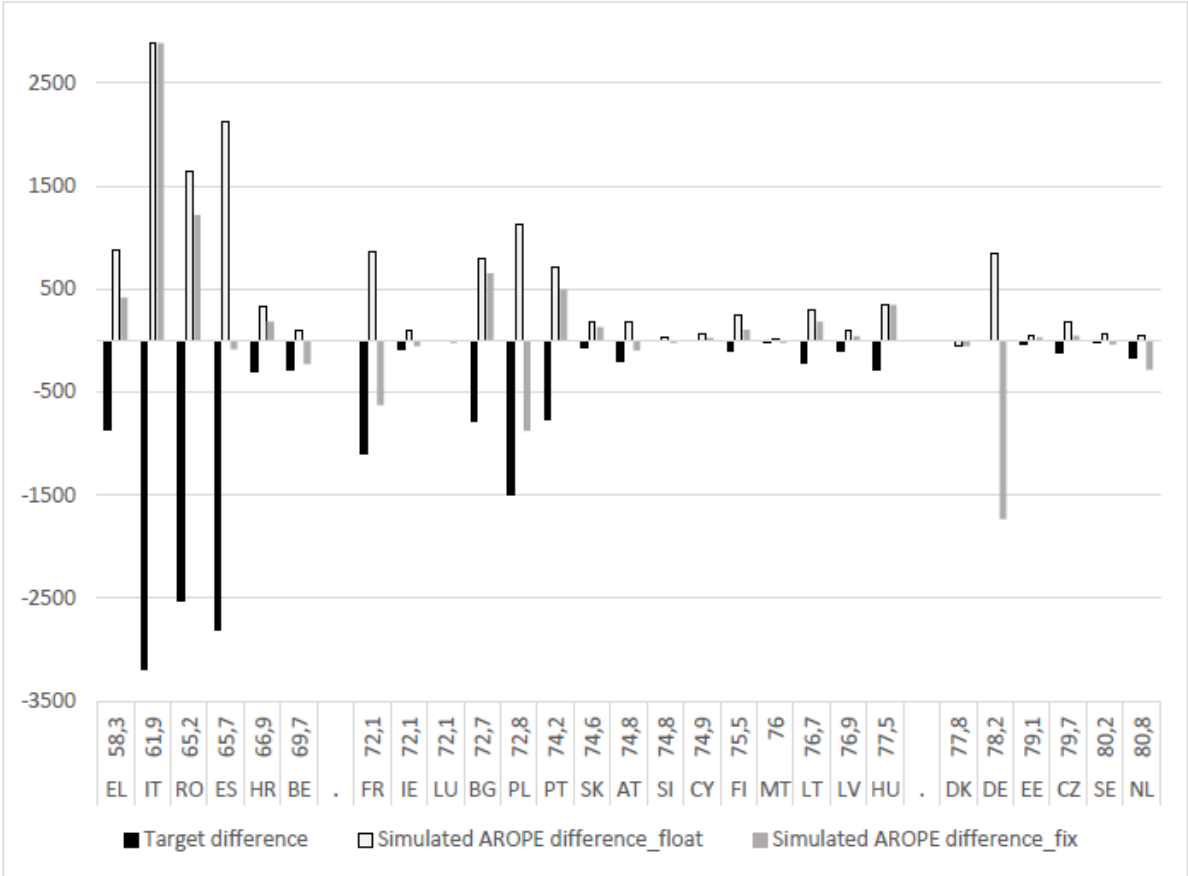
Source: Calculations are based on EU-SILC 2019. Simulated AROPE difference_float: The difference in AROPE (in thousand people) between the 2019 AROPE rate and the simulated AROPE rate after an increase of employment rates with RB methodology to 78% prioritising the unemployed and the inactive in job allocation and poverty line recalculated. Simulated AROPE difference_fix: The difference in AROPE (in thousand people) between the 2019 AROPE rate and the simulated AROPE rate after an increase of employment rates with RB methodology to 78% prioritising the unemployed and the inactive in job allocation and poverty line fixed. Countries are ranked from low to high 2020 employment rates. The target difference is missing for DE and DK as they express their AROPE targets in terms of a reduction in the number of people living in very low work-intensity households. Countries are ranked from low to high 2020 employment rates.

The country-specific contributions to this overall increase vary considerably, with Italy (2,889,353), Spain (2,118,715), Romania (1,643,711), and Poland (1,123,761) showing the largest projected increases, while Luxembourg (2,696), Malta (9,908), and Estonia (53,802) display much smaller increases. In the fixed poverty line scenario, the overall projected increase in individuals at risk is notably lower at 2,618,076, though it remains misaligned with the desired reduction. For child AROPE, the relative poverty line scenario simulates a decrease by 895,640 children at risk of poverty or social exclusion which falls significantly short of the 5 million target. Under the fixed poverty line scenario, the projected decrease of children at risk amounts to 3,538,317 which is significantly higher than in the latter scenario, but still not enough to meet the 2030 target.

As said, in these calculations the severe material deprivation (SMD) rate is kept constant when simulating job growth. While increases in employment rates have a direct impact on household work

intensity and incomes, the impact on SMD is indirect and therefore difficult to model. It is likely that in countries with high SMD, our simulations underestimate the impact of employment growth on AROPE. This is further supported by Tóth et al.'s (2024) finding that the SMD component was rather more responsive to employment changes as well as more highly correlated with the AROPE aggregate than the other two components.

By analysing the scenarios above, we aimed to capture the nuanced effects of employment policies on poverty reduction and to identify the structural and policy adjustments necessary to meet the EU's ambitious targets within the European Pillar of Social Rights Action Plan. In summary, the simulation exercises suggest that in most countries, attaining the employment targets alone is insufficient to achieve the poverty and social exclusion objectives. The way jobs are distributed among households, the evolution of the at- risk-of-poverty rates among (quasi-)jobless households, and the impact of job growth on median incomes are crucial factors in this regard.

6   Conclusion and Discussion

Performance vis-à-vis the employment and social targets of the European Pillar of Social Rights (EPSR) Action Plan represents a central test for the success of the EPSR. Performance regarding the social target (AROPE) at the EU level has not matched the success of increasing employment rates. Despite a notable increase in employment rates in recent years, this advancement has not correspondingly reduced the at-risk- of-poverty or social exclusion rate (AROPE). The ongoing disparity between employment growth and poverty alleviation prompts critical questions regarding the processes by which employment affects poverty and the feasibility of meeting the AROPE objective—a decrease of at least 15 million individuals at risk of poverty or social exclusion by 2030—under existing policies.

Regarding the historical trends, neither the employment nor social targets were achieved between 2010 and 2020, but poverty reduction fell even further short of the mark. While in 2005, there were only three countries with employment rates (in the population aged 20-64) above 75%, by 2021, sixteen of the twenty- seven observed countries reached this level. Still, the employment target was not achieved at the EU level.

The AROPE rate, the social target indicator, registered declines before and after the Great Recession while rising during it. This was primarily due to changes in levels of severe material (and social) deprivation and (quasi-)joblessness rather than relative income poverty (as captured by the AROP indicator). Looking beneath this EU aggregate to national level trends, most countries saw spells of decline and increase, and there was a marked reduction in most of East Central European countries. Overall, at the end of the period, the EU aggregate AROPE rate fell below the 2008 benchmark level, but did not reach the social target set by the Europe 2020 strategy.

Employment and poverty outcomes are strongly and negatively related to each other. AROPE rates at the national level were correlated negatively and quite strongly with employment rates over the entire period in the analysis: an increase in employment is associated with a decrease in the at-risk-of-poverty or social exclusion rate.

Out of the AROPE components, AROP – while negatively correlated according to all methods probed – responded only modestly to changes in employment compared to SMD or AROPE itself. However, the correlation between employment and income poverty proved considerably stronger when the AROP threshold was anchored at a point in time (2008) rather than derived from actual median income in the country. The SMD component was rather more responsive, and more highly correlated with the AROPE aggregate. The (quasi-) joblessness component also plays an important part in the overall correlation between employment and AROPE.

The distribution of additional jobs by household work intensity level strongly matters in how employment gains are translated into poverty reduction. The role of distribution of individual employment gains across households is highlighted in the effect of job growth on both AROPE and AROP in the active age population. According to the latter, AROP would be expected to fall when the weight of the working population is increased in all countries. That decline in income poverty is most substantial when job growth is assumed to reach (quasi-)jobless households first. When job growth is simulated, considering the statistical likelihood of individuals moving into employment, the impact on AROP is generally smaller than when the simulation allocates jobs first to the unemployed and (quasi-)jobless households.

Other mediating mechanisms between individual employment and household-level poverty also play a role. Besides the distribution of jobs across households, the quality of newly created jobs may affect poverty outcomes: a larger share of these precarious forms of employment increases the likelihood of higher poverty rates. Redistribution via various types of social protection benefits played a less important role in poverty reduction between 2005 and 2020. This role is present and fairly strong, however, when the poverty threshold is anchored in a fixed moment in time. The simulation models also demonstrated the effect of social protection for households who do not benefit from job growth by projecting poverty trends within the group of low-work-intensity households.

All in all, our simulation models, integrating key assumptions about the mediating mechanisms between employment growth and relative income poverty in the frame of the European Pillar of Social Rights 2030 targets, suggest the following: Assuming that the income poverty thresholds will increase due to employment growth, that additional jobs and related wages are allocated according to individual's job chances while SMDS is kept constant, none of the countries will attain the 2030 AROPE target. Under these assumptions, in the fixed-income poverty line scenario, the target is met only in 12 out of 27 countries. From a policy perspective, the implication is that the transmission mechanisms between individual employment and poverty should be improved: employment policies should focus more on activating the most vulnerable, policy interventions at national and EU level to underpin job quality should be strengthened via strategies encompassing labour market regulation (including minimum wages), collective bargaining, education and training, and innovation while, finally, social protection systems and social provision for those of working age should be safeguarded and enhanced.

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Annex

Table A1. Description of main indicators in the analysis

Short name	Full name	Definition	Source
EMP	Employment rate	Persons in employment as a percentage of the population of working age (20 - 64 years in this paper). Persons carrying out obligatory military or community service are not included in the target group of the survey, as is also the case for persons in institutions/collective households such as boarding houses, halls of residence and hospitals. The employed population consists of those persons who during the reference week did any work for pay or profit for at least one hour during the reference week, or were not working but had jobs from which they were temporarily absent. In all analyses, the indicator is lagged by one year.	Eurostat database. Primary data source: EU-LFS
AROPE-2020	At-risk-of- poverty or social exclusion rate in the total population, the social target of the EU 2020 strategy	The share of the population that is either at risk of poverty, or in a situation of severe material deprivation, or living in households with very low work intensity.	Eurostat database. Primary data source: EU-SILC. The time series is only available until 2020.
AROPE- 2020(a)	At-risk-of- poverty or- social exclusion rate in the active age (18- 64) population	The share of the population aged 18- 64 that is either at risk of poverty, or in a situation of severe material deprivation, or living in households with very low work intensity.	Eurostat database. Primary data source: EU-SILC.
AROPE-2030	At-risk-of- poverty or social exclusion rate in the total population, the 2030 social target indicator with the revised components (EPSR action plan)	The share of the population that is either at risk of poverty, or in a situation of severe material or social deprivation, or living in (quasi-)jobless households.	Eurostat database. Primary data source: EU-SILC. The time series is only available from 2015.
AROPE- 2030(a)	At-risk-of-poverty or social exclusion rate of	The share of the population aged 18-64 that is either at risk of poverty, or in a situation of severe material or	Eurostat database. Primary data source: EU-SILC.

Short name	Full name	Definition	Source
	active age (18-64) population	social deprivation, or living in (quasi-)jobless households.	
AROP(a)	At-risk-of- poverty rate of active age (18-64) population	Headcount of individuals aged 18- 64, whose income falls below the at- risk-of-poverty threshold established as 60% of median equivalent income of total population.	Eurostat database. Primary data source: EU-SILC
AROP_08(a)	At-risk-of- poverty rate of active age (18-64) population when the AROP threshold is anchored in a fix moment in time	Headcount of individuals aged 18- 64, whose income falls below the at- risk-of-poverty threshold established as 60% of median equivalent income of total population in a certain point in time (2008 in this paper), only price level index is applied over time.	Data source: Eurostat database. Primary data source: EU-SILC.
SMD(a)	Severe material deprivation rate of active age (18- 64) population	Headcount of individuals whose household cannot afford four or more items out of the following nine: (1) to pay their rent, mortgage or utility bills; (2) to keep their home adequately warm; (3) to face unexpected expenses; (4) to eat meat or proteins regularly; (5) to go on holiday; (6) a television set; (7) a washing machine; (8) a car; (9) a telephone.	Eurostat database. Primary data source: EU-SILC.
SMSD(a)	Severe material and social deprivation rate of active age (18- 4) population	Headcount of individuals whose household cannot afford seven or more items out of the following thirteen: (1) to face unexpected expenses; (2) to afford paying for one week annual holiday away from home; (3) to being confronted with payment arrears (on mortgage or rental payments, utility bills, hire purchase instalments or other loan payments); (4) to afford a meal with meat, chicken, fish or vegetarian equivalent every second day; (5) to keep home adequately warm; (6) have access to a car/van for personal use; (7) replacing worn-out furniture; (8) having internet connection; (9) replacing worn-out clothes by some new ones; (10) having two pairs of properly fitting shoes (including a pair of all- weather shoes); (11) spending a	Eurostat database. Primary data source: EU-SILC.

Short name	Full name	Definition	Source
		small amount of money each week on him/herself; (12) having regular leisure activities; (13) getting together with friends/family for a drink/meal at least once a month.	
WI	Household work intensity	The ratio of the number of months worked during the income reference year by all working age (18-64) household members to the number of months (measured in terms of full-time equivalent) they could theoretically have worked. The ratio ranges from 0 (meaning that no one at active age worked during the preceding year) to 1 (meaning that everyone at active age was full-time full-year employed). Households composed only of children, of students (aged 18-24) and/or people aged 65+, are excluded from the calculation. The indicator is defined for the population aged 0-64. Before 2021, the upper boundary of active age was set at 59.	Eurostat database. Primary data source: EU-SILC.
QJ-2020(a)	(Quasi-)joblessness rate, 18-59 years	If the value of household work intensity is below 0.2, for individuals in the age range 18-59.	Eurostat database. Primary data source: EU-SILC. The time series is only available until 2020.
QJ-2030 (a)	(Quasi-)joblessness rate, 18-64 years	If the value of household work intensity is below 0.2, for individuals in the age range 18-64.	Eurostat database. Primary data source: EU-SILC. The time series is only available from 2015.

Table A2. Country-specific employment rate and AROPE targets for 2030 (%of population in 2019)

Country	National employment target for 2030 (in % of active age population)	National AROPE target for 2030 (% of population based on 2019)
AT	79,9	13,88
BE	80,0	17,29
BG	79,0	21,96
CY	80,0	17,35
CZ	82,2	10,74
DE	83,0	*
DK	80,0	*
EE	81,3	20,53
EL	71,1	20,50
ES	76,0	19,93
FI	80,0	12,47
FR	78,0	15,78
HR	75,0	13,32
HU	85,0	16,69
IE	78,2	18,66
IT	73,0	19,40
LT	80,7	17,50
LU	77,6	18,73
LV	80,0	21,41
MT	84,6	15,73
NL	82,5	15,31
PL	78,3	13,36
PT	80,0	13,70
RO	74,7	23,18
SI	79,5	12,98
SK	76,5	13,30

Source: "State of Play on the National Targets for 2030" retrieved from https://employment-social- affairs.ec.europa.eu/policies-and-activities/european-pillar-social-rights-building-fairer-and-more-inclusive-european-union/european-pillar-social-rights-action-plan on 10.12.2024. *DE and DK express their AROPE targets in terms of a reduction in the number of people living in very low work-intensity households. AROPE targets were officially expressed in terms of the reduction in the number of people at risk of poverty and social exclusion. For the comparative purposes of this study, these were converted to % of the population in 2019. The official targets in thousand persons are in the table below.

Table A3. Country-specific AROPE targets for 2030 (in thousand persons)

Country	National AROPE target for 2030
AT	-204
BE	-279
BG	-787
CY	-10
CZ	-120
DE	*
DK	*
EE	-39
EL	-860
ES	-2 815
FI	-100
FR	-1 100
HR	-298
HU	-292
IE	-90
IT	-3 200
LT	-223
LU	-4
LV	-95
MT	*
NL	-163
PL	-1 500
PT	-765
RO	-2 532
SI	-9
SK	-70

Source: "State of Play on the National Targets for 2030" retrieved from https://employment-social- affairs.ec.europa.eu/policies-and-activities/european-pillar-social-rights-building-fairer-and-more-inclusive-european-union/european-pillar-social-rights-action-plan on 10.12.2024.*MT expresses its national poverty reduction target as a reduction of the AROPE rate by 3.1 percentage points. DE and DK express their AROPE targets in terms of a reduction in the number of people living in very low work-intensity households.