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Household Types, Poverty Risk and Welfare Effectiveness Across Europe

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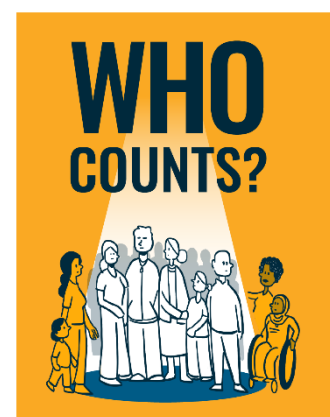


Funded by
the European Union



European Research Council
Established by the European Commission

This paper has been funded by a
European Research Council Starting Grant
(101077363).



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Singled Out: Household Types, Poverty Risk and Welfare Effectiveness Across Europe

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Abstract

Europe has experienced a significant rise in single, childless households of working age in recent decades. This presents a challenge to European welfare states that have typically tended to prioritise social security and anti-poverty spending around family-based and lifecycle needs. In response, this article critically considers the existing scholarship that has appraised the role of family as caregiver and gatekeeper in European social policy to date. Drawing on microdata from 25 countries included in the European Union Statistics on Income and Living Conditions, we examine the effectiveness of tax and transfer systems in tackling poverty amidst considerable changes in household types and composition across Europe. Overall, we find that European tax-transfer systems do a better job of poverty alleviation amongst households with children than they do amongst single, childless households of working age. However, we find considerable variation and important fault lines according to levels of (de-) familisation, welfare adequacy, labour market attachment and whether a household receives disability-related social security. Our findings illustrate the need to move beyond an examination of the absorptive functions of family to consider how household structures determine access to, and adequacy, of working-age welfare.

Keywords: poverty; defamilisation; social security; welfare adequacy; Europe

Introduction

Europe has uniquely high levels of living alone and has witnessed the most consistent upward trend in this household type globally in recent years (Cohen, 2021). The increased incidence of living alone in Europe has principally been driven by the rise of single, childless households of working age (Esteve *et al.*, 2020). Longer-term improvements in living standards have made living alone a more viable option for many, but new social risks have also emerged alongside changing household types. This poses a particular challenge for European welfare states, which have typically organised social policy around early years, child-rearing or later life stages (Orloff, 1993; Lohmann and Zagel, 2016; Vanhuysse *et al.*, 2023).

For working-age welfare, entitlement and generosity have become increasingly administered through family status, sickness or disability (Varner *et al.*, 2017). As a result, family and household structure continues to be a key determinant of redistribution in post-industrial democracies that shapes the extent of inequalities remaining after taxes and transfers (Huber and Stephens, 2014; Frericks and Gurín, 2023). Despite this, researchers have tended to position the family as caregiver, or conduit through which private welfare is provided, rather than gatekeeper to public welfare within social policy debates (Orloff, 2009). This neglects the various ways in which social policy has ‘institutionalized the definite conditions for family’s role as a substantive economic agent’ in its own right in social policy design and delivery (Papadopoulos and Roumpakis, 2017: 871). Against this backdrop, this article moves beyond an examination of the absorptive functions of family to consider how household structure mediates access to, and generosity of, working-age welfare – and in turn – exposure to poverty risk. To do so, we focus on the changing prevalence and risk of poverty amongst single, childless working-age households, and what effect taxes and transfer systems have in reducing poverty across different household types.

Particularly within dual-earner societies, there is some evidence to suggest single individuals of working age (with and without children) have been some of the biggest losers when it comes to welfare state recalibration (Alm *et al.*, 2019). In the United States, Gornick *et al.* (2024) demonstrate how taxes and transfers now prove much more effective at reducing poverty amongst non-disabled adults living in households with children, as compared to those living in households without children. As yet though, there has been no systematic examination of longer-term trends that evidence relative welfare effectiveness according to different household structures across Europe. In response, this article explores the following questions: what has been the prevalence and risk of poverty across different household types in Europe in recent years? And what impact have taxes and transfers had on reducing poverty risk across different household types?

To answer these questions, we draw on European Union Statistics on Income and Living Conditions microdata for 25 European countries over a 15-year period. We start by evidencing the how the overall profile and composition of the poor has changed across Europe in recent years. Relative to their poverty risk and contribution towards overall poverty rates, we find that European tax and transfer systems do a much better job of lifting families with children out of poverty than they do at lifting single, childless households out of poverty. However, we also find important fault lines according to employment status and disability receipt. Our findings offer lessons on how defamilisation could be more productively understood and operationalised in social

policy, as well as how this might better feature in analyses of social security and anti-poverty policy to better understand its effectiveness, logics and who the relative winners and losers tend to be as a result.

Welfare Access, Adequacy and Changing Household Types

In European social policy, a great deal of research has explored how varieties of welfare capitalism differ in their tripartite settlement between state-market-individual and the degrees of defamilisation at play (Israel and Spannagel, 2019). Broadly speaking, defamilisation is ‘the degree to which individual adults can uphold a socially acceptable standard living, independently of family relationships, either through paid work or through social security provision’ (Lister, 1997: 173).

However, there is a lack of consensus on how the concept of defamilisation should be understood and operationalised. For some, defamilisation principally concerns the degree to which welfare states decommodify family life (Korpi, 2000). For others, defamilisation more specifically concerns ‘the extent to which welfare states, and welfare state regimes, facilitate female autonomy and economic independence from the family’ (Bambra, 2007: 327). The latter has generated an important body of scholarship to reflect on questions of gender inequality and the reconciliation of paid work and unpaid care work (Orloff, 1993; Cho, 2014; Kowalewska, 2023). Such work examines the extent to which the ‘social citizenship rights of married and cohabiting women are mediated by their male partners’ (Lister, 1997: 173) and how family formation, female labour market participation, as well as child and female poverty are affected by the gendered nature of welfare state transformation (Lister, 1997: 173). To this end, the individualisation of social rights thesis has, to date, principally focused on the issue female autonomy (parents or otherwise) to form and sustain households independently of men (Bambra, 2007: 327). A consequence is that the existing literature has tended not to focus on the capacity of single individuals more generally to secure an adequate standard of living independently of being in or ‘doing’ family (Lister, 1997: 173). In particular, examination of the family and its role in mediating access to, and the adequacy of, welfare in anti-poverty policy has been much less common (Podestà and Marzadro, 2017).

Where attention has been paid to the role of family as gatekeeping or filtering access to welfare adequacy and access, this has principally focused on differences between family size with children (e.g. smaller vs. larger families), rather than on how an absence of family altogether can affect the operation of social security systems, particularly the (relative) generosity or adequacy of welfare (Köppe *et al.*, 2025). This is despite some evidence to suggest that the redistributive functions of welfare states are considerably shaped by the presence, size and structure of family across household types (Huber and Stephens, 2014; Frericks and Gurín, 2023). For example, Schechtl (2023) examines the relationship between vertical redistribution (from rich to poor) and horizontal redistribution (between different family types and household structures), in tax policy to establish which family types ‘win’ and ‘lose’. There is, of course, good reason for this: certain family types (e.g. lone parents) are often much more likely to be at risk of poverty (Frericks and Gurín, 2024). Functions of European tax-benefit systems mean working-age families and children are also at greater risk of economic insecurity when levels of welfare coverage and spending are lower (Cantó *et al.*, 2023).

However, with working-age social transfers increasingly tied to meeting work-related obligations and/or child-rearing responsibilities, delimited levels of de-commodification

have also brought low levels of defamilisation into sharper focus. That is to say, there is increasing interest in the extent to which different household types are protected from poverty ‘independently of family relationships’ (Lister, 1997: 173; Gregory *et al.*, 2024). Without dependents in the household, and therefore fewer obstacles to engage in the paid labour market, single childless households of working age have tended to be seen as less of a priority within tax-transfer systems, both amongst European social policy researchers and policymakers. Indeed, active labour market policies often prioritise attention towards single, childless working-age adults and net replacement rates tend to be much lower for this demographic group compared to others. Perhaps these trends are to be expected: family is, after all, a ‘major principle of welfare state redistribution’ and policy intervention (Orloff, 1993; Lohmann and Zagel, 2016; Frericks and Gurín, 2023: 53; Vanhuysse *et al.*, 2023). Across Europe, social investment as a policy paradigm pivoted on early childhood and childrearing, human capital development, addressing life-course changes and risks and supporting families through employment activation (Hemerijck, 2018; Hajek, 2024). But what does this mean for those who do not satisfy the condition of having and ‘doing’ family as a necessary precondition to certain forms and levels of welfare?

Hughes and Tarrant (2023: 209) argue it can result in the ‘discursive and evidentiary absenting’ of key groups on the social and economic margins. Exploring the trajectories of men experiencing place-based hardship they demonstrate how previously partnered single men principally become an object of social enquiry or policy attention as ‘absent fathers’ or via family participation (Hughes and Tarrant, 2023). Independently of family relationships, their poverty is largely overlooked. When the experiences of ‘families’ in poverty are centred and circulated over other household types, this shapes academic and public understanding of poverty, including who is most at risk of it. A consequence is that single, working-age adults have tended not to be considered a policy priority. This is despite evidence to suggest that single childless households are not only more likely to experience poverty, but more extreme forms of hardship in selected countries. Across Europe, the majority of people sleeping rough on the streets or in homeless shelters are single working-age adults (FEANTSA, 2023). Fitzpatrick *et al.* (2023: 24) find that single working-age adults are ‘3.5 times more likely to experience destitution compared with their share in the UK population’. By contrast, 11% of those in destitution are lone parents with children and 11% are couples with children, and they make up 5% and 18% of the population respectively. Beyond disproportionate risks to more intense forms of poverty, there is also evidence that single, childless adults have been some of the biggest losers to welfare state recalibration in recent years. For example, Alm *et al.* (2019) evidence how declining benefit adequacy has proven less detrimental to the relative position of couples with and without children, with much sharper rises in poverty witnessed amongst single, childless adults and single parents over time. Especially, within dual-earner societies, Alm *et al.*, (2019: 200) argue that shrinking welfare coverage and replacement rates place single persons without the ‘income buffering effect of the other spouse’ at particular risk.

This is particularly significant given the changing composition of household types across Europe and the overall profile of those living below the poverty line (see Table 1). Between 2007 and 2019, single, childless households grew steadily by around 12%, making up a third of all working-age households – the second most common household type – by 2019. Overall, couple households with 1-2 children and couple households with 3+ children contracted by 6% and 12% respectively over the same period. Overall, single-

member households experienced the highest percentage point increase in the incidence of relative poverty and deep poverty, primarily in the aftermath of the global financial crisis. Between 2007 and 2019, relative poverty increased by 8% for single, childless households and by 14% for couple, childless households. These trends are even more pronounced for deeper forms of poverty (measured here at 40% of median incomes). Whilst lone parent households are most at risk of poverty (34% were in relative poverty in 2019), single, childless households make up a large and increasing share of all households in relative and deep poverty. In 2007, 37% of all working-age households in relative poverty were single households without children, but this rose to 42% in 2019. And almost half of all working-age households in deep poverty are single, childless households rising from 42% in 2007 to 47% in 2019.

Table 1: Composition of working-age households and poverty incidence by household type, all countries, 2007-2019

<i>Share of households by household type for all, those in relative poverty and those in deep poverty</i>									
	2007			2013			2019		
	Total	Relative poverty	Deep poverty	Total	Relative poverty	Deep poverty	Total	Relative poverty	Deep poverty
Single	29.6	36.5	41.9	30.8	39.8	41.7	33.1	42.4	47.3
Single with children	9.6	20.7	19	9.9	19.3	15.9	10	20.1	18.7
Couple without children	18.3	8.4	8.2	18.3	9.0	9.3	17.3	8.1	7.7
Couple 1-2 children	35.8	25.1	22.3	34.9	23.5	25.3	33.6	21.8	19.4
Couple with 3+ children	6.7	9.3	8.4	6.1	8.4	7.9	5.9	7.6	7.0
Total	100	100	100	100	100	100	100	100	100
<i>Poverty rates by household type</i>									
		2007			2013			2019	
		Relative poverty	Deep poverty		Relative poverty	Deep poverty		Relative poverty	Deep poverty
Single		19.6	6.5		21.1	7.4		21.1	8.5
Single with children		33.4	9.6		31.9	9.2		33.5	11.1
Couple without children		7.1	2.1		8.4	2.9		8.1	2.8
Couple 1-2 children		10.3	2.7		10.5	3.3		10.3	3.2
Couple with 3+ children		20.0	5.2		20.3	5.5		19.5	5.5
<i>Poverty rates by HH labour market attachment</i>									
		2007			2013			2019	
		Relative poverty	Deep poverty		Relative poverty	Deep poverty		Relative poverty	Deep poverty
Low		33.4	10.8		39.0	12.7		40.3	14.6
Medium		6.7	1.4		6.7	1.7		7.7	1.9
High		4.5	1.3		4.9	1.4		1.9	2.1
<i>Poverty rates by HH disability receipt</i>									
		2007			2013			2019	
		Relative poverty	Deep poverty		Relative poverty	Deep poverty		Relative poverty	Deep poverty
No		14.2	4.4		15.8	5.0		15.4	4.9
Yes		24.5	6.1		28.2	7.2		28.5	8.3

Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). For details on the variables, see Table A2 in the Appendix. Authors' calculations.

Azzollini *et al.* (2025) demonstrate how the changing composition of household structures has affected poverty incidence, with mixed effects across selected countries. Alongside shifts in the work intensity of household types, the authors find that 'the share of single adult households rose in most countries (Azzollini *et al.*, 2025: np). This reduced poverty considerably in some countries (Germany, Greece, Italy, Israel and Spain), modestly in others (Denmark, Hungary and the USA), and increased it in a minority (Czechia and Norway). A comparative study focusing on the effectiveness of welfare systems in reducing poverty amongst single, childless, non-disabled, non-elderly adults recently evidenced considerable variation across Europe and North America (Gornick *et al.*, 2024). Focusing on the U.S. as a reference point, the authors demonstrate how taxes and transfers do a more effective job of lifting individuals living in U.S. households with children out of poverty relative to those living in households without children. The former group have witnessed a decline in poverty prevalence since the 1980s as a result, whilst the latter group have witnessed a modest increase. The starting point for Gornick *et al.* (2024: 1) was a concern that working-age single adults without a disability 'are relatively underserved' in the broader schema of welfare (Parolin, Desmond & Wimer, 2023; Gornick *et al.*, 2024: 1). Similarly, Frericks and Gurín (2023) demonstrate the limits of the individualisation of social rights in practice (Lewis, 2001) by evidencing how single-earner family forms are some of the most disadvantaged by tax-transfer systems across the Czech Republic, UK and Denmark. Beyond work-related redistributive principles, the authors argue that other redistributive logics, 'and the family as a major redistributive principle in particular' need to feature more prominently in welfare state analyses if we are to fully understand and explain differential material outcomes (Frericks and Gurín, 2023: 62).

Thus far then, existing research has either explored changing poverty incidence amongst single, childless working-age adults; their overall contribution to the profile of poverty; or the relative effectiveness of tax-transfer systems across single or selected countries. To date, there has been no systematic examination of all three dimensions in tandem over time. With that in mind, the contributions of this paper are twofold. First, we descriptively evidence changing poverty incidence of different household structures and the relative impact of different tax-transfer systems across Europe. Given some evidence suggesting that single working-age childless adults are at heightened risk of more intense forms of poverty (see above), we draw on different poverty thresholds to better capture the extent and severity of their income disadvantage within the broader poverty profile in Europe. Second, we draw on findings to highlight analytical blind spots in how defamilisation and familisation are currently understood and deployed in social policy analysis, particularly when it comes to understanding the changing demographic poverty risk factors and effectiveness of welfare state intervention. To do so, we delineate between different features of (and understandings of what constitutes) familisation. Specifically, we focus on two key macro-level indicators to better understand the relative effectiveness of tax and transfer systems. First, we explore the level of '*familisation*' in operation within a given country: that is, the degree to which welfare states support households to have and 'do' family, alongside or independently of labour market engagement. We measure this as combined public expenditure on early childhood education and care (in kind), family allowances and maternity and paternity leave (in cash). Second, we examine '*defamilisation*' by looking at the net replacement rate for *different* household types when

they are out of work. In particular, we explore *variable* net replacement rates across different household types to explore how far tax-transfer systems enable individuals to live independently from family ties, which aligns with Lister's (1997) definition of 'defamilisation'. Through such an approach, we are able to explore the impact of different tax and transfer configurations and their bearing on poverty prevalence across different household types. Detail concerning our data and empirical strategy are provided below.

Methods

Data

Our analyses draw on cross-sectional data from the European Survey on Income and Living Conditions (EU-SILC). We pool data from three waves (2007, 2013, 2019)¹ covering 25 European countries. These waves were chosen given EU-SILC's rotating panel design, in which one-quarter of the sample is replaced each wave with households surveyed for a maximum of four years. As a result, no household appears more than once in our dataset (Filandri *et al.*). For completeness, we focus on working-age households in which the reference person is the highest earner aged between 20 and 59. The analytical samples are restricted to 44,861 households living in relative poverty before taxes and transfers, and 28,925 households experiencing deep poverty before taxes and transfers. These households are nested within 75 country-years across 25 countries. An additional group of households, who do not experience poverty before taxes and transfers, is included in the descriptive analysis below but excluded from our multivariate models (See Tables A1-A2 in the Appendix, for details).

Micro-level variables

To explore differences in welfare effectiveness – namely, the capacity for welfare states to lift people out of poverty – across different household types, we examine poverty incidence and risk both before and after taxes and transfers. We calculate household poverty status before taxes and transfers based on the total gross market income derived from labour and capital, and household poverty status after taxes and transfers refers to total household income once taxes, credits, public pensions and social benefits have been applied (Filauro and Parolin, 2025). Like Ilmakunnas *et al.* (2025), we apply the poverty threshold based on net equivalised disposable income consistently to both pre- and post-tax income measures. For the purposes of our study, the relative poverty line is computed as 60% of the national median household income, while the deep poverty line is set at 40% to capture a more acute form of financial hardship. Building on these definitions, the multivariate analysis focuses on two main dependent variables: whether households avoid relative or deep poverty after taxes and transfers. In both cases, variables are coded as 1 if the household is not poor after taxes and transfers, and 0 otherwise.

Whilst a range of measures of poverty depth and intensity are in circulation, we have opted for this measure to maximise consistency and comparability across studied countries. There remain challenges surrounding the accurate measurement of deep poverty and the most appropriate measure to use (Edmiston, 2024). We, nonetheless, consider it important to include such a measure given the disproportionate exposure of single and childless households to more intense forms of financial hardship (See Table 1 above and Fitzpatrick *et al.*, 2023: 24).

¹ UK, IS: 2018 instead of 2019.

Our main independent variable is household type. Following Köppe *et al.* (2025), we distinguish between five working-age household types: singles without children, single parents with children, couples without children, couples with one child or two children and couples with three or more children. In addition, we include two further independent micro-level variables: labour market attachment and disability receipt within the household. To measure the labour market attachment of a household in a more granular manner, we adopt Eurostat's measure of labour market intensity, which is the ratio of months worked by working-age household members (excluding students) out of the number of months they could have worked during the income reference period (Eurostat, 2021). Household disability receipt, measured as a binary indicator, is based on objective information about the receipt of disability benefits at the individual level. A household is classified as experiencing disability if at least one member receives disability benefits. We also control for the following socio-demographic characteristics at the household level: highest educational level among household members (low, medium, high); age of the oldest member (categorically with 5-year intervals); tenure status (rent, outright homeownership, homeownership with mortgage, free-users); foreign born (whether at least one household member is foreign-born). Further details on the operationalisation and descriptive statistics of these micro-level variables are available in Tables A2-A4 in the Appendix.

Macro-level variables

We explore the effects of several macro-level factors in our analyses to examine what bearing they have on poverty alleviation across countries and household types. We adopted measures that reflect *de facto* welfare state operations rather than imposing assumed characteristics based 'ideal' welfare regime types where there can be both considerable variation within and deviation from expected performance. As detailed above, we focus on two key macro-level indicators to explore the impact of 'familisation' and 'defamilisation' on welfare effectiveness across household types. Public social expenditure as a percentage of GDP, Gini Coefficient of income inequality and unemployment rates are also included as macro-level controls. All indicators measured at country-wave level are normalised ranging from 0 to 1. Our macro-level variables represent the income reference year for each of the cases considered except for public social expenditure. Here, we use a lagged measure representing the value of the previous year to account for the delay between fund allocation and policy implementation. See Tables A4 and B4, and Figure B3 in the Appendix for further details on our macro-level indicators.

Empirical strategy

Below we descriptively outline poverty in Europe by country, wave and our main independent variables (Figures 1-2 and Table 2). To investigate how household type relates to avoiding poverty after taxes and transfers, we then estimate a series of multilevel linear regression models with a three-level random effects specification. Given the hierarchical structure of the data, working-age household respondents (Level 1) are nested within country-waves (Level 2), which are, in turn, nested within countries (Level 3). This structure reflects the time-series cross-sectional nature of the data, with countries observed across multiple survey waves. To properly account for both the cross-sectional and longitudinal variation in time-varying macro-level variables, we follow the strategy proposed by Schmidt-Catran and Fairbrother (2015). All macro-level variables are included in the models in two forms: the *between* component, defined as the country-level average across all waves, capturing cross-country differences; and the *within* component, defined as the deviation from this average in each wave, capturing temporal variation within countries. By construction, these components are uncorrelated. Additionally, two

wave-specific fixed effect dummies are included to control for period-specific shocks or common trends across countries. Following Mood (2010), we estimate linear probability models rather than logistic models to assess the likelihood of exiting poverty after taxes and transfer income. This strategy affords easier interpretation, as the coefficients can be read directly as changes in probability, and they closely approximate the average marginal effects derived from logit models.

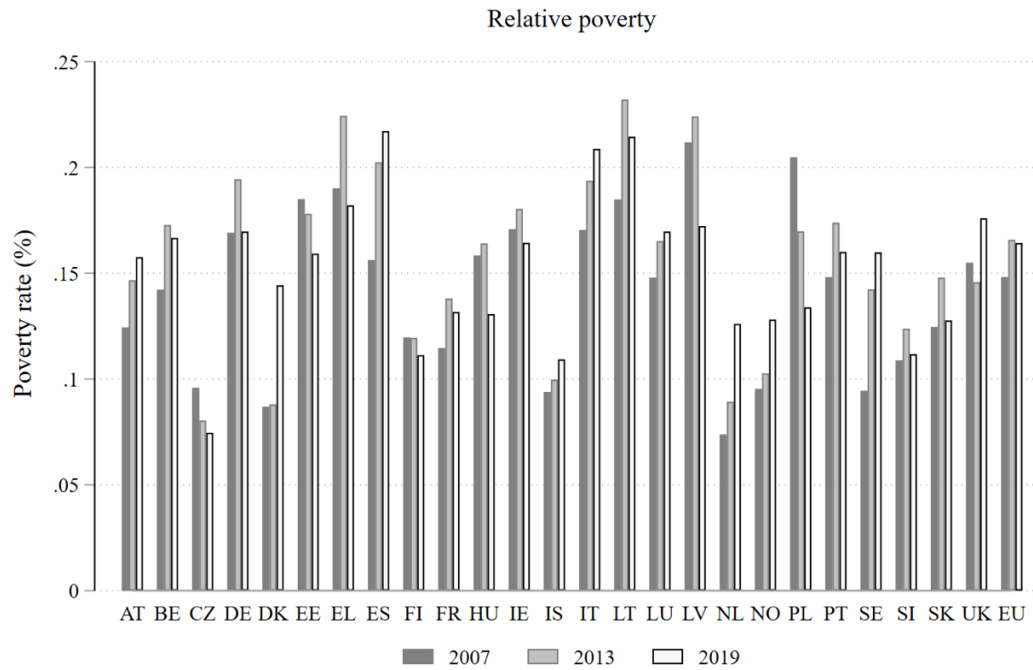
We conduct the analyses in four steps for both of our poverty indicators separately. First, we examine the association between poverty after taxes and transfer income and household type controlling for socio-demographic and contextual variables (Models 0 and 2 in Table 3 and Models 1 in Table C1 in the Appendix). Second, we test two separate micro-level interactions between household type and household labour market attachment and household disability status respectively (Models 3-4 in Table 3). Third, we examine the influence of our macro-contextual factors on welfare effectiveness across different household types (Models 5 and 7 in Table C2 in the Appendix).

Lastly, we examine whether macro-contextual factors affect the association between household type and avoiding poverty after taxes and transfer income through cross-level interactions (Models 6 and 8 in Table 4). Random slopes for household type are included at Level 2 and 3 so that the effect on the probability of avoiding poverty after taxes and transfer of living in a certain type of household varies across country and waves net of controls. Full models are available in Section C in the Appendix (Tables C1-C2). In the Appendix (Section D), we present several robustness checks and sensitivity analyses (Tables D3-D5). In addition, we incorporate both unweighted multivariate analyses and rescaled weights that sum cluster sample sizes (Asparouhov, 2006) (Tables D1-D2).

Preliminary findings

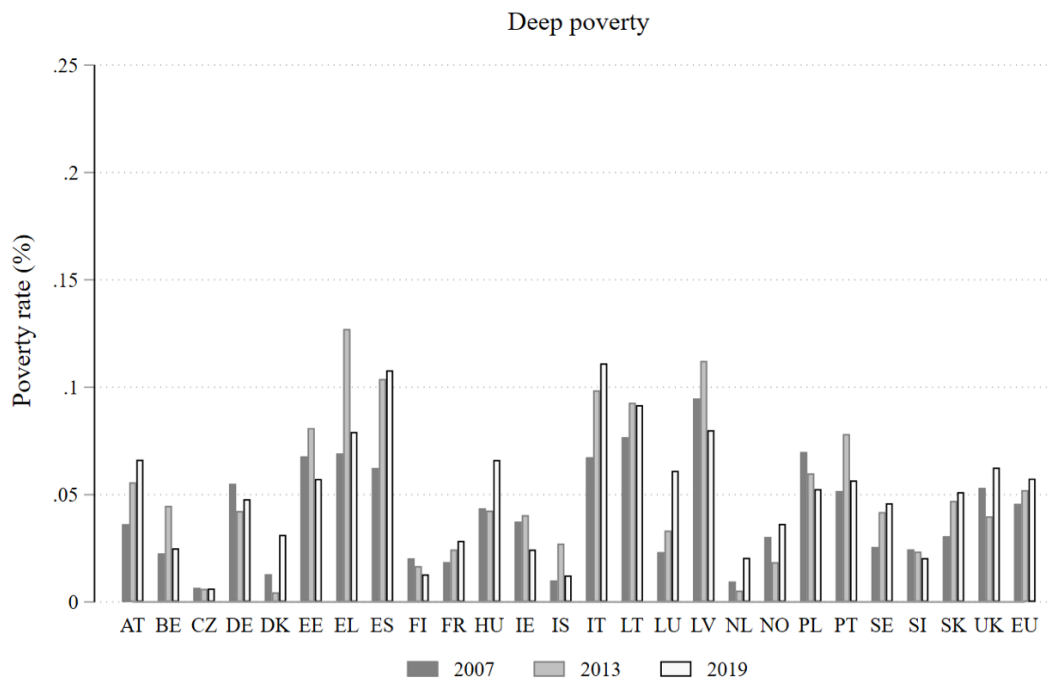
Alongside shifts in the composition of European households (see above), Figures 1 and 2 summarise the changing incidence of relative and deep poverty after taxes and transfers for 2007, 2013 and 2019. Southern European countries such as Greece, Spain, Portugal, and Italy experienced some of the highest levels of poverty. These countries witnessed marked increases in poverty following the 2008 economic crisis, with rates remaining persistently high in 2019. Several Eastern European countries also displayed notably high poverty levels but with fluctuating levels over time. For example, Lithuania and Latvia experienced a rise and then moderate reduction in both relative and deep poverty between 2013 and 2019. Poland, by contrast, witnessed considerable reductions in relative and deep poverty during the same period. In Northern Europe, countries such as Denmark and Sweden started from a relatively low rate in 2007 but experienced considerable increases in poverty by 2019. In countries such as Finland and Slovenia poverty rates remained comparatively low and stable over time.

Figure 1. Relative poverty rate in Europe



Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). N=245,696. Authors' calculations.

Figure 2. Deep poverty rate in Europe



Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). N=245,696. Authors' calculations.

Whilst there is considerable variation across Europe, descriptive statistics suggest tax-transfer systems have, on average, become less effective at lifting working-age households out of relative poverty and deep poverty over time (See Table 2 and Figures B1-B2 in the Appendix for country-level trends). Some Northern and Western European countries, such as Finland, Ireland and Belgium show strong redistributive effects. For example, taxes and transfers in Finland reduced relative poverty incidence by over 9 percentage points for all years, and deep poverty by 14 percentage points for all years.

Belgium also performed well, particularly for deep poverty, where reductions exceeded 16 percentage points in both 2013 and 2019. Ireland stands out as the best performer, reducing relative poverty incidence by 16 percentage points for all years and deep poverty incidence by over 23 percentage points. By contrast, Southern European countries such as Italy, Greece, Portugal and Spain show more limited redistributive effects. In Italy, the reduction in poverty is minimal, often below 1 percentage point. In Greece, taxes and transfers slightly increase poverty incidence for all years. Spain and Portugal fare slightly better, especially in the post-crisis period, but reductions in relative poverty remain under the EU average and tax and transfers systems became less effective at reducing relative and deep poverty between 2013 and 2019.

Table 2 also outlines how the welfare effectiveness of tax-transfers systems, varies between working-age household types, levels of labour market attachment, and disability receipt over time across Europe. Looking across different household types, tax-transfer systems have consistently done a better job of lifting certain households out of poverty than others. For example, tax and transfer systems across studied countries reduced relative poverty incidence by 15.5 percentage points and deep poverty incidence by over 25 percentage points on average for lone parents, and by 8 percentage points and 10.4 percentage points on average for larger families. By contrast, tax-transfer systems reduced relative poverty incidence by less than 1 percentage point amongst childless couple households and by just over one percentage point by couple households with 1-2 children. On average, tax and transfer systems reduced relative poverty incidence by 4.2 percentage points for single, childless households and deep poverty incidence by almost 13 percentage points for single, childless households. However, given their poverty risk and overall contribution to poverty prevalence (see above), single, childless households were relatively poorly served by tax-transfer systems across studied countries, and there is evidence of declining welfare effectiveness over time. That said, there was considerable variation across Europe. In Finland, Denmark and Belgium tax and transfers reduced relative poverty incidence by around a tenth for single, childless households; just slightly below poverty reduction rates for lone parent households. However, in countries such as the UK and Ireland tax and transfer systems performed particularly badly at lifting single, childless out of poverty, and tended to perform better for lone parent and larger family households. At an aggregate level, tax and transfer systems slightly increased relative poverty prevalence in countries such as Latvia, Italy and Portugal. Similarly, trends are observed for deep poverty incidence (see Figure B5 and B6 in the Appendix for detail of all countries).

Across Europe, tax-transfer systems tended to reduce poverty most dramatically in working-age households with low work intensity: by 13.6 percentage points for relative poverty and by 25.8 percentage points for deep poverty for all years. However, there are trends towards declining welfare effectiveness for low work intensity households: reducing relative poverty incidence by 14.1 percentage points in 2007 and by 11.6 in 2019. Similarly, households in receipt of disability saw much greater reductions in relative and deep poverty prevalence (by 33.1 and 45.3 percentage points respectively for all years) with declining welfare effectiveness over time.

Table 2: Percentage point reduction in poverty incidence after taxes and transfers, all countries

Relative Poverty	Deep Poverty
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	2007	2013	2019	All Years	2007	2013	2019	All Years
Country								
AT	-6.0	-4.9	-4.4	-5.1	-7.9	-7.6	-7.2	-7.5
BE	-6.5	-7.9	-7.1	-7.2	-14.8	-16.5	-16.5	-15.9
CZ	-6.7	-5.8	-3.0	-5.1	-7.9	-6.3	-4.1	-6.0
DE	-4.5	-1.0	0.7	-1.6	-11.4	-11.9	-7.8	-10.4
DK	-8.4	-10.5	-5.9	-8.3	-12.4	-13.2	-12.7	-12.8
EE	0.2	-1.6	-4.4	-2.1	-3.8	-4.4	-5.7	-4.7
EL	5.3	2.5	4.7	4.2	1.1	-0.3	-0.5	0.1
ES	0.6	-6.4	-3.2	-3.2	-1.7	-8.0	-5.5	-5.3
FI	-9.3	-9.3	-10.1	-9.6	-14.0	-13.8	-14.1	-14.0
FR	-7.5	-5.2	-4.6	-5.8	-9.6	-8.7	-8.6	-9.0
HU	-12.8	-4.7	-3.8	-7.2	-13.4	-9.8	-5.1	-9.5
IE	-15.3	-18.9	-14.8	-16.4	-20.5	-26.4	-21.8	-23.1
IS	-2.6	-8.8	-1.3	-4.2	-5.1	-8.6	-6.0	-6.6
IT	2.0	-0.1	-0.8	0.3	-0.5	-1.2	-1.5	-1.1
LT	-1.5	-4.5	-3.4	-3.1	-5.0	-10.4	-6.1	-7.2
LU	-4.0	-8.0	-0.1	-3.3	-7.6	-12.0	-4.1	-7.6
LV	-0.1	-2.3	-0.5	-0.9	-3.6	-5.1	-2.0	-3.5
NL	-9.9	-7.0	-5.3	-7.4	-12.2	-11.5	-11.3	-11.7
NO	-8.2	-7.1	-6.2	-7.1	-9.4	-9.1	-9.9	-9.5
PL	-0.2	1.1	-0.4	0.3	-6.2	-4.0	-2.5	-4.3
PT	-1.6	-2.9	0.4	-1.3	-3.3	-3.1	-2.5	-3.0
SE	-7.9	-4.5	-4.4	-5.5	-8.7	-9.3	-9.8	-9.3
SI	-3.8	-2.8	-2.8	-3.1	-5.8	-5.6	-5.2	-5.5
SK	-4.0	-4.4	0.3	-2.7	-5.2	-5.2	-1.3	-4.0
UK	-5.0	-12.9	-7.2	-8.5	-10.4	-17.6	-11.8	-13.4
HH type								
Single	-5.6	-4.4	-2.8	-4.2	-13.6	-14.5	-10.7	-12.9
Single with children	-17.2	-18.5	-10.8	-15.5	-26.7	-28.3	-20.3	-25.1
Couple	-1.2	-0.9	-0.1	-0.7	-3.3	-3.0	-2.3	-2.9
Couple, 1-2 children	-0.7	-2.4	-0.9	-1.3	-1.8	-3.5	-2.4	-2.6
Couple with 3+ children	-7.6	-8.0	-8.6	-8.0	-9.0	-11.6	-10.6	-10.4
HH labour market attachment								
Low	-14.1	-15.0	-11.6	-13.6	-24.4	-28.5	-24.4	-25.8
Medium	0.0	-1.1	-0.1	-0.02	-1.0	-1.0	-1.0	-1.0
High	0.1	0.1	0.1	0.1	0.0	0.0	-0.05	0.0
HH disability receipt								
No	2.4	-2.8	-1.2	-2.1	-6.1	-7.2	-5.2	-6.2
Yes	-34.4	-36.0	-29.1	-33.1	-45.2	-48.9	-41.8	-45.3
Total	-4.2	-4.4	-2.9	-4.0	-8.3	-9.6	-7.4	-8.4

Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). N=245,696 Authors' calculations.

Multilevel analysis

Tables 3-4 report results from the three-level linear probability models estimating the likelihood of taxes and transfers lifting European households out of poverty. The null-model (Model 0, Table 3) assesses how much variation in poverty alleviation can be explained by differences between countries and country-waves. For relative poverty, the ICC shows that 7.8% of the total variance lies between waves within countries, and 6.9%

between countries. These values increase substantially for deep poverty, with 18.9% and 17.2% respectively.

Model 2 (Table 3) includes the main micro-level variables and macro-level controls. Our results show that, relative to their poverty risk, single childless working-age households are the least likely to be lifted out of either relative poverty or deep poverty. While academics and policymakers have (rightly) emphasised the heightened poverty risk among lone parent households, tax-transfer systems appear considerably more effective at lifting them out of poverty compared to other household types: their predicted probability of avoiding poverty is around 10% higher than that of single, childless households. Similarly, couples with children are generally more likely to be protected from relative poverty, although to a lesser extent than lone parent households. In the case of deep poverty, Model 2 suggests that taxes and transfers operate with similar effectiveness where lone parent and larger family households avoid poverty at a higher rate than other household types. Across all working-age households, greater labour market attachment (defined as work intensity (“amount of work”) within the household), increases the predicted probability of avoiding relative poverty, but is less certain for avoiding deep poverty and even becomes negative. This may well reflect measurement error when examining deep (income) poverty (see discussion above). However, it may also reflect compositional differences where those in deep poverty are more likely to be self-employed and less likely to receive family/child or housing allowances that could lift them out of deep poverty. Equally, the result may suggest poorly designed taper rates (“cliff edges”) where increased, but insufficient, labour market attachment triggers a loss in certain income protections without concomitant improvements in net earnings. Model 2 also shows the predicted probability of avoiding deep poverty is 21% higher than for households who receive disability-related benefits (compared to those who do not), and 29% in the case of avoiding relative poverty.

Table 3. Multilevel regression table of avoiding different types of poverty after taxes and transfer: household-level results

	Relative poverty				Deep poverty			
	Model 0	Model 2	Model 3	Model 4	Model 0	Model 2	Model 3	Model 4
Household-level variables								
<i>Household type</i> [ref: Single]								
Single								
with children		0.099***	0.073***	0.111***		0.106***	0.070***	0.128***
Couple without children		0.055**	0.064**	0.025		-0.003	0.016	-0.010
Couple with 1-2 children		0.052*	0.030	0.054*		0.022	0.017	0.030
Couple 3+ children		0.074*	-0.014	0.094**		0.078**	0.020	0.099**
<i>HH labour market attachment</i>		0.103***	0.040***	0.102***		-0.043***	-0.128***	-0.045***

<i>* HH type</i>								
Single with children			0.090***				0.176***	
Couple without children			-0.014				-0.087*	
Couple 1-2 children			0.077***				0.063*	
Couple 3+ children			0.216***				0.206***	
<i>HH disability receipt [ref: No]</i>								
Yes	0.294***	0.291***	0.309***			0.213***	0.210***	0.240***
<i>HH disability receipt *</i>								
<i>HH type</i>								
Single with children			-0.071***					-0.096***
Couple without children			0.077***					0.011
Couple 1-2 children			0.002					-0.011
Couple 3+ children			-0.135**					-0.096***
<i>HH level control variables (not reported)</i>								
<i>Contextual-level control variables (not reported)</i>								
<i>Wave dummies [ref: 2007]</i>								
2013	-0.034*	-0.033*	-0.033*			-0.022	-0.021	-0.021
2019	-0.081***	-0.080***	-0.080***			-0.061***	-0.059**	-0.059**
Constant	0.363***	0.357***	0.370***	0.358***	0.679***	0.809***	0.821***	0.805***
Random effects (variances)								
Intercept variance household-level	0.211***	0.193***	0.193***	0.193***	0.177***	0.164***	0.163***	0.163***
Intercept variance country-wave level	0.004***	0.005***	0.004***	0.005***	0.004***	0.006***	0.006***	0.006***
Intercept variance country level	0.014***	0.021***	0.020***	0.022***	0.038***	0.019***	0.018***	0.020***
Slope variance HH type-country-wave level		0.001***	0.001***	0.001***		0.001***	0.001***	0.001***

Slope variance HH type- country level		0.001***	0.001***	0.001***		0.001***	0.001***	0.001***
AIC	57826.473	54031.534	53948.047	53932.770	(0.011)	30143.188	30029.929	30093.889
BIC	57861.319	54336.431	54287.789	54272.512	32300.572	30432.725	30352.555	30416.515
Log Likelihood	-28909.23	-26980.53	-26934.79	-26927.13	-16129.74	-15036.49	-14975.86	-15007.84
ICC country- wave	0.078	0.118	0.113	0.120	0.189	0.130	0.126	0.133
ICC country	0.069	0.097	0.093	0.099	0.172	0.101	0.096	0.103
N	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925

Notes: For full models and details on standards errors, household- and contextual-level control variables, see Table C1 in the Appendix. Unstructured covariance. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Model 3 adds an interaction between household type and labour market attachment. Our results indicate that the effect of labour market integration differs between relative and deep poverty alleviation and varies across household types. In the case of relative poverty, higher labour market attachment significantly enhances welfare effectiveness, much more so for households with children, especially larger families. Similar trends are observed for avoiding deep poverty. Model 4 includes an interaction between household type and disability benefit receipt. Our results show that receipt of disability benefits is one of the most important mechanisms through which tax-transfer systems improve welfare effectiveness particularly amongst single, childless households. By comparison, for lone parent households and larger family households, disability benefits are less effective in lifting them out of poverty after taxes and transfers. This is particularly true for larger family households, who are almost 14% less likely to avoid poverty (Model 4).

Table 4 focuses on macro-level factors, examining how familisation and defamilisation – measured through differential welfare adequacy across household types – affect the welfare effectiveness of tax-transfer systems. Average effects of these macro-level factors are shown in the Appendix (Models 5 and 7 in Table C2), while Models 6 and 8 in Table 4 test whether their influence varies across household types through cross-level interactions. Results from Model 6 show a substantial heterogeneity across household types, indicating that the redistributive capacity of such policies is conditional on family composition. For both relative and deep poverty, the average main effect of familisation refer to single, childless households. Among this group, neither the between-country nor the within-country component are significantly associated with poverty alleviation. Indeed, the within-country effect is negative for both outcomes (though not significant), suggesting that increases in family-related policy support over time do not improve, and could even disadvantage, the welfare effectiveness of tax-transfer systems for households without children. By contrast, households with children benefit more substantially from familisation, both in its between- and within-country components. For relative poverty, higher levels of familisation are associated with a significantly higher probability of avoiding poverty in lone parents and larger family households. These effects are even stronger for when looking at the impact of greater familisation on deep poverty avoidance, indicating that recent increases in family-related benefits are especially effective in alleviating more severe forms of deprivation among households with (overburdened) care

responsibilities. The between-country effects show a similar though more moderate pattern.

Table 4. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions

	Relative poverty		Deep poverty	
	Model 6	Model 8	Model 6	Model 8
Household-level variables				
<i>Household type [ref: Single]</i>				
Single with children	0.016	0.337***	0.006	0.204***
Couple without children	0.014	0.178***	0.013	0.048
Couple with 1-2 children	-0.024	0.313***	-0.023	0.082
Couple 3+ children	-0.023	0.419***	-0.104	0.189*
<i>HH level control variables (not reported)</i>				
Contextual-level variables				
Familisation index (B)	-0.029		0.054	
Familisation index (W)	-0.066		-0.156	
Defamilisation (B)		0.234**		0.059
Defamilisation (W)		0.201		0.222
<i>Cross-level interactions with HH type</i>				
Familisation index (B)* Single with children	0.143***		0.170***	
Familisation index (B)* Couple without children	0.068		-0.044	
Familisation index (B)* Couple with 1-2 children	0.133		0.075	
Familisation index (B)* Couple 3+ children	0.170		0.314**	
Familisation index (W)* Single with children	0.275***		0.378***	
Familisation index (W)* Couple without children	-0.137		-0.085	
Familisation index (W)* Couple with 1-2 children	0.176		0.349**	
Familisation index (W)* Couple 3+ children	0.461***		0.644***	
Defamilisation (B)* Single with children		-0.421***		-0.174***
Defamilisation (B)* Couple without children		-0.219**		-0.093
Defamilisation (B)* Couple with 1-2 children		-0.449***		-0.100
Defamilisation (B)* Couple 3+ children		-0.593***		-0.190
Defamilisation (W)* Single with children		0.198		0.065
Defamilisation (W)* Couple without children		0.217		0.288
Defamilisation (W)* Couple with 1-2 children		-0.021		-0.041
Defamilisation (W)* Couple 3+ children		0.091		-0.074
<i>Contextual-level control variables (not reported)</i>				
<i>Wave dummies [ref: 2007]</i>				
2013	-0.037*	-0.019	-0.023	-0.008
2019	-0.080***	-0.068***	-0.060**	-0.048*
<i>Constant</i>				
Random effects (variances)				
Intercept variance household-level	0.193***	0.192***	0.163***	0.163***
Intercept variance country-wave level	0.004***	0.004***	0.005***	0.006***
Intercept variance country level	0.021***	0.025***	0.018***	0.020***
Slope variance hh type-country-wave level	0.001***	0.001***	0.001***	0.001***
Slope variance hh type-country level	0.001***	0.002***	0.001***	0.001***
AIC	53971.237	53835.207	30018.488	30113.891

BIC	54363.246	54227.217	30390.749	30486.152
Log Likelihood	-26941.12	-26874.64	-14965.44	-15012.67
ICC country-wave	0.115	0.134	0.124	0.134
ICC country	0.095	0.112	0.099	0.103
N	44,861	44,861	28,925	28,925

Notes: For full models and details on standards errors, household- and contextual-level control variables, see Table C2 in the Appendix. Unstructured covariance. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

We now turn to defamilisation, understood as the extent to which social security systems allow people to live independently of family relationships (Lister, 1997). Our results from Model 8 indicate a positive association between defamilisation and poverty alleviation for single, childless households. This effect is driven by the between-country component for relative poverty, suggesting that in countries with more individualised and generous income protection (welfare adequacy), tax-transfer systems are more effective at poverty alleviation for this group. No significant association is found for deep poverty, and in both outcomes the within-country component is not statistically significant, indicating limited impact of short-term increases in defamilisation. As discussed above, this may be the result of measurement error, compositional effects or poverty traps distinctive to the dynamics of deeper forms of poverty (Edmiston *et al.*, 2025). Cross-level interaction coefficients show that these benefits do not extend to other household types. Interaction terms are significantly negative for lone parents, couples without children, couples with 1-2 children, and large families, meaning that these groups are less likely to benefit from defamilisation in welfare systems relative to single, childless households. For deep poverty, the same pattern holds, though the coefficients are smaller and not always significant. Taken together, these findings highlight that differences in welfare effectiveness (poverty reduction) across household types in Europe are significantly affected by the extent of familisation in operation and the extent of defamilisation made possible via tax-transfer systems.

Discussion and Conclusion

The analysis presented in this paper suggests European tax-transfer systems are increasingly out of step with changing household structures, and there is evidence to suggest they have become less effective at lifting working-age households out of poverty over time. Single, childless households are the fastest growing working-age household type in Europe and have experienced the largest increase in the incidence of relative poverty and deep poverty since the 2007-08 global financial crisis. As a result, they make up a large and growing share of those in relative poverty and deep poverty across Europe. In the absence of children and family household status, welfare access and adequacy is, at best, chequered for single, childless adults in Europe. Some of these observations are reversed where single, childless households receive disability benefits but there is strong evidence to suggest single, childless households without a disability in Europe 'fall between the cracks of existing categories' of welfare entitlement in much the same way as they do in the U.S. (Gornick *et al.*, 2024:1). Of course, this is not to suggest that welfare adequacy is satisfied for single, childless households in receipt of disability benefits: many remain in poverty without similar levels of poverty alleviation being achieved as other household types. However, we demonstrate how tax-transfer systems perform

especially better for households with children with greater labour market attachment, demonstrating the centrality of both work *and* family in mediating access to and generosity of working-age welfare. In this sense, it is important to recognise how family is systematically an intervening factor between the individual and the market (in terms of both consumption, supply and demand) in democratic welfare capitalism.

With welfare effectiveness depending greatly on family status and household type, there is a need to revisit the relationship between familisation and decommodification in European social policy. Family is often considered an important source of private welfare and object of welfare intervention and support itself. Having and ‘doing’ family is less commonly recognised as an administrative condition that delimits the effectiveness of tax-transfer systems in Europe. To better understand differential welfare support and outcomes, there is a need to move towards a (de-) familial framework in poverty analysis that fully accounts for household type and composition in the operation of social security systems. Such an approach could more completely appraise the interaction between family status and (de)familial welfare provision; particularly their combined bearing on the overall profile, risk and prevalence of poverty across Europe.

Without such a framework, single, childless adults and the distributional logics underpinning their relatively disadvantageous treatment by tax-transfer systems run the risk of being obscured. In turn, social policy as an applied field and academic discipline risks reproducing hierarchies of deservingness, with privileged attention and concern ascribed to certain household types over others. In many ways, the current lack of attention reflects and reinforces current public and political attitudes when it comes to welfare and anti-poverty policy. Indeed, the presence of children and caregiving responsibilities tends to increase public support for welfare programmes, greater welfare generosity and less conditionality (Buss, 2019; Toossi, 2022). These differences are perhaps to be expected given that single, childless adults without a disability may be perceived to be more in control and less in need to ‘deserve’ welfare support according to the CARIN criteria (Van Oorschot, 2000). However, such a belief appears not to be rooted in reality with the evidence presented in this paper suggesting the extent and intensity of poverty experienced by this demographic is considerable and growing.

Centring household types and specifically single working-age adults as a more salient feature of analysis and welfare intervention raises also new agendas and lines of enquiry. For researchers, it prompts questions about the comparability of needs and resources across household types and what this means for theory and method. For example, does money and specifically a low income hold the same significance for single, childless households compared to other household types? Do economies of scale, or a lack thereof, result in a single-poverty premium in terms of material deprivation, subjective well-being and poverty persistence? What does this mean for current poverty measures across household types and dominant approaches to equivalisation? For policymakers, how can and should the potential existence of a single poverty premium inform means-testing and welfare entitlements? If poverty alleviation is increasingly contingent on child-rearing *and* labour market engagement, this presents a particular challenge for tax-transfer systems interested in reducing the overall prevalence of poverty through finite resources given growing poverty risk of single, childless adults. The household as an administrative unit of entitlement is also complicated given changing household and living arrangements. Further research is needed focusing on specific age ranges and exploring

how retired households might feature in a (de-) familial framework in poverty analysis according to life stage and age.

Considering the above, we close by reflecting on the limitations of our study. First, the time period studied allowed us to focus on an extended period of welfare state transformation and ensured no households were sampled more than once. However, our analysis excluded consideration of the most recent economic crisis faced by Europe as a whole, potentially compromising our ability to assess the performance of European tax-transfer systems to respond to more recent economic shocks. Nevertheless, the extraordinary nature of the COVID-19 pandemic was accompanied by extraordinary social security measures that were a sharp but only temporary departure from ‘business as usual’. We therefore restrict our consideration to a period that better reflects the standard operation of tax-transfer systems in Europe. This approach also hinders a more nuanced understanding of the factors linked to the declining effectiveness of tax-transfer systems in lifting households out of poverty. Second, while EU-SILC includes some household-level data on specific social benefits, we do not disaggregate the effects of these transfers in our analysis. Moreover, EU-SILC microdata on benefits are often inconsistently reported across countries and waves, which limits their suitability and our focus lies in examining the role of a broader range macro-level welfare operations across countries, which allows for better comparability and alignment with policy-level instruments.

Funding statement

Parts of this paper were supported by a British Academy Wolfson Fellowship (WF21\210269) and a European Research Council Starting Grant (101077363).

Data availability and management statement

The EU-SILC microdata used in this study can be accessed through the Microdata Access Portal (available at <https://ec.europa.eu/eurostat/web/microdata/access>) upon request. Use of microdata is conditional upon an approved data management and security plan. A guide to the process and code used for the analyses can be provided if requested by reviewers and will be available on OSF subject to publication.

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Appendix

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Table D4. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions (other measure of HH labour market attachment)

Table D5. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions (social expenditure)

A. Sample distribution, operationalisation of the variables and descriptive statistics

Table A1. Number of valid observations by analytical samples and country

Country	Households in relative poverty before taxes and transfers	Households in deep poverty before taxes and transfers	Households <i>not</i> in relative poverty before taxes and transfers	Households <i>not</i> in deep poverty before taxes and transfers	Total
AT	1,391	896	6,624	7,119	8,015
BE	1,870	1,488	6,497	6,879	8,367
CZ	1,360	669	8,438	9,129	9,798
DE	2,895	2,233	13,715	14,377	16,610
DK	732	535	6,768	6,965	7,500
EE	1,433	821	4,940	5,552	6,373
EL	1,464	877	7,099	7,686	8,563
ES	3,407	2,123	11,473	12,757	14,880
FI	2,440	1,629	12,609	13,420	15,049
FR	2,671	1,659	12,033	13,045	14,704
HU	2,155	1,431	6,445	7,169	8,600
IE	2,057	1,661	3,868	4,264	5,925
IS	474	245	3,377	3,606	3,851
IT	3,545	1,960	18,408	19,993	21,953
LT	1,159	748	3,930	4,341	5,089
LU	1,338	786	4,697	5,249	6,035
LV	1,150	713	3,704	4,141	4,854
NL	1,563	1,101	13,519	13,981	15,082
NO	1,147	712	7,546	7,981	8,693
PL	2,893	1,741	11,632	12,784	14,525
PT	1,447	797	6,161	6,811	7,608
SE	1,178	748	6,879	7,309	8,057
SI	1,131	528	7,390	7,993	8,521
SK	777	394	4,032	4,415	4,809
UK	3,184	2,430	9,051	9,805	12,235
Total	44,861	28,925	200,835	216,771	245,696

Notes: unit of analysis: working-age households (20-59), number of country-years=75, number of countries=25. Average number of valid observations of the three country-waves. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Table A2. Details on data and the operationalisation of micro- and macro-level variables

We draw on the European Survey on Income and Living Conditions (EU-SILC), which provides detailed and comparable information on income, social exclusion, housing conditions, and the living standards of individuals and households (Wirth & Pforr, 2022).² We sought maximum completeness of countries in our analysis but were constrained by the availability of macro-level indicators. For this reason, Bulgaria, Cyprus, Malta, Romania and Switzerland are excluded from the analyses. Three waves (2007-2013-2019) were chosen in light of EU-SILC's rotating panel design, in which one-quarter of the sample is replaced each wave with households surveyed for a maximum of four years, even though the number of rotational groups may vary by country (e.g. nine in France, eight in Norway, and a pure panel in Luxembourg) (Iacovou *et al.*, 2012).³ In the case of a rotation scheme longer than four years, the rotating panel system used in EU-SILC remains unchanged, except that additional waves are included (Wirth & Pforr, 2022: 838). To restrict our sample to the working-age population we excluded households with members aged 60 or older. We also excluded households with retired members and those receiving pension income.

Micro-level variables			
<i>Variable</i>	<i>Level</i>	<i>Measurement</i>	<i>Notes</i>
Avoiding relative poverty after taxes and transfers	Household	Dummy indicator	This variable is measured only on the sample of households in relative poverty before taxes and transfers. We define a household as poor before taxes and transfers if its equivalised gross market income falls below 60% of the national median equivalised net disposable income after taxes and transfers. The income variable was top-bottom coded (0.01-99.9) and equivalized with the OECD modified scale, which assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each individual younger than 14. We compute the poverty line on the whole population, before restricting the samples for the analysis. We then construct a binary variable indicating the probability of avoiding poverty after taxes and transfers, coded as 1 if the household is no longer poor after taxes and transfers, and 0 otherwise

² Wirth, H. & Pforr, K. (2022) 'The European Union Statistics on Income and Living Conditions after 15 Years', *European Sociological Review*, 38(5): 832-848.

³ Iacovou M., Kaminska O & Levy H. (2012). 'Using EU-SILC Data for Cross-National Analysis: Strengths, Problems and Recommendations'. *ISER Working Paper Series*, 3. Institute for Social and Economic Research, University of Essex.

Avoiding deep poverty after taxes and transfers	Household	Dummy indicator	This variable is measured only on the sample of households in deep poverty before taxes and transfers. We define a household as poor before taxes and transfers if its equivalised gross market income falls below 40% of the national median equivalised net disposable income after taxes and transfers. The income variable was top-bottom coded (0.01-99.9) and equivalized with the OECD modified scale, which assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each individual younger than 14. We compute the poverty line on the whole population, before restricting the samples for analysis. ‘Those in ‘deep poverty’ are a subset of those that fall into the broader category of ‘relative poverty’. We then construct a binary variable indicating the probability of avoiding poverty after taxes and transfers, coded as 1 if the household is no longer poor after taxes and transfers, and 0 otherwise
HH type	Household	Categorical indicator	As Cutuli (2025) ⁴ and Köppe et al. (2025) ⁵ suggest, we distinguish between five different household types of working-age either with or without children. In line with Eurostat’s definition, dependent children are individuals aged 0–17, and 18–24 if inactive and living with at least one parent. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Dependent_children). The categories include singles, single parents with children, couples, couples with one or two children, and couples with three or more children.
HH labour market attachment	Household	Continuous indicator	We adopt a flexible measure of household members’ labour market participation, namely, work intensity. According to Eurostat, work intensity is calculated at the household level as the number of months that all working-age household members were employed during the income reference year, expressed as a proportion of the total number of months they could theoretically have worked (for details, see: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Persons_living_in_households_with_low_work_intensity). The indicator is calculated for adults aged 25–59. The variable ranges from 0 to 1. In regression models, we treat this variable as continuous, while for descriptive purposes, we recode it into three categories: a) low work intensity (≤ 0.5), b) medium work intensity (0.5-0.99), high work intensity (1).

⁴ Cutuli, G. (2025). Poverty exposure and poverty persistence for large families in Western Europe. A dynamic perspective. *International Journal of Social Welfare*, 34(1), e12718.

⁵ Köppe, S., Curran, M., & Aldama, I. (2025). How large families fare in Germany: Examining child poverty risks and policy solutions. *International Journal of Social Welfare*, 34(1), e12639.

HH disability receipt	Household	Dummy indicator	Household disability receipt, measured as a binary indicator, is based on objective information about the receipt of disability benefits at the individual level. A household is classified as experiencing disability if at least one member receives disability benefits. As mentioned, we include only working-age household members (25–59) who receive disability benefits at the individual level. Households receiving disability benefits for elderly individuals are therefore excluded from our samples. Rather than self-reported disability status, the advantage of this approach lies in the high degree of objectivity of the indicator, as well as the disability benefit receipt being of principle interest in assessing welfare effectiveness of tax and transfer systems. In addition, we know that the entitlement to and generosity of disability benefits are often closely linked to the household type in which individuals live (Parodi and Sciulli, 2008). ⁶
Age of the oldest member	Household	Categorical indicator	We consider the age of the oldest individual within the household, excluding those aged 59 or older, as well as those who are retired or receive pension income.
HH highest educational level	Household	Categorical indicator	We considered the highest level of education attained within the household and classified it into three categories: up to lower secondary (less than primary education, primary education, lower secondary education), secondary (upper secondary education, post-secondary non-tertiary education), and tertiary (short-cycle tertiary, bachelor or equivalent, master or equivalent, doctorate or equivalent) (Filandri <i>et al.</i> , 2020). ⁷
Tenure status	Household	Categorical indicator	We define the household's tenure status based on the variable provided by EU-SILC. We have collapsed the categories "Tenant, rent at market price" and "Tenant, rent at reduced price" into a single category (Köppe <i>et al.</i> , 2025). ⁸

⁶ Parodi, G., & Sciulli, D. (2008). Disability in Italian households: income, poverty and labour market participation. *Applied Economics*, 40(20), 2615–2630.

⁷ Filandri, M., Pasqua, S., & Struffolino, E. (2020). Being working poor or feeling working poor? The role of work intensity and job stability for subjective poverty. *Social Indicators Research*, 147(3), 781-803.

⁸ Köppe, S., Curran, M., & Aldama, I. (2025). How large families fare in Germany: Examining child poverty risks and policy solutions. *International Journal of Social Welfare*, 34(1), e12639.

Foreign born	Household	Dummy indicator	According to the EU-SILC variable RB280: we consider individuals within the household as foreign-born if they were not born in the country of residence (Israel and Spannagel, 2019). ⁹
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Macro-level variables

Variable	Benefit	Type of policy	Level/provision	Measurement	Note
Familisation index	Familial benefits	Familisation policies	Household (income level provided by child allowances)	Sum of in-kind services, such as early childhood education and care, and cash benefits, including family allowances as well as maternity/paternity leave	Each of these components is expressed as a share of gross domestic product (GDP). Higher levels of familisation imply greater welfare state commitment to enable households to have and 'do' family through in-kind support and cash transfers.
Defamilisation	Benefits	Defamilisation policies	Household (income level provided by several components)	Sum of unemployment, social assistance and housing benefits as a rate of the previous model income	Entitlements are calculated for model family types. Three model families are included in the OUTWB dataset: a single person, a lone parent with two dependent children, and a two-parent family with two dependent children. The breadwinner is assumed to be involuntary unemployed for the whole year. The out-of-work benefit packages take into consideration social assistance and associated minimum income benefits, housing allowances, child or family benefits, unemployment benefits, and tax expenditures of various kinds. Income taxation and social security contributions are also included in the benefit packages when applicable (Nelson et al., 2020). ¹⁰ We input the value of model family type according to the household type to explore the impact of different tax and transfer configurations and their bearing on poverty prevalence

⁹ Israel, S., & Spannagel, D. (2019). Material deprivation in the EU: a multi-level analysis on the influence of decommodification and defamilisation policies. *Acta Sociologica*, 62(2), 152-173.

¹⁰ Nelson, K., Fredriksson, D., Korpi, T., Korpi, W., Palme, J. and O. Sjöberg. 2020. The Social Policy Indicators (SPIN) database. *International Journal of Social Welfare*, 29(3), 285- 289.

across different household types. Detail concerning our data and empirical strategy are detailed below.

Gini coefficient	-	-	-	Measure of the extent to which the distribution of income within a country deviates from a perfectly equal distribution.	A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income
Unemployment rate	-	-	-	Unemployed people as a percentage of the labour force.	An unemployed person is defined by Eurostat, according to the guidelines of the International Labour Organization, as: someone aged 15 to 74; not employed during the reference week according to the definition of employment; currently available for work, i.e. available for paid employment or self-employment before the end of the 2 weeks following the reference week; actively seeking work, i.e. had either carried out activities in the four-week period ending with the reference week to seek paid employment or self-employment or found a job to start within a period of at most 3 months from the end of the reference week. The labour force is the total number of people employed and unemployed.
Public social expenditure	-	-	-	This indicator is measured as a percentage of GDP.	Social expenditure comprises cash benefits, direct in-kind provision of goods and services, and tax breaks for social purposes. Benefits may be targeted at low-income households, the elderly, disabled, sick, unemployed, or young persons. To be considered "social", programmes have to involve either redistribution of resources across households or compulsory participation. Social benefits are classified as public when general government (that is central, state, and local governments, including social security funds) controls the relevant financial flows. All social benefits not provided by general government are considered private. Private transfers between households are not considered as "social" and not included here. Net total social expenditure includes both public and private expenditure. It also accounts for the effect of the tax system by direct and indirect taxation and by tax breaks for social purposes. Our macro-level variables represent the income reference year for each of the cases considered except for public social expenditure as a percentage of GDP (OECD). In that respect, we use a lagged measure representing the value of the previous year. The logic behind this decision is threefold: First, this allows us to better consider the effect of temporal dynamics as social policies often take time to have an impact on societal outcomes. Second, it enables our estimations to clearly establish the direction of causality, as changes in relative poverty levels are likely to influence

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expenditure (Cameraat, 2020).¹¹ Third, this decision also reflects the usual delay between fund allocation and actual policy implementation.

¹¹ Cammeraat, E. (2020). The relationship between different social expenditure schemes and poverty, inequality and economic growth. *International Social Security Review*, 73(2), 101-123.

Table A3. Sample distribution used in the descriptive analyses

	<i>Mean or proportion</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Micro-level variables				
Relative poverty before taxes and transfers	19.8			
Deep poverty before taxes and transfers	13.6			
Relative poverty after taxes and transfers	15.9			
Deep poverty after taxes and transfers	5.2			
HH type				
Single	30.7			
Single with children	9.7			
Couple	17.0			
Couple, 1-2 children	36.2			
Couple with 3 or more children	6.5			
HH labour market attachment	73.1	32.1	0	1
HH disability receipt [ref.: No]				
Yes	5.8			

Notes: unit of analysis: working-age households (20-59), number of country-years=75, number of countries=25. Average number of valid observations of the three country-waves (N=245,696). *Source:* EU-SILC cross-sectional data (2007-2013-2019, weighted). Authors' calculations.

Table A4. Sample distribution and data source across all variables used in the multivariate analyses

<i>Households in relative poverty before taxes and transfers</i>					<i>Households in deep poverty before taxes and transfers</i>				<i>Source</i>
(N= 44,861)					(N= 28,925)				
	<i>Mean or proportion</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Mean or proportion</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	
Micro-level variables									
<i>Avoiding relative poverty after taxes and transfers</i>	33.0								EU-SILC ¹²
<i>Avoiding deep poverty after taxes and transfers</i>					68.5				EU-SILC
<i>HH type</i>									EU-SILC
Single	38.9				45.7				
Single with children	21.9				23.5				
Couple	7.2				6.8				
Couple, 1-2 children	22.3				16.0				
Couple with 3 or more children	9.7				8.0				
<i>HH labour market attachment</i>	31.8	33.2	0	1	20.6	29.2	0	1	EU-SILC
<i>HH disability receipt [ref.: No]</i>									EU-SILC
Yes	18.0				22.0				
<i>Age of the oldest member</i>									EU-SILC
20-25	2.0				2.1				
26-30	10.8				10.5				

¹² European Union Statistics on Income and Living Conditions, <https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions>

31-35	12.3	11.7	
36-40	15.5	14.2	
41-45	17.7	16.5	
46-50	15.9	16.0	
51-55	14.7	16.0	
56-59	11.1	13.0	
<i>HH highest educational level</i>			EU-SILC
Low	26.4	29.2	
Medium	52.1	50.9	
High	21.5	19.9	
<i>Tenure status</i>			EU-SILC
Rent	55.2	59.9	
Outright homeownership	23.0	19.9	
Homeownership with mortgage	14.7	13.6	
Free user	7.1	6.6	
<i>Foreign born [ref.: None]</i>			EU-SILC
At least one	19.7	19.2	
<i>Survey year</i>			
2007	31.5	31.1	
2013	36.4	37.0	
2019	32.1	31.9	

Macro-level variables					
	<i>Mean or proportion</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	
Familisation index	53.2	27.6	0	1	OECD ¹³
Defamilisation	56.6	21.9	0	1	SPIN ¹⁴
Gini coefficient	53.1	22.2	0	1	WBG, ¹⁵ EUROSTAT ¹⁶

¹³ OECD, online database, <https://www.oecd.org/en/data.html>

¹⁴ SPIN, Social Policy Indicators database, online database, <https://www.su.se/social-policy-indicators-database/data>

¹⁵ World Bank Group, online database, <https://data.worldbank.org/>

¹⁶ EUROSTAT, online database, [ilc_di12] (https://ec.europa.eu/eurostat/databrowser/product/page/ilc_di12). Iceland 2019 instead of 2018.

Unemployment rate	27.5	19.6	0	1	EUROSTAT ¹⁷
Social expenditure (% of GDP)	64.0	20.3	0	1	OECD ¹⁸

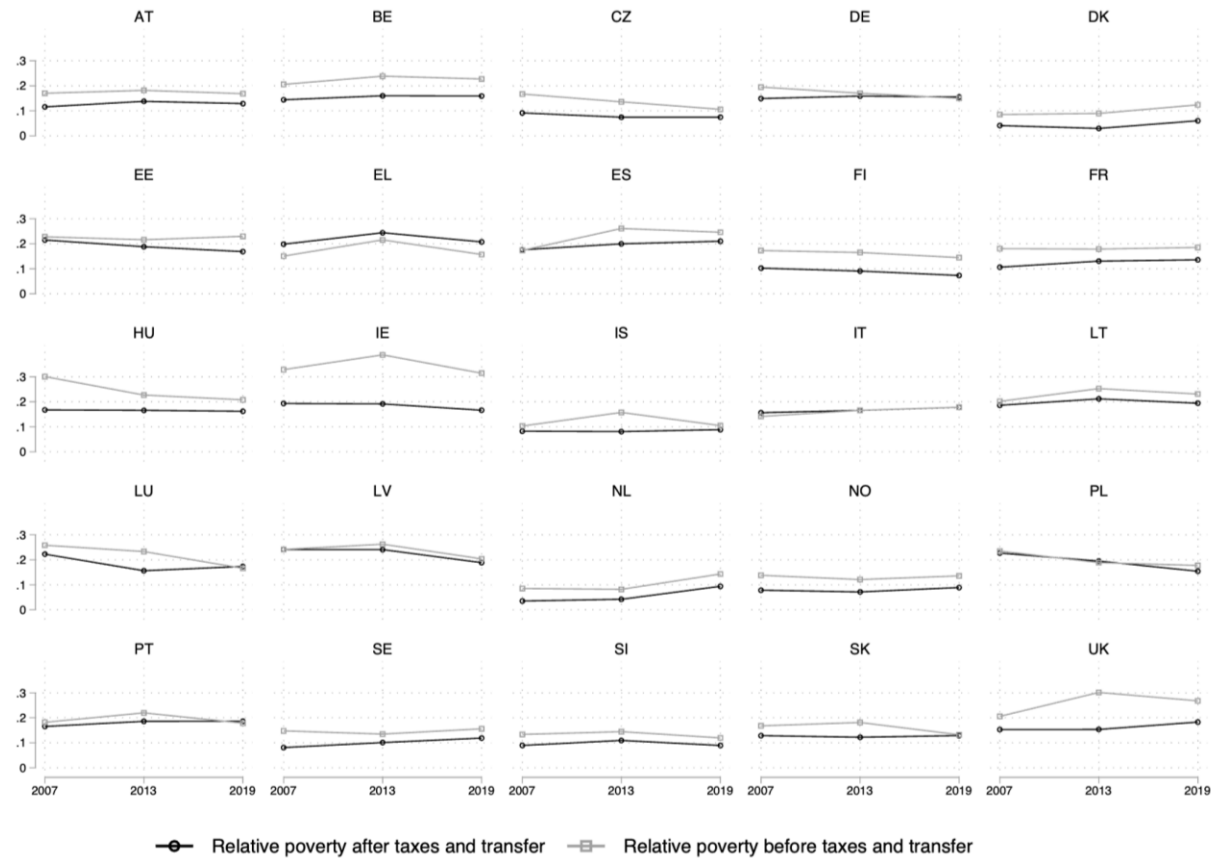
Notes: unit of analysis: working-age households (20-59), number of country-years=75, number of countries=25. Average number of valid observations of the three country-waves for each sample. *Source:* EU-SILC cross-sectional data (2007-2013-2019, weighted). Authors' calculations.

¹⁷ EUROSTAT, online database, [une_rt_a] https://ec.europa.eu/eurostat/databrowser/une_rt_a

¹⁸ OECD, Social Expenditure Database (SOCX), <https://www.oecd.org/en/data/datasets/social-expenditure-database-socx.html>

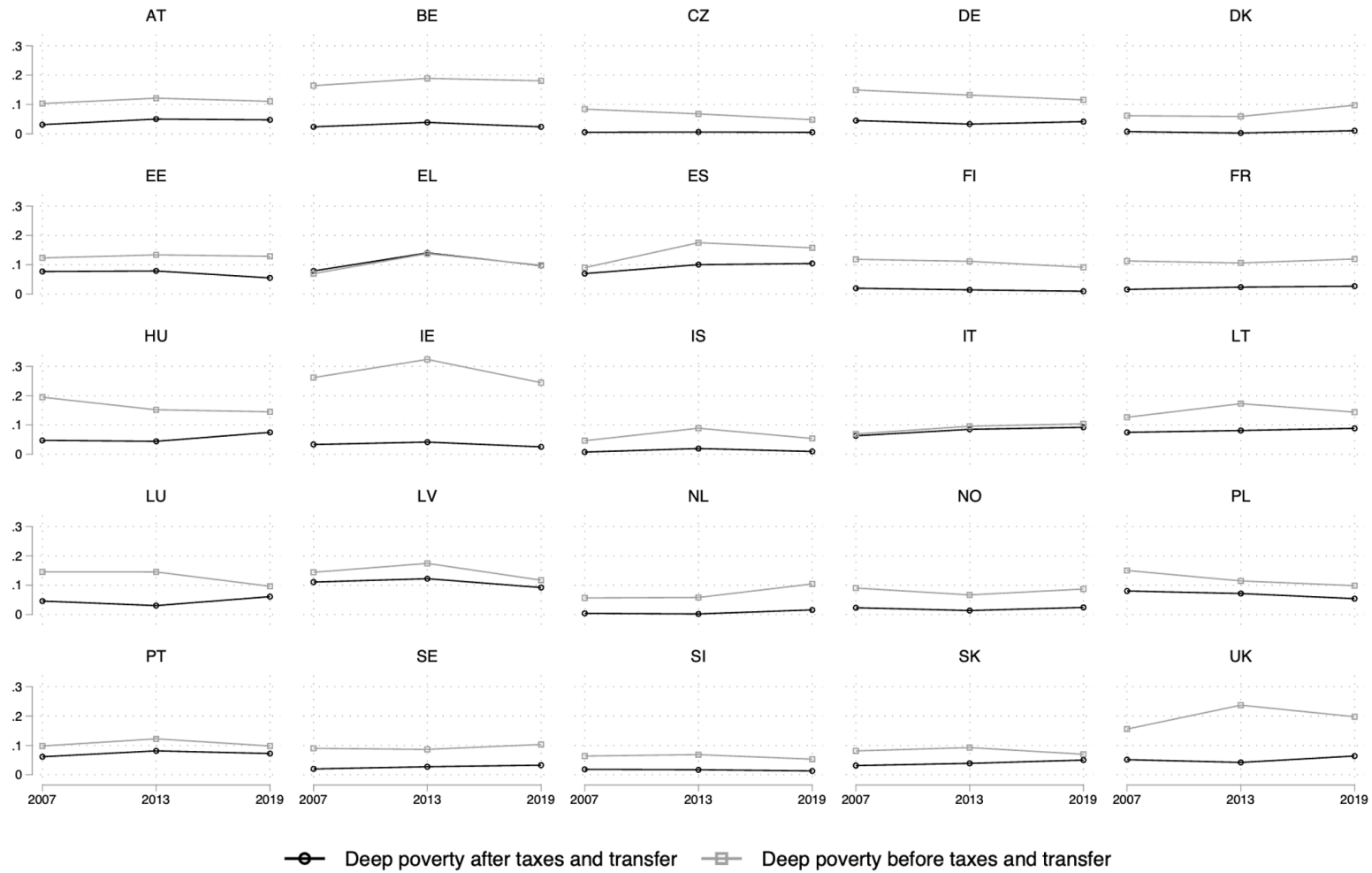
B. Additional descriptive statistics

Figure B1. Trends in relative poverty before- and after- taxes and transfer by country



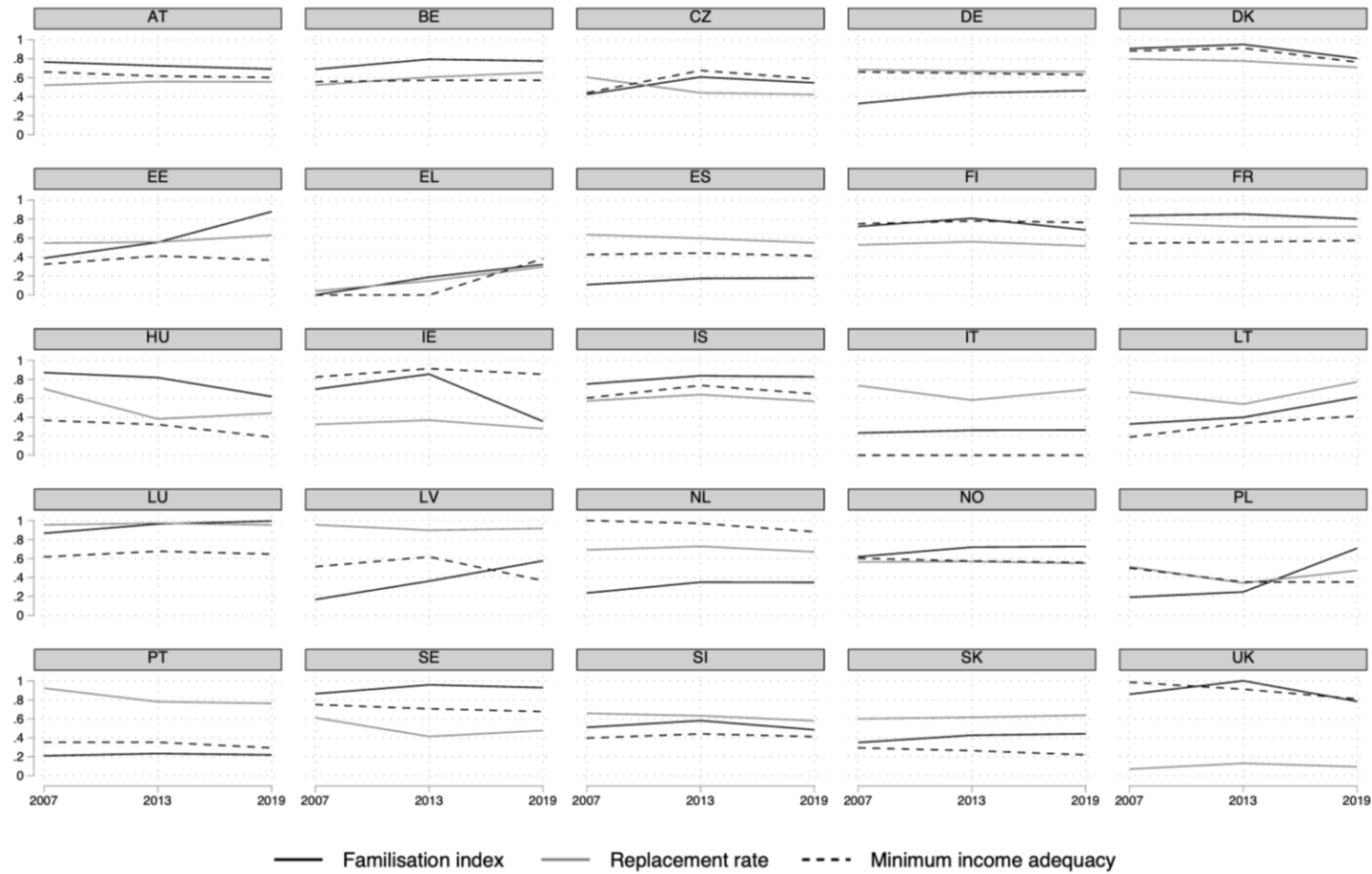
Notes: unit of analysis: working-age households (20-59), number of country-years=75, number of countries=25. N=245,696. Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). Authors' calculations.

Figure B2. Trends in deep poverty before- and after- taxes and transfer by country



Notes: unit of analysis: working-age households (20-59), number of country-years=75, number of countries=25. N=245,696. Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). Authors' calculations.

Figure B3. Trends in macro-contextual indicators in Europe



Source: for details, see Table A3 in the Appendix. Authors' calculations.

Table B4. Net replacement rates by household type and country

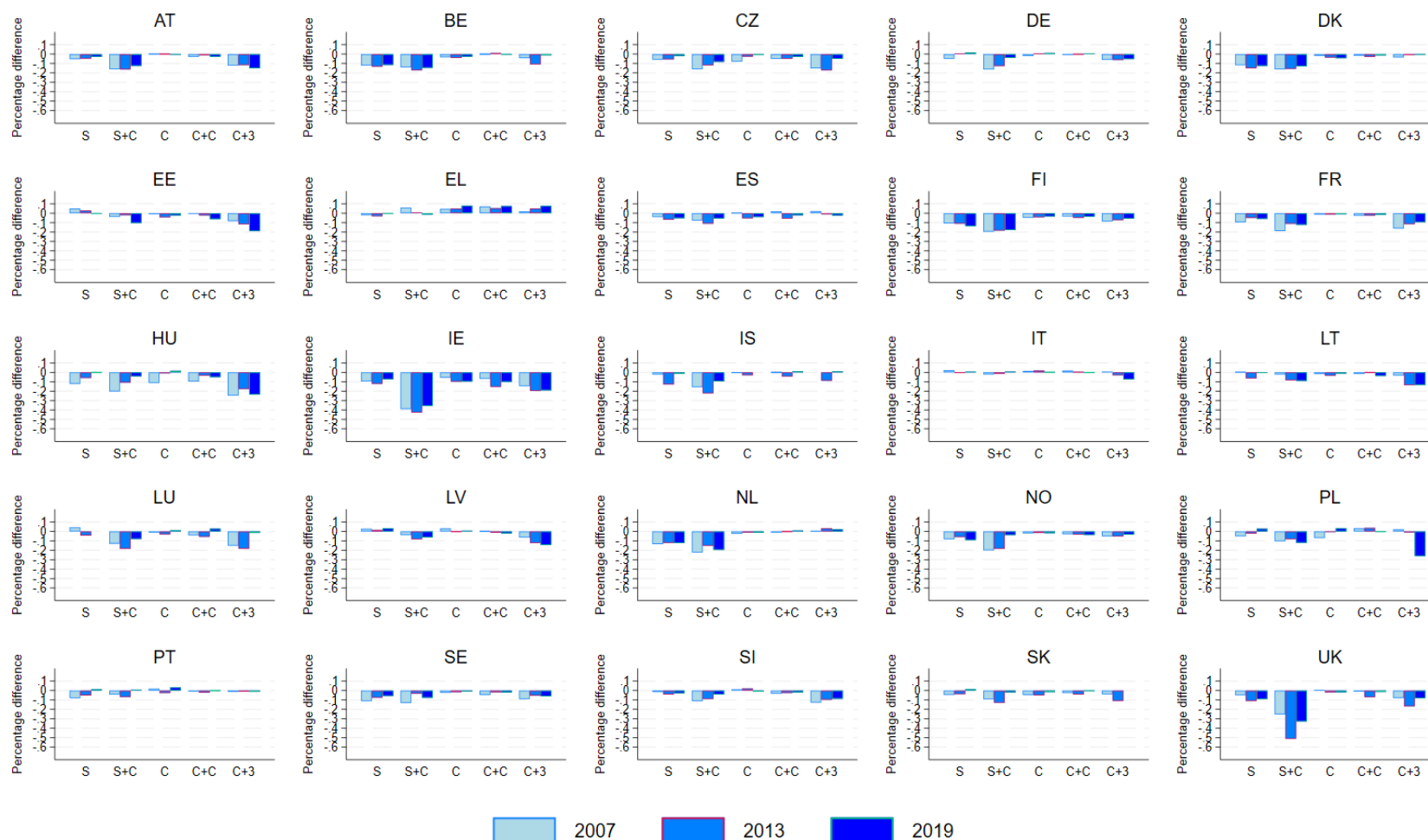
	<i>Single person without children</i>			<i>Single parent household with children</i>			<i>Couple household with children</i>		
	2006	2012	2018	2006	2012	2018	2006	2012	2018
Country									
Austria	48.1	49.6	49.7	58.2	59.6	59.5	59.6	63.3	63.7
Belgium	55.5	61.4	64.3	59.5	64.9	67.5	54.3	57.3	59.8
Czechia	40.5	46.3	45.0	51.4	51.4	50.6	51.8	51.2	50.0
Denmark	58.4	58.2	55.7	63.6	63.1	61.7	77.8	78.3	76.7
Estonia	53.7	54.7	56.7	57.2	58.2	66.3	57.4	59.1	64.0
Finland	48.8	53.2	50.4	61.0	64.0	60.7	55.3	58.9	56.2
France	69.3	69.3	68.6	69.0	68.6	70.5	66.8	64.7	64.8
Germany	58.1	57.6	57.6	67.4	67.2	70.0	66.3	68.1	68.0
Greece	30.5	27.2	31.1	35.4	32.9	44.6	38.2	35.5	47.1
Hungary	54.4	43.6	44.1	63.1	48.6	54.0	60.6	48.2	53.6
Iceland	46.3	54.9	50.8	54.0	61.7	59.1	55.8	65.5	60.5
Ireland	30.8	31.8	26.3	51.4	40.5	35.8	55.4	56.2	49.1
Italy	51.9	52.0	59.8	62.1	62.3	69.9	60.7	62.3	69.2
Latvia	82.0	82.0	82.3	81.3	77.6	81.0	73.9	73.7	75.1
Lithuania	56.8	42.8	71.1	64.5	55.1	71.3	63.5	68.3	66.1
Luxembourg	78.7	79.3	78.6	83.7	84.9	82.6	83.0	84.4	82.4
Netherlands	64.1	64.8	61.3	63.6	62.5	63.4	69.0	70.0	65.6
Norway	54.2	55.0	54.6	65.8	65.7	63.8	58.6	58.7	56.6
Poland	28.8	32.5	25.4	42.6	46.2	56.2	58.2	50.1	65.5
Portugal	81.5	71.5	70.6	81.6	73.4	72.0	78.1	70.3	69.1
Slovak Republic	64.6	64.6	64.7	66.9	67.1	66.6	59.2	59.6	60.1
Slovenia	56.5	60.2	58.3	64.3	65.2	62.6	61.3	62.8	59.2
Spain	55.5	53.8	51.6	65.0	62.8	60.8	64.4	62.7	59.3
Sweden	50.9	46.6	50.7	57.0	52.4	56.1	53.3	48.9	52.3
United Kingdom	13.1	14.6	13.5	31.6	36.1	33.2	37.1	42.1	39.0

Source: SPIN, Social Policy Indicators database, online database, <https://www.su.se/social-policy-indicators-database/data>. Notes: calculated for model families earning from 33 to 200 percent of an average wage (Nelson *et al.* 2020).¹⁹ Authors' calculations.

¹⁹ Nelson, K., Fredriksson, D., Korpi, T., Korpi, W., Palme, J. and O. Sjöberg. 2020. The Social Policy Indicators (SPIN) database. *International Journal of Social Welfare*, 29(3), 285- 289.

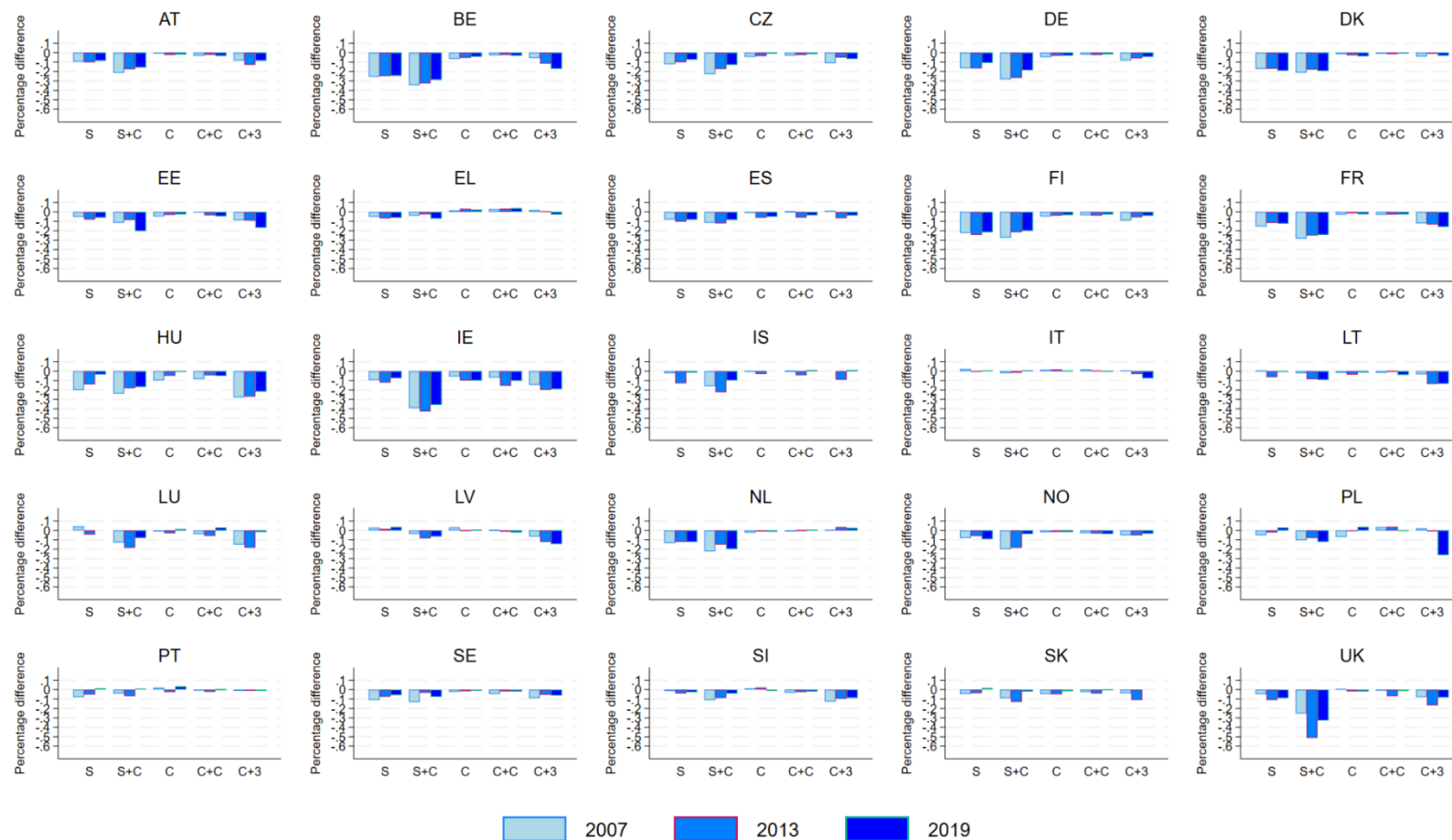
Figure B5. Percentage point reduction in relative poverty incidence after taxes and transfers by country and household type

Notes:
unit of
analysis:
working-
age



households (20-59) N=245,696. *Source:* EU-SILC cross-sectional data (2007-2013-2019, weighted). Authors' calculations.

Figure B6. Percentage point reduction in deep poverty incidence after taxes and transfers by country and household type



Notes: unit of analysis: working-age households (20-59) N=245,696. Source: EU-SILC cross-sectional data (2007-2013-2019, weighted). Authors' calculations.

Table B7. Income and socio-economic characteristics across the income distribution in Europe

	Relative poverty	Deep poverty	All	All population (EU)
<i>Mean HH income</i>				
2007	6619.5	4350.6	17708.5	16204
2013	7470.7	4588.9	19464.1	17993
2019	8616.8	5379.6	21987.9	20666
All years	7607.1	4804.7	19743.4	18287.6
<i>Median HH income</i>				
2007	7021.7	4447	14182	14182
2013	7912.5	4614.3	17757.2	15692
2019	8948	5367.3	20120	18104
All years	7948	4827.6	17950	15962.6
<i>Female (%)</i>				
2007	53.5	51.9	50.3	
2013	52.6	51.8	50.6	
2019	52.8	51.1	50.5	
All years	52.9	51.6	50.4	
<i>Foreign abroad (%)</i>				
2007	16.2	16.9	10.2	
2013	22.0	22.8	13.2	
2019	26.8	27.0	15.9	
All years	21.9	22.3	13.2	
<i>Living in private renting (%)</i>				
2007	17.8	13.8	12.4	
2013	37.6	31.9	25.5	
2019	46.2	42.1	29.9	
All years	34.5	30.3	22.7	
<i>HH labour attachment (mean)</i>				
2007	41.2	34.7	72.5	
2013	39.7	33.8	72.9	
2019	44.4	36.7	75.7	
All years	41.8	36.7	73.7	
<i>Self-employed (%)</i>				
2007	20.0	25.0	11.8	
2013	17.9	24.9	11.3	
2019	16.8	23.0	10.8	
All years	18.1	24.2	11.3	
<i>Receiving unemployment benefits (%)</i>				
2007	17.8	16.9	8.7	
2013	24.9	20.7	12.0	
2019	19.5	17.9	10.2	
All years	20.8	18.6	10.3	
<i>Receiving sickness benefits (%)</i>				
2007	2.9	1.9	3.9	
2013	1.8	1.3	3.0	
2019	2.5	1.6	3.4	
All years	2.4	1.6	3.4	
<i>N. of dep. Children in the HH (mean)</i>				
2007	1.35	1.30	1.12	
2013	1.23	1.23	1.07	
2019	1.19	1.09	1.05	
All years	1.25	1.12	1.08	
<i>Receiving social security (HH - %)</i>				
2007	57.9	48.9	50.5	
2013	59.3	47.9	47.9	

2019	61.8	54.3	50.9	
All years	59.7	50.3	49.8	
<i>Receiving family/child. allowances (HH - %)</i>				
2007	46.4	37.8	45.9	
2013	41.5	32.3	42.6	
2019	43.7	33.8	44.9	
All years	43.8	34.4	44.5	
<i>Receiving social exclusion (HH - %)</i>				
2007	17.7	18.1	5.4	
2013	18.4	16.9	6.1	
2019	25.1	23.7	9.0	
All years	20.5	19.7	6.8	
<i>Receiving housing allowances (HH - %)</i>				
2007	21.2	14.1	9.0	
2013	29.9	18.1	9.9	
2019	26.6	18.9	8.9	
All years	26.1	17.3	9.3	

Notes: unit of analysis: working-age individuals (20-59) living in distinct household types (single, single with children, couple without children, couple with 1-2 children, couple with 3+ children), number of countries=25. Variables: Income = net equivalised disposable household income; HH labour attachment = work intensity, measured as the ratio of the total number of months worked by all working-age household members during the income reference year; Self-employed = proportion of self-employed individuals out of all employed individuals; Receiving social security = proportion of individuals living in households that receive at least one of the following three types of benefits: family-related allowances, social exclusion benefits, or housing allowances. *Sources:* EU-SILC cross-sectional data (2007-2013-2019, weighted), EUROSTAT (ilc_di03 - population aged 18 and over). Authors' calculations.

C. Regression tables of the main models

Table C1. Multilevel regression table of avoiding different types of poverty after taxes and transfer: household-level results

	Relative poverty					Deep poverty				
	Model 0	Model 1	Model 2	Model 3	Model 4	Model 0	Model 1	Model 2	Model 3	Model 4
Micro-level variables										
Household type [ref: single]										
Single with children		0.099***	0.099***	0.073***	0.111***		0.106***	0.106***	0.070***	0.128***
		(0.010)	(0.010)	(0.011)	(0.011)		(0.010)	(0.010)	(0.010)	(0.011)
Couple without children		0.055**	0.055**	0.064**	0.025		-0.004	-0.003	0.016	-0.010
		(0.019)	(0.019)	(0.020)	(0.020)		(0.017)	(0.017)	(0.018)	(0.019)
Couple 1-2 children		0.051*	0.052*	0.030	0.054*		0.022	0.022	0.017	0.030
		(0.026)	(0.026)	(0.027)	(0.026)		(0.023)	(0.023)	(0.023)	(0.023)
Couple 3+ children		0.074*	0.074*	-0.014	0.094**		0.077**	0.078**	0.020	0.099**
		(0.034)	(0.034)	(0.035)	(0.035)		(0.030)	(0.030)	(0.031)	(0.030)
HH labour market attachment		0.103***	0.103***	0.040***	0.102***		-0.044***	-0.043***	-0.128***	-0.045***
		(0.007)	(0.007)	(0.012)	(0.007)		(0.009)	(0.009)	(0.015)	(0.009)
<i>HH labour market attachment *HH type</i>										
Single with children				0.090***					0.176***	

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			(0.016)				(0.020)	
Couple without children			-0.014				-0.087*	
			(0.028)				(0.037)	
Couple 1-2 children			0.077***				0.063*	
			(0.019)				(0.025)	
Couple 3+ children			0.216***				0.206***	
			(0.025)				(0.031)	
HH disability receipt [ref: no]								
Yes	0.295***	0.294***	0.291***	0.309***		0.214***	0.213***	0.210***
	(0.006)	(0.006)	(0.006)	(0.009)		(0.006)	(0.006)	(0.006)
<i>HH disability receipt *HH type</i>								
Single with children				-0.071***				-0.096***
				(0.015)				(0.015)
Couple without children				0.077***				0.011
				(0.017)				(0.019)
Couple 1-2 children				0.002				-0.011
				(0.014)				(0.016)
Couple 3+ children				-0.135***				-0.096***
				(0.020)				(0.022)
Age of the oldest member [ref:								

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26-30]								
20-25	-0.074***	-0.074***	-0.077***	-0.075***	-0.114***	-0.114***	-0.117***	-0.112***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)	(0.021)
31-35	0.031**	0.032**	0.031**	0.030**	0.031**	0.031**	0.029**	0.029**
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)
36-40	0.020*	0.020*	0.017	0.017	0.025*	0.025*	0.021*	0.022*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
41-45	-0.012	-0.011	-0.015	-0.014	0.012	0.012	0.006	0.011
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
46-50	-0.025**	-0.024**	-0.027**	-0.026**	-0.000	0.000	-0.005	-0.001
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
51-55	-0.011	-0.011	-0.013	-0.014	0.015	0.015	0.010	0.014
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
56-59	0.032**	0.032**	0.029**	0.027**	0.058***	0.058***	0.052***	0.056***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)
Foreign born [ref: no one]								
At least one	-0.050***	-0.051***	-0.048***	-0.051***	-0.034***	-0.034***	-0.033***	-0.034***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Tenure status [ref: rent]								
Outright homeownership	-0.015*	-0.015*	-0.017**	-0.015**	-0.052***	-0.052***	-0.053***	-0.052***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)

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Homeownership with mortgage	0.048*** (0.007)	0.048*** (0.007)	0.045*** (0.007)	0.047*** (0.007)	-0.021* (0.009)	-0.022* (0.009)	-0.023* (0.009)	-0.022* (0.009)
Free user	-0.035*** (0.009)	-0.035*** (0.009)	-0.036*** (0.009)	-0.035*** (0.009)	-0.093*** (0.010)	-0.093*** (0.010)	-0.093*** (0.010)	-0.093*** (0.010)
HH highest educational level [ref: high]								
Low	-0.072*** (0.007)	-0.072*** (0.007)	-0.070*** (0.007)	-0.073*** (0.007)	-0.006 (0.007)	-0.005 (0.007)	-0.005 (0.007)	-0.007 (0.007)
Medium	-0.033*** (0.006)	-0.033*** (0.006)	-0.032*** (0.006)	-0.034*** (0.006)	0.003 (0.007)	0.003 (0.007)	0.002 (0.007)	0.002 (0.007)
Survey year [ref: 2007]								
2013	0.003 (0.016)	-0.034* (0.016)	-0.033* (0.016)	-0.033* (0.016)	-0.005 (0.016)	-0.022 (0.018)	-0.021 (0.018)	-0.021 (0.018)
2019	-0.050** (0.016)	-0.081*** (0.016)	-0.080*** (0.016)	-0.080*** (0.016)	-0.054*** (0.016)	-0.061*** (0.018)	-0.059** (0.018)	-0.059** (0.018)
Macro-level variables (control)								
Gini coefficient (B)		-0.202** (0.067)	-0.200** (0.068)	-0.202** (0.067)		-0.341** (0.104)	-0.342** (0.104)	-0.339** (0.104)
Gini coefficient (W)		-0.069 (0.053)	-0.069 (0.053)	-0.070 (0.053)		-0.053 (0.060)	-0.052 (0.060)	-0.054 (0.060)
Social expenditure (B)		0.154* (0.053)	0.158* (0.053)	0.152* (0.053)		0.176 (0.060)	0.184 (0.060)	0.171 (0.060)

			(0.061)	(0.062)	(0.061)			(0.095)	(0.095)	(0.094)
Social expenditure (W)			0.321***	0.323***	0.322***			0.099	0.104	0.099
			(0.093)	(0.094)	(0.093)			(0.105)	(0.105)	(0.105)
Unemployment rate (B)			-0.208*	-0.203*	-0.212*			-0.425**	-0.416**	-0.433**
			(0.101)	(0.102)	(0.101)			(0.152)	(0.152)	(0.151)
Unemployment rate (W)			0.013	0.011	0.010			0.054	0.052	0.053
			(0.066)	(0.066)	(0.066)			(0.075)	(0.075)	(0.075)
Constant	0.363***	0.265***	0.357***	0.370***	0.358***	0.679***	0.622***	0.809***	0.821***	0.805***
	(0.025)	(0.031)	(0.051)	(0.051)	(0.051)	(0.040)	(0.038)	(0.072)	(0.072)	(0.072)
Random effects (variances)										
Intercept variance household-level	0.211***	0.193***	0.193***	0.193***	0.193***	0.177***	0.164***	0.164***	0.163***	0.163***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intercept variance country-wave level	0.004***	0.006***	0.005***	0.004***	0.005***	0.004***	0.006***	0.006***	0.006***	0.006***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Intercept variance country level	0.014***	0.027***	0.021***	0.020***	0.022***	0.038***	0.034***	0.019***	0.018***	0.020***
	(0.004)	(0.008)	(0.007)	(0.006)	(0.007)	(0.011)	(0.010)	(0.007)	(0.007)	(0.007)
Slope variance HH type-country-wave level		0.001***	0.001***	0.001***	0.001***		0.001***	0.001***	0.001***	0.001***
		(0.001)	(0.001)	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)	(0.001)

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Slope variance HH type-country level		0.001***	0.001***	0.001***	0.001***		0.001***	0.001***	0.001***	0.001***
		(0.001)	(0.001)	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)	(0.001)
AIC	57826.473	54059.998	54031.534	53948.047	53932.770	32267.483	30160.406	30143.188	30029.929	30093.889
BIC	57861.319	54312.627	54336.431	54287.789	54272.512	32300.572	30400.307	30432.725	30352.555	30416.515
Log Likelihood	-28909.23	-27000.99	-26980.53	-26934.79	-26927.13	-16129.74	-15051.20	-15036.49	-14975.86	-15007.84
ICC country-wave	0.078	0.146	0.118	0.113	0.120	0.189	0.193	0.130	0.126	0.133
ICC country	0.069	0.119	0.097	0.093	0.099	0.172	0.166	0.101	0.096	0.103
N	44,681	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925	28,925

Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * p < 0.05, ** p < 0.01, *** p < 0.001. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Table C2. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions

	Relative poverty				Deep poverty			
	Model 5	Model 6	Model 7	Model 8	Model 5	Model 6	Model 7	Model 8
Household-level variables								
Household type [ref: single]								
Single with children	0.099*** (0.010)	0.016 (0.026)	0.101*** (0.011)	0.337*** (0.023)	0.106*** (0.010)	0.006 (0.024)	0.108*** (0.010)	0.204*** (0.022)
Couple without children	0.056** (0.019)	0.014 (0.047)	0.056** (0.019)	0.178*** (0.043)	-0.003 (0.017)	0.013 (0.042)	-0.003 (0.017)	0.048 (0.041)
Couple 1-2 children	0.052* (0.026)	-0.024 (0.065)	0.054* (0.026)	0.313*** (0.068)	0.022 (0.023)	-0.023 (0.055)	0.025 (0.023)	0.082 (0.064)
Couple 3+ children	0.074* (0.034)	-0.023 (0.086)	0.075* (0.035)	0.419*** (0.092)	0.078** (0.030)	-0.104 (0.073)	0.079** (0.030)	0.189* (0.086)
HH labour market attachment	0.103*** (0.007)	0.104*** (0.007)	0.103*** (0.007)	0.107*** (0.007)	-0.043*** (0.009)	-0.042*** (0.009)	-0.043*** (0.009)	-0.042*** (0.009)
HH disability receipt [ref: no]								
Yes	0.294*** (0.006)	0.295*** (0.006)	0.294*** (0.006)	0.297*** (0.006)	0.213*** (0.006)	0.214*** (0.006)	0.213*** (0.006)	0.214*** (0.006)

Age of the oldest member [ref:
26-30]

20-25	-0.074***	-0.074***	-0.074***	-0.076***	-0.114***	-0.115***	-0.114***	-0.115***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)	(0.021)
31-35	0.032**	0.031**	0.032**	0.034***	0.031**	0.031**	0.031**	0.032**
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)
36-40	0.020*	0.020*	0.020*	0.025**	0.025*	0.025*	0.025*	0.027*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
41-45	-0.011	-0.011	-0.011	-0.006	0.012	0.013	0.012	0.015
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.010)	(0.011)	(0.011)
46-50	-0.024**	-0.024**	-0.024**	-0.017	0.000	0.001	0.000	0.004
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
51-55	-0.011	-0.011	-0.011	-0.005	0.015	0.015	0.016	0.019
	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)
56-59	0.032***	0.032**	0.033***	0.038***	0.058***	0.057***	0.058***	0.061***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)

Foreign born [ref: no one]

At least one	-0.051***	-0.051***	-0.051***	-0.051***	-0.034***	-0.033***	-0.034***	-0.034***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)

Tenure status [ref: rent]

Outright homeownership	-0.015*	-0.015*	-0.015*	-0.014*	-0.052***	-0.053***	-0.052***	-0.052***
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	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Homeownership with mortgage	0.048***	0.048***	0.048***	0.049***	-0.022*	-0.023*	-0.022*	-0.021*
	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.009)	(0.009)	(0.009)
Free user	-0.035***	-0.035***	-0.035***	-0.035***	-0.093***	-0.093***	-0.093***	-0.093***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
HH highest educational level [ref: high]								
Low	-0.072***	-0.072***	-0.071***	-0.069***	-0.005	-0.007	-0.005	-0.004
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Medium	-0.033***	-0.033***	-0.033***	-0.034***	0.003	0.001	0.003	0.002
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Survey year [ref: 2007]								
2013	-0.037*	-0.037*	-0.017	-0.019	-0.024	-0.023	-0.007	-0.008
	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.019)	(0.019)
2019	-0.081***	-0.080***	-0.066***	-0.068***	-0.061***	-0.060**	-0.047*	-0.048*
	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.019)	(0.019)
Contextual-level variables								
Familisation index (B)	0.089	-0.029			0.170	0.054		
	(0.076)	(0.110)			(0.116)	(0.129)		
Familisation index (W)	0.057	-0.066			0.035	-0.156		
	(0.066)	(0.080)			(0.075)	(0.087)		

Defamilisation (B)	-0.048	0.234**	-0.052	0.059
	(0.051)	(0.078)	(0.063)	(0.082)
Defamilisation (W)	0.307***	0.201	0.266**	0.222
	(0.072)	(0.127)	(0.084)	(0.140)
<i>Cross-level interactions with HH type</i>				
Familisation index (B)* Single with children	0.143***		0.170***	
	(0.041)		(0.038)	
Familisation index (B)* Couple without children	0.068		-0.044	
	(0.075)		(0.067)	
Familisation index (B)* Couple with 1-2 children	0.133		0.075	
	(0.103)		(0.088)	
Familisation index (B)* Couple 3+ children	0.170		0.314**	
	(0.138)		(0.116)	
Familisation index (W)* Single with children	0.275***		0.378***	
	(0.066)		(0.069)	
Familisation index (W)* Couple without children	-0.137		-0.085	
	(0.101)		(0.110)	

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Familisation index (W)* Couple with 1-2 children	0.176 (0.108)	0.349** (0.114)	
Familisation index (W)* Couple 3+ children	0.461*** (0.139)	0.644*** (0.143)	
Defamilisation (B)* Single with children		-0.421*** (0.036)	-0.174*** (0.036)
Defamilisation (B)* Couple without children		-0.219** (0.067)	-0.093 (0.067)
Defamilisation (B)* Couple with 1-2 children		-0.449*** (0.105)	-0.100 (0.102)
Defamilisation (B)* Couple 3+ children		-0.593*** (0.142)	-0.190 (0.136)
Defamilisation (W)* Single with children		0.198 (0.120)	0.065 (0.130)
Defamilisation (W)* Couple without children		0.217 (0.171)	0.288 (0.198)

Defamilisation (W)* Couple with 1-2 children				-0.021				-0.041
				(0.166)				(0.187)
Defamilisation (W)* Couple 3+ children				0.091				-0.074
				(0.204)				(0.228)
Contextual-level variables (control)								
Gini coefficient (B)	-0.192**	-0.193**	-0.197**	-0.165*	-0.316**	-0.326**	-0.339**	-0.335**
	(0.066)	(0.067)	(0.068)	(0.071)	(0.101)	(0.101)	(0.104)	(0.105)
Gini coefficient (W)	-0.067	-0.075	-0.051	-0.056	-0.054	-0.062	-0.041	-0.043
	(0.052)	(0.053)	(0.053)	(0.052)	(0.060)	(0.060)	(0.061)	(0.061)
Social expenditure (B)	0.126*	0.126*	0.156*	0.169**	0.119	0.119	0.186*	0.183
	(0.063)	(0.064)	(0.061)	(0.063)	(0.096)	(0.096)	(0.094)	(0.094)
Social expenditure (W)	0.282**	0.274**	0.233*	0.234*	0.078	0.066	0.027	0.029
	(0.104)	(0.104)	(0.095)	(0.094)	(0.119)	(0.119)	(0.110)	(0.110)
Unemployment rate (B)	-0.128	-0.127	-0.225*	-0.271*	-0.299	-0.288	-0.427**	-0.437**
	(0.121)	(0.122)	(0.103)	(0.109)	(0.178)	(0.178)	(0.153)	(0.155)
Unemployment rate (W)	0.028	0.031	0.038	0.047	0.064	0.060	0.076	0.080
	(0.069)	(0.069)	(0.066)	(0.065)	(0.079)	(0.079)	(0.077)	(0.077)
Constant	0.295***	0.362***	0.375***	0.202**	0.696***	0.764***	0.825***	0.763***
	(0.075)	(0.089)	(0.058)	(0.069)	(0.110)	(0.115)	(0.081)	(0.086)

Random effects (variances)								
Intercept variance household-level	0.193***	0.193***	0.193***	0.192***	0.164***	0.163***	0.164***	0.163***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intercept variance country-wave level	0.005***	0.004***	0.004***	0.004***	0.006***	0.005***	0.006***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Intercept variance country level	0.022***	0.021***	0.021***	0.025***	0.020***	0.018***	0.018***	0.020***
	(0.007)	(0.007)	(0.007)	(0.009)	(0.007)	(0.007)	(0.007)	(0.008)
Slope variance hh type-country-wave level	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Slope variance hh type-country level	0.001***	0.001***	0.001***	0.002***	0.001***	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
AIC	54033.596	53971.237	54016.495	53835.207	30145.037	30018.488	30136.584	30113.891
BIC	54355.915	54363.246	54338.814	54227.217	30451.118	30390.749	30442.665	30486.152
Log Likelihood	-26979.57	-26941.12	-26973.46	-26874.64	-15035.39	-14965.44	-15032.30	-15012.67
ICC country-wave	0.121	0.115	0.116	0.134	0.134	0.124	0.126	0.134
ICC country	0.099	0.095	0.095	0.112	0.104	0.099	0.095	0.103
N	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925

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Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

D. Robustness checks

We present some robustness checks on our multivariate models. First, we report the full multivariate analyses (Models 0–8) for both poverty measures using sample weights. The use of raw weights, which reflect unequal selection probabilities, is a recognized challenge in multilevel modelling, as it may lead to biased parameter estimates (Rabe-Hesketh and Skrondal, 2006).²⁰ Various alternative approaches have been proposed through simulation studies; however, no gold standard has emerged in the literature. Consequently, we follow Carle’s (2009)²¹ recommendation to include both unweighted analyses and rescaled weights that sum to cluster sample sizes (Asparouhov, 2006).²² Second, at the micro level, we compute a different measure of household members’ labour market attachment. It is measured as the ratio between the number of workers within the household over the number of working-age household members. Following Eurostat’s definition, we define workers as those working-age household members aged 25 to 59 who have been employed for at least six months during the previous year. However, due to the nature of the EU-SILC data, in register countries where employment status cannot be identified through self-reported monthly main activity (e.g. Denmark, Finland, the Netherlands, and Sweden) we consider also individuals as workers if their market income exceeds the 25th percentile of the country- and year-specific income distribution (Barbieri et al., 2024).²³ A household-level measure allows us to account for the employment contributions of all working-age members, which affects the household’s poverty risk. The variable ranges from 0 to 1. In regression models, we treat this variable as continuous, while for descriptive purposes, we recode it into three categories: zero share of workers, up to 50%, and more than 50%. Third, at the macro level, we conduct a sensitivity analysis using alternative measures of our macro-level indicators. Specifically, we examine the cross-level interaction between social expenditure and household type. This allows us to evaluate the influence of a broader social policy measure than those considered in the main analysis, as well as its differential impact across household types.

²⁰ Rabe-Hesketh, S., & Skrondal, A. (2006). Multilevel modelling of complex survey data. *Journal of the Royal Statistical Society Series A: Statistics in Society*, 169(4), 805-827.

²¹ Carle, A. C. (2009). Fitting multilevel models in complex survey data with design weights: Recommendations. *BMC medical research methodology*, 9, 1-13.

²² Asparouhov, T., & Muthén, B. (2006). Multilevel modeling of complex survey data. *Proceedings of the joint statistical meeting in Seattle*, 2718-2726.

²³ Barbieri, P., Cutuli, G., & Scherer, S. (2024). In-work poverty in Western Europe. A longitudinal perspective. *European Societies*, 26(4), 1232–1264.

Table D1. Multilevel regression table of avoiding different types of poverty after taxes and transfer: household-level results (weighted)

	Relative poverty					Deep poverty				
	Model 0	Model 1	Model 2	Model 3	Model 4	Model 0	Model 1	Model 2	Model 3	Model 4
Micro-level variables										
Household type [ref: single]										
Single with children		0.098***	0.098***	0.080**	0.111***		0.100***	0.101***	0.069***	0.120***
		(0.025)	(0.025)	(0.025)	(0.029)		(0.021)	(0.021)	(0.018)	(0.026)
Couple without children		0.057*	0.057*	0.062*	0.038		-0.002	-0.002	0.009	-0.013
		(0.024)	(0.024)	(0.029)	(0.025)		(0.020)	(0.020)	(0.020)	(0.024)
Couple 1-2 children		0.065*	0.065*	0.043	0.069*		0.028	0.029	0.018	0.038
		(0.026)	(0.026)	(0.035)	(0.028)		(0.023)	(0.023)	(0.025)	(0.029)
Couple 3+ children		0.084*	0.084*	-0.005	0.106**		0.069	0.070	0.010	0.092*
		(0.036)	(0.036)	(0.042)	(0.037)		(0.039)	(0.039)	(0.043)	(0.043)
HH labour market attachment		0.107***	0.108***	0.062	0.107***		-0.047	-0.046	-0.118**	-0.048
		(0.021)	(0.021)	(0.034)	(0.021)		(0.031)	(0.031)	(0.036)	(0.031)
<i>HH labour market attachment *HH type</i>										
Single with children				0.064					0.154**	
				(0.039)					(0.050)	

Couple without children			-0.011 (0.044)				-0.050 (0.045)	
Couple 1-2 children			0.069 (0.042)				0.071 (0.046)	
Couple 3+ children			0.213*** (0.057)				0.209** (0.066)	
HH disability receipt [ref: no]								
Yes	0.303*** (0.019)	0.303*** (0.019)	0.301*** (0.019)	0.320*** (0.030)	0.206*** (0.025)	0.206*** (0.025)	0.203*** (0.025)	0.228*** (0.032)
<i>HH disability receipt *HH type</i>								
Single with children				-0.071* (0.034)				-0.092** (0.028)
Couple without children				0.054* (0.026)				0.025 (0.025)
Couple 1-2 children				-0.005 (0.030)				-0.021 (0.038)
Couple 3+ children				-0.152*** (0.032)				-0.112* (0.045)
Age of the oldest member [ref: 26-30]								
20-25	-0.079* (0.032)	-0.079* (0.032)	-0.081* (0.032)	-0.079* (0.032)	-0.088* (0.032)	-0.089* (0.032)	-0.092* (0.032)	-0.087* (0.032)

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	(0.038)	(0.038)	(0.039)	(0.038)	(0.043)	(0.043)	(0.044)	(0.043)
31-35	0.023	0.023	0.023	0.021	0.040*	0.040*	0.039	0.039
	(0.017)	(0.017)	(0.017)	(0.017)	(0.020)	(0.020)	(0.021)	(0.020)
36-40	0.016	0.016	0.015	0.014	0.035	0.035	0.032	0.033
	(0.020)	(0.020)	(0.021)	(0.020)	(0.023)	(0.023)	(0.024)	(0.024)
41-45	-0.009	-0.009	-0.011	-0.011	0.023	0.023	0.019	0.022
	(0.016)	(0.016)	(0.017)	(0.016)	(0.020)	(0.020)	(0.022)	(0.020)
46-50	-0.016	-0.016	-0.017	-0.017	0.014	0.014	0.011	0.013
	(0.021)	(0.021)	(0.022)	(0.021)	(0.024)	(0.024)	(0.025)	(0.024)
51-55	-0.002	-0.002	-0.004	-0.005	0.027	0.027	0.023	0.026
	(0.021)	(0.022)	(0.022)	(0.021)	(0.020)	(0.020)	(0.021)	(0.020)
56-59	0.034	0.034	0.032	0.030	0.067**	0.068**	0.063**	0.065**
	(0.023)	(0.023)	(0.024)	(0.023)	(0.022)	(0.022)	(0.023)	(0.023)
Foreign born [ref: no one]								
At least one	-0.053***	-0.053***	-0.051***	-0.053***	-0.028	-0.028	-0.026	-0.028
	(0.012)	(0.013)	(0.013)	(0.012)	(0.016)	(0.016)	(0.016)	(0.015)
Tenure status [ref: rent]								
Outright homeownership	-0.021	-0.021	-0.023	-0.021	-0.051*	-0.051*	-0.052*	-0.051*
	(0.016)	(0.016)	(0.016)	(0.016)	(0.024)	(0.024)	(0.023)	(0.024)
Homeownership with mortgage	0.051*	0.051*	0.048*	0.050*	-0.002	-0.002	-0.004	-0.002
	(0.022)	(0.022)	(0.022)	(0.022)	(0.027)	(0.027)	(0.027)	(0.027)

Free user	-0.032	-0.033	-0.033	-0.033	-0.108***	-0.108***	-0.110***	-0.109***
	(0.021)	(0.021)	(0.022)	(0.021)	(0.032)	(0.032)	(0.032)	(0.032)
HH highest educational level [ref: high]								
Low	-0.056**	-0.056**	-0.055**	-0.058**	0.000	0.000	0.001	-0.002
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Medium	-0.025*	-0.025*	-0.025*	-0.026*	0.007	0.007	0.006	0.005
	(0.011)	(0.011)	(0.011)	(0.011)	(0.015)	(0.015)	(0.015)	(0.015)
Survey year [ref: 2007]								
2013	-0.007	-0.042*	-0.041*	-0.041*	-0.007	-0.020	-0.019	-0.018
	(0.017)	(0.018)	(0.018)	(0.018)	(0.014)	(0.016)	(0.016)	(0.017)
2019	-0.061***	-0.091***	-0.090***	-0.089***	-0.062***	-0.068***	-0.067***	-0.067***
	(0.017)	(0.020)	(0.020)	(0.020)	(0.018)	(0.020)	(0.020)	(0.020)
Macro-level variables (control)								
Gini coefficient (B)		-0.159**	-0.158*	-0.159*		-0.315**	-0.318**	-0.314**
		(0.062)	(0.063)	(0.062)		(0.115)	(0.116)	(0.115)
Gini coefficient (W)		-0.086	-0.087	-0.087		-0.069	-0.067	-0.070
		(0.060)	(0.061)	(0.060)		(0.062)	(0.064)	(0.062)
Social expenditure (B)		0.173**	0.176**	0.171**		0.177	0.183	0.171
		(0.063)	(0.063)	(0.063)		(0.113)	(0.113)	(0.113)
Social expenditure (W)		0.290*	0.290*	0.288*		0.072	0.072	0.072

			(0.129)	(0.129)	(0.129)			(0.139)	(0.140)	(0.139)
Unemployment rate (B)			-0.232***	-0.227***	-0.236***			-0.516***	-0.506***	-0.526***
			(0.060)	(0.062)	(0.061)			(0.119)	(0.121)	(0.120)
Unemployment rate (W)			0.018	0.019	0.017			0.045	0.048	0.045
			(0.057)	(0.057)	(0.057)			(0.089)	(0.089)	(0.089)
Constant	0.348***	0.252***	0.319***	0.328***	0.317***	0.675***	0.615***	0.807***	0.817***	0.806***
	(0.023)	(0.032)	(0.056)	(0.059)	(0.056)	(0.040)	(0.049)	(0.088)	(0.090)	(0.089)
Random effects (variances)										
Intercept variance household-level	0.211***	0.192***	0.192***	0.192***	0.192***	0.171***	0.158***	0.158***	0.158***	0.158***
	(0.001)	(0.007)	(0.007)	(0.007)	(0.007)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)
Intercept variance country-wave level	0.004***	0.008***	0.006***	0.006***	0.006***	0.004***	0.007***	0.007***	0.007***	0.007***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)
Intercept variance country level	0.011***	0.023***	0.019***	0.018***	0.020***	0.037***	0.034***	0.020***	0.018***	0.020***
	(0.002)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.010)	(0.006)	(0.006)	(0.006)
Slope variance HH type-country-wave level		0.001***	0.001***	0.001***	0.001***		0.001***	0.001***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
Slope variance HH type-country level		0.001***	0.001***	0.001***	0.001***		0.001***	0.001***	0.001***	0.001***

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		(0.001)	(0.001)	(0.001)	(0.001)		(0.000)	(0.000)	(0.000)	(0.000)
AIC	61517.067	57230.811	57196.372	57118.376	57106.816	34319.548				
BIC	61551.912	57439.883	57414.155	57327.448	57324.600	34352.638				
Log Likelihood	-30754.53	-28591.40	-28573.18	-28535.18	-28528.40	-17155.77	-15973.10	-15959.27	-15908.63	-15928.29
ICC country-wave	0.067	0.138	0.116	0.112	0.117	0.194	0.207	0.145	0.140	0.148
ICC country	0.049	0.104	0.088	0.085	0.90	0.174	0.171	0.106	0.100	0.109
N	44,681	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925	28,925

Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * p < 0.05, ** p < 0.01, *** p < 0.001. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Table D2. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions (weighted)

	Relative poverty				Deep poverty			
	Model 5	Model 6	Model 7	Model 8	Model 5	Model 6	Model 7	Model 8
Household-level variables								
Household type [ref: single]								
Single with children	0.098*** (0.025)	-0.002 (0.058)	0.102*** (0.026)	0.297*** (0.052)	0.101*** (0.021)	0.000 (0.062)	0.104*** (0.021)	0.187*** (0.054)
Couple without children	0.057* (0.024)	0.014 (0.058)	0.057* (0.023)	0.120 (0.078)	-0.001 (0.020)	0.023 (0.053)	-0.003 (0.020)	-0.010 (0.050)
Couple 1-2 children	0.065* (0.026)	-0.018 (0.067)	0.067* (0.027)	0.220* (0.103)	0.029 (0.023)	0.019 (0.062)	0.031 (0.024)	0.026 (0.058)
Couple 3+ children	0.084* (0.036)	-0.002 (0.100)	0.086* (0.036)	0.275* (0.139)	0.070 (0.039)	-0.118 (0.111)	0.071 (0.039)	0.154 (0.095)
HH labour market attachment	0.108*** (0.021)	0.107*** (0.022)	0.108*** (0.021)	0.110*** (0.022)	-0.046 (0.032)	-0.046 (0.032)	-0.047 (0.031)	-0.045 (0.031)
HH disability receipt [ref: no]								
Yes	0.303***	0.304***	0.303***	0.304***	0.206***	0.206***	0.206***	0.206***

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	(0.019)	(0.019)	(0.019)	(0.019)	(0.025)	(0.025)	(0.025)	(0.025)
Age of the oldest member [ref: 26-30]								
20-25	-0.079*	-0.079*	-0.079*	-0.081*	-0.089*	-0.090*	-0.089*	-0.090*
	(0.038)	(0.038)	(0.038)	(0.038)	(0.043)	(0.043)	(0.043)	(0.043)
31-35	0.023	0.022	0.023	0.025	0.040*	0.040*	0.040*	0.041*
	(0.017)	(0.017)	(0.017)	(0.017)	(0.020)	(0.020)	(0.020)	(0.020)
36-40	0.016	0.016	0.016	0.019	0.035	0.034	0.035	0.036
	(0.020)	(0.020)	(0.020)	(0.020)	(0.023)	(0.023)	(0.023)	(0.023)
41-45	-0.009	-0.009	-0.009	-0.006	0.023	0.024	0.024	0.026
	(0.016)	(0.016)	(0.016)	(0.015)	(0.020)	(0.020)	(0.020)	(0.019)
46-50	-0.015	-0.016	-0.015	-0.011	0.014	0.014	0.014	0.016
	(0.021)	(0.021)	(0.021)	(0.020)	(0.024)	(0.023)	(0.024)	(0.023)
51-55	-0.002	-0.003	-0.002	0.001	0.027	0.027	0.027	0.029
	(0.022)	(0.021)	(0.022)	(0.020)	(0.020)	(0.020)	(0.020)	(0.019)
56-59	0.034	0.033	0.034	0.038	0.068**	0.067**	0.068**	0.069**
	(0.023)	(0.023)	(0.023)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
Foreign born [ref: no one]								
At least one	-0.053***	-0.053***	-0.053***	-0.054***	-0.028	-0.027	-0.028	-0.028
	(0.012)	(0.012)	(0.013)	(0.012)	(0.016)	(0.015)	(0.016)	(0.015)
Tenure status [ref: rent]								

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Outright homeownership	-0.021 (0.016)	-0.020 (0.016)	-0.021 (0.016)	-0.020 (0.016)	-0.051* (0.024)	-0.052* (0.023)	-0.051* (0.024)	-0.051* (0.024)
Homeownership with mortgage	0.051* (0.022)	0.051* (0.022)	0.051* (0.022)	0.051* (0.021)	-0.002 (0.027)	-0.003 (0.027)	-0.002 (0.027)	-0.001 (0.027)
Free user	-0.033 (0.021)	-0.033 (0.021)	-0.033 (0.021)	-0.033 (0.021)	-0.108*** (0.032)	-0.107*** (0.032)	-0.108*** (0.032)	-0.108*** (0.032)
HH highest educational level [ref: high]								
Low	-0.056** (0.018)	-0.057** (0.018)	-0.056** (0.018)	-0.054** (0.018)	0.000 (0.018)	-0.002 (0.019)	0.000 (0.018)	0.001 (0.018)
Medium	-0.025* (0.011)	-0.026* (0.011)	-0.025* (0.011)	-0.026* (0.011)	0.007 (0.015)	0.005 (0.015)	0.007 (0.015)	0.006 (0.015)
Survey year [ref: 2007]								
2013	-0.046** (0.018)	-0.045* (0.018)	-0.029 (0.017)	-0.029 (0.018)	-0.021 (0.018)	-0.019 (0.018)	-0.006 (0.016)	-0.006 (0.016)
2019	-0.090*** (0.021)	-0.090*** (0.021)	-0.079*** (0.019)	-0.078*** (0.019)	-0.068** (0.021)	-0.068** (0.022)	-0.055* (0.021)	-0.055* (0.021)
Contextual-level variables								
Familisation index (B)	0.118 (0.075)	0.001 (0.112)			0.170 (0.145)	0.075 (0.152)		
Familisation index (W)	0.087	-0.003			0.014	-0.152		

	(0.072)	(0.096)		(0.104)	(0.139)		
Defamilisation (B)			-0.066	0.106		-0.069	-0.031
			(0.116)	(0.131)		(0.108)	(0.132)
Defamilisation (W)			0.245*	0.224		0.249	0.198
			(0.110)	(0.150)		(0.133)	(0.207)
<i>Cross-level interactions with HH type</i>							
Familisation index (B)* Single with children		0.172			0.170		
		(0.103)			(0.097)		
Familisation index (B)* Couple without children		0.068			-0.056		
		(0.095)			(0.079)		
Familisation index (B)* Couple with 1-2 children		0.145			0.006		
		(0.103)			(0.091)		
Familisation index (B)* Couple 3+ children		0.150			0.328*		
		(0.147)			(0.159)		
Familisation index (W)* Single with children		0.159			0.265*		
		(0.130)			(0.116)		
Familisation index (W)* Couple without children		-0.147			-0.044		

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	(0.087)	(0.126)	
Familisation index (W)* Couple with 1-2 children	0.174	0.411*	
	(0.190)	(0.204)	
Familisation index (W)* Couple 3+ children	0.424	0.560	
	(0.316)	(0.335)	
Defamilisation (B)* Single with children	-0.340***		-0.144
	(0.087)		(0.087)
Defamilisation (B)* Couple without children	-0.111		0.016
	(0.114)		(0.077)
Defamilisation (B)* Couple with 1-2 children	-0.263		0.011
	(0.163)		(0.092)
Defamilisation (B)* Couple 3+ children	-0.324		-0.145
	(0.237)		(0.168)
Defamilisation (W)* Single with children	0.197*		0.129
	(0.099)		(0.150)
Defamilisation (W)* Couple without children	0.251		0.274

				(0.216)				(0.292)
Defamilisation (W)* Couple with 1-2 children				-0.161				-0.002
				(0.114)				(0.156)
Defamilisation (W)* Couple 3+ children				-0.166				-0.077
				(0.162)				(0.176)
Contextual-level variables (control)								
Gini coefficient (B)	-0.147**	-0.147**	-0.147*	-0.131	-0.294**	-0.304**	-0.306**	-0.307**
	(0.056)	(0.056)	(0.066)	(0.067)	(0.105)	(0.105)	(0.106)	(0.107)
Gini coefficient (W)	-0.083	-0.087	-0.072	-0.080	-0.069	-0.074	-0.056	-0.058
	(0.053)	(0.052)	(0.057)	(0.059)	(0.062)	(0.065)	(0.064)	(0.067)
Social expenditure (B)	0.138*	0.140*	0.177**	0.187**	0.124	0.122	0.188	0.196
	(0.068)	(0.068)	(0.060)	(0.061)	(0.123)	(0.122)	(0.110)	(0.109)
Social expenditure (W)	0.225	0.222	0.220	0.216	0.063	0.056	0.003	0.003
	(0.146)	(0.145)	(0.126)	(0.130)	(0.133)	(0.136)	(0.144)	(0.144)
Unemployment rate (B)	-0.121	-0.123	-0.255**	-0.277**	-0.369	-0.361	-0.526***	-0.519***
	(0.101)	(0.101)	(0.087)	(0.088)	(0.208)	(0.206)	(0.124)	(0.124)
Unemployment rate (W)	0.044	0.045	0.038	0.055	0.051	0.046	0.067	0.071
	(0.066)	(0.065)	(0.066)	(0.064)	(0.091)	(0.093)	(0.095)	(0.096)
Constant	0.235**	0.302**	0.346***	0.237*	0.688***	0.747***	0.831***	0.801***

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	(0.083)	(0.107)	(0.094)	(0.105)	(0.131)	(0.137)	(0.117)	(0.128)
Random effects (variances)								
Intercept variance household-level	0.192***	0.192***	0.192***	0.192***	0.158***	0.157***	0.158***	0.158***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.012)	(0.012)	(0.012)	(0.012)
Intercept variance country-wave level	0.006***	0.006***	0.006***	0.006***	0.007***	0.006***	0.008***	0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)
Intercept variance country level	0.020***	0.019***	0.019***	0.020***	0.020***	0.019***	0.018***	0.018***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)
Slope variance hh type-country-wave level	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Slope variance hh type-country level	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
AIC	57190.483	57120.260	57181.998	57036.713				
BIC	57399.555	57338.043	57391.069	57254.496				
Log Likelihood	-28571.24	-28535.13	-28566.99	-28493.35	-15958.26	-15881.6	-15954.68	-15933.6
ICC country-wave	0.118	0.112	0.114	0.118	0.146	0.137	0.140	0.139
ICC country	0.089	0.085	0.087	0.091	0.106	0.104	0.099	0.098

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N	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925
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Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Table D3. Multilevel regression table of avoiding different types of poverty after taxes and transfer: household-level results (alternative measure of HH labour market attachment)

	Relative poverty					Deep poverty				
	Model 0	Model 1	Model 2	Model 3	Model 4	Model 0	Model 1	Model 2	Model 3	Model 4
Household-level variables										
Household type [ref: single]										
Single with children		0.097***	0.098***	0.065***	0.109***		0.105***	0.106***	0.073***	0.128***
		(0.010)	(0.010)	(0.011)	(0.011)		(0.010)	(0.010)	(0.010)	(0.011)
Couple without children		0.057**	0.058**	0.068***	0.027		-0.005	-0.004	0.011	-0.011
		(0.019)	(0.019)	(0.020)	(0.020)		(0.017)	(0.017)	(0.018)	(0.019)
Couple 1-2 children		0.055*	0.056*	0.032	0.058*		0.019	0.019	0.021	0.027
		(0.026)	(0.026)	(0.026)	(0.026)		(0.023)	(0.022)	(0.023)	(0.023)
Couple 3+ children		0.078*	0.079*	0.007	0.099**		0.074*	0.075*	0.032	0.096**
		(0.034)	(0.034)	(0.035)	(0.035)		(0.030)	(0.030)	(0.031)	(0.030)

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HH labour market attachment	0.072***	0.072***	0.017	0.071***	-0.021**	-0.020**	-0.085***	-0.022***
	(0.006)	(0.006)	(0.009)	(0.006)	(0.007)	(0.007)	(0.011)	(0.007)
<i>HH labour market attachment *</i>								
<i>HH type</i>								
Single with children			0.091***				0.131***	
			(0.012)				(0.015)	
Couple without children			-0.020				-0.063*	
			(0.023)				(0.030)	
Couple 1-2 children			0.073***				0.029	
			(0.016)				(0.020)	
Couple 3+ children			0.165***				0.143***	
			(0.021)				(0.026)	
HH disability receipt [ref: no]								
Yes	0.290***	0.290***	0.287***	0.303***	0.217***	0.217***	0.214***	0.243***
	(0.006)	(0.006)	(0.006)	(0.009)	(0.006)	(0.006)	(0.006)	(0.009)

*HH disability
receipt *HH
type*

Single with children				-0.069***				-0.096***
				(0.015)				(0.015)
Couple without children				0.078***				0.011
				(0.017)				(0.019)
Couple 1-2 children				0.003				-0.010
				(0.014)				(0.016)
Couple 3+ children				-0.133***				-0.096***
				(0.020)				(0.022)
Age of the oldest member [ref: 26-30]								
20-25	-0.075***	-0.075***	-0.078***	-0.076***	0.105***	0.106***	0.073***	0.128***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.010)	(0.010)	(0.010)	(0.011)
31-35	0.030**	0.031**	0.030**	0.029**	-0.005	-0.004	0.011	-0.011
	(0.010)	(0.010)	(0.010)	(0.010)	(0.017)	(0.017)	(0.018)	(0.019)
36-40	0.020*	0.020*	0.018	0.017	0.019	0.019	0.021	0.027

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	(0.009)	(0.009)	(0.009)	(0.009)	(0.023)	(0.022)	(0.023)	(0.023)
41-45	-0.012	-0.011	-0.015	-0.014	0.074*	0.075*	0.032	0.096**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.030)	(0.030)	(0.031)	(0.030)
46-50	-0.025**	-0.025**	-0.028**	-0.027**	-0.021**	-0.020**	-0.085***	-0.022***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.007)	(0.007)	(0.011)	(0.007)
51-55	-0.013	-0.012	-0.014	-0.015	0.105***	0.106***	0.073***	0.128***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.011)
56-59	0.029**	0.030**	0.027**	0.024*	-0.005	-0.004	0.011	-0.011
	(0.010)	(0.010)	(0.010)	(0.010)	(0.017)	(0.017)	(0.018)	(0.019)
Foreign born [ref: no one]								
At least one	-0.051***	-0.051***	-0.049***	-0.051***	-0.034***	-0.034***	-0.033***	-0.034***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Tenure status [ref: rent]								
Outright homeownership	-0.014*	-0.014*	-0.015*	-0.014*	-0.054***	-0.054***	-0.053***	-0.054***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Homeownership with mortgage	0.051***	0.050***	0.048***	0.050***	-0.023*	-0.024**	-0.024**	-0.024**
	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.009)	(0.009)	(0.009)
Free user	-0.035***	-0.035***	-0.035***	-0.035***	-0.093***	-0.093***	-0.093***	-0.093***

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	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
HH highest educational level [ref: high]								
Low	-0.074*** (0.007)	-0.073*** (0.007)	-0.072*** (0.007)	-0.074*** (0.007)	-0.004 (0.007)	-0.004 (0.007)	-0.004 (0.007)	-0.005 (0.007)
Medium	-0.033*** (0.006)	-0.033*** (0.006)	-0.033*** (0.006)	-0.034*** (0.006)	0.003 (0.007)	0.003 (0.007)	0.002 (0.007)	0.002 (0.007)
Survey year [ref: 2007]								
2013	0.002 (0.016)	-0.035* (0.016)	-0.034* (0.016)	-0.034* (0.016)	-0.004 (0.016)	-0.022 (0.018)	-0.021 (0.018)	-0.021 (0.018)
2019	-0.051** (0.016)	-0.082*** (0.016)	-0.080*** (0.016)	-0.081*** (0.016)	-0.054*** (0.016)	-0.061*** (0.018)	-0.059** (0.018)	-0.059** (0.018)
Contextual-level variables (control)								
Gini coefficient (B)		-0.205** (0.064)	-0.204** (0.065)	-0.205** (0.064)		-0.335** (0.103)	-0.337** (0.103)	-0.333** (0.103)
Gini coefficient (W)		-0.067 (0.053)	-0.067 (0.053)	-0.068 (0.053)		-0.055 (0.060)	-0.054 (0.060)	-0.057 (0.060)
Social		0.147* (0.053)	0.149* (0.053)	0.146* (0.053)		0.181 (0.060)	0.184 (0.060)	0.176 (0.060)

expenditure (B)			(0.060)	(0.060)	(0.060)			(0.096)	(0.095)	(0.095)
Social expenditure (W)			0.328***	0.328***	0.328***			0.100	0.103	0.100
			(0.094)	(0.094)	(0.094)			(0.105)	(0.106)	(0.105)
Unemployment rate (B)			-0.225*	-0.220*	-0.230*			-0.492**	-0.488**	-0.502**
			(0.102)	(0.102)	(0.102)			(0.163)	(0.163)	(0.163)
Unemployment rate (W)			0.007	0.006	0.004			0.058	0.056	0.058
			(0.066)	(0.067)	(0.067)			(0.075)	(0.075)	(0.075)
Constant	0.340***	0.274***	0.373***	0.387***	0.374***	0.684***	0.617***	0.811***	0.823***	0.807***
	(0.031)	(0.031)	(0.050)	(0.050)	(0.050)	(0.038)	(0.039)	(0.074)	(0.073)	(0.073)
Random effects (variances)										
Intercept variance household-level	0.211***	0.194***	0.195***	0.193***	0.193***	0.174***	0.164***	0.164***	0.163***	0.163***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intercept variance country-wave level	0.004***	0.006***	0.004***	0.004***	0.004***	0.008***	0.006***	0.006***	0.006***	0.006***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)

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Intercept variance country level	0.014*** (0.004)	0.026*** (0.008)	0.021*** (0.007)	0.020*** (0.006)	0.021*** (0.007)	0.036*** (0.011)	0.034*** (0.010)	0.020*** (0.007)	0.019*** (0.007)	0.020*** (0.007)
Slope variance HH type- country-wave level		0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.001)		0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Slope variance HH type- country level		0.001*** (0.000)	0.001*** (0.001)	0.001*** (0.001)	0.001*** (0.000)		0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
AIC	57,245.745	54,103.299	54,074.241	53,981.475	53,977.325	31,942.749	30,174.949	30,157.494	30,051.808	30,107.722
BIC	57,298.013	54,355.927	54,379.137	54,321.216	54,317.067	32,008.928	30,414.851	30,447.030	30,374.434	30,430.348
Log Likelihood	-28616.873	-27022.650	-27002.120	-26951.737	-26949.662	-15963.374	-15058.475	-15043.747	-14986.904	-15014.861
ICC country- wave	0.116	0.143	0.116	0.113	0.118	0.206	0.194	0.133	0.130	0.136
ICC country	0.090	0.116	0.095	0.093	0.097	0.166	0.167	0.103	0.100	0.106
N	44,681	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925	28,925

Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * p < 0.05, ** p < 0.01, *** p < 0.001. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Table D4. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions (alternative measure of HH labour market attachment)

	Relative poverty				Deep poverty			
	Model 5	Model 6	Model 7	Model 8	Model 5	Model 6	Model 7	Model 8
Household-level variables								
Household type [ref: single]								
Single with children	0.097*** (0.010)	0.008 (0.027)	0.099*** (0.011)	0.322*** (0.023)	0.105*** (0.010)	-0.011 (0.025)	0.107*** (0.010)	0.209*** (0.022)
Couple without children	0.057** (0.019)	-0.002 (0.047)	0.058** (0.019)	0.163*** (0.042)	-0.004 (0.017)	-0.013 (0.043)	-0.005 (0.017)	0.046 (0.041)
Couple 1-2 children	0.056* (0.026)	-0.041 (0.065)	0.057* (0.026)	0.280*** (0.066)	0.019 (0.023)	-0.065 (0.056)	0.021 (0.022)	0.088 (0.064)
Couple 3+ children	0.078* (0.034)	-0.048 (0.086)	0.080* (0.034)	0.383*** (0.089)	0.074* (0.030)	-0.163* (0.074)	0.076* (0.030)	0.205* (0.086)

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HH labour market attachment	0.072***	0.072***	0.072***	0.074***	-0.020**	-0.020**	-0.020**	-0.020**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
HH disability receipt [ref: no]								
Yes	0.290***	0.290***	0.290***	0.292***	0.217***	0.217***	0.217***	0.217***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Age of the oldest member [ref: 26- 30]								
20-25	-0.075***	-0.075***	-0.075***	-0.077***	-0.113***	-0.114***	-0.114***	-0.114***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)	(0.021)
31-35	0.000	0.000	0.000	0.000	0.031**	0.032**	0.031**	0.033**
	0.031**	0.030**	0.031**	0.033***	(0.011)	(0.011)	(0.011)	(0.011)
36-40	(0.010)	(0.010)	(0.010)	(0.010)	0.025*	0.025*	0.025*	0.027*
	0.020*	0.020*	0.020*	0.025**	(0.011)	(0.011)	(0.011)	(0.011)
41-45	(0.009)	(0.009)	(0.009)	(0.009)	0.012	0.012	0.012	0.015
	-0.011	-0.011	-0.011	-0.006	(0.011)	(0.010)	(0.011)	(0.011)
46-50	(0.009)	(0.009)	(0.009)	(0.009)	0.000	0.001	-0.000	0.004
	-0.025**	-0.025**	-0.025**	-0.018*	(0.011)	(0.011)	(0.011)	(0.011)
51-55	(0.009)	(0.009)	(0.009)	(0.009)	0.016	0.016	0.016	0.020
	-0.012	-0.012	-0.012	-0.006	(0.011)	(0.011)	(0.011)	(0.011)

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56-59	(0.009)	(0.009)	(0.009)	(0.009)	0.059***	0.058***	0.059***	0.062***
	0.030**	0.029**	0.030**	0.035***	(0.011)	(0.011)	(0.011)	(0.011)
Foreign born [ref: no one]								
At least one	-0.051***	-0.051***	-0.051***	-0.052***	-0.034***	-0.033***	-0.034***	-0.034***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Tenure status [ref: rent]								
Outright homeownership	-0.014*	-0.013*	-0.014*	-0.012*	-0.054***	-0.054***	-0.053***	-0.053***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Homeownership with mortgage	0.050***	0.050***	0.050***	0.052***	-0.024**	-0.025**	-0.024**	-0.023*
	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.009)	(0.009)	(0.009)
Free user	-0.035***	-0.035***	-0.035***	-0.035***	-0.093***	-0.093***	-0.093***	-0.093***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
HH highest educational level [ref: high]								
Low	-0.073***	-0.074***	-0.073***	-0.071***	-0.004	-0.006	-0.004	-0.003
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Medium	-0.033***	-0.034***	-0.033***	-0.035***	0.003	0.001	0.003	0.003
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)

Survey year [ref:
2007]

2013	-0.039*	-0.040*	-0.020	-0.021	-0.028	-0.028	-0.009	-0.010
	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.019)	(0.019)	(0.019)
2019	-0.081***	-0.081***	-0.069***	-0.069***	-0.060**	-0.061**	-0.049*	-0.049**
	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.019)	(0.019)	(0.019)

**Contextual-
level variables**

Familisation index (B)	0.040	-0.131			0.019	-0.257		
	(0.072)	(0.108)			(0.114)	(0.140)		
Familisation index (W)	0.092	-0.020			0.112	-0.055		
	(0.065)	(0.079)			(0.074)	(0.087)		
Defamilisation (B)			-0.027	0.225**			-0.032	0.079
			(0.050)	(0.077)			(0.063)	(0.082)
Defamilisation (W)			0.267***	0.205			0.240**	0.187
			(0.072)	(0.127)			(0.084)	(0.139)

*Cross-level
interactions with
HH type*

Familisation index (B)*		0.154***				0.198***		
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Single with children	(0.042)	(0.039)
Familisation index (B)* Couple without children	0.098	-0.002
	(0.076)	(0.069)
Familisation index (B)* Couple with 1-2 children	0.168	0.140
	(0.104)	(0.089)
Familisation index (B)* Couple 3+ children	0.220	0.407***
	(0.137)	(0.118)
Familisation index (W)* Single with children	0.279***	0.363***
	(0.066)	(0.069)
Familisation index (W)* Couple without children	-0.127	-0.081

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	(0.099)		(0.107)	
Familisation index (W)* Couple with 1-2 children	0.200		0.345**	
	(0.107)		(0.113)	
Familisation index (W)* Couple 3+ children	0.472***		0.615***	
	(0.138)		(0.142)	
Defamilisation (B)* Single with children		-0.399***		-0.183***
		(0.036)		(0.036)
Defamilisation (B)* Couple without children		-0.189**		-0.092
		(0.066)		(0.066)
Defamilisation (B)* Couple with 1-2 children		-0.389***		-0.118
		(0.102)		(0.101)
Defamilisation (B)* Couple 3+ children		-0.523***		-0.224

				(0.139)				(0.136)
Defamilisation (W)* Single with children				0.187				0.105
				(0.119)				(0.130)
Defamilisation (W)* Couple without children				0.144				0.182
				(0.169)				(0.194)
Defamilisation (W)* Couple with 1-2 children				-0.086				-0.010
				(0.165)				(0.187)
Defamilisation (W)* Couple 3+ children				0.005				-0.012
				(0.204)				(0.229)
Contextual- level variables (control)								
Gini coefficient (B)	-0.201**	-0.205**	-0.202**	-0.173*	-0.333**	-0.340**	-0.332**	-0.324**
	(0.064)	(0.065)	(0.065)	(0.068)	(0.103)	(0.109)	(0.104)	(0.104)
Gini coefficient (W)	-0.064	-0.071	-0.051	-0.056	-0.058	-0.062	-0.044	-0.045
	(0.053)	(0.053)	(0.053)	(0.052)	(0.060)	(0.061)	(0.061)	(0.061)

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Social expenditure (B)	0.135*	0.140*	0.150*	0.163**	0.174	0.167	0.188*	0.188*
	(0.062)	(0.063)	(0.059)	(0.061)	(0.100)	(0.106)	(0.095)	(0.095)
Social expenditure (W)	0.260*	0.240*	0.250**	0.244**	0.027	-0.005	0.034	0.033
	(0.105)	(0.106)	(0.095)	(0.095)	(0.119)	(0.120)	(0.110)	(0.110)
Unemployment rate (B)	-0.186	-0.210	-0.231*	-0.275*	-0.473*	-0.617**	-0.493**	-0.512**
	(0.122)	(0.124)	(0.104)	(0.108)	(0.195)	(0.206)	(0.165)	(0.166)
Unemployment rate (W)	0.032	0.042	0.030	0.041	0.093	0.096	0.079	0.083
	(0.070)	(0.070)	(0.066)	(0.066)	(0.079)	(0.080)	(0.077)	(0.076)
Constant	0.346***	0.450***	0.377***	0.223***	0.800***	1.007***	0.816***	0.753***
	(0.073)	(0.087)	(0.057)	(0.067)	(0.112)	(0.125)	(0.081)	(0.087)
Random effects (variances)								
Intercept variance household-level	0.194***	0.194***	0.194***	0.193***	0.164***	0.163***	0.164***	0.163***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Intercept variance country-wave level	0.005***	0.004***	0.004***	0.005***	0.006***	0.005***	0.006***	0.006***

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	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Intercept								
variance country	0.021***	0.021***	0.021***	0.024***	0.019***	0.024***	0.019***	0.021***
level								
	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)	(0.010)	(0.007)	(0.008)
Slope variance								
hh type-country-	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
wave level								
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Slope variance								
hh type-country	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
level								
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
AIC	54,076.236	54,015.122	54,064.433	53,890.747	30,159.590	30,030.534	30,153.105	30,128.495
BIC	54,398.554	54,407.132	54,386.752	54,282.757	30,465.671	30,402.795	30,459.186	30,500.756
Log Likelihood	-27001.118	-26962.561	-26995.216	-26900.374	-15042.795	-14970.267	-15039.552	-15019.247
ICC country-								
wave	0.096	0.094	0.094	0.128	0.135	0.150	0.136	0.140
ICC country	0.118	0.114	0.115	0.107	0.102	0.124	0.100	0.109
N	44,681	44,681	44,681	44,681	28,925	28,925	28,925	28,925

Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * p < 0.05, ** p < 0.01, *** p < 0.001. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.

Table D5. Multilevel regression table of avoiding different types of poverty after taxes and transfer: cross-level interactions (social expenditure)

	Relative poverty		Deep poverty	
	Model 5	Model 6	Model 5	Model 6
Household-level variables				
Household type [ref: single]				
Single with children	0.099*** (0.010)	0.226*** (0.026)	0.106*** (0.010)	0.211*** (0.024)
Couple without children	0.055** (0.019)	0.113* (0.047)	-0.003 (0.017)	0.053 (0.042)
Couple 1-2 children	0.052* (0.026)	0.155* (0.064)	0.022 (0.023)	0.141** (0.053)
Couple 3+ children	0.074* (0.034)	0.197* (0.084)	0.078** (0.030)	0.229*** (0.069)
HH labour market attachment	0.103*** (0.007)	0.102*** (0.007)	-0.043*** (0.009)	-0.044*** (0.009)
HH disability receipt [ref: no]	0.294*** (0.006)	0.296*** (0.006)	0.213*** (0.006)	0.215*** (0.006)
Yes				
Age of the oldest member [ref: 26-30]				
20-25	-0.074*** (0.019)	-0.074*** (0.019)	-0.114*** (0.021)	-0.114*** (0.021)
31-35	0.032** (0.010)	0.033*** (0.010)	0.031** (0.011)	0.032** (0.011)
36-40	0.020* (0.009)	0.022* (0.009)	0.025* (0.011)	0.026* (0.011)
41-45	-0.011 (0.009)	-0.009 (0.009)	0.012 (0.011)	0.014 (0.011)
46-50	-0.024** (0.009)	-0.021* (0.009)	0.000 (0.011)	0.002 (0.011)
51-55	-0.011 (0.009)	-0.007 (0.009)	0.015 (0.011)	0.018 (0.011)
56-59	0.032** (0.010)	0.037*** (0.010)	0.058*** (0.011)	0.061*** (0.011)

Foreign born [ref: no one]				
At least one	-0.051***	-0.050***	-0.034***	-0.033***
	(0.006)	(0.006)	(0.007)	(0.007)
Tenure status [ref: rent]				
Outright homeownership	-0.015*	-0.015*	-0.052***	-0.052***
	(0.006)	(0.006)	(0.007)	(0.007)
Homeownership with mortgage	0.048***	0.049***	-0.022*	-0.022*
	(0.007)	(0.007)	(0.009)	(0.009)
Free user	-0.035***	-0.036***	-0.093***	-0.093***
	(0.009)	(0.009)	(0.010)	(0.010)
HH highest educational level [ref: high]				
Low	-0.072***	-0.071***	-0.005	-0.005
	(0.007)	(0.007)	(0.007)	(0.007)
Medium	-0.033***	-0.032***	0.003	0.003
	(0.006)	(0.006)	(0.007)	(0.007)
Survey year [ref: 2007]				
2013	-0.034*	-0.034*	-0.022	-0.022
	(0.016)	(0.016)	(0.018)	(0.018)
2019	-0.081***	-0.082***	-0.061***	-0.061***
	(0.016)	(0.016)	(0.018)	(0.018)
Contextual-level variables				
Social expenditure (B)	0.153*	0.327**	0.180	0.346**
	(0.061)	(0.105)	(0.095)	(0.111)
Social expenditure (W)	0.325***	0.350***	0.099	0.060
	(0.093)	(0.106)	(0.105)	(0.117)
<i>Cross-level interactions with HH type</i>				
Social expenditure (B)* Single with children		-0.232***		-0.193***
		(0.046)		(0.041)
Social expenditure (B)* Couple without children		-0.107		-0.108
		(0.083)		(0.074)
Social expenditure (B)* Couple with 1-2 children		-0.193		-0.227*
		(0.114)		(0.094)
Social expenditure (B)* Couple 3+ children		-0.230		-0.287*
		(0.151)		(0.123)
Social expenditure (W)* Single with children		-0.064		-0.000

	(0.077)		(0.080)	
Social expenditure (W)* Couple without children	0.021		0.126	
	(0.122)		(0.134)	
Social expenditure (W)* Couple with 1-2 children	0.020		0.237	
	(0.131)		(0.144)	
Social expenditure (W)* Couple 3+ children	-0.148		0.126	
	(0.170)		(0.185)	
Contextual-level variables (control)				
Gini coefficient (B)	-0.202**	-0.202**	-0.335**	-0.334**
	(0.066)	(0.065)	(0.103)	(0.102)
Gini coefficient (W)	-0.068	-0.071	-0.054	-0.054
	(0.053)	(0.053)	(0.060)	(0.060)
Unemployment rate (B)	-0.232*	-0.232*	-0.491**	-0.492**
	(0.104)	(0.103)	(0.162)	(0.162)
Unemployment rate (W)	0.013	0.009	0.055	0.051
	(0.066)	(0.066)	(0.075)	(0.075)
Constant	0.362***	0.264***	0.817***	0.725***
	(0.051)	(0.067)	(0.073)	(0.079)
Random effects (variances)				
Intercept variance household-level	0.193	0.193	0.164	0.164
	(0.001)	(0.001)	(0.001)	(0.001)
Intercept variance country-wave level	0.005	0.005	0.005	0.005
	(0.001)	(0.001)	(0.002)	(0.002)
Intercept variance country level	0.021	0.021	0.019	0.018
	(0.007)	(0.007)	(0.007)	(0.006)
Slope variance HH type-country-wave level	0.001	0.001	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.000)
Slope variance HH type-country level	0.001	0.001	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.000)
AIC	54031.060	53988.609	30142.993	30127.217
BIC	54335.956	54363.196	30432.529	30482.932
Log Likelihood	-26980.5	-26951.30	-15036.49	-15020.60
ICC country-wave	0.118	0.116	0.131	0.123
ICC country	0.907	0.905	0.102	0.095

N	44,681	44,681	28,925	28,925
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Notes: Number of country-year=75, number of countries=25. Unit of analysis: working-age households (20-59) living in poverty before taxes and transfer. Standard errors in parentheses, covariance unstructured. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *Source:* EU-SILC cross-sectional data (2007-2013-2019). Authors' calculations.