Outside the box - Women's individual poverty situation in the EU and the role of labour market characteristics and tax-benefit policies

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January 2023, Draft do not circulate

Abstract: Social policy debates as early as the 1950s have very often focused on the activation of individuals into employment. In these debates, making work pay is considered the holy grail for a sustainable welfare state and the financial independence of its population. This however equates jobs with good working conditions and fair pay; ignores women's reality of part-time work, unpaid care work and the gender pay gap; and has often resulted in the weakening of traditional social protection. The main aim of this paper is to empirically assess these caveats by comparing the individual poverty situation of working-age women to the benchmark situation of 'typical' male workers. The analysis contributes to a better understanding of how higher individual poverty risks of women in the EU are shaped by differences in employment participation and how much by the job characteristics of employed women. It furthermore assesses the role of the tax-benefit system in cushioning the negative consequences for women who fall outside the social realm of a 'typical' worker using the microsimulation model EUROMOD for all EU countries.

1 Introduction

Social policy debates as early as the 1950s have focused on the activation of individuals into employment. Starting with active labour market policies with a focus on classic workers in the male breadwinner welfare state (Annesley 2007), policies have expanded to a wider focus on activating all individuals into employment in the early 2000s shifting to the adult worker model (Lewis 2001). In these debates, making work pay is considered the holy grail to a sustainable welfare state (Esping-Andersen et al. 2002) and the financial independence of its population. The main assumption of this strategy is that being in full-time employment for most of the working-age life guarantees a good standard of living which as a consequence leads to lower dependence on social protection.

This broad assumption has several caveats. First, it equates jobs with good working conditions and fair pay. Research, however, shows that even though employment rates have increased, poverty among the working-age population has not gone down (Cantillon et al. 2019, Fischer and Strauss 2020, Nolan 2018) and in-work poverty has increased (Halleröd et al. 2015, Lohmann and Marx 2019). Second, the gender blindness of activation (Daly 2011) ignores women's reality of part-time work, unpaid care work and the gender pay gap. Rather than acknowledging unpaid contributions to society, the activation idea encourages all working-age adults to adjust their life course to the one of stereotypical male bread-winners (Saraceno 2015). Saraceno (2015) refers to this as an ambivalent empowering of women, as it is almost taken for granted that women will continue to do the unpaid care work even when in employment. Third, the focus on individual financial independence through employment has partly led to 'unsupportive' welfare reforms where welfare receipt is tied to being in employment instead of considering the circumstances of the family as a whole. This has resulted in support gaps for individuals where "making work pay" does not result in individual independence and an overall weaker redistributive power of welfare states (Cantillon 2011). Furthermore, the aim to increase employment has partially led to a reduction of reservation wages and weakened traditional social protection (Atkinson 2010). The design of social protection needs to strike a balance between activation policies and adequate support for those who are not employed (Vandelannoote and Verbist 2020, Jara et al. 2020). Instead, public spending on childcare and activation policies has increased while spending on income protection has decreased (Kuitto 2016, Noël 2020, Vandenbroucke and Vleminckx 2011).

The main aim of this paper is to empirically assess these caveats by comparing the individual poverty situation of working-age women to the benchmark situation of 'typical' male workers, i.e. workers who full fill the working full-time for most of their working life criteria often advocated for in the adult worker model.

While poverty is usually measured at the household level, the social-political focus on individual independence through employment requires to move to an individual definition of poverty. Previous research attempting to move away from treating households and its members as a single unit (i.e. unitary model of household pooling) usually finds that individual poverty increases for women and decreases for men. However, very little is known about the heterogeneity of this effect and the role of social policy in moderating the impact of gendered labour market differences on the individual poverty situation.

Our research contributes to a better understanding on how the higher individual poverty risks of women are shaped by differences in employment participation and how much by the job characteristics of employed women. The paper furthermore assesses the role of the tax-benefit system in mitigating negative consequences for women who fall outside the social

realm of a 'typical' worker. Methodologically, the analysis uses the tax-benefit microsimulation model EUROMOD for all EU-27 countries together with various intra-household income splitting assumptions. The former allows for a more fine grained allocation of family-level resources to different members of the household - an important prerequisite for measuring individual poverty risks - while the later provides an assessment of the sensitivity of the individual poverty risk to the chosen assumptions. The individualisation of incomes furthermore helps to improve understanding on how the framing of welfare support can foster improvements in the individual poverty situation of women.

The rest of the paper proceeds as follows. We first review the literature on measuring individual poverty risks. This is followed by a section on the methodological approach and the underlying data. Finally, we present findings and conclusions.

2 Literature

The standard way of measuring poverty goes back to Becker's unitary model (1974) which treats households as a single unit. The unitary model assumes the resources are pooled and equally distributed among all household members. By doing so, income differences within the household are disregarded. Instead, all household members face the same risk of being poor and intra-household inequality is fully ignored (Findlay and Wright 1996). This is based on the underlying assumption of consensus between different household members about resource distribution and the disregard of conflicts of interest within the household (Daly 1992).

Although, the shortcomings of this approach are widely accepted (see for example Bonke and Browning (2009), Chiappori (1992)), it is still the standard methodology used for official poverty statistics as well as in poverty research. This is partly explained by the lack of data on individual consumption and the unobservability of individual sharing preferences as well as the existence of family-level income sources (Karagiannaki and Burchardt 2020). To our knowledge, the only large scale dataset covering the subject is the EU-SILC 2010 thematic module on "Intra-household sharing resources" (Ponthieux 2017). An analysis across EU countries shows that over 47 percent of adults are living in multi-adult households where at least part of the household's financial resources are not fully shared (Ponthieux 2013). This finding but also the broader context of individual independence as a core socio-political objective, calls for analysing the individual poverty situation rather using outdated assumptions.

Early empirical studies on individual poverty used generic assumptions to split incomes of married couples by multiplying disposable household incomes with different factors based on the gender of the individual (Borooah and M 1993, Findlay and Wright 1996). Other papers calculate indifference scales, where the utility of a person living alone is compared to the utility of the same person if they would be living as a couple using subjective indicators such as satisfaction with the financial situation as a proxy (Browning et al. 2013, Fialová and Mysíková 2021). While the former approach makes very crude assumptions on intra-household sharing patterns without taking the heterogeneity of individual market incomes and living situations into account, the latter focuses on individual income sources only while disregarding family-level sources of income.

Instead, it is more favourable to follow an approach that takes both the heterogeneity of family types and the heterogeneity of individual income sources into account. Building on previous work (see for example: Jenkins 1991, Sutherland 1997, Meulders and O'Dorchai

2010, Figari et al. 2011), Avram and Popova (2022) focus on all women and men rather than couple households only by individualising disposable income based on income sources. This methodological approach assumes minimum income pooling where individuals retain all their individual-level earnings and benefits and family-level resources are split based on pre-defined assumptions. The approach furthermore allows to test different assumptions of family-level income sharing patterns, building on the discussed evidence on decision making processes and money management patterns within the household. As such, it helps to gain a better understanding of the financial independence of women and allows for a more fine-grained analysis of heterogeneous effects beyond the male breadwinner family type.

An approach to address the lack of recent data on intra-household sharing of resources is to draw from empirical evidence on decision making processes within the household and factors that define the bargaining power of resource sharing. Earlier studies have found that the decision making process of households is shaped by the spouses' individual resources and more specifically by the women's income contribution (Blood and Wolfe 1960, Pahl 1983, Sorensen and McLanahan 1987). This still holds true in more recent work showing that a woman's consumption and living standard in the household is strongly correlated with her share of earnings (Bennett 2013, Bonke 2015) or, more broadly, her share of income (Cantillon 2013, Himmelweit et al. 2013). Additional factors influencing the intra-household bargaining power of individuals are work trajectories, the type of job and career potential (Kulic 2014), and as such characteristics linked to her quality of job. In a similar vein, evidence focusing on individual material deprivation as an alternative outcome measure shows that individuals who contribute a higher share to the total household income are significantly less likely to be materially deprived (Karagiannaki and Burchardt 2020). Satisfaction with the household's income situation is furthermore driven by the source of income with full-time employment income being valued the most and unpaid contributions valued less (De Henau and Himmelweit 2013). Being in employment and the quality of the job matters for higher independence of women as it increases their bargaining power in the household.

Closely related is the role of money management and financial arrangements. Empirical evidence suggests that married couples use various arrangements of which only a few are egalitarian (Pahl 1983, Vogler and Pahl 1994). More recent studies on both married and non-married couples suggest a shift towards individualised financial arrangements (Pahl 2008, Kan and Laurie 2014) partly driven by the decline of male breadwinner families and the increase in cohabitation (Lauer and Yodanis 2011, Yodanis and Lauer 2007). These findings suggest that individualised forms of money management are going to play an even more significant role in the future. This in turn might have implications for the intra-household sharing of family-level benefits as the person providing the bank details is also the person who ends up with the benefit on their individual account (see for example the Universal Credit in the UK).

Apart from this evidence, assuming limited sharing of resources can also help to assess the potential negative economic consequences of union dissolution or more broadly the level of financial independence that allows one to leave the household if necessary. Thus, even if unitary sharing of resources would be true, it only provides protection against poverty if partners stay together but not in case of divorce or separation (Mortelmans 2020), which often leads to negative economic consequences for women (de Vaus et al. 2017, Popova and Navicke 2019) and mights also increase the risk of staying in harmful relationships.

We built on the methodology developed by Avram and Popova (2022) but focus on poverty

instead of income and add to the literature by assessing the role of labour market participation and job characteristics to better understand how these characteristics shape women's individual poverty risks in an environment that is focused on pressing women into the mould of 'typical' male workers.

3 Methodology

The paper focuses on the individual poverty situation of women using the methodology developed in Avram and Popova (2022). Rather than analysing gender differences in income like in the previous work, this paper uses differences in individual poverty as the main outcome indicator.

3.1 Data and sample information

The analysis is based on the 2019 European Union Statistics on Income and Living Conditions (EU-SILC), the most recent year for which data was available at the time of writing. The survey is available for all EU countries (and selected additional countries) and includes detailed and representative information on the income situation of households and the characteristics of their household members.

The analysis uses a pooled sample of all European Union countries to show the situation of women across the EU. All presented results are restricted to individuals aged 25 to 55 to capture the main working-age population.

3.2 Measuring individual poverty risk

Individual poverty risk is calculated based on individual disposable income which is the result of market incomes net of direct taxes and social insurance contributions plus individual and family-level transfers as well as the applied individual-sharing assumption for family-level incomes within the household. All of these dimensions are furthermore the results of personal and household characteristics.

The attribution of different income sources to the members of the household is carried out in several steps. First, all individual market incomes are retained by the individual receiving them based on the minimum sharing assumption. Second, market income sources that are not assessed at the individual level are attributed to different household members. Investment and property income is either split equally among the oldest couple of the household or attributed to the oldest person in the household. This decision has been made based on the life-cycle hypothesis (Modigliani 1966) which stipulates that wealth requires long periods to accumulate and increases over the lifetime up to retirement. Non-individual income from other sources such as private transfers are split equally among all household members. Even though this is a strong assumption given that Sierminska (2017) finds a strong gender gap in wealth, the importance of such incomes is comparably small for most households. Finally, tax-benefit elements such as direct taxes, social insurance contributions as well as individual and family-level benefits need to be assigned to different household members.

This final step is often the reason why previous research has focused on generic overall sharing assumptions. Survey data often only provides direct taxes and social contributions

at the household level and information on benefit receipt is usually aggregated into larger benefit groups sometimes mixing individual and family-level transfers. The use of the tax-benefit model EUROMOD allows to deal with these difficulties. EUROMOD is an open-access model available for all EU countries and uses reported information on market incomes and the compositional characteristics of household members to simulate disposable household incomes by taking interrelated mechanisms of different tax-benefit elements into account (Sutherland and Figari 2013). Using the model has several advantages. First, it allows to simulate direct taxes and social insurance contributions at the taxpayer unit level. While this is the individual level in most countries, taxes are allocated to individuals in proportion to their taxable income in countries with joint taxation. Second, the model allows to differentiate between the household and the benefit unit, with the benefit unit often being smaller than the household. Family-level benefits are split among adults in the benefit entitlement unit, based on the applied sharing assumption (see next subsection) while individual-level benefits are assigned to the individual receiving them. Even though, not all benefits can be simulated in the model, a great effort has been made to disaggregate benefits in the underlying input datasets of each country model. In most cases, this allows to also attribute non-simulated benefits to members of the respective family unit. In a small number of cases this is not possible and benefits are split between all adults in the household. Finally, the detailed assignment of tax-benefit elements allows to not only calculate individual disposable income but also other individualised income concepts such as for example individual market incomes net of taxes and social insurance contributions which can be used to assess the welfare impact on individual poverty risks.

To account for economies of scale in consumption and be able to compare individuals living in households with different sizes and/or compositions, we adapt the 'modified OECD' scale for use with individual incomes. The 'modified OECD' scale assigns a weight of 1 to the first adult, 0.5 to subsequent adults, and 0.3 to children. We modify this scale in two steps. First, we add the weights of adults living in the same household and divide them by the number of adults present. Second, we take into account the cost of having children by attributing the weight of children to their parents. When both parents are present, we assume that the costs of their children are split equally. Children are defined as individuals below 18 years, unless they live in single-person households. Note that we do not use equivalisation as a means of addressing intra-household allocation of resources. We do not have separate data on consumption in our datasets. As such, we are not able to model intra-household differences in consumption. In this context, equivalisation is used solely to account for economies of scale and to enable comparisons between individuals living in households of different size.

3.3 Individual-sharing scenarios

Family-level benefits are assigned to adults within the benefit entitlement unit using three different individual-sharing assumptions in order to test the sensitivity of the assumption but also to show how the framing of the benefit affects results. In the primary earner scenario (PE), family-level benefits are assigned to the person with the highest earnings within the benefit unit (or the highest market/replacement income if earnings alone cannot determine a unique primary earner). The assumption is that this person has the highest bargaining power in the household and can decide how to use the resources which in turn limits the independence of other members. In the secondary earner scenario (SE), family-level benefits are assigned to the partner of the primary earner instead. The secondary earner is defined as the partner of the primary earner; or as the person with the second

highest earnings or market/replacement income if the primary earner has no partner. The assumption of this scenario is more from a social-political perspective where the family-level benefit is treated as a type of replacement income for the person with lower earnings in the unit. The third scenario is based on equal sharing (EQ). All family-level benefits are split equally between all adults in the benefit unit as from a normative point of view, common benefits are meant to benefit all members. In addition, we also show results using the standard unitary model of household sharing (U) for a comparison between the standard way of measuring poverty and the individualised risk results.

3.4 Outcome measures

Poverty is defined as (individual) disposable income below the national poverty line which is set at 60 percent of the median equivalised disposable income of the country. The same poverty line is used across all scenarios as the basic benchmark.

For most of the analysis, the poverty risk of women is compared to the poverty risk of male reference workers. The comparison between the two risk levels shows the extent the situation of women differs from the situation of "ideal" working-age individuals as defined in the adult worker model. Results are presented as the percentage point difference between women and male reference workers and referred to as the *reference worker poverty gap* (RWPG). Reference workers workers are characterised as men who are n employment or self-employment for the whole year, working at least 35 hours a week and having worked at least two-third of their adult life. The work experience is standardised in relation to age by dividing the overall number of years in employment to the number of years aged 20 or older.

In addition, selected results focus on the *gender poverty gap* which is calculated the same way as the RWPG but compares the same groups with each other, i.e. all women vs. all men or female references workers vs. male reference workers.

The analysis furthermore focuses on women with different labour market characteristics (economic status and job characteristics). First, the probability of being poor is calculated using logistic regressions and controlling for age, gender, education (low educated, middle educated, highly educated[1]), citizenship, partnership (married and non-married), household types (one adult, two adults, lone parent, 2 adults with one child, 2 adults with 2 children, 2 adults with 3 or more children, other households) and whether there is a young child aged 0-5 in the household. All models furthermore include country-fixed effects. Results by economic status analyse differences in poverty risks of women in employment, self-employment, unemployment or inactivity (in education, retired or other reasons for inactivity). Results on job characteristics additionally include the effect of working hours (marginal part-time of less than 20 hours per week, substantial part-time of 20-34 hours, full-time of 35 hours or more following the ILO statistical definition), the skill-level of the job (low-skilled, medium-skilled, high-skilled jobs[2]) and work experience (using the standardised measure in relation to age as described above and differentiating between low with less than one third in employment, medium with less than two third

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[1]Based on ISCED standard classification of education: low educated refers to less than primary, primary and lower secondary education, middle educated refers to upper secondary education, highly educated refers to post secondary and tertiary education.

[2]Based on the ISCO skill level classification: low-skilled refers to elementary occupations; medium-skilled refers to clerks, service and sale workers, skilled agriculture, craft and trades worker, plant and machine operators; high-skilled refers to senior officials and managers, professionals, technicians and associate professionals

in employment, high with at least two third in employment). Each job characteristic is interacted with employment in separate logistic regressions. Second, the probability of being poor is compared to the overall poverty risk of male reference workers to calculate the RWPG of the specific subgroup.

The final section of the empirical analysis focuses on the *welfare impact* on the RWPG of women. The welfare impact is measured by comparing the RWPG based on disposable incomes (the standard measure used for most of the analysis) with RWPGs based on gross market incomes, as well as disposable income excluding cash transfers and disposable income excluding taxes and SIC. The difference between these gaps shows the contribution of the tax-benefit system overall and the role of benefits and contributions separately and allows to assess the extent the tax-benefit system cushion gendered labour market differences. Again, heterogeneous effects by labour market characteristics are based on the RWPG of the specific subgroup calculated using logistic regressions.

4 Results

4.1 Descriptive overview

Table 1 provides an overview of the characteristics of women in comparison to men as well as female reference workers and male reference workers. While almost over 64 percent men can be characterised as reference workers, only 37 percent of women fulfil the stereotype. Instead, women are more likely to be inactive (18 vs. 7 percent), to work part-time (28 vs. 11 percent) and to have disrupted careers (29 vs. 11 percent have worked less than two-third of their adult life). Partnership and household composition play a more prominent role for women than for men. While women with partners are less likely to be reference workers, the opposite is true for men. One factor are children and related care responsibilities. While women with young children in the household are substantially less likely to be reference workers this is not the case for men (14 vs. 22 percent). In addition, the educational gradient of full-time labour market participation is more significant for women than for men with female reference workers being more likely to be highly-skilled than the overall sample of women which is not the case for men.

Table 1: Descriptive sample overview

	Women		Men	
	Total	Reference worker	Total	Reference worker
Personal characteristics				
Average age	41	42	41	42
Low educated	18.2	9.7	21.5	16.1
Middle educated	37.5	40.2	42.7	47.3
Highly educated	44.2	50.1	35.8	36.6
With partner	56.3	53.5	50.7	59.1
Labour market characteristics				
Stereotypical worker	36.0	100.0	62.1	100.0
Employed	66.8	89.8	73.1	85.0
Self-employed	7.7	10.2	13.4	15.0
Unemployed	7.3	0.0	6.7	0.0
Inactive	18.2	0.0	6.8	0.0
Civil servant	10.2	12.9	8.7	9.6
Marginal part-time work (<20 hours)	3.9	0.0	0.9	0.0
Substantial part-time work (20-34 hours)	18.6	0.0	5.3	0.0
Full-time work (35+ hours)	59.8	100.0	85.5	100.0
No work experience	6.1	0.0	2.3	0.0
Low work experience (less than a third)	10.8	0.0	7.5	0.0
Medium work experience (less than two-thirds)	18.6	0.0	13.1	0.0

Almost always working (at least two-thirds)	64.5	100.0	77.1	100.0
Low-skilled job	6.3	6.4	6.5	6.5
Medium-skilled job	32.9	44.2	44.8	53.1
High-skilled job	35.3	49.4	35.2	40.4
Secondary earner	49.9	39.9	15.0	13.2
Household characteristics				
1 adult	11.2	14.6	16.2	14.1
2 adults	19.3	22.9	19.7	18.7
Lone parent	6.9	7.1	1.4	1.7
2 adults, 1 child	16.9	16.5	15.6	17.9
2 adults, 2 children	18.6	16.7	18.1	22.0
2 adults, 3+ children	5.9	3.5	5.7	6.4
Other households	21.2	18.6	23.3	19.2
Young child (0-5) in household	21.1	13.6	20.0	21.6
Number of earners	1.8	1.9	1.8	1.9
Sample size	109,669	43,835	103,753	64,376

Source: Own calculations based on EUROMOD I4.62.
Note: Weighted results. Sample restricted to men and women aged 25 to 55.

This sample overview provides a good starting point for the analysis of individual poverty risks and the role of the welfare state as it highlights the large share of women who do not associate with the stereotype promoted by active labour market policies and who might not be able to sustain a living standard above the poverty threshold if their living situations are disregarded in the design of social policy in general and anti-poverty measures specifically. It furthermore suggests that sharing assumptions of household resources are crucial in assessing the individual poverty risk especially in situations where women are not working due to caring responsibilities.

4.2 Gender differences in poverty risks

Figure 1 shows poverty rates by gender (total and references workers only) and sharing assumption. Overall, the poverty risk of women and men is not significantly different from each other when the standard unitary model of household sharing is assumed. However, the difference in poverty increases when moving to individual poverty rates. While individual poverty rates only increase slightly for men, they increase between 15 and 18 percentage points for women. These increases differ slightly between individual-sharing scenarios, with the secondary earner scenario showing lower rates than the other two scenarios. The level of men's individual poverty risk is not affected by the sharing assumption.

For both men and women alike, poverty rates are smaller for reference workers but gender differences prevail. While the individual poverty rate of male reference workers is lower than their unitary rate, the individual poverty rate of female reference workers is higher than their unitary rate. The choice of individual-sharing scenario has very little influence on the poverty rates of references workers. Instead, higher individual poverty levels of female references workers compared to male reference workers are more likely to be driven by differences in labour market outcomes.

The difference in individual poverty rates between men in total and male reference workers is below 10 percentage points across individual-sharing scenarios, while it is more than 20 percentage points for women compared to female reference workers. Although still quite pronounced for men too, the higher difference for women is largely due to the smaller share of women fitting the stereotype.

The poverty levels of male reference workers in each scenario are used as the benchmark for the RWPG of women in the following sections of the analysis. This benchmark refers to a poverty level of 7.8% in the unitary model, 5.7% in the primary earner scenario, 5.8% in the equal sharing scenario and 6.0 in the secondary earner scenario.

Figure 1: Poverty rates by gender (overall and reference workers only) and sharing assumption
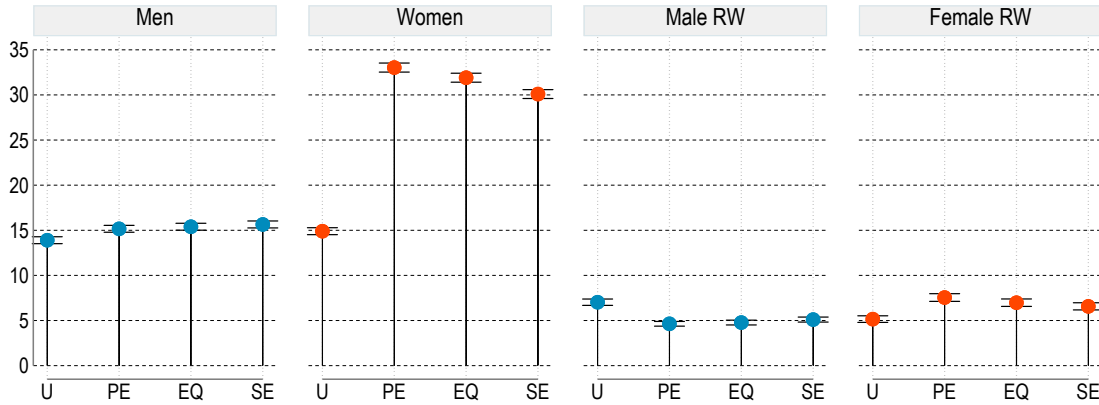
Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Based on disposable incomes. U refers to unitary model, PE to primary earner, EQ to equal sharing and SE to secondary earner. Sample restricted to men and women aged 25 to 55.

The greater gender disparities in individual risks lead to a significant overall gender poverty gap (women compared to men) and a very pronounced RWPG of women (women compared to male reference workers). Figure 2 visualises the difference in poverty risks by sharing assumption and shows that the gap is between 14 and 19 percentage points for the overall sample and above 24 percentage points when comparing the risk of women to the risk of reference male workers. In contrast, the gender gap in poverty is 1 percentage point when focusing on the unitary model and the RWPG of women 7 percentage points.

In addition, comparing the RWPG of women to the RWPG of men (men compared to reference male workers) shows that the women's RWPG is significantly higher than the gap for men. Again, this is partly driven by the higher share of men who can be described as reference workers. However, this is only one explanation. Focusing on the gender gap between female and male reference workers shows that the difference is still significant, ranging between 2 and 4 percentage points. This indicates that the difference is also driven by differences in job characteristics between female and male reference workers.

The individual-sharing scenario plays a significant role for both the RWPG of women and the overall gender poverty gap. The secondary earner scenario leads to the smallest gap in both indicators. However, even in this 'best'-case scenario, the gap is only 3 and 2 percentage points lower than in the worst-case primary earner scenario. Thus, differences between the unitary model and the individual-sharing assumption are more pronounced than differences between the three individual-sharing scenarios.

Figure 2: Gaps in poverty risk by sharing assumption and different groups in percentage points

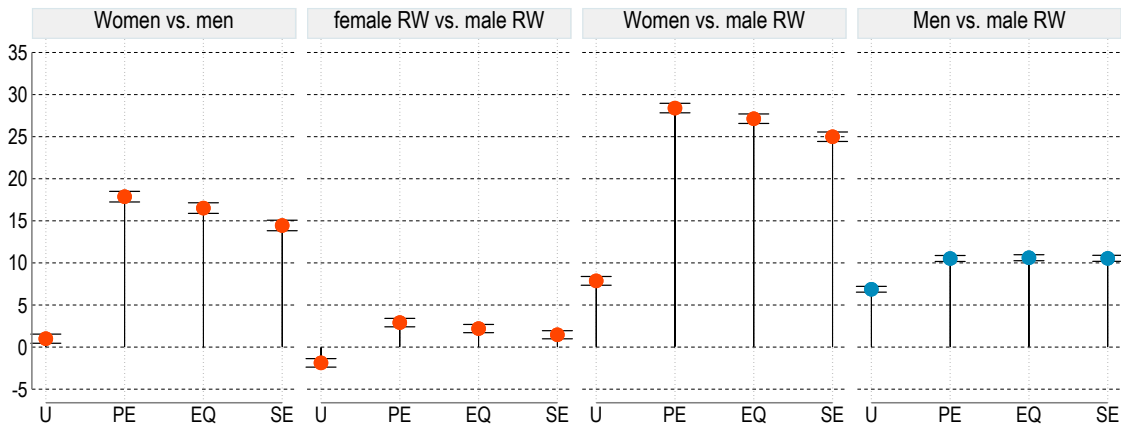Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Based on disposable incomes. U refers to unitary model, PE to primary earner, EQ to equal sharing and SE to secondary earner. Sample restricted to men and women aged 25 to 55.

Overall, the smaller share of women fitting the box leads to a much higher poverty risk of women resulting in a very high RWPG. However, this does not explain all of the gap. Instead, differences in labour market characteristics of those in employment are likely to contribute as well.

4.3 The role of gendered labour market differences

This section focuses on the heterogeneity of women's RWPG by labour market characteristics, using the the overall poverty risk of male reference workers as the benchmark. Figure 3 shows differences in the RWPG of women by economic status while Figure 4 zooms in on women in employment, providing RWPG results by different job characteristics. All results are based on logistic regressions that control for differences in personal and household characteristics and include country-fixed effects (average marginal effects are available in Table A2 - Table A5 in the Appendix). Both graphs compare the unitary model results with the equal sharing scenario only while results for the other two individual-sharing scenarios are available in the Appendix (see Figure A1 and Figure A2). The equal sharing scenario is the middle-bound scenario between the secondary and the primary earner scenario and in most cases leads to non-significantly different results than the primary earner scenario.

Starting with differences by economic status, the unitary model suggests a very small RWPG of employed women. However, the equal sharing scenario shows that this is clearly not the case. Even though, the gap is smallest for women in employment and significantly below the overall RWPG, it is still above 10 percentage points. Thus, being in employment in general does not necessarily lead to a poverty risk similar to those of male reference workers.

Worrying is also the high RWPG of self-employed women who show significant higher than average risk levels and poverty rates that are 40 percentage points higher than the risk of male reference workers. Thus even though they participate on the labour market, being

self-employed does not necessarily lead to a standard of living equal to the situation of male reference workers.

The unitary model furthermore hides the very high RWPG of inactive women who show a higher gap than unemployed women in the individual-sharing scenario compared to a significantly lower gap in the unitary model. Both groups of non-employed women - unemployed and inactive - face an individual poverty risk that is at least 50 percentage points higher than the risk of male reference workers, highlighting the very precarious individual situation of almost one fifth of women.

Figure 3: The reference worker poverty gap of women by economic status and sharing assumption
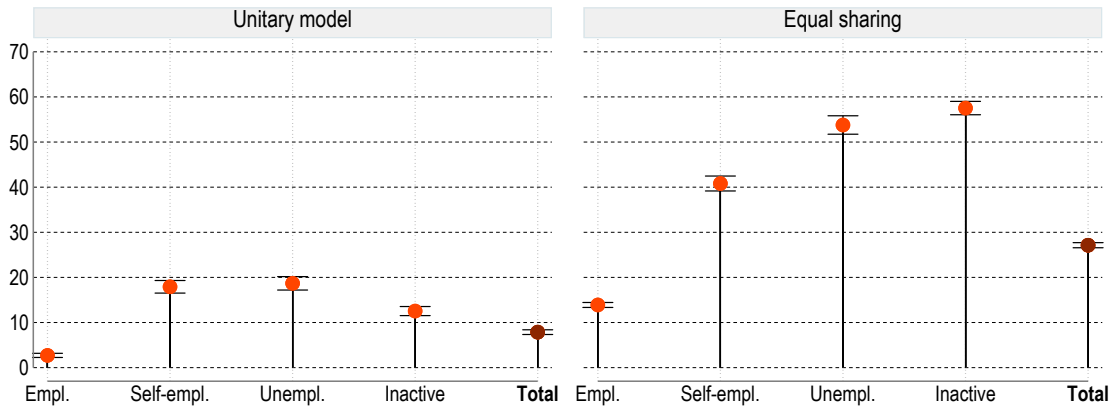
Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Sample restricted to women aged 25 to 55. Women's probability of being at risk of poverty compared to the risk of male reference workers, controlling for personal and household characteristics, incl. country-fixed effects.

Overall the results of heterogeneous effects by economic status show that the higher share of inactive women - almost every fifth woman is inactive - significantly contributes to the RWPG. On the other hand, actively participating on the labour market is important for a poverty risk that is closer to the situation of male reference workers. Still, self-employed women are in a significantly worse position than employed women. Nevertheless, this group of women only explains a small part of the overall RWPG as only 8 percent of women are self-employed (compared to 13 percent of men). Instead, differences in job characteristics of women in employment might shed further light on the difference in poverty risk between women and the benchmark of male reference workers.

Although the share of women in employment is only 6 percentage points lower than the share of men (67 percent of women vs. 73 percent of men), only 36 percent of women can be characterised as reference workers, compared to 62 percent of men. Thus, gender differences in factors that constitute a 'typical' worker such as full-time work and undisrupted working careers together with gender differences in the skill-level of the job provide further insights.

The role of job characteristics is less pronounced in the unitary model but play an important role when moving to the individual-sharing scenario. Gender differences are for example completely hidden for employed women in full-time employment, with highly-skilled jobs or with significant work experience. The unitary model furthermore hides

the precarious situation of women with other job characteristics as most of the unitary model-based RWPG are below or not significantly different from the overall RWPG.

Moving to the equal sharing scenario, the differences in RWPGs of employed women are most pronounced between different working hour arrangements. Women in marginal part-time employment (less than 20 hours a week) have a close to 60 percentage point higher risk to be in poverty than male reference workers. Thus, even though they are employed, they are far from being financially in a good position and their RWPG is similar to the situation of inactive women and higher than the gap of unemployed women. The gap is significantly reduced for women in substantial part-time (working 20-34 hours per week) and significantly lower than the average risk of women. With a RWPG of slightly below 10 percentage points, women in full-time employment are in a much stronger position than women overall and women with less working hours. However, even their RWPG is still slightly larger than the overall gender gap between female reference workers and male reference workers which is below 5 percentage points (shown in Figure 2).

The second characteristic that defines a reference worker is work experience. Women who have worked less than a third of their working-age life show a RWPG that is comparable to the overall average of women, while women with more work experience have significant lower gaps. However, the work experience of women seems to be counting less than the work experience of men given that women with almost no interruptions in their career are still faced with a close to 20 percentage points higher poverty risk than male reference workers.

Finally, differences due to the skill-level of the job show similarities to the RWPG based on differences in work experience for the low and middle category but significantly lower gaps for women with high-skilled jobs. Nevertheless, also women with high-skilled jobs have a higher RWPG compared to women in full-time employment.

Figure 4: The reference worker poverty gap of employed women by job characteristics and sharing assumption
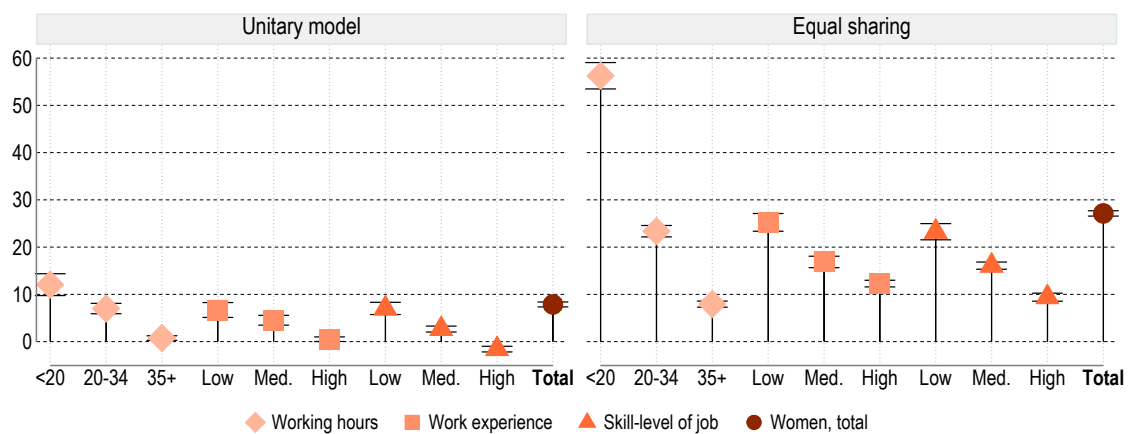
Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Sample restricted to women aged 25 to 55. Employed women's probability of being at risk of poverty compared to the risk of male reference workers, controlling for personal and household characteristics, incl. country-fixed effects. Results based on the interaction of the shown job characteristic with employed women.

Overall, the results by job characteristics highlight the importance of fitting the stereotype

of the 'typical' male worker as closely as possible. Work experience in itself still leads to a high RWPG and needs to be coupled with full-time employment. However, four percent of women are working marginal hours and around one out of five women substantial part-time hours only and thus, face a RWPG that is almost three times and two times higher than women in full-time employment. However, the solution is not to advise part-time employed women to adjust to the life-course of a 'typical' worker when the reason for the lower working hours is that she is responsible for childcare and other family obligations. Additionally, it is not just the work arrangement but also the type of job that significantly influences the large gap between women and male reference workers. About one third of women work in a medium-skilled job and their RWPG is significantly higher than the gap of women in high-skilled jobs.

4.4 The role of the tax-benefit system

The final empirical section analyses the impact of the tax-benefit system for different female population subgroups and how the welfare state supports them differently. Figure 5 compares the RWPG based on individual disposable incomes to RWPGs using alternative income concepts and expresses the difference in percentage points. The bar shows the overall welfare impact, i.e. the difference in the gross market income-based RWPG to the disposable income-based RWPG. The dots show the role of benefits and the role of contributions separately. All results are based on the equal sharing scenario while results for the unitary model and the other two individual-sharing scenarios are available in the Appendix (see Table A6).

Focusing on the overall welfare impact first shows that the welfare state reduces the RWPG between women and male reference workers by 4 percentage points. Although this is a significant reduction in the gap, it is also a rather small contribution of the tax-benefit system.

The impact of the tax-benefit system varies greatly between women with different economic status. The role of the tax-benefit system is more pronounced for unemployed and inactive women where the gap focusing on disposable income is 11 and 16 percentage points lower than the gap focusing on gross market incomes. Thus, existing social protection systems in the EU do provide greater support for women outside the social real of a 'typical' worker. However, as the magnitude of the RWPG has shown, the reduction is not large enough. The reduction for employed women is comparably low with 3 percentage points and the tax-benefit system even leads to a higher gap for self-employed women.

Figure 5: The impact of contributions and benefits on the reference worker gap by economic status and job characteristics of employed women, difference to disposable income reference worker gap in percentage points
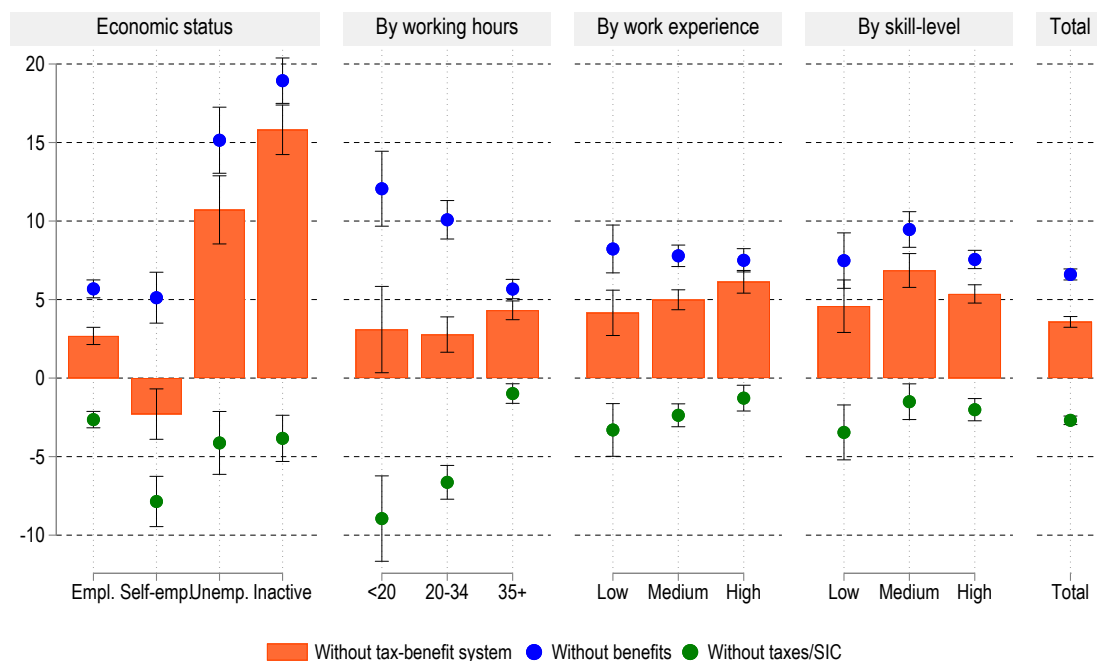
Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Sample restricted to women aged 25 to 55. Difference between disposable income-based reference worker gap compared to gross market income-based gap (without tax-benefit system), disposable income excluding benefits (without benefits) and disposable income excluding contributions (without taxes/SIC) expressed in percentage points. See Table A6 for an overview of the reference worker gap for all income concepts in the Appendix.

5 Conclusion

The main aim of this paper is to empirically assess these caveats by comparing the individual poverty situation of working-age women to the benchmark situation of male reference workers. While poverty is usually measured at the household level, the social-political focus on individual independence through employment requires to move to an individual definition of poverty. Previous research attempting to move away from treating households and its members as a single unit (i.e. unitary model of household pooling) usually finds that individual poverty increases for women and decreases for men. However, very little is known about the heterogeneity of this effect and the role of social policy in moderating the impact of gendered labour market differences on the individual poverty situation.

Our research contributes to a better understanding on how the higher individual poverty risks of women are shaped by differences in employment participation and how much by the job characteristics of employed women. The paper furthermore assesses the role of the tax-benefit system in mitigating negative consequences for women who fall outside the social realm of a 'typical' worker. Methodologically, the analysis uses the tax-benefit microsimulation model EUROMOD for all EU-27 countries together with various intra-household income splitting assumptions. The former allows for a more fine grained allocation of

family-level resources to different members of the household - an important prerequisite for measuring individual poverty risks - while the later provides an assessment of the sensitivity of the individual poverty risk to the chosen assumptions. The comparison of results based on different sharing assumptions furthermore helps to improve understanding on how the framing of welfare support can foster improvements in the individual poverty situation of women.

- Emphasize of social policy on financial independence through employment requires to focus on household dimension combined with gender
  - Gender awareness instead of gender blindness
  - Unitary model of household sharing hides significant differences and vulnerabilities
    * female reference workers still have higher risk than male reference workers
    * Being active on the labour market in itself is not a guarantee for financially independent life
    * The sharing assumption only plays a small role. There are some significant differences between the secondary earner scenario and the primary earner scenario as well as the secondary earner scenario and the equal sharing scenario while both the primary earner and the equal sharing scenario do not show any significant differences. However, differences between the unitary model of sharing and the individual poverty rates are substantial.
- Heterogeneity needs to be part of the story (significant differences in gaps and role of the tax-benefit system)
  - Vulnerable situation of inactive women
  - Working hours matter the most, work experience and high-skilled job reduce gap but need to be coupled with full-time employment
  - But gap not eradicated even for full-time employed women, women with high work experience and women in highly-skilled jobs
  - Benefits reduce the gap of unemployed and inactive but are not generous enough
  - Very little mitigation for non-typical female workers in part-time employment
  - Role of taxes require more research
- Policy design and framing is important!
  - Secondary earner scenario vs. primary earner and equal sharing scenario
  - Whether a benefit is considered to subsidize a woman for her care work can make a significant difference
  - Role of targeting individuals vs targeting households

References

C. Annesley. Lisbon and social Europe: Towards a European 'adult worker model' welfare system. *Journal of European Social Policy*, 17(3):195–205, 2007.

A. B. Atkinson. Poverty and the EU: the New Decade. *Macerata Lectures on European Economic Policy*, 24, 2010.

S. Avram and D. Popova. Do taxes and transfers reduce gender income inequality? Evidence from eight European welfare states. *Social Science Research*, 102, 2022.

G. S. Becker. A Theory of Social Interactions. *Journal of Political Economy*, 82(6):1063–1093, 1974.

F. Bennett. Researching Within-Household Distribution: Overview, Developments, Debates, and Methodological Challenges. *Journal of Marriage and Family*, 75(3):582–597, 2013.

R. Blood and D. Wolfe. *Husbands and Wives: The Dynamics of Married Living.* Free Press of Glencoe, Glencoe, Ill., 1960.

J. Bonke. Pooling of income and sharing of consumption within households. *Review of Economics of the Household*, 13(1):73–93, 2015.

J. Bonke and M. Browning. The Distribution of Financial Well-being and Income Within the Household. *Review of Economics of the Household*, 7(1):31–42, 2009.

V. K. Borooah and M. P. M. Intra-household Income Transfers and Implications for Poverty and Inequality in the UK. In J. Creedy, editor, *Taxation, Poverty and the Distribution of Income.* Edward Elgar Publishing Lmtd., London, 1993.

M. Browning, P. A. Chiappori, and A. Lewbel. Estimating consumption economies of scale, adult equivalence scales, and household bargaining power. *Review of Economic Studies*, 80(4):1267–1303, 2013.

B. Cantillon. The paradox of the social investment state: growth, employment and poverty in the Lisbon era. *Journal of European Social Policy*, 21(5):432–449, 2011.

B. Cantillon, T. Goedemé, and J. Hills. *Decent incomes for all. Improving policies in Europe.* Oxford University Press, Oxford, 2019.

S. Cantillon. Measuring Differences in Living Standards Within Households. *Journal of Marriage and Family*, 75(3):598–610, 2013.

P. Chiappori. Collective labor supply and welfare. *Journal of Political Economy*, 100(3), 1992.

M. Daly. Europe's poor women? Gender in research on poverty. *European Sociological Review*, 8(1):1–12, 1992.

M. Daly. What adult worker model? A critical look at recent social policy reform in europe from a gender and family perspective. *Social Politics*, 18(1):1–23, 2011.

J. De Henau and S. Himmelweit. Comparing welfare regimes by their effects on intra-household inequalities. In M. Ferri and I. Monsonis-Paya, editors, *Sustainability and transformation in European Social Policy*, pages 117–146. Peter Lang, 2013.

D. de Vaus, M. Gray, L. Qu, and D. Stanton. The economic consequences of divorce in six OECD countries. *Australian Journal of Social Issues,*, 52:180–199, 2017.

G. Esping-Andersen, D. Gallie, A. Hemerijck, and J. Myles. *Why We Need a New Welfare State.* Oxford University Press, Oxford, 2002.

K. Fialová and M. Mysíková. Intra-household distribution of resources and income poverty and inequality in Visegrád countries. *International Journal of Social Economics*, 48(6):914–930, 2021.

F. Figari, H. Immervoll, H. Levy, and H. Sutherland. Inequalities within couples in Europe: Market incomes and the role of taxes and benefits. *Eastern Economic Journal*, 37(3):344–366, 2011.

J. Findlay and R. E. Wright. Gender, Poverty and the Intra-Household Distribution of Resources. *Review of Income and Wealth*, 42(3):335–351, 1996.

G. Fischer and R. Strauss, editors. *Europe's Income, Wealth, Consumption, and Inequality*. Oxford University Press, Oxford, 2020.

B. Halleröd, H. Ekbrand, and M. Bengtsson. In-work poverty and labour market trajectories: Poverty risks among the working population in 22 European countries. *Journal of European Social Policy*, 25(5):473–488, 2015.

S. Himmelweit, C. Santos, A. Sevilla, and C. Sofer. Sharing of Resources Within the Family and the Economics of Household Decision Making. *Journal of Marriage and Family*, 75(3):625–639, 2013.

H. X. Jara, K. Gasior, and M. Makovec. Work Incentives at the Extensive and Intensive Margin in Europe: The Role of Taxes, Benefits and Population Characteristics. *Social Indicators Research*, 152:705–778, 2020.

S. P. Jenkins. Poverty Measurement and the Within-Household Distribution: Agenda for Action. *Journal of Social Policy*, 20(4):457–483, 1991. ISSN 0047-2794. doi: 10.1017/s0047279400019760.

M. Y. Kan and H. Laurie. Changing patterns in the allocation of savings, investments and debts within couple relationships. *Sociological Review*, 62(2):335–358, 2014.

E. Karagiannaki and T. Burchardt. Intra-household inequality and adult material deprivation in Europe. *CASEpapers*, 218, 2020.

K. Kuitto. From social security to social investment? Compensating and social investment welfare policies in a life course perspective. *Journal of European Social Policy*, (January):1–26, 2016.

N. Kulic. European women: The link between money, career, and financial satisfaction. *European Sociological Review*, 30(3):287–301, 2014.

S. R. Lauer and C. Yodanis. Individualized marriage and the integration of resources. *Journal of Marriage and Family*, 73(3):669–683, 2011.

J. Lewis. The decline of the male breadwinner model: Implications for work and care. *Social Politics*, 8(2), 2001.

H. Lohmann and I. Marx. *Handbook on In-work Poverty*. Edward Elgar Publishing Lmtd., Cheltenham, 2019.

D. Meulders and S. O'Dorchai. Revisiting poverty measures towards individualisation. *DULBEA working paper*, (10-03.RS), 2010.

F. Modigliani. The life cycle hypothesis of savings, the demand for wealth, and the supply of capital. *Social Research*, 33:160–217, 1966.

D. Mortelmans. Economic Consequences of Divorce: A Review. In M. Kreyenfeld and H. Trappe, editors, *Parental Life Courses after Separation and Divorce in Europe*, pages 23–42. Springer Open, Cham, 2020.

A. Noël. Is social investment inimical to the poor? *Socio-Economic Review*, 18(3):857–880, 2020.

B. Nolan. *Generating Propserity for Working Families in Affluent Countries*. Oxford University Press, Oxford, 2018.

J. Pahl. The allocation of money and the structuring of inequality within marriage. *The Sociological Review*, 31(2):237 – 262, 1983.

J. Pahl. Family finances, individualisation, spending patterns and access to credit. *Journal of Socio-Economics*, 37(2):577–591, 2008.

S. Ponthieux. Income pooling and equal sharing within the household - What can we learn from the 2010 EU-SILC module? *Eurostat Methodologies and Working Papers*, 2013.

S. Ponthieux. Intra-household sharing of resources: A tentative "modified" equivalised income. In A. B. Atkinson, A.-C. Guio, and E. Marlier, editors, *Monitoring social inclusion in Europe*, pages 175–190. European Union, Luxembourg, 2017.

D. Popova and J. Navicke. The probability of poverty for mothers after childbirth and divorce in Europe: The role of social stratification and tax-benefit policies. *Social Science Research*, 78: 57–70, 2019.

C. Saraceno. A Critical Look to the Social Investment Approach from a Gender Perspective. *Social Politics*, 22(2):257–269, 2015.

E. Sierminska. *Wealth and gender in Europe*. 2017. doi: doi/10.2838/39491.

A. Sorensen and S. McLanahan. Married Women's Economic Dependency, 1940-1980. *American Journal of Sociology*, 93(3):659–687, 1987.

H. Sutherland. Women, men and the redistribution of income. *Fiscal Studies*, 18(1):1–22, 1997.

H. Sutherland and F. Figari. EUROMOD: the European Union tax-benefit microsimulation model. *International Journal of Microsimulation*, 1(6):4–26, 2013.

D. Vandelannoote and G. Verbist. The impact of in-work benefits on work incentives and poverty in four European countries. *Journal of European Social Policy*, 30(2):144–157, 2020. ISSN 14617269.

F. Vandenbroucke and K. Vleminckx. Disappointing poverty trends : is the social investment state to blame? *Journal of European Social Policy*, 21(5):450–471, 2011.

C. Vogler and J. Pahl. Money, Power and Inequality within Marriage. *The Sociological Review*, 42 (2):263–288, 1994.

C. Yodanis and S. Lauer. Managing money in marriage: Multilevel and cross-national effects of the breadwinner role. *Journal of Marriage and Family*, 69(5):1307–1325, 2007.

Appendix

Table A1: Background indicators, 2021

| | Women in employment | | Children in formal childcare | | | |
| | | | Aged 0-2 | | Aged 3-school age | |
	Total	Thereof part-time	Total	Thereof full-time	Total	Thereof full-time
AT	71.3	49.8	28	34.2	89.4	31
BE	66.7	38.9	51.7	65.5	97.8	85.6
BG	68.8	1.7	18.7	90.3	92	83.4
CY	69.9	12.3	28.8	72.9	83.2	53
CZ	72.1	9.4	4.9	16.3	62.6	57.5
DE	75.8	47.7	19.9	59.2	64.2	59.6
DK	75.5	30.4	69.1	88.2	91	90
EE	77.5	16.3	25.7	79.3	90.5	84.9
EL	52.7	12.4	32.3	51	83.4	50
ES	62.3	22	55.3	45.7	97.9	43.7
FI	75.8	21.3	42.1	80.7	92	76.7
FR	70.1	27.1	57.1	64.6	96.2	63.9
HR	62.9	5.9	33.3	96.9	63.7	81.4
HU	73.4	6.6	13.9	79.8	90.4	75.9
IE	69.9	27.5	16.6	50	84	11.1
IT	53.1	31.4	33.4	52.9	91.7	71.1
LT	76.6	7.4	21.4	89.2	84.6	90.7
LU	70.3	30.8	62	67.4	95.1	65.4
LV	72.9	9.9	31	94.5	86	96.6
MT	70.3	17.4	24	46.6	86	70.1
NL	77.5	62.9	74.2	10.6	96.7	31.8
PL	68.3	7.4	18.3	74.3	66.1	67.3
PT	73	8.8	50.4	98	85.5	97.4
RO	56.8	2.9	9.5	82.1	51.8	16
SE	77.9	28.1	55.8	70.2	98.4	72.7
SI	72.5	12.2	47.5	81.4	87.9	84.6
SK	70.3	4.5	4.8	100	86.8	88.3
EU27	67.6	28.3	36.2	58.2	83.4	61.8

Source: EUROSTAT database [last accessed 06/01/2023].

Note: Labour market indicators refer to women aged 20 to 64 and are based on the Labour Force Survey. Childcare indicators are based on EU-SILC. Childcare indicators for Slovakia refer to 2020. Part-time employment is self-defined and country specific. Formal childcare refers to care organised/controlled by a structure (public, private). Full-time childcare refers to 30+ hours per week.

Figure A1: The reference worker gap of women by economic status and sharing assumption
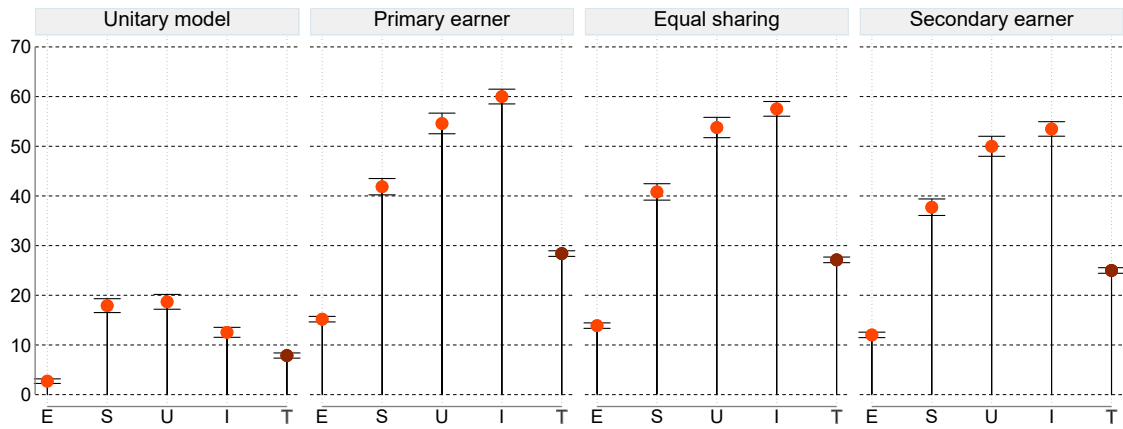
Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Sample restricted to women aged 25 to 55. Women's probability of being at risk of poverty compared to the risk of male reference workers, controlling for personal and household characteristics and economic status, incl. country-fixed effects. "E" refers to employed, "S" to self-employed, "U" to unemployed, "I" to inactive and "T" to total.

Figure A2: The reference worker gap of employed women by job characteristics and sharing assumption
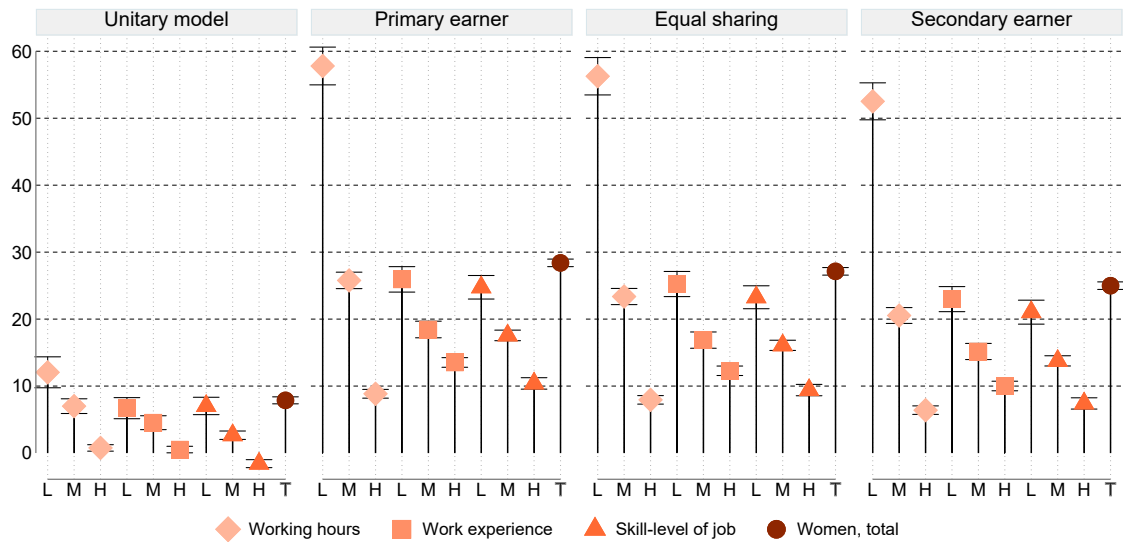
Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Sample restricted to women aged 25 to 55. Employed women's probability of being at risk of poverty compared to the risk of male reference workers, controlling for personal and household characteristics and economic status, incl. country-fixed effects. Results based on the interaction of the shown job characteristic with employed women. "L" refers to low, "M" to medium and "H" to high working hours, skill level or work experience and "T" to the average gap of women in total.

Table A2: Average marginal effects by income definition and sharing assumption - basic model without job characteristics

	Disposable income				Disposable income minus benefits				Disposable income plus taxes/SIC				Gross market incomes			
	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE
Men	-0.004	-0.148***	-0.135***	-0.114***	-0.004	-0.129***	-0.129***	-0.129***	0.001	-0.127***	-0.115***	-0.098***	0.002	-0.108***	-0.108***	-0.108***
Age	-0.001***	-0.003***	-0.003***	-0.003***	-0.001**	-0.002***	-0.002***	-0.002***	-0.001***	-0.003***	-0.003***	-0.003***	-0.000*	-0.002***	-0.002***	-0.002***
Education (Ref.=Low)																
Middle educated	-0.074***	-0.047***	-0.052***	-0.053***	-0.101***	-0.076***	-0.076***	-0.076***	-0.057***	-0.043***	-0.047***	-0.043***	-0.090***	-0.070***	-0.070***	-0.070***
Highly educated	-0.138***	-0.113***	-0.116***	-0.116***	-0.209***	-0.162***	-0.162***	-0.162***	-0.096***	-0.093***	-0.096***	-0.091***	-0.164***	-0.141***	-0.141***	-0.141***
Non-citizen	0.092***	0.082***	0.095***	0.093***	0.097***	0.092***	0.092***	0.092***	0.064***	0.075***	0.084***	0.078***	0.081***	0.088***	0.088***	0.088***
With partner	0.012***	0.017***	0.022***	0.018***	-0.047***	0.010**	0.010**	0.010**	0.010***	0.016***	0.020***	0.016***	-0.028***	0.005	0.005	0.005
Household type (Ref.=1 adult)																
2 adults	-0.040***	0.014**	0.020***	0.017***	0.069***	0.016***	0.016***	0.016***	-0.035***	0.029***	0.033***	0.030***	0.022***	0.033***	0.033***	0.032***
Lone parent	0.037***	0.022**	0.030***	0.040***	0.094***	0.098***	0.098***	0.098***	0.021***	0.016*	0.021**	0.031***	0.047***	0.056***	0.056***	0.056***
2 adults, 1 child	-0.005	0.054***	0.052***	0.046***	0.087***	0.051***	0.051***	0.051***	-0.016***	0.058***	0.058***	0.050***	0.032***	0.055***	0.055***	0.055***
2 adults, 2 children	0.019***	0.092***	0.084***	0.071***	0.148***	0.093***	0.093***	0.093***	0.003	0.089***	0.085***	0.073***	0.067***	0.091***	0.091***	0.091***
2 adults, 3+ children	0.082***	0.136***	0.129***	0.098***	0.263***	0.163***	0.163***	0.163***	0.044***	0.132***	0.122***	0.096***	0.169***	0.146***	0.146***	0.146***
Other households	0.009	0.119***	0.126***	0.119***	0.311***	0.144***	0.144***	0.144***	-0.006	0.130***	0.133***	0.127***	0.175***	0.161***	0.161***	0.161***
Child 0-5 in household	-0.015***	-0.001	-0.008*	-0.016***	0.018***	0.018***	0.018***	0.018***	-0.005	0.001	-0.005	-0.011*	0.015***	0.017***	0.017***	0.017***
Number of earners	-0.098***	-0.064***	-0.073***	-0.072***	-0.212***	-0.096***	-0.096***	-0.096***	-0.082***	-0.065***	-0.072***	-0.070***	-0.167***	-0.098***	-0.098***	-0.098***
Economic status (Ref.=Inactive)																
Employee	-0.103***	-0.396***	-0.378***	-0.362***	-0.192***	-0.633***	-0.633***	-0.633***	-0.083***	-0.370***	-0.352***	-0.339***	-0.163***	-0.611***	-0.611***	-0.611***
Self-employed	0.048***	-0.161***	-0.137***	-0.128***	-0.055***	-0.394***	-0.394***	-0.393***	0.030***	-0.189***	-0.169***	-0.159***	-0.044***	-0.424***	-0.424***	-0.424***
Unemployed	0.084***	0.009	0.034***	0.033***	0.052***	-0.114***	-0.114***	-0.114***	0.077***	0.012	0.035***	0.033***	0.055***	-0.122***	-0.122***	-0.122***
BE	-0.042***	-0.076***	-0.074***	-0.059***	-0.027***	-0.041***	-0.041***	-0.041***	-0.026***	-0.062***	-0.058***	-0.042***	-0.009	-0.035***	-0.035***	-0.035***
BG	0.075***	0.009	0.015	0.031***	0.012	-0.004	-0.004	-0.004	0.060***	-0.007	-0.001	0.011	0.037***	-0.026**	-0.026**	-0.026**
CY	0.005	-0.003	0.001	0.013	-0.024***	-0.002	-0.002	-0.002	0.001	-0.006	-0.001	0.012	0.022**	-0.000	-0.000	-0.000
CZ	-0.041***	-0.054***	-0.045***	-0.031***	-0.085***	-0.064***	-0.064***	-0.064***	-0.047***	-0.058***	-0.049***	-0.037***	-0.049***	-0.064***	-0.064***	-0.064***
DE	0.025***	0.056***	0.058***	0.063***	-0.011	0.038***	0.038***	0.038***	-0.004	0.022**	0.025***	0.030***	-0.016*	0.008	0.008	0.008
DK	-0.025**	-0.056***	-0.052***	-0.050***	0.043***	0.002	0.002	0.002	-0.065***	-0.122***	-0.122***	-0.104***	0.001	-0.028**	-0.028**	-0.028**
EE	0.035***	0.024***	0.014	0.013	0.013	0.024**	0.024**	0.024**	0.048***	0.038***	0.023**	0.027***	0.068***	0.036***	0.036***	0.036***
EL	-0.026***	-0.033***	-0.025***	-0.007	-0.074***	-0.055***	-0.055***	-0.055***	-0.038***	-0.034***	-0.027***	-0.013*	-0.048***	-0.055***	-0.055***	-0.055***
ES	0.047***	0.015*	0.024***	0.046***	0.017*	0.007	0.007	0.007	0.041***	0.013	0.021***	0.042***	0.057***	0.010	0.010	0.010
FI	-0.053***	-0.092***	-0.098***	-0.087***	-0.003	-0.032***	-0.032***	-0.032***	-0.060***	-0.093***	-0.098***	-0.091***	-0.003	-0.042***	-0.042***	-0.042***
FR	-0.020*	-0.044***	-0.041***	-0.030***	-0.003	-0.062***	-0.062***	-0.062***	-0.032***	-0.051***	-0.048***	-0.039***	0.002	-0.024**	-0.024**	-0.024**
HR	-0.001	-0.033***	-0.024**	-0.007	-0.067***	-0.064***	-0.064***	-0.064***	-0.000	-0.024***	-0.015*	-0.000	-0.024***	-0.049***	-0.048***	-0.051***
HU	0.136***	0.108***	0.124***	0.141***	0.075***	0.077***	0.077***	0.077***	0.073***	0.047***	0.055***	0.065***	0.051***	0.016	0.016	0.016
IE	-0.021*	-0.034***	-0.034***	-0.018*	-0.032***	-0.007	-0.007	-0.007	-0.007	-0.026***	-0.026***	-0.010	0.033***	0.007	0.007	0.007
IT	0.003	0.006	-0.001	0.019***	-0.047***	-0.031***	-0.031***	-0.031***	0.004	-0.016	-0.007	0.018***	-0.022***	-0.032***	-0.032***	-0.032***
LT	0.078***	0.014	0.014	0.030***	0.071***	0.034***	0.034***	0.034***	0.019*	-0.016	-0.007	0.006	0.031***	-0.003	-0.003	-0.003
LU	-0.034***	-0.042***	-0.051***	-0.034***	-0.061***	-0.061***	-0.061***	-0.061***	-0.055***	-0.051***	-0.058***	-0.046***	-0.031***	-0.060***	-0.060***	-0.060***
LV	0.033***	-0.001	-0.008	0.008	-0.009	-0.016	-0.016	-0.016	0.015*	-0.005	-0.013	0.002	0.011	-0.028***	-0.028***	-0.028***
MT	-0.020*	-0.049***	-0.042***	-0.025***	-0.082***	-0.088***	-0.088***	-0.088***	-0.020***	-0.041***	-0.034***	-0.020*	-0.023***	-0.073***	-0.073***	-0.073***
NL	-0.016*	-0.029***	-0.018*	-0.003	-0.026***	-0.011	-0.011	-0.011	-0.061***	-0.047***	-0.046***	-0.034***	-0.021**	-0.011	-0.011	-0.011
PL	-0.001	-0.015*	-0.015*	-0.006	-0.003	-0.035***	-0.035***	-0.035***	-0.029***	-0.028***	-0.026***	-0.018*	-0.014*	-0.044***	-0.044***	-0.044***
PT	0.004	-0.034***	-0.026***	-0.013	-0.065***	-0.068***	-0.068***	-0.068***	0.001	-0.029***	-0.023*	-0.008	-0.020**	-0.058***	-0.058***	-0.058***
RO	0.050***	-0.013	-0.009	0.013	-0.022*	-0.050***	-0.050***	-0.050***	0.029***	0.006	0.011	0.032***	-0.028***	-0.027***	-0.027***	-0.027***
SE	0.005	-0.038***	-0.034***	-0.035***	0.009	0.005	0.005	0.005	-0.016*	-0.052***	-0.052***	-0.049***	0.004	-0.014	-0.014	-0.014
SI	0.007	-0.012	-0.003	0.008	0.039***	0.012	0.012	0.012	-0.037***	-0.027***	-0.021**	-0.012	-0.003	-0.014*	-0.014*	-0.014*
SK	-0.016*	-0.042***	-0.035***	-0.018*	-0.028***	-0.061***	-0.061***	-0.061***	-0.032***	-0.056***	-0.050***	-0.034***	-0.035***	-0.075***	-0.075***	-0.075***

Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Sample restricted to men and women aged 25 to 55. Including interaction term of all variables with gender.

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Table A3: Average marginal effects by income definition and sharing assumption – model including interaction of employed with working hours

	Disposable income				Disposable income minus benefits				Disposable income plus taxes /SIC				Gross market incomes			
	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE
Men	0.014***	-0.104***	-0.092***	-0.073***	0.024***	-0.076***	-0.076***	-0.076***	0.014***	-0.091***	-0.081***	-0.065***	0.024***	-0.064***	-0.064***	-0.064***
Age	-0.001***	-0.003***	-0.002***	-0.002***	-0.000*	-0.002***	-0.002***	-0.002***	-0.000**	-0.002***	-0.002***	-0.002***	-0.000*	-0.001***	-0.001***	-0.001***
Education (Ref.=Low)																
Middle educated	-0.052***	-0.014***	-0.018***	-0.021***	-0.074***	-0.035***	-0.035***	-0.035***	-0.042***	-0.014***	-0.018***	-0.016***	-0.067***	-0.033***	-0.033***	-0.033***
Highly educated	-0.094***	-0.052***	-0.056***	-0.058***	-0.145***	-0.088***	-0.088***	-0.088***	-0.066***	-0.041***	-0.045***	-0.042***	-0.116***	-0.077***	-0.077***	-0.077***
Non-citizen	0.074***	0.057***	0.069***	0.067***	0.073***	0.062***	0.062***	0.062***	0.051***	0.054***	0.061***	0.056***	0.062***	0.059***	0.059***	0.059***
With partner	0.012***	0.016***	0.021***	0.017***	-0.047***	0.008*	0.008*	0.008*	0.010***	0.015***	0.020***	0.016***	-0.028***	0.003	0.003	0.003
Household type (Ref.=1 adult)																
2 adults	-0.048***	-0.004	0.003	0.000	0.065***	-0.001	-0.001	-0.001	-0.041***	0.015*	0.020***	0.017***	0.017***	0.018***	0.018***	0.018***
Lone parent	0.034***	0.006	0.015	0.027**	0.092***	0.082***	0.082***	0.082***	0.019**	0.005	0.011	0.021**	0.044***	0.042***	0.042***	0.042***
2 adults, 1 child	-0.013*	0.028***	0.027***	0.023***	0.081***	0.025***	0.025***	0.025***	-0.022***	0.038***	0.040***	0.032***	0.026***	0.034***	0.034***	0.034***
2 adults, 2 children	0.010	0.059***	0.053***	0.043***	0.142***	0.061***	0.061***	0.061***	-0.003	0.063***	0.060***	0.051***	0.061***	0.064***	0.064***	0.064***
2 adults, 3+ children	0.067***	0.087***	0.081***	0.056***	0.249***	0.113***	0.113***	0.113***	0.032***	0.091***	0.084***	0.061***	0.155***	0.103***	0.103***	0.103***
Other households	-0.006	0.066***	0.073***	0.069***	0.294***	0.088***	0.088***	0.088***	-0.016***	0.084***	0.089***	0.085***	0.160***	0.109***	0.109***	0.109***
Child 0-5 in household	-0.013***	0.003	-0.004	-0.011**	0.017***	0.018***	0.018***	0.018***	-0.004	0.006	0.001	-0.005	0.015***	0.020***	0.020***	0.020***
Number of earners	-0.092***	-0.050***	-0.059***	-0.059***	-0.207***	-0.080***	-0.080***	-0.080***	-0.077***	-0.052***	-0.060***	-0.058***	-0.161***	-0.083***	-0.083***	-0.083***
Economic status (Ref.=Inactive)																
Employed, marginal hours	0.048***	0.066***	0.094***	0.083***	0.026	-0.092***	-0.092***	-0.092***	0.036**	0.043**	0.052***	0.048***	0.031	-0.115***	-0.115***	-0.115***
Employed, substantial hours	-0.019*	-0.204***	-0.195***	-0.187***	-0.090***	-0.395***	-0.395***	-0.395***	-0.021*	-0.221***	-0.211***	-0.200***	-0.076***	-0.408***	-0.408***	-0.407***
Employed, full-time	-0.105***	-0.352***	-0.335***	-0.324***	-0.221***	-0.587***	-0.587***	-0.586***	-0.086***	-0.323***	-0.305***	-0.297***	-0.185***	-0.546***	-0.546***	-0.546***
Self-employed	0.070***	-0.067***	-0.045***	-0.042***	-0.055***	-0.305***	-0.305***	-0.304***	0.047***	-0.101***	-0.082***	-0.078***	-0.039***	-0.326***	-0.326***	-0.325***
Unemployed	0.074***	0.037***	0.060***	0.054***	0.023*	-0.104***	-0.104***	-0.104***	0.067***	0.037***	0.057***	0.052***	0.031***	-0.107***	-0.107***	-0.107***
Low-skilled job	0.058***	-0.004	-0.000	0.012	0.138***	-0.222***	-0.222***	-0.219***	0.041***	0.002	0.003	0.010	0.100***	-0.201***	-0.201***	-0.199***
Medium-skilled job	0.012	-0.050***	-0.048***	-0.035***	0.076***	-0.284***	-0.284***	-0.282***	0.007	-0.036***	-0.039***	-0.029***	0.048***	-0.255***	-0.255***	-0.252***
High-skilled job	-0.042***	-0.107***	-0.103***	-0.089***	-0.003	-0.347***	-0.347***	-0.345***	-0.029***	-0.085***	-0.086***	-0.076***	-0.008	-0.306***	-0.306***	-0.303***
Low work experience	0.012	-0.030*	-0.023*	-0.019	0.035***	-0.351***	-0.350***	-0.347***	0.010	-0.026*	-0.022*	-0.013	0.017	-0.377***	-0.377***	-0.374***
Medium work experience	0.005	-0.077***	-0.073***	-0.063***	0.035**	-0.388***	-0.388***	-0.385***	0.005	-0.066***	-0.060***	-0.050***	0.017	-0.410***	-0.410***	-0.407***
Almost always working	-0.034***	-0.141***	-0.136***	-0.129***	-0.021	-0.460***	-0.460***	-0.457***	-0.024***	-0.123***	-0.117***	-0.109***	-0.026**	-0.475***	-0.475***	-0.472***
BE	-0.051***	-0.083***	-0.082***	-0.072***	-0.042***	-0.049***	-0.049***	-0.049***	-0.034***	-0.070***	-0.067***	-0.055***	-0.024***	-0.044***	-0.044***	-0.044***
BG	0.067***	0.025**	0.029***	0.038***	0.004	0.014	0.014	0.014	0.054***	0.003	0.005	0.013	0.029***	-0.015	-0.015	-0.015
CY	-0.002	0.009	0.011	0.017*	-0.031***	0.017*	0.017*	0.017*	-0.005	0.001	0.003	0.012	0.015	0.012	0.012	0.012
CZ	-0.037***	-0.024**	-0.016*	-0.007	-0.075***	-0.024**	-0.024**	-0.024**	-0.045***	-0.035***	-0.029***	-0.021**	-0.043***	-0.034***	-0.034***	-0.034***
DE	0.024***	0.051***	0.053***	0.055***	-0.013	0.036***	0.036***	0.036***	-0.005	0.016*	0.020**	0.024***	-0.020**	0.006	0.006	0.006
DK	-0.019	-0.028*	-0.035***	-0.030**	0.049***	0.027**	0.027**	0.027**	-0.064***	-0.098***	-0.101***	-0.088***	0.003	-0.007	-0.007	-0.007
EE	0.044***	0.054***	0.041***	0.034***	0.026**	0.063***	0.063***	0.063***	0.056***	0.062***	0.044***	0.043***	0.079***	0.068***	0.068***	0.068***
EL	-0.032***	-0.032***	-0.026***	-0.012	-0.082***	-0.053***	-0.053***	-0.053***	-0.042***	-0.036***	-0.031***	-0.020**	-0.054***	-0.056***	-0.056***	-0.056***
ES	0.043***	0.028***	0.035***	0.052***	0.012	0.024***	0.024***	0.024***	0.038***	0.021**	0.027***	0.045***	0.051***	0.023**	0.023**	0.023**
FI	-0.061***	-0.101***	-0.108***	-0.101***	-0.020*	-0.046***	-0.046***	-0.046***	-0.065***	-0.102***	-0.108***	-0.103***	-0.019**	-0.056***	-0.056***	-0.056***
FR	-0.023**	-0.033***	-0.033***	-0.027***	-0.001	0.013	0.013	0.013	-0.035***	-0.045***	-0.044***	-0.039***	0.000	-0.011	-0.011	-0.011
HR	-0.005	-0.017*	-0.011	0.000	-0.065***	-0.039***	-0.038***	-0.042***	-0.005	-0.016*	-0.010	0.001	-0.025**	-0.036***	-0.036***	-0.039***
HU	0.137***	0.134***	0.148***	0.160***	0.076***	0.107***	0.107***	0.107***	0.074***	0.064***	0.069***	0.076***	0.052***	0.038***	0.038***	0.038***
IE	-0.033***	-0.048***	-0.048***	-0.036***	-0.051***	-0.025**	-0.025**	-0.025**	-0.018**	-0.040***	-0.040***	-0.027***	0.013	-0.012	-0.012	-0.012
IT	-0.007	-0.021**	-0.014*	0.002	-0.057***	-0.039***	-0.039***	-0.039***	-0.004	-0.022**	-0.015*	0.000	-0.032***	-0.041***	-0.041***	-0.041***
LT	0.073***	0.022*	0.027**	0.037***	0.067***	0.059***	0.059***	0.059***	0.014	-0.009	-0.003	0.007	0.027**	0.012	0.012	0.012
LU	-0.029***	-0.030***	-0.042***	-0.027***	-0.044***	-0.043***	-0.043***	-0.043***	-0.053***	-0.044***	-0.056***	-0.046***	-0.018*	-0.050***	-0.050***	-0.050***
LV	0.036***	0.028**	0.018*	0.028**	-0.000	0.023**	0.023**	0.023**	-0.000	0.016*	0.005	0.016*	0.016	0.001	0.001	0.001
MT	-0.014	-0.025**	-0.019*	-0.006	-0.073***	-0.056***	-0.056***	-0.056***	-0.016*	-0.023**	-0.017*	-0.006	-0.017*	-0.048***	-0.048***	-0.048***
NL	-0.021**	-0.042***	-0.031***	-0.019**	-0.033***	-0.027***	-0.027***	-0.027***	-0.064***	-0.057***	-0.056***	-0.045***	-0.029***	-0.024***	-0.024***	-0.024***
PL	-0.008	-0.009	-0.012	-0.008	-0.009	-0.023**	-0.023**	-0.023**	-0.034***	-0.028***	-0.029***	-0.025***	-0.021***	-0.041***	-0.041***	-0.041***
PT	0.017*	0.007	0.005	0.024**	-0.049***	-0.017*	-0.017*	-0.017*	0.011	0.007	0.010	0.021**	-0.006	-0.017*	-0.017*	-0.017*
RO	0.046***	-0.012	-0.010	-0.016	-0.019*	-0.023**	-0.023**	-0.023**	0.026***	0.019**	0.019**	0.038***	-0.027***	-0.008	-0.008	-0.008
SE	0.012	-0.012	0.020**	0.024**	0.022*	0.039***	0.039***	0.039***	-0.012	-0.032***	-0.033***	-0.035***	0.011	0.013	0.013	0.013
SI	0.011	0.013	0.020**	0.026***	0.047***	0.045***	0.045***	0.045***	-0.036***	-0.010	-0.007	-0.001	0.003	0.009	0.009	0.009
SK	-0.013	-0.013	-0.008	0.004	-0.018*	-0.022**	-0.022**	-0.022**	-0.031***	-0.037***	-0.033***	-0.021**	-0.030***	-0.049***	-0.049***	-0.049***

Source and notes: see Table A2.

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Table A4: Average marginal effects by income definition and sharing assumption – model including interaction of employed with skill-level of job

	Disposable income				Disposable income minus benefits				Disposable income plus taxes/SIC				Gross market incomes			
	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE
Men	0.013***	-0.097***	-0.086***	-0.067***	0.022***	-0.068***	-0.068***	-0.068***	0.014***	-0.084***	-0.074***	-0.059***	0.022***	-0.055***	-0.055***	-0.055***
Age	-0.001**	-0.003***	-0.003***	-0.003***	-0.000	-0.002***	-0.002***	-0.002***	-0.000*	-0.003***	-0.003***	-0.003***	-0.000	-0.002***	-0.002***	-0.002***
Education (Ref.=Low)																
Middle educated	-0.057***	-0.017***	-0.022***	-0.024***	-0.077***	-0.041***	-0.041***	-0.041***	-0.045***	-0.017***	-0.022***	-0.019***	-0.070***	-0.038***	-0.038***	-0.038***
Highly educated	-0.108***	-0.062***	-0.066***	-0.068***	-0.162***	-0.101***	-0.101***	-0.101***	-0.077***	-0.050***	-0.054***	-0.052***	-0.129***	-0.088***	-0.088***	-0.088***
Non-citizen	0.074***	0.054***	0.065***	0.063***	0.074***	0.060***	0.060***	0.060***	0.051***	0.050***	0.057***	0.052***	0.062***	0.056***	0.056***	0.056***
With partner	0.014***	0.013***	0.018***	0.015***	-0.043***	0.005	0.005	0.005	0.011***	0.012***	0.016***	0.013***	-0.024***	-0.001	-0.001	-0.001
Household type (Ref.=1 adult)																
2 adults	-0.044***	-0.017***	-0.009	-0.010*	0.072***	-0.014*	-0.014*	-0.014*	-0.037***	0.002	0.008	0.006	0.024***	0.004	0.004	0.004
Lone parent	0.034***	0.006	0.015	0.027***	0.092***	0.085***	0.085***	0.085***	0.019**	0.003	0.010	0.020*	0.044***	0.042***	0.042***	0.042***
2 adults, 1 child	-0.008	0.013*	0.013*	0.010	0.092***	0.010	0.010	0.010*	-0.018***	0.023***	0.025***	0.019***	0.035***	0.017***	0.017***	0.017***
2 adults, 2 children	0.016***	0.043***	0.038***	0.029***	0.153***	0.044***	0.044***	0.044***	0.002	0.046***	0.044***	0.037***	0.071***	0.046***	0.046***	0.046***
2 adults, 3+ children	0.071***	0.072***	0.067***	0.042***	0.257***	0.099***	0.099***	0.099***	0.037***	0.075***	0.069***	0.047***	0.162***	0.086***	0.086***	0.086***
Other households	0.003	0.035***	0.044***	0.044***	0.315***	0.057***	0.057***	0.057***	-0.010*	0.050***	0.057***	0.056***	0.177***	0.073***	0.073***	0.073***
Child 0-5 in household	-0.014***	0.002	-0.004	-0.012*	0.017***	0.017***	0.017***	0.017***	-0.005	0.005	-0.000	-0.006	0.015***	0.019***	0.019***	0.019***
Number of earners	-0.097***	-0.027***	-0.037***	-0.040***	-0.221***	-0.057***	-0.057***	-0.057***	-0.082***	-0.027***	-0.036***	-0.037***	-0.173***	-0.056***	-0.056***	-0.056***
Economic status (Ref.=Inactive)																
Employed, low-skilled	-0.053***	-0.130***	-0.123***	-0.130***	-0.170***	-0.309***	-0.309***	-0.308***	-0.051***	-0.116***	-0.106***	-0.116***	-0.146***	-0.274***	-0.274***	-0.273***
Employed, medium-skilled	-0.103***	-0.195***	-0.186***	-0.195***	-0.230***	-0.375***	-0.375***	-0.375***	-0.086***	-0.170***	-0.160***	-0.170***	-0.199***	-0.329***	-0.329***	-0.329***
Employed, high-skilled	-0.149***	-0.247***	-0.237***	-0.246***	-0.312***	-0.426***	-0.426***	-0.426***	-0.114***	-0.215***	-0.204***	-0.214***	-0.256***	-0.370***	-0.370***	-0.369***
Self-employed	0.039***	0.028**	0.043***	0.030***	-0.115***	-0.176***	-0.177***	-0.176***	0.022**	0.004	0.017	0.006	-0.093***	-0.175***	-0.175***	-0.175***
Unemployed	0.082***	0.083***	0.104***	0.094***	0.022*	-0.036*	-0.036*	-0.036*	0.074***	0.080***	0.099***	0.090***	0.031***	-0.029*	-0.029*	-0.029*
Marginal	0.160***	0.164***	0.187***	0.204***	0.274***	-0.066***	-0.066***	-0.066***	0.132***	0.121***	0.128***	0.155***	0.232***	-0.106***	-0.107***	-0.106***
Substantial	0.087***	-0.079***	-0.070***	-0.035***	0.159***	-0.339***	-0.339***	-0.338***	0.070***	-0.113***	-0.109***	-0.070***	0.129***	-0.378***	-0.378***	-0.378***
Full	0.009	-0.221***	-0.205***	-0.170***	0.050***	-0.511***	-0.511***	-0.511***	0.005	-0.219***	-0.208***	-0.173***	0.037***	-0.506***	-0.506***	-0.506***
Low work experience	0.014*	-0.018	-0.013	-0.010	0.057***	-0.306***	-0.306***	-0.302***	0.013**	-0.003	-0.003	0.003	0.043***	-0.313***	-0.313***	-0.309***
Medium work experience	0.007	-0.062***	-0.061***	-0.051***	0.057***	-0.341***	-0.341***	-0.337***	0.008	-0.041***	-0.039***	-0.032***	0.034***	-0.344***	-0.344***	-0.340***
Almost always working	-0.034***	-0.117***	-0.114***	-0.110***	-0.004	-0.403***	-0.403***	-0.399***	-0.023***	-0.087***	-0.086***	-0.083***	-0.014*	-0.397***	-0.397***	-0.394***
BE	-0.046***	-0.078***	-0.076***	-0.064***	-0.029***	-0.046***	-0.046***	-0.046***	-0.029***	-0.065***	-0.062***	-0.049***	-0.012	-0.042***	-0.042***	-0.042***
BG	0.071***	0.026***	0.031***	0.043***	0.013	0.016*	0.016*	0.016*	0.058***	0.005	0.008	0.017*	0.037***	-0.013	-0.013	-0.013
CY	0.000	-0.002	0.001	0.009	-0.021*	0.004	0.004	0.004	-0.003	-0.009	-0.007	0.004	0.024**	-0.001	-0.001	-0.001
CZ	-0.033***	-0.025***	-0.016*	-0.006	-0.064***	-0.026***	-0.026***	-0.026***	-0.041***	-0.036***	-0.036***	-0.020**	-0.032***	-0.036***	-0.036***	-0.036***
DE	0.027***	0.052***	0.054***	0.057***	-0.005	0.034***	0.034***	0.034***	-0.002	0.017	0.020**	0.025***	-0.011	0.003	0.003	0.003
DK	-0.021*	-0.028*	-0.035***	-0.028**	0.051***	0.028**	0.028**	0.028**	-0.064***	-0.100***	-0.103***	-0.089***	0.005	-0.006	-0.006	-0.006
EE	0.044***	0.053***	0.041***	0.036***	0.031***	0.059***	0.059***	0.059***	0.056***	0.061***	0.043***	0.044***	0.084***	0.063***	0.063***	0.063***
EL	-0.028***	-0.036***	-0.030***	-0.013*	-0.072***	-0.064***	-0.064***	-0.064***	-0.038***	-0.040***	-0.034***	-0.021***	-0.045***	-0.069***	-0.069***	-0.069***
ES	0.049***	0.037***	0.044***	0.062***	0.023**	0.031***	0.031***	0.031***	0.043***	0.031***	0.036***	0.055***	0.062***	0.029***	0.029***	0.029***
FI	-0.062***	-0.100***	-0.107***	-0.099***	-0.019*	-0.043***	-0.043***	-0.043***	-0.065***	-0.100***	-0.107***	-0.102***	-0.018*	-0.053***	-0.053***	-0.053***
FR	-0.019***	-0.029***	-0.029***	-0.020***	0.008	0.013	0.013	0.013	-0.032***	-0.040***	-0.039***	-0.033***	0.008	-0.011	-0.011	-0.011
HR	-0.001	-0.015*	-0.008	0.005	-0.057***	-0.040***	-0.040***	-0.043***	-0.001	-0.013	-0.007	0.005	-0.016*	-0.038***	-0.038***	-0.041***
HU	0.138***	0.131***	0.146***	0.160***	0.083***	0.104***	0.104***	0.104***	0.075***	0.063***	0.069***	0.077***	0.059***	0.035***	0.035***	0.035***
IE	-0.030***	-0.060***	-0.059***	-0.044***	-0.042***	-0.044***	-0.044***	-0.044***	-0.015*	-0.051***	-0.051***	-0.036***	0.022*	-0.031***	-0.031***	-0.031***
IT	-0.005	-0.009	-0.002	0.014*	-0.051***	-0.030***	-0.030***	-0.030***	-0.002	-0.010	-0.004	0.012*	-0.026***	-0.031***	-0.031***	-0.031***
LT	0.076***	0.022*	0.028**	0.039***	0.077***	0.059***	0.059***	0.059***	0.017	-0.007	-0.001	0.009	0.036***	0.013	0.013	0.013
LU	-0.028***	-0.030***	-0.040***	-0.025***	-0.042***	-0.045***	-0.045***	-0.045***	-0.053***	-0.045***	-0.055***	-0.044***	-0.017*	-0.052***	-0.052***	-0.052***
LV	0.038***	0.031***	0.021*	0.033***	0.004	0.023**	0.023**	0.023**	0.018*	0.020*	0.009	0.021**	0.021*	0.002	0.002	0.002
MT	-0.011	-0.033***	-0.027***	-0.011	-0.061***	-0.066***	-0.066***	-0.066***	-0.013	-0.031***	-0.025**	-0.012	-0.006	-0.059***	-0.059***	-0.059***
NL	-0.024***	-0.053***	-0.043***	-0.029***	-0.031***	-0.040***	-0.040***	-0.040***	-0.065***	-0.066***	-0.065***	-0.053***	-0.027***	-0.037***	-0.037***	-0.037***
PL	-0.001	-0.006	-0.009	-0.003	0.005	-0.022***	-0.022***	-0.022***	-0.028***	-0.026***	-0.027***	-0.021***	-0.008	-0.041***	-0.041***	-0.041***
PT	0.018*	0.003	0.010	0.020**	-0.042***	-0.026***	-0.026***	-0.026***	0.012	-0.001	0.003	0.017*	0.001	-0.027***	-0.027***	-0.027***
RO	0.050***	0.003	0.003	0.023*	-0.011	-0.029***	-0.029***	-0.029***	0.030***	0.015*	0.015**	0.036***	-0.020**	-0.015*	-0.015*	-0.015*
SE	0.013	-0.009	-0.007	-0.011	0.027**	0.038***	0.038***	0.039***	-0.034***	-0.028***	-0.030***	-0.030***	0.015	0.012	0.012	0.012
SI	0.012	0.008	0.015*	0.024***	0.055***	0.039***	0.039***	0.039***	-0.034***	-0.015*	-0.012	-0.004	0.010	0.002	0.002	0.002
SK	-0.008	-0.018*	-0.012	0.002	-0.005	-0.028***	-0.028***	-0.028***	-0.026***	-0.044***	-0.039***	-0.024***	-0.018*	-0.059***	-0.059***	-0.059***

Source and notes: see Table A2.

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Table A5: Average marginal effects by income definition and sharing assumption – model including interaction of employed with work experience

	Disposable income				Disposable income minus benefits				Disposable income plus taxes/SIC				Gross market incomes			
	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE	U	PE	EQ	SE
Men	0.011***	-0.101***	-0.090***	-0.071***	0.021***	-0.070***	-0.070***	-0.070***	0.012***	-0.088***	-0.078***	-0.062***	0.021***	-0.057***	-0.057***	-0.057***
Age	-0.001***	-0.003***	-0.003***	-0.003***	-0.000	-0.003***	-0.003***	-0.003***	-0.000***	-0.003***	-0.003***	-0.003***	-0.000	-0.002***	-0.002***	-0.002***
Education (Ref.=Low)																
Middle educated	-0.052***	-0.015***	-0.019***	-0.021***	-0.071***	-0.036***	-0.036***	-0.036***	-0.041***	-0.015***	-0.019***	-0.017***	-0.065***	-0.034***	-0.034***	-0.034***
Highly educated	-0.094***	-0.048***	-0.052***	-0.055***	-0.143***	-0.083***	-0.083***	-0.083***	-0.066***	-0.038***	-0.041***	-0.039***	-0.115***	-0.072***	-0.072***	-0.072***
Non-citizen	0.072***	0.054***	0.065***	0.064***	0.071***	0.057***	0.057***	0.057***	0.049***	0.049***	0.056***	0.052***	0.060***	0.054***	0.054***	0.054***
With partner	0.013***	0.012***	0.017***	0.013***	-0.044***	0.004	0.004	0.004	0.010***	0.011***	0.015***	0.012***	-0.025***	-0.001	-0.001	-0.001
Household type (Ref.=1 adult)																
2 adults	-0.043***	-0.016**	-0.008	-0.010	0.072***	-0.012**	-0.012**	-0.012**	-0.037***	0.003	0.009	0.007	0.023***	0.005	0.005	0.005
Lone parent	0.034***	0.005	0.014	0.027**	0.091***	0.085***	0.085***	0.085***	0.020**	0.004	0.010	0.021**	0.044***	0.042***	0.042***	0.042***
2 adults, 1 child	-0.007	0.015**	0.014*	0.012*	0.092***	0.012*	0.012*	0.012*	-0.017***	0.024***	0.026***	0.021***	0.035***	0.018***	0.018***	0.018***
2 adults, 2 children	0.016**	0.044***	0.038***	0.030***	0.153***	0.045***	0.045***	0.045***	0.002	0.047***	0.045***	0.037***	0.071***	0.046***	0.046***	0.046***
2 adults, 3+ children	0.074***	0.074***	0.069***	0.045***	0.258***	0.100***	0.100***	0.100***	0.039***	0.077***	0.071***	0.050***	0.163***	0.086***	0.086***	0.086***
Other households	0.003	0.037***	0.045***	0.045***	0.313***	0.058***	0.058***	0.058***	-0.009*	0.052***	0.059***	0.058***	0.175***	0.074***	0.074***	0.074***
Child 0-5 in household	-0.014***	0.001	-0.006	-0.014***	0.017***	0.017***	0.017***	0.017***	-0.005	0.004	-0.002	-0.008*	0.014***	0.018***	0.018***	0.018***
Number of earners	-0.097***	-0.027***	-0.037***	-0.039***	-0.220***	-0.057***	-0.057***	-0.057***	-0.081***	-0.027***	-0.035***	-0.037***	-0.172***	-0.056***	-0.056***	-0.056***
Economic status (Ref.=Inactive)																
Employed, low experience	-0.076***	-0.134***	-0.120***	-0.130***	-0.196***	-0.310***	-0.310***	-0.309***	-0.061***	-0.114***	-0.105***	-0.110***	-0.161***	-0.269***	-0.269***	-0.269***
Employed, medium experience	-0.090***	-0.192***	-0.187***	-0.191***	-0.211***	-0.361***	-0.361***	-0.361***	-0.075***	-0.169***	-0.156***	-0.166***	-0.183***	-0.320***	-0.320***	-0.319***
Employed, high experience	-0.127***	-0.240***	-0.231***	-0.241***	-0.275***	-0.422***	-0.422***	-0.422***	-0.101***	-0.211***	-0.199***	-0.212***	-0.232***	-0.371***	-0.371***	-0.371***
Self-employed	0.039***	0.018	0.034***	0.020*	-0.117***	-0.187***	-0.187***	-0.186***	0.023***	-0.005	0.010	-0.003	-0.096***	-0.186***	-0.186***	-0.186***
Unemployed	0.069***	0.065***	0.087***	0.076***	0.007	-0.055***	-0.055***	-0.055***	0.065***	0.064***	0.084***	0.074***	0.018*	-0.049***	-0.049***	-0.049***
Marginal	0.157***	0.150***	0.173***	0.190***	0.263***	-0.092***	-0.092***	-0.091***	0.129***	0.106***	0.113***	0.141***	0.224***	-0.139***	-0.139***	-0.138***
Substantial	0.082***	-0.097***	-0.088***	-0.053***	0.149***	-0.365***	-0.365***	-0.365***	0.066***	-0.133***	-0.129***	-0.088***	0.120***	-0.412***	-0.412***	-0.412***
Full	0.002	-0.241***	-0.226***	-0.190***	0.040***	-0.540***	-0.540***	-0.540***	0.000	-0.240***	-0.228***	-0.192***	0.028***	-0.543***	-0.543***	-0.543***
Low-skilled job	0.050***	0.012	0.013	0.017*	0.119***	-0.098***	-0.034	-0.032	0.037***	0.022**	0.022**	0.024***	0.086***	-0.025	-0.025	-0.023
Medium-skilled job	0.005	-0.037***	-0.037***	-0.032***	0.059***	-0.098***	-0.098*	-0.096*	0.003	-0.019**	-0.022**	-0.017***	0.036***	-0.080*	-0.080*	-0.078*
High-skilled job	-0.050***	-0.093***	-0.092***	-0.086***	-0.023*	-0.160***	-0.159***	-0.158***	-0.033***	-0.067***	-0.068***	-0.064***	-0.023***	-0.130***	-0.130***	-0.128***
BE	-0.041***	-0.069***	-0.067***	-0.054***	-0.028***	-0.044***	-0.044***	-0.044***	-0.026***	-0.058***	-0.054***	-0.040***	-0.011	-0.039***	-0.039***	-0.039***
BG	0.073***	0.034***	0.039***	0.051***	0.012	0.019	0.019	0.019*	0.058***	0.010	0.013	0.023**	0.037***	-0.011	-0.011	-0.011
CY	0.004	0.006	0.008	0.018*	-0.021*	0.006	0.006	0.005	0.000	-0.003	-0.000	0.012	0.024***	0.000	0.000	0.000
CZ	-0.030***	-0.018*	-0.010	0.001	-0.065***	-0.024***	-0.024***	-0.024***	-0.039***	-0.031***	-0.025***	-0.015*	-0.033***	-0.034***	-0.034***	-0.034***
DE	0.030***	0.058***	0.060***	0.065***	-0.004	0.037***	0.037***	0.037***	0.001	0.022**	0.025***	0.031***	-0.011	0.006	0.006	0.006
DK	-0.015	-0.019	-0.026*	-0.019	0.054***	0.032***	0.032***	0.032***	-0.059***	-0.093***	-0.096***	-0.081***	0.009	-0.001	-0.001	-0.001
EE	0.050***	0.062***	0.050***	0.046***	0.034***	0.063***	0.063***	0.063***	0.061***	0.068***	0.051***	0.053***	0.087***	0.067***	0.067***	0.067***
EL	-0.026***	-0.031***	-0.024***	-0.007	-0.072***	-0.063***	-0.063***	-0.063***	-0.036***	-0.036***	-0.030***	-0.016*	-0.045***	-0.067***	-0.067***	-0.067***
ES	0.051***	0.042***	0.049***	0.069***	0.022**	0.031***	0.031***	0.031***	0.045***	0.035***	0.040***	0.060***	0.061***	0.030***	0.030***	0.030***
FI	-0.052***	-0.079***	-0.085***	-0.078***	-0.014	-0.033***	-0.033***	-0.033***	-0.057***	-0.082***	-0.089***	-0.084***	-0.011	-0.043***	-0.043***	-0.043***
FR	-0.016*	-0.021***	-0.021***	-0.011	0.008	0.017	0.017	0.017*	-0.029***	-0.034***	-0.032***	-0.025**	0.009	-0.008	-0.008	-0.008
HR	0.005	-0.001	0.006	0.020*	-0.054***	-0.029***	-0.029***	-0.032***	0.004	-0.001	0.004	0.018*	-0.014*	-0.027***	-0.027***	-0.030***
HU	0.142***	0.141***	0.156***	0.171***	0.083***	0.107***	0.107***	0.107***	0.079***	0.071***	0.077***	0.086***	0.060***	0.038***	0.038***	0.038***
IE	-0.029***	-0.055***	-0.054***	-0.038***	-0.044***	-0.044***	-0.044***	-0.044***	-0.014*	-0.048***	-0.047***	-0.031***	0.020*	-0.031***	-0.031***	-0.031***
IT	0.005	0.008	0.015*	0.032***	-0.044***	-0.020**	-0.020**	-0.020*	0.006	0.004	0.011	0.028***	-0.020**	-0.022***	-0.022***	-0.022***
LT	0.079***	0.031**	0.036***	0.049***	0.076***	0.060***	0.060***	0.060***	0.020*	-0.000	0.006	0.018	0.036***	0.014	0.014	0.014
LU	-0.023***	-0.026***	-0.036***	-0.020*	-0.036***	-0.039***	-0.039***	-0.039***	-0.048***	-0.041***	-0.051***	-0.039***	-0.010	-0.046***	-0.046***	-0.046***
LV	0.041***	0.037***	0.028***	0.040***	0.005	0.024**	0.024**	0.024***	0.021***	0.025***	0.014	0.027***	0.022**	0.003	0.003	0.003
MT	-0.006	-0.024***	-0.017*	-0.001	-0.059***	-0.063***	-0.063***	-0.063***	-0.009	-0.024***	-0.017***	-0.003	-0.004	-0.055***	-0.055***	-0.055***
NL	-0.015*	-0.039***	-0.029***	-0.014*	-0.025***	-0.031***	-0.031***	-0.031***	-0.059***	-0.055***	-0.053***	-0.041***	-0.023***	-0.028***	-0.028***	-0.028***
PL	0.002	0.001	-0.001	0.006	-0.040***	-0.022***	-0.022***	-0.022*	-0.026***	-0.020**	-0.020**	-0.013*	-0.010	-0.041***	-0.041***	-0.041***
PT	0.022***	0.005	0.016*	0.027***	0.057***	0.046***	0.046***	0.046***	0.028***	0.016*	0.017*	0.023***	0.003	-0.023***	-0.023***	-0.023***
RO	0.049***	-0.003	-0.000	-0.005	-0.040***	-0.023*	-0.023*	-0.023*	-0.009	-0.023*	-0.020**	-0.013*	-0.023***	-0.017*	-0.017*	-0.017*
SE	0.016*	0.009	0.016*	-0.005	0.028**	0.046***	0.046***	0.046***	0.016*	-0.023***	-0.025***	0.038***	0.017*	0.016*	0.016*	0.016*
SI	0.018*	0.020**	0.028***	0.037***	0.057***	-0.027***	-0.023***	-0.025***	0.028***	-0.005	-0.002	0.007	0.013	0.009	0.009	0.009
SK	-0.004	-0.012	-0.006	0.010	-0.006	-0.027***	-0.027***	-0.027***	-0.023***	-0.038***	-0.034***	-0.018*	-0.018*	-0.058***	-0.058***	-0.058***

Source and notes: see Table A2.

Table A6: Reference worker gap and overall welfare impact by subgroups, income definition and sharing assumption

Scenario:	Unitary model					Primary earner					Equal sharing					Secondary earner				
		Disposable income					Disposable income					Disposable income					Disposable income			
Income concept:	Gross market income	Excl. tax/SIC	Excl. benefits	Total	Overall welfare impact	Gross market income	Excl. tax/SIC	Excl. benefits	Total	Overall welfare impact	Gross market income	Excl. tax/SIC	Excl. benefits	Total	Overall welfare impact	Gross market income	Excl. tax/SIC	Excl. benefits	Total	Overall welfare impact
By economic status																				
Employed	7.5	2.5	8.5	2.7	4.7	16.6	12.2	19.6	15.2	1.4	16.6	11.2	19.6	13.9	2.7	16.6	9.7	19.6	12.0	4.6
Self-employed	19.5	13.6	23.1	17.9	1.6	38.5	34.1	45.9	41.9	-3.3	38.5	33.0	45.9	40.8	-2.3	38.5	30.8	45.9	37.7	0.8
Unemployed	24.5	15.5	28.3	18.7	5.8	64.5	50.6	68.9	54.6	9.9	64.5	49.7	68.9	53.8	10.7	64.5	46.6	68.9	50.0	14.5
Inactive	16.6	9.3	20.2	12.5	4.1	73.3	56.2	76.5	60.0	13.3	73.3	53.7	76.5	57.5	15.8	73.3	50.2	76.4	53.5	19.8
Employed women by working hours																				
<20	21.7	10.3	23.9	12.1	9.7	59.4	50.0	68.3	57.8	1.6	59.4	47.3	68.3	56.3	3.1	59.3	44.1	68.3	52.5	6.8
20-34	13.3	5.4	15.0	7.0	6.3	26.1	18.7	33.5	25.8	0.4	26.1	16.7	33.5	23.4	2.8	26.1	15.1	33.4	20.5	5.6
35+	4.4	1.1	5.2	0.8	3.7	12.3	7.4	13.6	8.8	3.4	12.3	7.0	13.6	7.9	4.3	12.2	5.4	13.6	6.4	5.8
Employed women by work experience																				
Low	12.5	5.6	13.6	6.7	5.8	29.8	23.0	32.7	25.9	3.9	29.8	21.8	32.7	25.2	4.6	29.8	20.6	32.7	23.0	6.8
Medium	8.8	3.7	11.1	4.5	4.2	23.7	16.0	26.3	18.4	5.3	23.7	15.4	26.3	16.9	6.9	23.7	13.2	26.3	15.2	8.6
High	3.5	0.7	4.0	0.5	2.9	17.6	11.1	19.8	13.5	4.1	17.6	10.3	19.8	12.3	5.4	17.6	8.1	19.8	10.0	7.6
Employed women by skill-level of job																				
Low	11.7	5.5	14.7	7.0	4.7	27.4	20.8	31.5	24.8	2.7	27.4	20.0	31.5	23.3	4.2	27.4	17.7	31.5	21.0	6.4
Medium	6.5	2.0	8.1	2.7	3.8	21.1	14.8	23.9	17.6	3.5	21.1	13.7	23.9	16.1	5.0	21.1	11.6	23.9	13.8	7.3
High	1.0	-0.5	0.4	-1.6	2.6	15.5	8.7	16.9	10.4	5.1	15.5	8.1	16.9	9.4	6.1	15.5	6.3	16.9	7.4	8.1
Total	11.9	6.7	13.2	7.9	4.0	30.7	25.5	33.7	28.4	2.3	30.7	24.4	33.7	27.1	3.6	30.7	22.7	33.7	25.0	5.7

Source: Own calculations based on EUROMOD I4.62.

Note: Weighted results. Overall welfare impact refers to the difference in reference worker gap between disposable and gross market incomes.