COPE

Combating Poverty in Europe

Can Work-Family Policies reduce the poverty gap between one-parent and two-parent households?

- A Multi-Level Analysis of Child Poverty across 25 European Countries

Elisabeth Ugreninov, Bjørn Hvinden and Viggo Nordvik[1]

Introduction

Work-family policies are one of the most important welfare state innovations of the late twentieth and early twenty-first centuries. The main objectives of these policies are to help parents balancing competing demands of work and family and protect families against poverty risk due to care demands. While the poverty risk varies cross-country and between types of household, one-parent households have greater exposure of poverty than most other types of households. Earlier research has attributed variations in the high poverty risk of one-parent households, especially lone-mothers, to differences in employment rates and varieties in the systems of social protection and work-family policies (e.g. Misra, Moller, and Budig 2007). In general, benefits are important to extend the total income for households with children, and potentially pushing some vulnerable households above the poverty threshold, thus also reducing their poverty risk. Nevertheless, benefits are seldom enough to keep vulnerable households with children out of poverty. Similarly, employment is generally an important factor of the reducing poverty risk. Although work-family policies aim to facilitate the interplay between work and care obligations, some parents might have to reduce their employment in periods to cope with their care burden, consequently being at greater poverty risk. In this regard, accessible and affordable public or publically supported childcare is likely to be an important factor. At the Barcelona Summit in 2002 as part of the European Employment Strategy (European Council 2002), the Council agreed on an explicit target for Member States to by 2010 provide childcare to at least 33% of children under 3 years old, and to at least 90% of children between 3 and mandatory school age. Similarly, scholars have defined investment in public childcare and commitment to equal distribution of public childcare among all social groups, as an important steps on the way to reducing the child

poverty (e.g. Esping-Andersen et al. 2002). These scholars have pointed to at least two reasons for expecting investment in public childcare to mitigate poverty. First, parents, especially mothers, can step up their employment after birth, with the prospects of raising the household income (the focus in this article). Second, such investment will enhance the human capital of children by providing equal educational stimulation at an early stage, which in particular would benefit children with disadvantaged background.

How the roles of parenting are understood, (e.g. whether mothers are regarded as the main caregiver and fathers as the breadwinner, or not), are related to gendered views on the appropriate interplay between families, state and the market (Daly and Lewis 2000; O'Connor, Orloff and Shaver 1999). A basic dichotomy divides care responsibilities into private and state. According to one view, care for children and family is a private and usually women's responsibility, meaning that the state has limited liability for the providing care arrangements and cash transfers helping with the material aspects of upbringing children. By a contrasting view, mothers have individual rights to uphold employment after birth, enabled through the provision of paid parental leave and public childcare services reconciling the work-family conflict. Nevertheless, this clear-cut dichotomy of views is weakened and outdated. Nowadays, European welfare states aim to increase employment for both men and women, and to facilitate dual earnership and contribute to gender equality in labour market (Ghysels and Van Lancker 2011; Lewis et al. 2008; O'Connor 2005). Consequently, all European welfare states utilize a mixture of universal and mean-tested cash benefits, tax allowances and credits, and services, when supporting families with children. Nevertheless, we still find substantial cross-country differences in the structure, generosity, and entitlement firmly (Ferrarini 2006; Bradshaw 2006; Montanari 2000).

Given that the performance of work-family policies influences the risk of living in poverty, two main questions arises: can work-family policies reduce the poverty gap between one-parent and two-parent households? And, can work-family policies reduce the gender gap in poverty among single-mothers and single-father households? The main aim of this article is to investigate which configuration of work-family policies produces the best outcomes in terms of households' poverty risk and, in particular, if work-family policies can reduce the poverty gap between one-parent and two-parent households, when taking into account the structures of labour markets. Investigating this issue, we focus on key elements of work-family-related policies, and assess their impact on poverty risks among different type of households with children.

Our main attribution to the literature is to extend the understanding how the interplay between work-family policies and one-parent households impacts poverty risk in a multilevel perspective. While earlier research to a larger degree has solely focused on lone mothers, this

study compares one-parent with two-parent households on the one hand, and lone mothers compared to lone fathers on the other hand. This extension is important to make progress in our understanding of variations in poverty risks of households. In particular, such extension is necessary to clarify whether differences in risks are driven by absence of the additional income that a partner can bring (comparing one-parent with two-parent households), *versus* by lack of resources and difficulties in the labour market (comparing single-mother with single-father households). Hence this clarification includes a gender aspect as well. Comparing one-parent and two-parent households will narrow the focus to households with children.

Earlier research has mainly examined how different grouping of countries, conceptualised as welfare regimes or care regimes, affects poverty, or has almost exclusively analysed poverty risks at a macro or a micro-level approach. Typical macro-level studies assess the effects of cross-national differences in social policy and cannot incorporate individual-level information such as the characteristics of households with children. Vice versa, individual-level analyses within countries using precise data at individual level, cannot grasp the impact of country differences in policy or labour market situation. Recently, multilevel analyses have become very popular. Multilevel analyses are essential when examining cross-national differences in households' poverty risk. This study joins this trend by examining the influence of household and country characteristics on poverty risk using a multilevel analysis across 25 European countries.

Earlier research and theoretical framework

When studying households' poverty risk, research has to deal with two dimensions. First, poverty may be a result of factors operating at the individual level, such as educational attainment, employment, and household structure (the individual dimension). Second, a number of societal factors may influence poverty risk, for instance a country's work-family policies, the level and structure of labour force participation, the availability of family and other benefits and services, and overall affluence, for instance measured by the level or change in GDP per capita. As we have mentioned earlier, earlier research largely tends to be either macro- or micro-level studies. There is, however, a need to link individual and household characteristics and societal factors in multilevel analyses, allowing us to examine both micro- and macro-level explanations.

Starting with micro-level explanations, work and family are not separate spheres but influence one another in a myriad of positive and negative ways (Campione 2008; Haddock et al. 2006; Huang et al. 2004; Schieman and Young 2011; Tuttle and Garr 2009; Winslow 2005). First, the relations between family structure and poverty risk are particularly prominent. Existing scholarship suggests that the conflict and burden combining work and family are greater for

one-parent compared to two-parent households (Forma 2009; Winslow 2005). One-parent households do face a greater burden in combining paid work and care responsibilities. Their difficulties with combining work and family life affect the ability to obtain and maintain employment (e.g. Ciabattari 2007; DeBord et al. 2000; Gemelli 2008; Howe and Pidwell 2004; Neblett 2007). Second, human capital differences between the heads of two-parent and one-parent households, as well as between the heads of single-mother and single-father households might affect their income earning capacity and thus their poverty risk. Often, one-parent households, especially female headed, are more likely to have low income, and more likely to report financial worries, suggesting that such families have less monetary resources (Edin and Kefalas 2005; Malone et al. 2010; Son and Bauer 2010). Third, work place organisations are in many societies more likely to fit workers who have a partner available to attend non-work needs (Mannis 1999; Moen and Roehling 2005). For instance the employer might think it is easier for an employee to work overtime if a partner can take care of the children and domestic work. One-parent households' greater needs for family-friendly work place arrangements might cause a selection into apparently family-friendly but often low-wage jobs.

Taking one-parents' burden of combining work and family life, lack of human capital, and poor family-friendly workplace organisation into account, we expect that one-parent households have higher poverty risk than two-parent households regardless of other households characteristics such as educational attainment, employment status, and age. We suggest as well that single-mother households have a higher poverty risk than single-father household.

The explanatory mechanisms we have mentioned affect households' poverty risk differently depending on cross-country differences of work-family policies and country structure. A prominent theory used when comparing western welfare states is Esping-Andersen's (1990) threefold model of different welfare state regimes, each having its own features and administration of risk developed. First, the *liberal model* (exemplified by the UK) is characterised by the importance of the market and residual, mean-tested policies targeted at specific groups. Second, the *corporate-conservative model* (exemplified by Germany, France, Belgium, Netherlands, and Italy) is characterised by key role of the one-breadwinner family. There is a strong connection between access to welfare services from the state and labour force participation. Employment relationships assuming stable, non-interrupted working careers serve to pool social risks. The state provides services only when the family, and not the market, fails to produce the welfare needed. Third, the social-democratic model (exemplified by the Nordic countries) is characterised by a state, securing access to income maintenance and services which has a central and universal role in securing welfare. The market and the family have marginal roles compared to the other welfare states.

A criticism, mainly among feminists, is that this welfare state typology is gender blind, and that using different care regimes would strengthen the gender aspect (Lewis 1992; Orloff 1993). Drawing on Fraser's (1994) conceptualization, four strategies for reconciling work and family emerges. First, *the care strategy*, characterises women primarily as carers, and combines a male breadwinner and a female carer strategy. The policy of carer countries (as Netherlands, Germany and Luxemburg) explicitly rewards mothers for providing care, reinforcing traditional gender divisions between care and employment. Part-time employment is as an ideal strategy for mothers who wish to combine employment and care. Second, *the earner strategy*, primarily treats women as workers and secondly as carers. Men and women invest equally in labour force participation, but with low public support of care. The UK is a case in point for this strategy. Third, *the choice strategy*, especially mothers can choose whether they would like to be primarily earners or caregivers. Mothers are rewarded for providing care but also stimulated to participate in the labour force. France and Belgium are close to this mixed strategy. Policies provide substantial support both for mothers' full-time employment and for caregiving within the family. Fourth, *the earner-carer strategy* explicitly has a gendered vision of society in which both mothers and fathers balance informal care and employment. Mothers and fathers are stimulated to take parental leave, and after the leave, have strong incentives and norms to re-enter employment. This is possible because available public childcare after the leave period exist. Additional, employers meet the expectation to accommodate the needs for parents to reduce the burden of combining work and informal care. To link these care strategies to the poverty risk, earlier research indicates that the risk of poverty is much lower in countries with the earner-care strategies, in general (Misra et al. 2007). In addition, poverty rates are significantly higher for one-parents, in particular, in countries categorised as earner or care strategies (Misra et al. 2007).

Despite the heuristic value of such typologies of welfare or care regimes, for our purpose they simplify matters too much to serve as a basis for formulating precise hypotheses for testing. These and other existing typologies miss the complexity of factors affecting the poverty risks of different combinations of household types and structural contexts. In other words, we argue that work-family policies and structural contexts have different impact for different subgroups of households. First, public childcare aims to reduce the burden of combining work and family life and to increase especially mothers' labour force participation (Pettit and Hook 2005), and through these mechanisms to decrease the poverty risk among household with children. The effect of access to public childcare is, however, likely to be more complicated. Such access will only reduce the poverty risk if marginal groups with high poverty risk use public childcare to increase their employment. Nevertheless, existing research shows that vulnerable groups tend not to use public childcare (Van Lanker 2012), thus undermining the effect of public childcare on the poverty risk. Second, to have or get a job with a reasonable wage may well be the most important way to avoid poverty. Vulnerable groups, in

particularly one-parent households, tend, however, when employed to be or become low-earners. Higher levels of employment for these groups are insufficient to lower their poverty risk. Consequently, the availability and generosity of social transfers become crucial (Christopher 2002a, 2002b, 2005; Christopher et al. 2002). Diverse forms of social transfers, including family benefits, social assistance, minimum income and unemployment benefits, are likely to decrease the poverty risk among households with children, independently of their labour force participation.

Following Casper, McLanahan, and Garfinkel (1994) we ask whether low rates of employment and one-parenthood are more significant than low human capital in explaining poverty gaps, especially gender gaps in poverty. Country specific characteristics like overall employment levels and generosity of social transfers are indeed important for the poverty risk in general. However, do country specific characteristics give a better explanation than human capital factors of the poverty gap between one-parent and two-parent households? Additionally, how do we account for the gender gap in poverty between single-mother and single-father households? To get a better understanding of the complexity of the interplay between individual and country-specific characteristics, we rely on more fine-grained measures at both micro- and macro-level. A better understanding of this interplay would enable more reliable indicators of policy effects and more solid policy implications. Given these considerations, there is a clear need for research that combines micro- and macro-levels to examine the interplay between individual characteristics and country specific characteristics on poverty risk among families with children.

The prevalence of poverty among the target groups at country level

To examine the statement that one-parents are vulnerable in European countries, we report poverty figures for one-parents and two-parent households.

Figure 1. Poverty rates for lone parents and couples at active age (25-60) with dependent children, European countries.
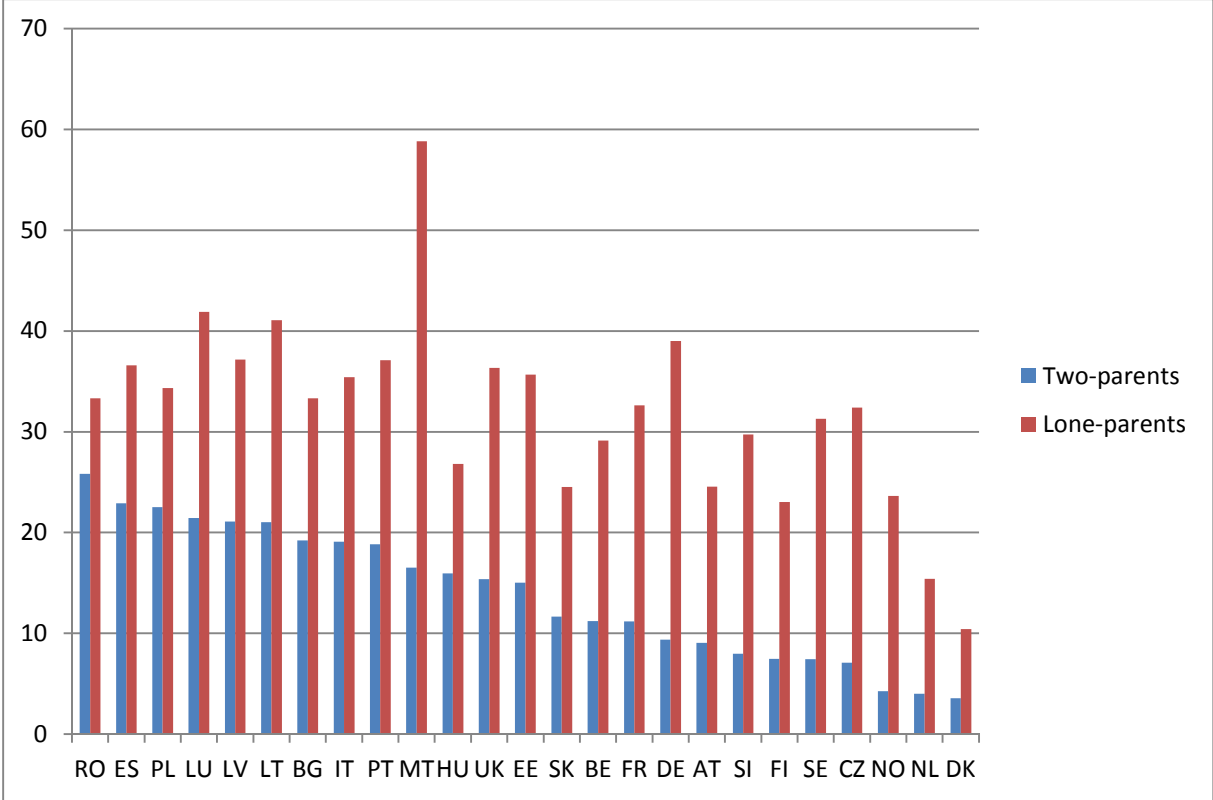
Two observations emerge from this picture. First, in all countries, the results indicate that one-parent households face a significantly higher poverty risk than two-parent households. Second, cross-country differences are ranging from less than 10 per cent in Denmark to 59 per cent in Malta. In-between cross-country variation (measured in percentage point) between one-parent and two-parent households shows that country differences are greater in countries where the overall poverty rate are high (Appendix 1). There is however, some exceptions, notably Nordic countries as Sweden and Norway, reporting higher than expected poverty figures among one-parent households. For instance, the gap between two-parent households' poverty rates and one-parent households' poverty rates are respectively 24 and 19 percentage points. In contrast, the gap in Denmark is only 7 percentage points, and compared to other countries with a high prevalence of poverty, for example Spain, the gap is 14 percentage points. Earlier research found similar figures; see for example Van Lancker, Ghysels and Cantillon (2012).

The descriptive statistics indicate that one-parent households are associated with a higher poverty risk *vis-á-vis* two-parent households. On the basis of previous research we have highlighted several factors that may contribute to this result: age, educational attainment, and labour force participation. Institutional configurations may mitigate or exacerbate the effect of these determinants. To examine whether the association between high poverty risk and one-parenthood at micro-level is spurious or not, we rely on multivariate analysis to be able to control for competing explanations.

Empirical strategy

The dataset used is Survey on Living and Income Conditions (EU-SILC). EU-SILC provides cross-nationally and representative micro-level dataset for all individuals within a household, and provides comparable data on income, employment and living conditions of European households. The dependent variable is a binary indicator of poverty, coded 1 for households living in poverty and 0 for not having a poverty risk. We follow the vast majority of cross-national poverty studies and use a relative measure of poverty. We consider a household as poor if the equivalent household income is below 60% of the national median equivalent household income in the country of residence. Household income is a function of income of the members of the household. Multiple members are likely to pool their resources and expenses, thus the unit of analysis are the household.

Sample restrictions

We conducted original analyses with a recent dataset for 25 European countries[2]. Our analyses are confined to families with children, where a child is defined as a person below 18 years or below 24 years when economically inactive and living in the household. Further, we restrict our sample to working-aged head adults, defined as those 25 through 60 years of age. Partly, this is because concentrating on the working-aged, these age restrictions allow us to hold constant some of the life cycle dynamics that increase the odds of being out of the labour force. The analysis pools the data from these 25 countries into one merged files containing 67592 households.

Micro-level variables

At the micro-level, we consider several independent variables that are likely to affect poverty. Four measures of head of household characteristics are included. *Age* and *age square* is a scaled variable that ranges from 25 and onwards until 60 and refers to the age of the head of the household. *Age square* is included to inspect whether the effect of age on the poverty risk is increasing or decreasing after age. We categorize *head educational attainment* in three

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[2] Austria, Belgium, Bulgaria, Czech republic, Deutschland, Denmark, Estonia, Spain, Finland, France, Hungary, Italia, Lithuania, Luxemburg, Latvia, Malta, Netherland, Norway, Poland, Romania, Sweden, Slovenia, Slovak republic, United Kingdom.

different dummies based on the highest level of education of head using ISCED standard. If the ISCED scale is used as a continuous variable, we thus predict that a change from level 1 to 2 has the same effect as a change from 4 to 5; binary variables are used to avoid such problems. We include binary measures of *Head low education* (ISCED=0-2), *Head medium education* (ISCED=3-4) and *Head high education* (ISCED=5).

Three measures of household characteristics are included. Type of household are organised as a dummy, coded 0 if the household consists of one-parent household, and 1 if two-parent household. We include three measures of household labour market standing by using question on self-defined current economic status. The variables are organized as binary variables for *no-earner*, where none in the household defined themselves as part-time or full-time employed. *One-earner,* one of the household members defined themselves as part-time or full-time employed. *Multiple earners*, two or more of the household members defined themselves as part-time or full-time employed. *Number of children* are included as a continuous variable measuring number of children below 18 years or below 24 when economically inactive living in the household.

Macro-level variables

The main source for the macro-level variables is the Social Assistance and Minimum Income Protection Interim Data-Set (SaMip). SaMip is an on-going research project at the Swedish Institute for Social Research (Stockholm University). The aim of the data set is to improve the possibilities to conduct large-scale institutionally informed comparative and longitudinal analyses of social policy in general and of social assistance and related policy programs of last-resort in particular. The SaMip contains detailed information regarding the level of means-tested benefits in 34 industrialized welfare democracies year-by-year for the period1990-2009. For further information and documentation, see Nelson (2007).

We include five measures of work and family context. *Public childcare* measures the enrolment of children below three years of age in public care. *Social assistance for lone parent with two children* is the average monthly amounts, excluding housing costs, special needs benefits and occasional payments. *Social assistance for two-parent with two children* is the average monthly amounts, excluding housing costs, special needs benefits and occasional payments. *Unemployment transfers* is the unemployment benefits as percentage of GDP. While it would be optimal to use the unemployment replacement as percentage of own income, good measures are not available, thus we include *Total unemployment rate* as well to get a better or cleaner measure of generosity of unemployment.

Last, we include three measures of structural context. The level of *GDP* measured in purchasing power parity EUR. *Employment rate female* is the percentage of female labour

force per working aged citizen. *Single household* is the percentage of single household in the country of residence.

Descriptive statistics

Figure 1 indicates that one-parents have significantly higher poverty risk than two-parents, in all countries. To get a better insight to this problem, table 1 shows descriptive statistics for some important factors for one-parent and two-parent households. At the individual-level, we consider several independent variables that are likely to affect poverty. In general, one-parent households tend to have fewer children compared to two-parent households. Regarding educational attainment, there are great differences between one-parent and two-parent households. In all countries, head of one-parent households are more likely to have lower education compared to head of two-parent household. We found the same figures for higher education; heads of two-parent households are more likely to have higher education compared to heads of one-parent households.

(Table 1)

In general, employment is important to mitigate poverty. In all countries, one-parents are more likely to be non-earner households; nevertheless, cross-country differences are ranging from less than 2.6 per cent in Denmark to 14.4 per cent in the Netherlands. Conversely, non-earner households are very rare among two-parent households, and cross-country differences are smaller than among one-parent households. It is, however, interesting to notice the cross-country differences in the gap in non-earner status between one-parent and two-parent households. Surprisingly, the gap between one-parent and two-parent households in non-employment is nearly 10 percentage points in Sweden, and only 2 percentage points in Denmark.

To summarize, descriptive statistics confirm that one-parent households are a vulnerable group. They are more likely to live in poverty, are lower educated, and more likely to be non-earner households, compared to two-parent households. It seems that one-parenthood entails difficulties to combine the dual role of being a parent and a worker, leading to less disposable income compared to two-parent households. In the case of non-employment or low-income, households have to rely on unemployment or social assistance benefit. Nevertheless, recent research indicates that those benefits are often inadequate to keep out of poverty (Van Mechelen et al. 2010; Nelson 2008). The structure and generosity of work-family policies

might play an important role explaining cross-country differences in poverty among households with dependent children.

Table 2 shows descriptive statistics for macro-level variables used in multilevel analyses. Public childcare varies cross-country, from 2.2 per cent of children below three years in public childcare in Czech Republic, to 65.7 per cent in Denmark. Family transfers vary from 0.8 per cent of GDP in Poland, to 4.2 per cent of GDP in Denmark. Social assistance payments (in purchase power parities, PPP) differentiate between one-parent with one child and two-parent with two children. The minimum income benefit for households with children varies a lot cross-country. Italy is the only country without any social assistance. The unemployment benefit, in per cent of GDP, varies from 0.4 per cent in Poland and Romania, to 3.8 per cent in Belgium.

(Table 2)

To measure the structure of the labour market, we use the total and female employment rate, and the unemployment rate. The total employment rate varies from 60 per cent in Malta to 80 per cent in Sweden. We find the same pattern for the female employment rate; highest in Sweden (77 per cent), and lowest in Malta (42 per cent). The unemployment rate is remarkable high in Spain (20 per cent), and vice versa, very low in Norway (3.5 per cent).

Table 2 indicates differences in generosity of work-family benefits and in labour market structure. Nevertheless, we ask whether work-family policies can explain differences between countries in the prevalence of poverty among households. To examine whether the association between a higher poverty risks at the micro level is spurious or not, we use multivariate analysis to be able to control for competing explanations.

A multilevel approach

In analyses where the dependent variable is a binary indicator, as here where the dependent variable is poor or not poor, logistic regression models can be used in order to examine binary dependent variables. Nevertheless, due to the clustering of households within countries and the inclusion of country-level variables, standard logistic regression model violates the assumption of the independence of errors (Rabe-Heseth and Skrondal 2012). A multilevel modelling technique takes the hierarchical structure of the data explicitly into account and yields less biased standard errors than a regular logistic regression model (Rabe-Heseth and

Skrondal 2012). Consequently, we use multilevel mixed-effects logistic regression model (estimated in STATA). Mixed logit models predict whether a household is poor based on a set of individual- and country-level variables. We use the Maximum Likelihood procedure as our estimation method. When analyzing data with a logistic regression, an equivalent statistic to R-squared does not exist. The model estimates from a logistic regression are maximum likelihood estimates arrived at through an iterative process. They are not calculated to minimize variance, so the OLS approach to goodness-of-fit does not apply. However, to evaluate the goodness-of-fit of our model we use LogLikelihood and McFadden's pseudo R-squared. If the predictors in the model are effective, then the penalty will be small relative to the added information of the predictors. If a model contains predictors that do not add sufficiently to the model, then the penalty becomes noticeable and McFadden's pseudo R-squared can *decrease* with the addition of a predictor. If comparing two models on the same data, McFadden's would be higher for the model with the greater likelihood. We estimate several models with stepwise inclusion of variables, first controlling for household characteristics thus including macro level variables. This would give an insight on how or if macro level variables mitigate differences between one-parent and two-parent households, and single-mother and single-father households.

Multilevel results

The partner effect on poverty

Table 3 displays the odds ratios for the first set of models. The baseline model, an empty model (not shown), analyses the between-country variance without considering any control or explanatory variables on the individual level. In the first analyses, we calculate the intra class correlation coefficient (ICC) as 0.09, indicating that country-level differences explain 9 per cent of the residual variation in poverty risk among families with children.

The first model compares one-parent and two-parent households, with no other control variables included, and analyses the poverty gap among one-parent and two-parent households. Model 2 includes only the micro-level variables. We have constructed a reference group that are comparable with one-parent household. The reference group consists of one-earner partnered households where head of household has medium education; else, they are equal on other variables as age, number of children and immigrant status. The reference group chosen will thus reflect most of the one-parent households and would be comparable with two-parent households, except that they differ in having a partner.

(Table 3)

The estimate from Model 1 shows that one-parent households have much larger odds of being poor; the factor is 3.1 relative to two-parent households. The poverty gap between one-parent and two-parent households decreases when controlling for other individual characteristics (Model 2). The estimates indicate that living in a household with the following characteristics: one-parent household, no one employed, the head has lower education, a great number of children and the head is an immigrant, increases one's odds of being poor. More specifically, living in one-parent household increases the odds of being poor by a factor of 1.9, relative to two-parent households when controlling for all the other individual characteristics. According to the odds ratios, the greatest effects are living in households headed by someone with lower education where the odds of being poor increases with a factor of 2.8 relative to households headed by someone with medium education. In contrast, living in households headed by someone with higher education declines the odds of being poor with a factor of 0.3 relative to households headed by someone with medium education. Living in no-earner households has a strong effect of being poor as well, the odds of being poor increase with a factor of 2.5 relative to one-earner households. Alternatively, living in household with multiple earners reduces the odds of being poor by 0.3 relative to one-earner households. Living in households where the head is an immigrant increases the odds of being poor with a factor on 2.1 relative to the reference household. Households with many children have a higher risk of being poor. This is a continuing variable, which indicates that the effect shown in the table comes from having one additional child. For each child in the household, the odds of poverty increase by a factor of 1.8. Age has reducing effects that are more moderate. Living in a household where head is one year older decline the odds of being poor by a factor of 0.9 relative to household headed by someone who are one year younger. Age square is positive which indicates that the reducing effect of age on the poverty risk is decreasing.

In Model 3 we include work and family measures. This model shows that the poverty gap between one-parent and two-parent households, and the other individual-level variables, are stable and robust when controlling for work-family measures. Enrolment in public childcare among children under the age of three is the only work-family variable that is significant at a 5 per cent level. The estimate indicates that a one-unit increase decreases the poverty risk by a factor of 0.98. The other insignificant results points in the expected direction, except social assistance among one-parent households. Nevertheless, other variables may confound some of our work-family variables; Model 4 allows a further inspection.

In Model 4 we include labour market- and country structure. Still, the poverty gap between one-parent and two-parent households, and the other individual-level variables, is stable and robust when including country-level variables.

Our assumption that labour market- or country structure confounds some work and family measures variables is supported in Model 4. It is interesting to note that when including labour market- and country structure variables, some variables turns out to be significant and vice versa. An increase in the minimum income scheme for two-parent household indicates a reduction in the odds of being poor by a factor of 0.99 for a one-unit increase in the minimum income scheme for two-parent household. This seems like a trivial effect; however, it is worth noticing that the effect shows one unit change. On the other hand, the minimum income scheme for one-parent households turns out to be significant in Model 4 as well, and one-unit increase slightly increases the odds of being poor. The direction is unexpected but might be a results of the disproportion between two-parent households and one-parent households, and can be understood that the minimum income scheme for one-parent households have no effect on two-parent households, which are the reference group. To test this assumption, we add an interaction term between one-parent household and the minimum income scheme for one-parent households. Because in logistic regression the interpretation of interaction effects is complicated, we only report the coefficients (not odds ratios) and concentrate on significance and direction. The interaction term is significant and negative, which indicates that one-unit increase in the minimum income scheme for one-parent households declines the risk of being poor among one-parent household (results in Appendix 2). Further, a one-unit increase in the unemployment benefit declines the odds of being poor by a factor of 0.84 (borderline significant p<0.7). None of the labour market and country structure variables are significant. McFadden's pseudo R-squared is decreasing when including work and family measures, which indicate that the new information do not add sufficiently to the full model (Model 4).

Combinations of type of households and employment status

Estimates from Table 3 indicate very strong odds ratios of one-parent households and households' employment status. Variables used might overestimate the effect of one-parent households and do not differentiate between combinations of type of households and employment status. As mentioned above, interaction terms are not preferable when using logit-modelling estimation. To give a further inspection on how the poverty risks vary after combinations of type of households and labour market status, six different groupings are used. Two-parent families with one-earner are the reference household. The estimates from Model 1 indicate that two-parent and one-parent households with no one employed in the household have a high risk of poverty relative to the reference household, respectively by factors of 2.47 and 2.83. Further, two-parent and one-parent households with no one employed in the household are not statistical different from each other. One-parent and one-earner households, have higher odds of being poor with a factor of 1.26 relative to two-parents and one-earner households. Households with more than one employed are better off compared to the reference households. Two-parent and one-parent households with more than one employed have a lower odds of being poor, respectively by a factor of 0.23 and 0.62 relative to the

reference household. Two-parent and one-parent households with more than one employed are statistical different from each other. Living in a one-parent and no-earner household have the highest odds of being poor, 2.83, relative to two-parents and one-earner households. Controlling for work-family variables (Model 2 in Table 4) or labour market- and country structure (Model 3 in Table 4) does not alter any of the odds ratios of the individual variables. McFadden's pseudo R-squared is decreasing when including work and family measures, which indicate that the new information do not add sufficiently to Model 3.

(Table 4)

The gender gap in poverty risk among one-parent households

Turning to the gender gap in poverty risk among one-parent households comparing single-mother and single-father households, we use the same empirical strategy as the analysis in table 3. The baseline model (not shown), analyses the between-country variance without considering any control or explanatory variables. The intra class correlation coefficient (ICC) is calculated as 0.05, indicating that country-level differences explain 5 per cent of the residual variation in poverty risk among families with children. Model 1 compares single-mother and single-father households and does not include any control variables, thus reflecting the gender gap in poverty risk among one-parent households. The estimate from Model 1 shows that single-father households have significant lower odds of being poor; the factor is 0.63 relative to single-mother households. In Model 2 (Table 5), individual characteristics are included. The reference group consists of single-mother, one-earner households where the head has medium education; else, they are equal on other variables as age, number of children and immigrant status. The gender gap in one-parent households' poverty risk is reduced when controlling for other individual characteristics (Model 2). The odds of being poor are 0.83 if living in single-father households relative to single-mother households, when controlling for all the other individual characteristics. Other individual characteristics of interest are that one-parent household where head has higher education has much lower odds of being poor relative to one-parent household with medium education. On contrary, the odds of being poor are 2.32 in one-parent household where head has lower education. Number of children has a very strong effect of the poverty risk, the odds of being poor increase with a factor of 2.24 for each additional child. Living in no-earner households has a strong effect of being poor as well, the odds of being poor increase with a factor of 2.54 relative to one-earner households. Alternatively, living in household with multiple earners

reduces the odds of being poor by 0.38 relative to one-earner households. Age has moderate reducing effects. Living in a household where the head is one year older declines the odds of being poor by a factor of 0.86 relative to household headed by someone who are one year younger. Age square is positive which indicate that the reducing effect of age on the poverty risk is decreasing.

(Table 5)

In Model 3, work and family variables are included. The results indicate that the gender gap among one-parent households does not alter when controlling for work and family measures. The same pattern is found for the other individual-level variables. Regarding work-family variables, enrolment in public childcare among children under the age of three is the only variable that is significant at a 5 per cent level. The estimate indicates that a one-unit increase decreases the poverty risk by a factor of 0.99 (borderline significant p<0.8). In the last model (Model 4), labour market- and country structure is included. Still, the gender gap in poverty among one-parent households, and the other individual-level variables, does not alter when including country-level variables. In contrast to the joint analyses of one-parent and two-parent households, none of the labour market- or country structure variables are significant. McFadden's pseudo R-squared is decreasing when including work and family measures, which indicate that the new information do not add sufficiently to Model 3.

Discussion and concluding remarks

This study provides multi-level, cross-national analyses of the poverty risk among one-parent and two-parent households. Incorporating data on 25 European countries, we assess the effects of individual characteristics and work-family policies. Our descriptive analysis showed that one-parent households are more likely to be poor compared to two-parent households, and this apply to all 25 countries included in the analysis. Additionally, we found great country differences between one-parent and two-parent households. In general, the country differences are greater in countries where the overall poverty rate is high. However, we find some exceptions, as the poverty gap between one-parent and two-parent households is respectively 24 and 19 percentage points in Sweden and Norway, which is higher than expected. The descriptive statistic gives, however, only an imprecise picture of the division of poverty among one-parent and two-parent households in the 25 countries chosen. To confirm

whether the association between high poverty risk and parenthood at micro-level is not spurious, we rely on multivariate analysis to be able to control for competing explanations.

The general picture from the main analysis is that households with multiple earners, head highly educated, older heads and few children was less likely to be poor, while one-parent households, non-earners, younger heads, and households with multiple children was more likely to be poor. Further inspections reveal that individual characteristics shape poverty. Work-family policies had only limited reducing effects on the poverty gap between one-parent and two-parent households. Family transfers, social assistance and unemployment transfers do reduce households' poverty risk, but individual-level characteristics are particularly robust and do not alter when controlling for macro-level variables. Moreover, we carried out a further inspection on how the poverty risks varying after combinations of type of households and labour market status. One-parent and two-parent in non-earner households are worse off compared to one-earner or multiple-earner households, this result were expected. However, family structure does not matter between non-earner households; one-parent and two-parent households where not statistical different from each other. On the other hand, family structure does matter in one-earners and multiple-earner households. Among one-earner households, differences in the poverty gap might be results of differences in one-parent households' individual factors that are not encompassed by the models, and that work-family policies are not sufficient to tighten the poverty gap. Further, one-parents and two-parents from multiple-earner households are statistical different from each other. We may explain this finding by the composition of the employed in the household. In one-parent households, youngsters are more likely to be an additional earner, which implies that they typically work part-time or in low-wage jobs. We restricted our sample to households with children, where a child was defined as a person below 18 years or below 24 when economically inactive living in the household, however, it is possible that one-parent households have economic active children in addition to economic inactive children living in the household.

In the last analyses, we examined whether work-family policies reduce the gender gap in poverty among one-parent households. The results indicate that single-mother households had a significant higher poverty risk compared to single-father households. Moreover, the same picture arises, individual characteristics shape the poverty risk among one-parent households, and including work-family characteristics do not diminish the gender gap. In contrast to the joint analyses of one-parent and two-parent households, it seems that individual characteristics count more for one-parent households though none of the labour market- or country structure variables was significant.

Lastly, did our results give an answer to our research questions? To sum up, our first research question was; can work-family policies reduce the poverty gap between one-parent and two-

parent households? The second was; can work-family policies reduce the gender gap in poverty among single-mothers and single-father households? Overall, the results indicate that work-family policies are not sufficient to reduce the poverty gap between one-parent and two-parent households, or between single-mother and single-father households. Individual characteristics were the main factor to tighten the poverty gap. Obviously, some work-family measures do reduce households' poverty risk although the effect on a reduction of the poverty gap was very limited. For instance, high enrolment in public childcare indicates a lower poverty risk, which points in the direction that policy which arranges possibilities for combining work and family life carry out lover poverty risk among households with children. In contrast, high female labour force participation is not significant but points in the directions of higher poverty risk. At first sight this might be regarded as somewhat surprising. A probable explanation is that high female labour force participation pushes the median income upwards. Consequently; high female labour force participation gives a higher poverty line. Vulnerable groups outside the labour market thus would have relatively higher poverty risk compared to those employed. This is supported by the strong effect of household-level employment found in our analyses.

It is worth noticing that our definition of poverty is based on the equivalent household income for one year, and this might underestimate the effect of work-family policies on households' poverty risks. Measuring poverty only for one year would probably include many households hit by "random" shocks in their household economy (e.g. after a divorce it takes some time before a household would receive benefits), thus the benefits are not included in the income measure used in EU-SILC (especially for those countries using administrative register data). Partly to address the limitations of this study, we encourage future research to give more effort on studying the effect of work-family policies on long-term poverty, on individual-level employment, and the use of public childcare among vulnerable groups. This is essential to extend the understanding of vulnerable groups' use of work and family friendly measures, which in turn might be crucial to understand the effect of work-family policies on the poverty risk among household with children.

References

Bradshaw, J. (2006). Child benefit packages in 15 countries in 2004. In *Children, Changing Families and Welfare States*, edited by J. Lewis. Cheltenham: Edward Elgar.

Campione, W. (2008). Employed women's well-being: The global and daily impact of work. *Journal of Family and Economic Issues*, 29, 346-361.

Casper, L. M., McLanahan, S. S., and Garfinkel, I. (1994). The Gender-Poverty Gap: What We Can Learn from Other Countries. *American Sociological Review*, 59(4); 594-605.

Christopher, K. 2002. Single Motherhood, Employment, or Social Assistance: Why are U.S. Women Poorer than Women in Other Affluent Nations? *Journal of Poverty,* 6 (2):61 - 80.

Christopher, K. 2002. Welfare State Regimes and Mothers' Poverty. *Social Politics: International Studies in Gender State and Society,* 9 (1):60-86.

Christopher, K. 2005. A "Pauperization of Motherhood"? Single Motherhood and Women's Poverty over Time. *Journal of Poverty* 9 (3):1-23.

Christopher, K., England, P., Smeeding, T.M. and K. R. Phillips. 2002. The gender gap in poverty in modern nations: Single motherhood, the market, and the state. *Sociological Perspectives* 45 (3):219-242.

Ciabattari, T. (2007). Single mothers, social capital, and work-family conflict. *Journal of Family and Economic Issues,* 28, 34-60.

Daly, M., and Jane Lewis. 2000. The concept of social care and the analysis of contemporary welfare states. *British Journal of Sociology* 51 (2):281-298.

DeBord, K., Canu, R. F., and Kerpelman, J. (2000). Understanding a work-family fit for single parents moving from welfare to work. *Social Work,* 4, 313-324.

Edin, K., and Kefalas, M. (2005). *Promises I can keep: Why poor women put parenthood before marriage*. Berkeley: University of California Press.

European Commission (2002). Joint Employment Report Luxembourg, Office for Official Publication of the European Communities.

Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism.* Cambridge: Polity Press.

Esping-Andersen, G. (1999). *Social Foundations of Postindustrial Economies*. Oxford, Oxford University Press.

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

Ferrarini, T. (2006). *Families, states and labour markets*. Cheltenham: Edward Elgar.

Forma, P. (2009). Work, family and intensions to withdraw from the workplace. *International Journal of Social Welfare*, 18, 183-192.

Fraser, N. (1994). After the Family Wage: Gender Equity and the Welfare State. *Political Theory* 22 (4):591-618.

Gemelli, M. (2008). Understanding the complexity of attitudes of low-income mothers toward work and family in the age of welfare reform. *Gender Issues*, 25, 101-113.

Ghysels, J. and Van Lancker, W. (2011). The unequal benefits of activation: an analysis of the social distribution of family policy among families with young children. *Journal of European Social Policy* 21(5): 472-485.

Haddock, S. A., Zimmermann, T. S., Ziemba, S. J. and Lyness, K. P. (2006). Practices of dual earner couples successfully balancing work and family. *Journal of Family and Economic Issues*, 27, 207-234.

Huang, Y. H., Hammer, L. B., Neal, M. B. and Perrin, N. A. (2004). The relationship between work-to-family conflict and family-to work conflict: A longitudinal study. *Journal of Family and Economic Issues*, 25, 79-100.

Howe, B., and Pidwell, R. (2004). Single parents and paid work. *Australian Journal of Social Issues*, 39, 169-181.

Lewis, J. (1992). Gender and the development of welfare regimes. *Journal of European Social Policy* 2 (3):159-173.

Lewis, J., Knijn, K., Martin, C. and Ostner, I. (2008). Patterns of Development in Work/Family Reconciliation Policies for Parents in France, Germany, the Netherlands, and the UK in the 2000s. *Social Politics: International Studies in Gender Stat and Society* 15 (3):261-286.

Malone, K., Stewart, S. D., Wilson, J., and Korsching, P.F (2010). Perceptions of financial well-being among American women in diverse families. *Journal of Family and Economic Issues*, 31, 63-81.

Mannis, V. S. (1999). Single mothers by choice. *Family Relations*, 48, 121-128.

Misra, J, Budig, M. J. and Moller, S. (2007a). Reconciliation policies and the effects of motherhood on employment, earnings, and poverty. Journal of Comparative Policy Analysis 9 (2):135-55

Misra, J, Moller, S and Budig, M. J. (2007b). Work Family Policies and Poverty for Partnered and Single Women in Europe and North America. *Gender and Society*, 21; 804-825.

Moen, P., and Roehling, P. (2005). *The career mystique.* Lanham, MD: Rowman and Littlefield.

Montanari, I. (2000). From family wage to marriage subsidy and child benefits: controversy and consensus in the development of family support. *Journal of European Social Policy* 10 (4):307-333.

Neblett, N. G. (2007). Patterns of single mothers' work and welfare use. *Journal of Family and Economic Issues,* 28, 1083-1112.

Nelson, K. (2007). *Introducing SaMip: The Social Assistance and Minimum Income Protection Interim Dataset*. S-WoPEc No. 11/2007. Swedish Institute for Social Research.

Nelson, Kenneth. 2008. Minimum Income Protection and European Integration: Trends and Levels of Minimum Benefits in Comparative Perspective 1990-2005. *International Journal of Health Services* 38 (1):103-124.

O'Connor, J, Orloff, A. S, and Shaver. S. (1999). *States, Markets, Families.* Cambridge: Cambridge University Press.

O'Connor, J. (2005). Employment-anchored social policy, gender equality and the open method of policy coordination in the European union. *European Societies* 7 (1):27-52.

Orloff, A. S. (1993). Gender and the Social Rights of Citizenship: The Comparative Analysis of Gender Relations and Welfare States. *American Sociological Review* 58 (3):303-328.

Rabe-Hesketh, S. and Skrondal, A.(2008). *Multilevel and Longitudinal Modeling Using Stata.* Stata Press, Second Edition.

Schieman, S., and Young, M. (2011). Economic hardship and family-to-work conflict: The importance of gender and work conditions. *Journal of Family and Economic Issues*, 32, 46-61.

Son, S., and Bauer, J. W. (2010). Employed rural, low-income, single mothers' family and work over time. *Journal of Family and Economic Issues,* 31, 107-120.

Tuttle, R., and Garr, M. (2009). Self-employment, work-family fit, and mental health among female workers. *Journal of Family and Economic Issues,* 30, 282-292.

Van Lancker, W. (2012). "The European World of Temporary Employment: Gendered and Poor?" *European Societies* 14(1): 83-111.

Van Lancker, W., Ghysels, J., and Cantillon, B. (2012). *An international comparison of the impact of child benefits on poverty outcomes for single mothers.* CSB Working Paper No. 12/03. Antwerp: Herman Deleeck Centre for Social Policy

Van Mechelen, N., Marx, I., Marchal, S., Goedemé, T., and Cantillon, B. (2010). The Evolution of Social Assistance and Minimum Wages in 25 European Countries, 2001 2009. Antwerp: Herman Deleeck Centre for Social Policy.

Winslow, S. (2005). Work-family conflict, gender, and parenthood, 1977-1997. *Journal of Family and Economic Issues,* 26, 727-755.

Tables

Table 1. Descriptive statistic of the analytical sample, individual level

		N	Age		Number of children		Non-earners		Head low education		Head meadium education		Head higher education	
		All	one-parent HH	two-parent HH	one-parent HH	two-parent HH	one-parent HH	two-parent HH	one-parent HH	two-parent HH	one-parent HH	two-parent HH	one-parent HH	two-parent HH
AT	Austria	1781	40,17	41,98	1,48	1,8	7,9	1	14,6	3,9	67,7	59,6	17,7	36,4
BE	Belgium	2023	41,12	41,48	1,66	1,91	9,9	2,3	30,5	8,9	37,6	31,9	31,9	59,1
BG	Bulgaria	1463	42,77	42,68	1,41	1,59	3,8	1,1	17,3	15,7	50	49,8	32,7	34,5
CZ	Czech republic	2637	39,81	41,06	1,59	1,69	5,9	0,4	5,9	1,6	78,2	70,7	15,8	27,8
DE	Deutschland	3175	41,95	42,53	1,39	1,72	11,1	1	12,2	2,4	55,6	39,4	32,3	58,2
DK	Denmark	2154	43,25	42,72	1,57	1,89	2,6	0,4	16,2	3,7	47,8	39,1	35,9	57,1
EE	Estonia	1804	42,51	42,08	1,71	1,85	8,5	1,4	8	3,1	54	48,9	37,9	47,9
ES	Espania	4659	42,26	43,46	1,53	1,67	6,7	2,3	34,2	23,5	28,6	26,7	37,2	49,8
FI	Finland	3600	43,68	42,83	1,65	1,98	6,5	1	12,8	2,4	42,4	35,3	44,8	62,3
FR	France	3652	42,31	41,88	1,7	1,93	7,4	1,6	17,1	5,3	50,5	43,9	32,5	50,8
HU	Hungary	3266	42,18	42,49	1,58	1,79	9	2,4	12,1	8	58,4	59	29,6	32,9
IT	Italia	5755	42,36	43,97	1,5	1,62	5,2	1,9	24,5	17,2	58,2	57,5	17,3	25,3
LT	Lithuania	1538	42,66	43,49	1,45	1,61	10,6	2,4	3,7	2,5	55,6	50,9	40,7	46,6
LU	Luxenburg	2094	42,55	42,38	1,71	1,92	9,8	1,7	36,3	23,9	37,2	39,7	26,5	36,3
LV	Latvia	1805	41,24	41,85	1,49	1,66	5,9	1,8	10,1	4,9	58,7	53,1	30,5	42
MT	Malta	1272	41,43	43,86	1,72	1,73	17	2,1	71	38,9	21	34,9	8	26,1
NL	Netherland	3554	44,42	43,53	1,66	1,95	14,4	1,8	14,9	4,5	45,9	40,3	39,1	55,2
NO	Norway	1996	42,19	42,75	1,6	1,97	5,5	1	16,2	4,9	40,8	35,8	43	59,3
PL	Poland	4659	42,68	42,61	1,65	1,81	12	1,8	11,2	2,2	63,9	67,4	24,9	30,4
PT	Portugal	1532	42,24	43,69	1,65	1,6	4,1	1,4	52	46,2	29,7	31,6	18,2	22,2
RO	Romania	1812	43,54	43,6	1,34	1,55	6,9	2,1	15,5	10,8	62,9	70,8	31,6	18,4
SE	Sweden	2462	43,6	41,31	1,59	1,87	10,6	1	12,1	1,4	54,9	44,4	32,9	54,1
SI	Slovenia	3902	42,03	43,9	1,58	1,76	6,5	1,2	9,5	2,4	59,7	57,3	30,7	40,3
SK	Slovak republic	2131	43,24	43,84	1,54	1,85	8,6	1	2,6	1	64,9	58,1	32,5	40,9
UK	United Kingdom	2228	39,3	42,97	1,81	1,87	5,6	1	17,2	5,4	61,9	42,1	20,9	52,5

Table 2. Descriptive statistic of the analytical sample, country level

		N	Public child-care <3 years (%)	Family transfers (in % of GDP)	Social assistance lone-parents	Social assistance two-parents	Unemploy-ment benefit (in % of GDP)	Total employment rate	Employment rate, female	Unemploy-ment rate	Single household (%)
AT	Austria	1781	12,1	3,1	10128	20782	1,8	75	69	4,4	36
BE	Belgium	2023	48,4	2,2	28704	52394	3,8	68	62	8,3	35
BG	Bulgaria	1463	14,6	2,0	108	399	0,5	67	62	10,2	19
CZ	Czech republic	2637	2,2	1,4	6202	13746	1,1	70	62	7,3	24
DE	Deutschland	3175	17,8	3,2	1727	3751	1,9	77	71	7,1	40
DK	Denmark	2154	65,7	4,2	8280	23323	2,1	79	76	7,4	46
EE	Estonia	1804	17,5	2,3	1902	4302	1,2	74	71	16,9	35
ES	Espania	4659	37,5	1,5	61327	11170	3,7	73	66	20,1	19
FI	Finland	3600	28,6	3,3	5795	12072	2,4	74	73	8,4	40
FR	France	3652	42,0	2,6	3840	7083	1,9	70	66	9,7	35
HU	Hungary	3266	8,8	3,0	28150	87123	1	62	57	11,2	24
IT	Italia	5755	29,2	1,4	-	-	0,8	62	51	8,4	31
LT	Lithuania	1538	13,7	2,8	448	1509	0,9	71	69	17,8	32
LU	Luxemburg	2094	38,6	4,0	51323	105440	1,4	68	60	4,4	29
LV	Latvia	1805	16,1	1,7	79	231	1,6	73	71	18,7	27
MT	Malta	1272	6,8	1,3	190	326	0,6	60	42	6,9	19
NL	Netherlands	3554	55,9	1,3	31000	3562	1,4	78	73	4,5	36
NO	Norway	1996	51,3	3,2	41200	22321	0,7	78	76	3,5	41
PL	Poland	4659	7,9	0,8	14300	1064	0,4	66	59	9,6	25
PT	Portugal	1532	47,4	1,5	18890	129599	1,4	74	70	10,8	18
RO	Romania	1812	14,3	1,7	11000	399	0,4	64	56	7,3	21
SE	Sweeden	2462	46,7	3,2	28000	18131	1,3	80	77	8,4	40
SI	Slovenia	3902	33,8	2,1	20500	215077	0,6	72	67	7,2	27
SK	Slovak republic	2131	3,0	1,7	17000	12510	1	69	61	14,4	23
UK	United Kingdom	2228	40,8	1,8	26000	1204	0,8	75	69	7,8	31

Table 3.Multilevel results, all. OR

	Model 1	Model 2	Model 3	Model 4
Household characteristics				
One-parent	3,10***	1,93***	1,93***	1,93***
Age		0,89***	0,89***	0,88***
Age squared		1,12***	1,12***	1,12***
Number of children		1,82***	1,82***	1,81***
Low education		2,78***	2,79***	2,78***
Medium education (ref)				
High education		0,31***	0,31***	0,32***
Non-earners		2,31***	2,31***	2,31***
One-earner (ref)				
Multiple-earners		0,28***	0,28***	0,28***
Immigrants		2,10**	2,10***	2,11***
Work and family				
Public childcare			0,98***	0,99
Family transfers			0,930	0,97
Social assistance (single hh)			1,000	1,01**
Social assistance (partnered hh)			0,990	0,99**
Unemployment transfers			*0,820*	*0,84*
Unemployment rate (total)			1,07***	*1,04*
Labour market structure				
Female labour force participation				0,99
Country structure				
GDP 2010				0,99
Single household				0,98
Constant	0,15***		3,46***	3,54***
ICC	0,091	0,085	0,031	0,027
ll(model)	-27734	-23680	-23666	-23665
McFadden pseudo-R2	0,032	0,035	0,012	0,012
AIC	55474	47382	47367	47368
BIC	55502	47482	47521	47560

Note: p<0.05, ** p<0.01, *** p<0.001

Table 4. Multilevel results, combination of type of household and employment status. OR.

	Model 1	Model 2	Model 3
Household characteristics			
One-parent household and:			
Non-earners	2,83***	2,82***	2,83***
One-earners	1,26***	1,26***	1,27***
Multiple-earners	0,62***	0,62***	0,62***
Two-parent household and:			
Non-earners	2,47***	2,47***	2,47***
One-earners (ref)			
Multiple-earners	0,23***	0,23***	0,24***
Head of household			
Age	0,90***	0,89***	0,89***
Age squared	1,11***	1,11***	1,11***
Number of children	1,82***	1,81***	1,82***
Low education	2,78***	2,79***	2,79***
Medium education (ref)			
High education	0,32***	0,31***	0,32***
Immigrants	2,11***	2,11***	2,12***
Work and family			
Public childcare		0,98**	0,99
Social assistance (single hh)		1,010	1,01*
Social assistance (partnered hh)		0,990	0,99*
Unemployment transfers		0,960	0,81*
Labour market structure			
Female labour force participation			0,99
Country structure			
GDP 2010			0,99
Single household rate			0,98
Constant	2,71***	3,52***	3,56***
ICC	0,086	0,031	0,011
ll(model)	-23609	-23601	-23594
McFadden pseudo-R2	0,035	0,011	0,010
AIC	47244	47239	47232
BIC	47362	47402	47432

Note: p<0.05, ** p<0.01, *** p<0.001

Table 5 Multilevel results, one-parent households. OR

	Model 1	Model 2	Model 3
Household characteristics			
Single-father	0,83*	0,84*	0,84*
Age	0,87***	0,87***	0,87***
Age squared	1,12***	1,12**	1,12**
Number of children	2,24***	2,24***	2,24***
Low education	2,30***	2,32***	2,32***
Medium education (ref)			
High education	0,37***	0,38***	0,38***
Non-earners	2,53***	2,54***	2,54***
One-earner (ref)			
Multiple-earners	0,38***	0,38***	0,38***
Immigrants	1,46***	1,48***	1,48***
Work and family			
Public childcare< 3 years		0,99*	0,99
Social assistance (single hh)		0,99	0,99
Unemployment transfers		0,88	0,97
Unemployment rate (total)		1,04*	1,05*
Labour market structure			
Female labour force participation			0,99
Country structure			
GDP 2010			0,99
Single household			0,99
Constant	10,28***	12,3***	10,33***
ICC	0,05	0,03	0,03
ll(model)	-4074	-4067	-4067
McFadden pseudo-R2	0,016	0,008	0,007
AIC	8171	8167	8174
BIC	8247	8278	8313

Note: p<0.05, ** p<0.01, *** p<0.001

Appendix 1 Poverty rates for lone parents and couples at active age (25-60) with dependent children, European countries.

	Two-parent household	One-parent household	% diff
Austria	9,05	24,57	15,52
Belgium	11,21	29,13	17,92
Bulgaria	19,21	33,33	14,12
Czech republic	7,1	32,39	25,29
Deutschland	9,37	38,99	29,62
Denmark	3,57	10,43	6,86
Estonia	15,02	35,68	20,66
Spain	22,9	36,6	13,7
Finland	7,49	23,02	15,53
France	11,18	32,62	21,44
Hungary	15,94	26,81	10,87
Italia	19,09	35,4	16,31
Lithuania	21,04	41,05	20,01
Luxemburg	21,46	41,88	20,42
Latvia	21,08	37,17	16,09
Malta	16,51	58,82	42,31
Netherland	4,03	15,4	11,37
Norway	4,27	23,64	19,37
Poland	22,53	34,32	11,79
Portugal	18,85	37,09	18,24
Romania	25,83	33,33	7,5
Sweden	7,43	31,29	23,86
Slovenia	7,97	29,74	21,77
Slovak republic	11,68	24,52	12,84
United Kingdom	15,37	36,34	20,97

Appendix 2 Multilevel results with interaction terms, all.

Household characteristics	Coeff.	
One-parent	0,44	***
Age	-0,116	***
Age squared	0,001	***
Number of children	0,592	***
Low education	1,02	***
Medium education (ref)		
High education	-0,155	***
Non-earners	0,906	***
One-earner (ref)		
Multiple-earners	-1,259	***
Immigrants	0,746	***
Work and family		
Public childcare < 3 years	-0,005	
Family transfers	0,006	
Social assistance (single hh)	0,002	*
Social assistance (partnered hh)	-0,001	*
Unemployment transfers	-0,206	*
Labour market structure		
Female labour force participation	-0,001	
Country structure		
GDP 2010	-0,001	
Single household rate	-0,014	
Unemployment rate	0,044	*
Interaction term		
Social assistance (single hh) * one-parent	-0,001	*
constant	1,290	***
ICC	0,027	
ll(model)	-23911	
McFadden pseudo-R2	0,007	
AIC	47867	
BIC	48069	
N	67592	

Note: p<0.05, ** p<0.01, *** p<0.001