The role of education for poverty risks revisited: Couples, employment and profits from work–family policies

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Abstract
This article explores the specific effects of work-related family policies on poverty risks among various educational groups. Based on European Union Statistics on Income and Living Conditions (EU-SILC) data (2005–2010) and policy indicators drawn from the Multilinks project, we estimated a series of multilevel models for approximately 123,000 households with children below the age of 6 years in 25 European countries. The results emphasize clear education-specific differences and thus are essential for the ongoing social-policy discourse. Interestingly, with respect to infant childcare, the strongest poverty-reducing effect was identified among women with mid-level education and their families, followed by low-educated women. In contrast, full-time care for children aged 3–5 years reduced the poverty risk only among women with mid- and high-level education and their families, whereas a medium length of well-paid parental leave was observed to be of particular importance to low-qualified mothers.

Keywords
Couples, education, employment, family policy, poverty

Introduction
Families with a limited labour force participation are among the groups in Western societies that are at a particular risk of poverty (Muffels and Fouarge, 2002; Vleminckx, 2002). This group includes households with small children or families with low levels of education. Low-qualified mothers are dropping out of occupational life for more extended periods of time following childbirth than mothers with higher educational levels and more rarely assume full-time jobs after re-entry (Blossfeld and Hofmeister, 2007; Evertsson et al., 2009; Rubery et al., 1999; Uunk et al., 2005). In turn, low-qualified men are increasingly facing deteriorated employment and income opportunities (Blossfeld et al., 2007). Families with...
small children and low levels of education thus often fail to achieve a sufficient volume of labour market participation in order to prevent life in poverty. In this context, several European welfare states have attempted to promote continuous labour force participation for both parents by the agency of various family policy initiatives. Many recent studies confirm that these measures are associated with a lower poverty risk among families with children (Bäckman and Ferrarini, 2010; Engster and Olofsdotter Stensöta, 2011; Misra et al., 2007, 2012; Palme, 2006).

However, international poverty research has not yet exhaustively attended to the specific effects of work-related family policies on poverty risks among various social strata or educational groups. From the perspective of stratification theory, this aspect would seem to be decisive, as employment opportunities are very unevenly distributed among households in postindustrial societies (De Graaf-Zijl and Nolan, 2011; Gregg et al., 2010). In this regard, research has indicated that work–family policies could reduce class inequalities (Crompton, 2006). In particular, families with low educational levels would rely on such policies to balance the competing demands of family and work in an effort to prevent poverty (Bonoli, 2007). Other investigations into the education-specific effects of social policies have recently cautioned against the potentially polarizing effects of the social investment state, which may emerge once employment-centred family policies are used more often by already privileged families (Cantillon, 2011; Ghysels and Van Lancker, 2011).

This article concentrates on couple families with infants. Alongside the poverty-reducing effect of work–family policies, we also considered the connection between education-specific employment patterns among couple households and poverty risks at the microlevel. The extent to which both parents contribute to preventing poverty in postindustrial societies becomes relevant in the course of increasing female labour force participation and low-qualified men’s sinking employment and income opportunities. This is an aspect that so far has received insufficient attention in poverty research, with most studies focusing traditionally on breadwinners’ or single persons’ socioeconomic status.

In order to address our research questions, we estimated a series of multilevel models for approximately 123,000 households with children below the age of 6 years in 25 European countries (Rabe-Hesketh and Skrondal, 2008). We resorted to the most recent data derived from the European Union Statistics on Income and Living Conditions (EU-SILC) study (2005–2010) and the family policy indicators of the Multilinks project (Keck and Saraceno, 2011a). Unlike other studies, we narrowed down our analysis to families with children younger than 6 years, as this group is also the target of the family policies referred to here. With the exception of Malta, we included all EU-25 states in addition to Norway. Previous comparative analyses of the poverty-preventing effects of family policies concentrated on the ‘old’ Organisation for Economic Co-operation and Development (OECD) countries and failed to consider the countries of Central and Eastern Europe (Bäckman and Ferrarini, 2010; Engster and Olofsdotter Stensöta, 2011; Misra et al., 2007, 2012).
Background and previous research

Couples’ education, employment and poverty

Comparative research has demonstrated that education is the most crucial resource for occupational success (Erikson and Jonsson, 1996; Shavit and Müller, 1998) and plays a key role in reducing poverty risks (Fusco et al., 2010; Gesthuizen and Scheepers, 2010). Due to a variety of societal developments over the past decades, the educational resources available to both partners to prevent poverty have become increasingly important. Recent studies have shown that, in many Western societies, the income and employment opportunities of male employees with low educational levels, in particular, have deteriorated since the 1980s (Blossfeld et al., 2007; DiPrete et al., 2006; Gallie and Paugam, 2000; Scherer, 2005). This decline is due to a change in labour markets. Postindustrial labour markets are characterized by greater wage inequality and a higher unemployment risk. Due to job cuts in the industrial sector, individuals with lower levels of qualification are frequently unemployed or only employed in the poorly paid services sector. From the viewpoint of households, this process implies that a male breadwinner’s income may often no longer safeguard his family against poverty (Esping-Andersen, 2002; Vleminckx, 2002).

In analogy, we are presently observing a rising extent of labour force participation among highly qualified women (Blossfeld and Drobníč, 2001; Blossfeld and Hakim, 1997; Blossfeld and Hofmeister, 2007; Rubery et al., 1999). After their children are born, low-qualified women interrupt their employment careers for a longer period of time to re-enter the labour market with less intensity, if at all. This is especially the case when work–family policies are lacking (Evertsson et al., 2009; Uunk et al., 2005). From a longitudinal perspective, extended employment interruptions and non-continuous occupational careers result in downgraded skills and reduced income opportunities (Adda et al., 2011; Rønsen and Sundström, 2002). These two developments are amplified at the household level: although dual-earner couples are increasingly becoming the dominant family model in all Western countries (Blossfeld and Drobníč, 2001; Daly, 2005; Rubery et al., 1999), it is families with low levels of education in particular who are the ones who often cannot fall back on a second income. Growing poverty risks are the outcome (Cantillon et al., 2001).

The significance attached to educational levels and labour force participation in preventing poverty risks is known in research. This article examines the extent to which both parents’ educational levels are associated with a given family’s poverty risk and the role labour participation plays in this regard. Several authors have pointed out that the pooling of income and working hours is of increasing relevance for inequality between households (Blossfeld and Drobníč, 2001; Blossfeld and Timm, 2003; Esping-Andersen, 2007, 2009). Apart from scarce exceptions (Gesthuizen and Scheepers, 2010; Misra et al., 2012), research in poverty has focused on either individuals’ or breadwinners’ characteristics, while disregarding their respective partners’ features. In contrast, we consider both parents’ educational levels and investigate the following hypothesis:

\[ H1. \] The higher poverty risk among families with low-qualified fathers and low-qualified mothers can be partially explained by a lower level of labour force participation.

Work-related family policies, education as moderator and poverty

Families with infants are increasingly confronted with large-scale challenges in the course of growing labour market risks. Children require care and thus set limits to their parents’ – mostly their mothers’ – extent of labour force participation. Moreover, they also entail additional costs. Measures to support families have therefore been implemented in all Western welfare states, yet their design and extent vary considerably according to the type of welfare regime (Bettio and Plantenga, 2004; Esping-Andersen, 1999; Ferrarini and Sjöberg, 2010; Gauthier, 1996; Korpi, 2000; Leitner, 2003; Lewis, 1992). This article concentrates on family policy
measures that promote both parents’ continuous labour force participation. Research on family policies has suggested that infant childcare and full-time care (i.e. more than 30 hours a week) for children aged 3–5 years both play an important role in this context (Korpi, 2010; Korpi et al., 2013). Apart from childcare services, families with small children also benefit greatly from paid parental leave (Saraceno, 2011). Women with access to paid leave more often return to work than those with access to unpaid leave only (Hegewisch and Gornick, 2011; Joesch, 1997). High medium-term transfers have shown to be particularly profitable in this regard (Korpi et al., 2013; Misra et al., 2011). This is because labour market re-entry becomes increasingly more difficult with longer employment interruptions following childbirth (Misra et al., 2011). Additionally, parental leave benefits also have a direct effect on household income as they partly counterbalance a caring parent’s lack of earnings (Ferrarini, 2006).

Research has demonstrated that family policy initiatives that facilitate both parents’ gainful employment are associated with lower poverty risks among families with children (Bäckman and Ferrarini, 2010; Engster and Olofsdotter Stensöta, 2011; Misra et al., 2007, 2012; Palme, 2006). Generous financial support following childbirth and both parents’ continuous labour force participation provide better protection for households with small children in the context of postindustrial labour markets with their increased risk of unemployment and/or low wage earnings: ‘Two incomes make the household less vulnerable to unemployment or career change. Being less dependent on male breadwinner job security and entitlements, the two-earner family is also more equipped to adapt to labour market flexibilization’ (Esping-Andersen, 1999: 162). According to some authors (Bonoli, 2005; Esping-Andersen, 1999; Taylor-Gooby, 2004), countries in which labour participation is supported for both parents have thus better adapted to postindustrial societies’ new risk structures. One of the aspects that have not yet been studied in detail in this regard is the specific significance of work-related family policies in terms of poverty risks encountered by different educational groups.

From a theoretical point of view, we argue that two aspects should be considered in this regard: the level of household vulnerability and mother’s differing responsiveness to work–family policies. First, the differences in household vulnerability are crucial. Following up the considerations discussed in the previous section, we assume that families with low educational levels rely particularly on second incomes and/or income replacement benefits after a child is born, owing to their marginal employment and income opportunities. Due to the high degree of educational homogamy in Western societies (Blossfeld and Timm, 2003; Domański and Przybysz, 2007; Hamplova, 2009), the partners of individuals with low levels of education often show a similarly low level of qualification. Most commonly, one single income thus proves insufficient. This leads to the following hypotheses:

$H2$. The lower a family’s educational level, the stronger is the impact of the availability of childcare facilities and the length of well-paid parental leave in reducing their poverty risk.

$H3$. Differences between the educational groups in terms of poverty risks are thus mitigated.

The argument of household vulnerability may be further specified with a perspective on more concrete household labour market integration since work–family policies may sometimes facilitate entry into employment without avoiding poverty. The swelling phenomenon of working poor indicates that not every job is well-paid in postindustrial labour markets (Andreß and Lohmann, 2008; Eurofound, 2010; Lohmann, 2009). This aspect is of special importance as our aim is to examine whether these policies guarantee a poverty-free existence – thus tying in with a central focus of poverty research (Atkinson and Marlie, 2010; Bäckman and Ferrarini, 2010; Misra et al., 2012). The fact that the low-skilled are often employed in the low-paid sector and more frequently encounter poverty despite being employed (even if they work full-time) is an aspect that could attenuate the link between childcare and poverty prevention (for contours of the debate on low-paid jobs/working poor, see Andreß and Lohmann, 2008; Lohmann, 2009). In contrast, parents with mid-level qualifications can more easily translate their labour into sufficient wages. We will
consider this line of thought further below in a reformulation of our hypotheses (H4–H6).

Apart from the different vulnerabilities of households, the education-specific effect of work–family policies on women’s labour force participation also requires investigation. The resulting picture is far more complex: educational levels influence mothers’ labour market opportunities as well as preferences (Cantillon et al., 2001; Crompton and Harris, 1999; Crompton and Lyonette, 2005; Kangas and Rostgaard, 2007). Research has shown that low- and medium-qualified women in Scandinavia have high labour force participation rates and that the difference to highly qualified women turns out to be lower by tendency (Cantillon et al., 2001). An analysis of the education-specific utilization of childcare thus shows congruently that, as a rule, low-qualified women in countries with a high rate of care avail themselves most frequently of formal childcare (Ghysels and Van Lancker, 2011). Some conservative countries (Belgium, France, Netherlands) are shown to be outliers in this regard: in these countries, highly qualified women make use of formal childcare far more frequently than low-qualified women despite a comparatively high coverage of childcare facilities. The strong education-specific differences in Belgium (Cantillon, 2011; Ghysels and Van Lancker, 2011; Van Lancker and Ghysels, 2012) have been ascribed to the poor accessibility of childcare in contrast to Sweden, among others (Van Lancker and Ghysels, 2012). Research has suggested that childcare should not only be generally available but also cost-efficient and equally accessible to all population groups (Ghysels and Van Lancker, 2011; Van Lancker and Ghysels, 2012).

Further evidence has been provided by (few) internationally comparative studies that statistically examined the connection between family policies and mothers’ education-specific work decisions. A study authored by Del Boca et al. (2009) showed that infant childcare and the length of parental leave among women lacking a tertiary degree have the strongest effect on labour force participation (Del Boca et al., 2009). Korpi et al. (2009, 2013) yielded comparable results in analysing the degree of ‘dual-earner support’, that is, infant childcare, full-time care for children aged 3–5 years and the amount and length of income-related parental leave. Among women without a university degree, the intensity of dual-earner support has the strongest effect on labour market participation (Korpi et al., 2009: 44, 2013: 16). Finally, Stadelmann-Steffen’s (2011) comparative study on regions in Switzerland revealed similar results with respect to preschool childcare. In this study, the strongest link is found for women with mid-level qualifications.

How can these results be integrated as regards content? The lesser influence of work–family policies on labour market participation among highly qualified women is hardly surprising and in line with economic theory (Mincer, 1974). For this group, employment interruptions are attended by higher opportunity costs and career orientations are more strongly pronounced (Evertsson et al., 2009; Konietzka and Kreyenfeld, 2010). Moreover, this group may more easily switch to frequently expensive private care arrangements due to their larger income potential (Del Boca et al., 2009), and their partners mostly having a high educational level as well (Blossfeld and Timm, 2003). The strong effect among women without a tertiary degree can be related to both their specific employment preferences and opportunities. Among this group, the share of ‘adaptive women’ (Hakim, 2000) is greater than that among highly qualified women (Crompton, 2006; Crompton and Lyonette, 2005). Adaptive women show a weaker degree of career orientation than work-centred women and tend, over their life course, to adapt their employment behaviour to family needs (Hakim, 2000). Work decisions are thus made more strongly according to the availability of care services. This appears to apply especially to women with mid-level qualifications (cf. Stadelmann-Steffen, 2011). However, low-qualified women are more often exposed to labour market insecurities (Blossfeld and Hofmeister, 2007). As empirical research has shown, economic uncertainty may accelerate fertility decisions among this group (Kreyenfeld, 2005). This can be seen as a strategy to structure an otherwise uncertain life course (Friedman et al., 1994). In the case that they are employed, women with low-level education more often resort to informal care (e.g. by the extended family), particularly in the absence of public services (Anderson and Levine, 1999; Debacker,
This group is also more often involved in non-standard working hours (Debacker, 2005), thus being less capable of employing the standardized opening hours offered by public childcare facilities. Overall, it seems plausible that work–family policies most strongly affect labour force participation among women without a university degree, especially those with mid-level qualifications. The greater relevance of paid parental leave for employment patterns among women without a tertiary degree (Del Boca et al., 2009; Korpi et al., 2013) is also to be seen against the background of divergent education-specific income opportunities, employment opportunities and preferences. The decreasing incentive to re-enter the labour market with longer lengths of parental leave is observed especially among low-qualified women, transfers often being more attractive for this group than poorly paid jobs (Misra et al., 2011).

It is important to mention that other social policies – such as unemployment or in-work benefits – have an impact on mothers’ labour market participation as well. Especially for low-skilled mothers, relatively generous income replacement benefits are often more appealing than low-quality, low-paid jobs (Cantillon et al., 2001). In-work benefits, on the other hand, are specifically designed to raise the labour force participation of low-income families (Brewer et al., 2009). However, research has suggested that these policies lower work incentives for secondary earners if eligibility is tested at the household level. In turn, individualized benefits are often substantially lower, thus limiting the employment effect for low-skilled workers (Immervoll and Pearson, 2009). Considering these quite complex relations for this group, both types of policies could thus attenuate the impact of existing work–family policies on both female employment and poverty reduction.

In view of these considerations, slightly different hypotheses can be derived. They can be seen as a complement and alternative to those mentioned above (H2–H3) and will also be tested in the empirical analysis:

**H4.** An improved availability of childcare is associated with a lower poverty risk, especially among women with mid-level qualifications and their families, followed by low-qualified women and their families.

**H5.** The difference to highly qualified women and their families in terms of poverty risks is thus attenuated for both groups, while the distance is increasing between women with low- and mid-level qualifications and their families.

**H6.** Poverty risks decrease with long-lasting, well-paid parental leave, especially among low-qualified women and their families. However, the risk of poverty advances again after a certain length of leave.

### Data, methods and variables

**Data**

The statistical analyses of this article were based on EU-SILC data. These data contain comparable information about the income situation of private households in a large number of European countries and are therefore particularly suitable for the present research endeavour. The analyses refer to families with children below age 6 who lived with their parents in the same household unit. The waves of 2005–2010 were pooled in an attempt to attain a sufficient number of cases. The dataset covers a total of approximately 123,000 households. Bulgaria, Romania and Malta were not included in the analysis, as three or more waves were missing for these countries. France, Ireland and Cyprus were included although data were lacking for the waves of 2008 and/or 2010. The analysis thus encompassed 147 country-years and 25 countries. These numbers of cases are sufficient to apply a series of macrovariables in the models.

**Methods**

The underlying database suggests a hierarchical structure with three levels: households, years and countries. We selected to treat years as nested into countries, as this equals a panel structure (cf. Nieuwenhuis et al., 2012). Observations not being independent, three-level data structures require adequate analytical methods. We performed likelihood ratio tests suggesting random intercept to be necessary at both higher levels, years and countries (cf. Rabe-Hesketh and Skrondal,
For this reason, a series of three-level random-intercept logistic regressions were computed. In the framework of a three-level regression, the average poverty risk may vary as to date of assessment and country. Macrovariables can be applied to explain time- and country-specific variance. We estimated the models using glamm in Stata (Rabe-Hesketh and Skrondal, 2008).

We were particularly interested in the education-specific effects of work-related family policies. Cross-level effects are frequently used in analysing such effects. Recent methodological advances have instead indicated that interaction effects in logistic regression models are confounded with residual variation (Long, 2009). We thus calculated separate models for three groups: households in which mothers had low, medium or high educational levels. Misra et al. (2012) selected the same approach to compare the poverty-reducing effects of family policy measures among mothers in single-parent households and couple families. As the addressed work–family policies tend to increase mothers’ labour participation (Del Boca et al., 2009; Korpi et al., 2013), the following sections distinguish by women’s educational level.

**Variables**

This article measured poverty on the basis of the resource approach. Being interested in the actual living conditions among families with small children, we based our investigation on net disposable income (post tax and transfers) (cf. Bäckman and Ferrarini, 2010; Misra et al., 2012). This includes labour market incomes from main and secondary earners as well as social benefits and other forms of income. As is common in international research, we applied a relative approach (Bäckman and Ferrarini, 2010; Lohmann, 2009; Misra et al., 2012; Palme, 2006) and set the at-risk-of-poverty threshold at 60 percent of the national median income (main unit: all households).

The microvariables of education and labour market participation were centrally important in our analyses in which both parents’ educational levels were considered. We applied a collapsed variable on the basis of the International Standard Classification of Education (ISCED) concept which distinguishes between three steps: low-level education (ISCED 0–2), mid-level education (ISCED 3) and high-level education (ISCED 4–6) (cf. Lohmann, 2009). Labour participation among couple families was measured via so-called full-time equivalents (Table 1). A maximum of one full-time equivalent corresponds to one person (with 40 or more effective working hours spent in jobs and side jobs). For couple households, the spectrum ranges from 0 (neither parent employed) to 2 (both parents employed for 40 hours or more) (following Nollmann, 2009; see also OECD, 2012). Parents on leave were classified as unemployed.

In view of families’ poverty risks, ongoing research (Fusco et al., 2010) has repeatedly discussed a number of factors which have been incorporated into our investigation as control variables. These variables include the number of children younger than 18 years per household, the main breadwinner’s age in years and his or her squared age (cf. Lohmann, 2009), the main breadwinner’s migratory status (basis: country of birth) and the household type. The latter was operationalized as a dichotomous variable that distinguishes between nuclear families and households comprising parents, children and other family members, for example, grandparents. Main breadwinners were identified according to Erikson’s (1984) dominance approach. Work intensity, education and age served as distinctive features in this order. All microvariables with the exception of labour participation were grand-mean centred. Labour market participation, in turn, was centred around the country mean (group mean). This is because we were interested in the microeffect of labour participation on poverty and refrained from computing moderation effects with the macrovariables – work–family policy indicators, in particular (Enders and Tofighi, 2007; Paccagnella, 2006). Full-time equivalents in the results section of this article thus always apply to deviations from the respective country means.²

The key macrolevel variables referred to infant childcare, full-time care for children aged 3–5 years and the length of well-paid parental leave. The ‘infant childcare’ indicator measured the national average of publicly available childcare (coverage rate) and was based on the Multilinks database (Keck
and Saraceno, 2011a, 2011b). The information about full-time care for children aged 3–5 years referred to publicly and privately used formal childcare (usage rate) and was derived from the EU-SILC survey. Use of formal childcare to an extent exceeding 30 hours was classified as full-time care. The usage rates were available for the entire period (total: 157 country-years) and the coverage rates for one point in time per country (around 2004) (Keck and Saraceno, 2011b: 61). Both variables were coded in units of 10 percent. We mapped the influence of the length of well-paid leave on families’ poverty risks with another macrovariable (source: Multilinks). The indicator measured the length of (maternity and parental) leave in months with an income replacement through benefits of 60 percent or more of the average income in the respective country (Keck and Saraceno, 2011b: 54). We computed the average from the information available for 2004 and 2009.

In addition to the above-mentioned measures, other social policies may also play a role in preventing poverty. For example, families with children usually benefit from child allowances (see, for example, Engster and Olofsdotter Stensöta, 2011; Ferrarini, 2006; Korpi, 2010; Leitner, 2003; Montanari, 2000). Financial support may take the form of cash or tax benefits and may additionally include in-work benefits targeted especially at working poor families (Brewer et al., 2009; Figari, 2010). To measure public income support for families, we used an additional indicator: the income difference between couple families with two children (aged 6 and 11 years) and couple families without children (measured as to average net income). As maternity and parental leave benefits are directed towards smaller children, those policies were not taken into account when calculating public income support for families. Following the Multilinks project (Keck and Saraceno, 2011a, 2011b).

| Table 1. Microdeterminants of poverty in two-parent families with children below age 6 (random-intercept logistic regressions). |
|-----------------|-----------------|-----------------|-----------------|
|                | Exp(B)          | Exp(B)          | Exp(B)          |
| Education father (Ref.: high) |                  |                  |                  |
| Medium          | 1.79***         | 1.81***         | 1.81***         |
| Low             | 3.19***         | 2.92***         | 2.92***         |
| Education mother (Ref.: high) |                  |                  |                  |
| Medium          | 2.00***         | 1.71***         | 1.71***         |
| Low             | 4.02***         | 2.76***         | 2.76***         |
| Labour participation (full-time equivalents)\(a\) | 0.21***         |                  |                  |
| Number of children | 1.55***         | 1.45***         | 1.45***         |
| Age in years (main breadwinner) | 0.978***        | 0.989***        | 0.989***        |
| Squared         | 1.003***        | 1.001***        | 1.001***        |
| Migratory status (main breadwinner) (Ref.: native) |                  |                  |                  |
| Foreign-born    | 2.49***         | 2.21***         | 2.21***         |
| Household type (Ref.: nuclear family) |                  |                  |                  |
| Other           | 0.76***         | 0.72***         | 0.72***         |
| Intercept       | 0.14***         | 0.10***         | 0.10***         |
| Log-likelihood  | −47,792         | −40,347         | −37,537         |
| Rho (countries) | 0.084           | 0.046           | 0.049           |
| Rho (country-years) | 0.004           | 0.005           | 0.005           |

Source: European Union Statistics on Income and Living Conditions (EU-SILC, 2005–2010). \(N_{\text{countries}} = 25\), \(N_{\text{country-years}} = 147\), \(N_{\text{households}} = 123,004\), own computations.

Models 1a and 1b also control for infant childcare, income support for families and unemployment benefits.

\(a\)In relation to country mean.

Levels of significance: °\(p < 0.10\); *\(p < 0.05\); **\(p < 0.01\); ***\(p < 0.001\).
Saraceno, 2011b: 106), the indicator was calculated for the 2005–2010 interval on the basis of Eurostat data. Financial support for families with children can be seen as an independent dimension of family policy (Korpi, 2000; Leitner, 2003). In order to measure the effect of the above-mentioned work–family policies independently of, for example, child allowances or in-work benefits, we used this indicator as a control variable (cf. Bäckman and Ferrarini, 2010).

In addition, the average expenditures per unemployed individual (measured against average net incomes) were drawn upon as a proxy for policies against industrial social risks (compare Armingeon, 2007; Bonoli, 2007). As to contents, this political field is relevant, as the reduction in market dependency (decommodification) per se has an impact on the poverty risk (Esping-Andersen, 1990; Gallie and Paugam, 2000; Korpi and Palme, 1998). The data for 2005–2010 originate from Eurostat. All macrovariables were centred around the total sample mean following a common standard in multilevel analysis (Enders and Tofighi, 2007: 1).

**Findings**

**Disentangling the link between couples’ education, employment and poverty**

Our analysis first addressed the microlevel and subsequently tested our policy hypotheses (H2–H5). Approximately 92.2 percent of the poverty risk variation can be ascribed to differences between households, some 8.4 percent to average differences between countries and merely 0.4 percent to average differences between years (Table 1, M0). Household characteristics thus become very important in explaining child poverty.

In compliance with our initial considerations, poverty risks at the microlevel were shown to be stratified according to both fathers’ educational levels and – independently – mothers’ educational levels (Model 1a). Families in which both parents had low levels of education (ISCED 0–2) therefore face multiplied poverty risks as compared to the reference group.3

We then considered households’ labour market participation in Model 1b. One single additional worker per household – with 40 working hours or more (full-time equivalent) – was seen to reduce the poverty risk to a considerable extent. Moreover, by controlling for labour participation, the increased poverty risks were significantly attenuated for families with low-qualified fathers and mothers with low- or medium-level qualifications.4 Our first hypothesis was thus confirmed. A low level of labour participation serves to explain approximately 30 percent of the poverty risk of families with low-skilled mothers. This result is highly crucial from the social-policy perspective. Findings concerning the incorporated control variables corroborate important results emerging from recent research (Fusco et al., 2010; Lohmann, 2009; Misra et al., 2012): the number of children, type of household, and main breadwinner’s age and migratory status altogether have a significant impact on the poverty risk experienced by families with children.

**Group-specific effects of work–family policies on poverty**

Our next step was to explore the specific effects of childcare and well-paid parental leave on poverty risks among different educational groups. As the policies addressed are mainly related to mothers’ labour participation, we chose to differentiate according to women’s educational levels (Table 2). Our empirical analyses identified a number of important differences between the groups under study.

*Infant childcare* has a poverty-reducing effect in all educational groups. It is interesting to note that the strongest effect was seen in women with mid-level qualifications and their families, followed by those with low qualifications. With a 10-percent increase in the coverage rate, the poverty risk decreased by 24 percent among mothers with mid-level qualifications and by 12 percent among those with low levels. As to this indicator, Hypothesis 4 was thus confirmed and Hypothesis 2 rejected. Alongside the differences in household vulnerability, the education-specific effect of childcare on women’s labour market participation seems to play an important role.

Figure 1 elaborates on the connection between the availability of public care for infants and poverty.
Table 2. Work–family policies and poverty by mother’s education (random-intercept logistic regressions).

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<th>Low</th>
<th>Medium</th>
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<tr>
<td></td>
<td>Exp(B)</td>
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<td>Rho (countries)</td>
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<td>0.058</td>
<td>0.045</td>
</tr>
<tr>
<td>Rho (country-years)</td>
<td>0.007</td>
<td>0.008</td>
<td>0.005</td>
</tr>
<tr>
<td>N (households)</td>
<td>21,419</td>
<td>21,419</td>
<td>21,419</td>
</tr>
</tbody>
</table>

Exp(B) = exponential of the regression coefficient. All models also control for fathers’ education, number of children, household type, main breadwinners’ age, migratory status and income support for families.

Source: European Union Statistics on Income and Living Conditions (EU-SILC, 2005–2010). \( N_{\text{countries}} = 25, N_{\text{country-years}} = 147, \) own computations.

Coded in units of 10 percent.

Length in months.

Levels of significance: °p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001.

Figure 1. Childcare and poverty by mother’s education.
Graph corresponds to Table 2 (predicted probabilities).

It shows the predicted probabilities of being poor according to mothers’ educational level while keeping all other characteristics that were considered in the three models constant. Quite obviously, the distance between low- and high-qualified mothers is clearly reduced. In turn, the distance between low- and
medium-qualified women and their families becomes slightly larger – thus confirming Hypothesis 5, yet not Hypothesis 3.

With respect to the second childcare indicator that is characteristic of countries with a high level of dual-earner support – full-time care for children aged 3–5 years – a poverty-reducing effect was only shown for medium- and high-qualified women. The strongest effect was again seen in women with mid-level qualifications and their families. Hypotheses 4 and 5 were thus confirmed only in part when it comes to full-time care for children. In view of our initial assumptions, the lack of a connection among low-qualified mothers and their families is particularly in need of explanation, with the factor of working poverty possibly playing a role. In some countries, a high full-time employment rate could be associated with low wages, especially in the presence of low qualifications (cf. Haas et al., 2006).

We again identified differences between the educational groups with regard to the length of well-paid parental leave. Among women with low educational levels, the length of such leave has a significant poverty-reducing effect that lessens with the length of leave. Hypothesis 5 was thus clearly verified. Figure 2 elaborates on the connection between the length of well-paid parental leave and poverty. A U-shaped connection is shown in the case of low-qualified women and their families. The poverty risk again tended to increase after a leave of approximately 1 year. Misra et al. (2007) yielded somewhat similar results examining the effect of family leave on women’s impoverishment. Our findings further extend their results and indicate merely a slight change in the poverty risk among medium- and high-qualified women and their families.

Finally, it should be mentioned that unemployment support is also associated with lower poverty risks among families with small children. From our perspective, the high significance of unemployment benefits shows that the established social policies of industrial society (Armingeon, 2007; Bonoli, 2007) continue to be largely decisive for poverty prevention, also in times of postindustrial welfare states. In our view, this is a quite important result. The main aim of these measures – to cover the main breadwinner in the case of inactivity (Gallie and Paugam, 2000) – therefore still seems to be a crucial policy.

Figure 2. Well-paid parental leave and poverty by mother’s education. Graph corresponds to Table 2 (predicted probabilities).
goal. This holds true regardless of the growing importance of new social risk policies such as childcare.

Discussion

This article dealt with the social gradient in the link between work-related family policies and poverty among families with small children. We empirically investigated this issue for a total of 25 countries estimating several multilevel models. By looking at education-specific differences, we tied in with various studies on the poverty-reducing effects of family policies (Bäckman and Ferrarini, 2010; Engster and Olofsdotter Stensöta, 2011; Misra et al., 2007, 2012; Palme, 2006) and were able to further advance those studies: previous research merely distinguished single-parent households from couple families (Bäckman and Ferrarini, 2010; Misra et al., 2012; Ugreninov et al., 2013).

What are the most remarkable results of our study? First, there are clear education-specific differences in the link between work–family policies and poverty: for women with low levels of education, infant childcare and well-paid parental leave (up to a length of 1 year) show to be highly beneficial. This is a picture one would expect: in the context of postindustrial labour markets, these families rely particularly on second incomes and/or income replacement benefits (Blossfeld and Drobnič, 2001; Bonoli, 2007; Esping-Andersen, 2002). In view of these results, the provision of childcare for infants could in fact be linked with smaller class inequalities, as suggested by several authors (Cantillon et al., 2001; Crompton, 2006). Against this background, the implementation of the Barcelona target – 33 percent of all children below the age of 3 years in formal care – should be considered an important social-policy objective.

Our findings also indicate, however, that childcare for infants and full-time childcare for children aged 3–5 years have the strongest poverty-reducing effects among women with mid-level qualifications and their families. This may be the case for several reasons: work–family policies can sometimes facilitate entry into employment without avoiding poverty if wages are too low. In addition, mothers’ responsiveness to work–family policies not only depends on household necessities but also on individual employment chances and preferences (Stadelmann-Steffen, 2011). For low-skilled women, full-time motherhood is often an alternative in view of insecure labour market conditions and low wages. The existence of other social policies could attenuate the link between work–family policies and employment for this group as well. Last but not least, the accessibility of childcare also appears to be particularly crucial.

The fact that work–family policies may sometimes facilitate employment without avoiding poverty needs some further consideration, as it concerns the interpretation of our results: the focus of our analysis is on the poverty-reducing effects of work–family policies, not on specific income effects. As work–family policies may increase household income without avoiding poverty, we may possibly underestimate the importance of these policies especially for low-skilled women and their families. It could very well be the case that work–family policies indeed diminish the intensity of poverty among such families – in terms of a lowered distance from the at-risk-of-poverty threshold – without any effect upon the incidence of poverty (as assessed with our indicator). The strong poverty-reducing effect of childcare among women with mid-level education is thus to be primarily understood with respect to the incidence of poverty (i.e. living above the at-risk-of-poverty threshold) and less as referring to the intensity of poverty. Our results therefore do not provide evidence for cutbacks in childcare policies. However, it is possible to argue that caution may be indicated with regard to the redistributive effects of work–family policies (see also Cantillon, 2011). This is because a poverty-free existence (i.e. living above the at-risk-of-poverty threshold) should still be an important policy goal in postindustrial societies – especially when it comes to children. We therefore can derive some important policy conclusions.

From a policy perspective, this means that the implementation of the Barcelona targets should be accompanied by a reduction in educational differences in childcare usage. An exclusive view on national quotas is insufficient. Rather, the question is which social groups profit from childcare policies. Apart from augmenting the general accessibility of
childcare facilities, this would additionally imply a specific policy focus on low-qualified mothers. It appears to be a critical objective for postindustrial welfare policies to promote this group’s employment opportunities and affinity (Esping-Andersen, 1999, 2002). As low-skilled mothers frequently face serious challenges when seeking high-quality jobs that allow us to combine work and care (Cantillon, 2011; Cantillon et al., 2001), such policies would be designed to account both for the care responsibilities and for the specific barriers to formal employment encountered by individuals with low educational levels (Debacker, 2005). Occupational training programmes geared to the specific needs of low-qualified mothers would prove to be a rewarding starting point (Bergemann and Van den Berg, 2008). The need for a policy focus on low-skilled mothers is also underlined by our results at the microlevel, indicating that the particularly high poverty risk among families with low-qualified mothers can substantially be attributed to the low level of labour market participation.

Overall, this article provides a series of novel insights. The finding that the link between work–family policies and poverty is so strongly education-specific is certainly a result to be accounted for in future debates at the social and societal levels. Finally, we may remark that work–family policies – alongside their poverty-reducing effect – in themselves have an important function for families with children, and especially for women. Such policies facilitate work–family reconciliation, while at once reducing gender inequalities with regard to participation in eminent aspects of social life.

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**Notes**

1. Apart from childcare and paid parental leave, cash benefits, tax policies and in-work benefits also have an influence on female employment patterns. In this article, the focus is on work–family policies in a narrower sense. ‘Financial support for families’ is used as a control variable (see the ‘Variables’ section).

2. Empirically, the average labour market participation rate of couples with children below age 6 is between 1.15 in Austria and 1.73 in Slovenia (European Union Statistics on Income and Living Conditions (EU-SILC), 2005–2010, own calculations).

3. This finding indicates that the so-called joint classification (Sørensen, 1994) of households under consideration of both parents’ resources should be given a more important role in poverty research.

4. We applied the Karlson–Holm–Breen (KHB) method (Kohler et al., 2011) to decompose the moderation of the connection between fathers’ and/or mothers’ education and poverty by ways of household labour participation. Computing Model 1b for each year (2005–2010) individually with xtlogit, the effects were shown to be significant at the 0.001 level for women with low and medium educational levels and at the 0.01 level for low-qualified men.

5. The maximum value (50%) was selected such that it is no more distant from the mean care rate than 2 standard deviations (Hox, 2010: 63–67).

6. Future projects that aim at generating comparable policy indicators could consider this aspect more thoroughly.

**References**


Troger and Verwiebe


