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Title: Do it both, but how? Enabling maternal employment in four European countries

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Maternal employment: enabling factors in context

Abstract

Maternal employment is still below the overall EU recommended level of 60% in many European countries. Understanding the circumstances (individual, household and contextual) under which mothers of children of different ages are likely to be employed is crucial in order to develop strategies capable of increasing maternal employment. This article takes a comparative approach to investigating the characteristics associated with maternal employment in the presence of children aged 0-2, 3-5, 6-9 and 10-12. We model the probability of being employed full-time, part-time or being a homemaker using EU-SILC data (2004/2007) from Germany, Italy, Norway and the United Kingdom – four countries belonging to different gender and welfare regimes. The results indicate that individual and household characteristics are more relevant in determining mothers' employment in countries where the state is less supportive towards maternal employment: Italy and to a lesser extent Germany and the UK – for the period observed.

Keywords: Europe, maternal employment; work-family reconciliation.

1. Introduction

This article investigates the individual and household characteristics associated with maternal full-time or part-time employment and homemaking in the presence of children of different ages in four countries belonging to different welfare and gender regimes: Germany, Italy, Norway and the United Kingdom.

One of the objectives of the European Union – at least up to the 2010 Lisbon strategy – has been to raise female and maternal employment rates (Bettio et al., 2013). Besides the overarching goal of reducing gender inequality in employment, there are many reasons why maternal employment is a desirable outcome. For one thing, despite their over-representation in unfavourable positions in the job market (e.g. temporary and part-time employment (Mandel and Shalev, 2009)), employed mothers protect themselves and their children from poverty (Barbieri et al., 2012; Esping-Andersen, 2009). Indeed, poverty rates in households with dependent children are dramatically higher in one-earner than two-earner households (OECD, 2015). Furthermore, having women (and mothers) in employment has benefits both at the firm level and at the broader macro-economic level (Smith, Akram-Lodhi and Bettio, 2013). Moreover, states can benefit from the tax revenue stemming from higher maternal employment rates (Olovsson, 2009). In addition, employment seems to be beneficial for maternal well-being. In fact, full-time employed mothers display greater life satisfaction than mothers who are employed part-time or not employed (Berger, 2013) and in general employed women have greater resources and thus freedom to decide how to direct their lives compared to homemakers (Korpi et al., 2013). Given the advantages of maternal employment, it is not surprising that efforts have been made at the EU level to encourage the labour force participation of mothers by promoting quantitative targets for both female employment and childcare provision (Villa and Smith, 2015).

Despite these efforts to promote maternal employment, the reasons behind low maternal employment rates in some countries are still not fully understood. On the one hand, scholars point

towards structural features (e.g. availability of childcare services and parental leave, and also flexible work arrangements and part-time jobs) as means to ease work-motherhood incompatibility (Gornick and Meyers, 2003; Bettio and Plantenga, 2004). On the other hand, cultural reasons and lifestyle preferences are called upon to explain individual and cross-national variation in maternal employment (Hakim, 2002; Stam et al., 2014).

This article investigates the individual and household characteristics which are most effective in enabling maternal labour force participation in different contexts. It adds to existing knowledge on the topic in three ways. First, as research has shown that commitment to employment is harder to maintain when children are very young, we compare mothers with children of different ages (0-2, 3-5, 6-9 and 10-12). Second, going beyond the employed/not employed dichotomy, the article simultaneously considers full-time and part-time employment (the latter being deemed a strategic means of combining work and family in many European countries (Drobnič, 2000)). Third, and most importantly, we investigate the *interaction* between micro-level characteristics and resources (what we call 'individual enabling-traits') and the macro-level context, showing how individual-level characteristics are of different importance in different contexts (Korpi et al., 2013, Pettit and Hook, 2009). We therefore take a comparative approach focusing on four countries belonging to different welfare, gender and care regimes (Esping-Andersen, 1990; Korpi, 2000; Bettio et al., 2006): Germany, Italy, Norway and the United Kingdom. At the theoretical level, to elaborate our hypotheses on the micro-macro interaction we juxtapose two opposite mechanisms: the discount mechanism, according to which individual resources matter the most in gender-equal contexts (Blumberg, 1984), and the equalization mechanism, which sees individual resources as more relevant in gender-unequal scenarios (Hook, 2010). We conceptualize gender equality at the macro level somewhat broadly, allowing it to include both the public (e.g. equality in employment, pay and representation) and the private (e.g. division of domestic labour) spheres.

2. The 'enablers' of maternal employment: micro, macro and their interaction

2.1 The micro level: individual and household characteristics

Low maternal employment rates are generally accounted for by the fact that mothers have greater childcare, housework and family responsibilities than fathers and childless women and men (Gauthier et al., 2004; Craig and Mullan, 2010). However, not all mothers (altogether) forego employment, which begs the question of which micro-level characteristics (by which we mean both individual and household) 'enable' maternal employment.

Education certainly plays a key role. Indeed, everywhere highly educated mothers are more likely to be employed than their less educated peers (Korpi et al., 2013; OECD, 2014). However, what 'education' really stands for is not fully clear. On the one hand, human capital theory puts much emphasis on the relation between educational attainment and employment outcomes as, in general terms, higher education leads to higher wages and better employment conditions (Polachek, 1981; Becker, 1991). On the other hand, the attitudes and preferences that are linked to higher education (Hakim, 2002) also play a role. Indeed, more highly educated women are more likely to have non-traditional attitudes towards gender roles, and due to educational assortative mating they often have an equally highly educated partner with similar attitudes (Kanjii, 2013; Blossfeld and Drobnič, 2001). This favours less traditional roles in the household (Bolzendahl and Myers, 2004). Furthermore, education can improve women's bargaining situation in the household, additionally conducing to greater support from their partner (Brynin and Francesconi, 2004) and ultimately easing reconciliation. Beyond individual traits, therefore, the household situation, its resources, the characteristics of both partners and their combination (i.e. the relative position of each partner, not just the absolute level) are decisive for mothers' employment.

The bargaining perspective emphasizes conflicting interests within the couple, where the woman's bargaining power (for instance, to persuade the man to behave more supportively within

the house) depends not least on her (relative) earning capacity and thus education (Manser and Brown 1980). In contrast, the 'Economic Theory of the Family' emphasizes the (cooperative) maximization of a joint utility function. The gains from within-couple specialization are larger when the male partner's level of education is higher (in relative and absolute terms) (Becker, 1991). Both theories thus lead to the same expectations but through different mechanisms: a high level of education increases a woman's/mothers' employment chances and a (relative) higher level of education of the partner reduces them. However, the gains from specialization have been declining and the bargaining power of women has generally improved, partly as a result of higher levels of female education (Oppenheimer, 1994). For example, Kanji (2011) finds that mothers are more likely to be employed full time if they are better educated than their partner. At the same time, highly educated partners are likely to have more understanding of each other's careers and thus provide more reciprocal support (Brynin and Francesconi, 2004). Expectations about the partner's level of education are therefore less straightforward than parts of the literature might have suggested and certainly depend on additional controls in models and on the context of the analysis (Verbakel and de Graaf, 2009; Konietzka and Kreyenfeld, 2010; Berghammer, 2014).

In the absence of a direct measure of the partner's supportive attitudes and behaviours, his employment hours are an important piece of the puzzle. A partner working longer hours is less likely to be available at home, leaving mothers with more responsibility for the house and children (Hook, 2006; Author) and thus increasing the difficulty of reconciling work and family needs for the mother (Fagan and Press, 2008; Hook and Wolfe, 2013; Roeters, 2013).

Mothers' employment decisions are also likely to be contingent on the economic welfare of the household. Mothers living in high-income households can afford to not contribute economically and, other things being equal, will be more likely to be out of the labour market, while mothers in households where ends do not meet are more likely to seek employment. However, the empirical research on this topic presents mixed results that are highly contingent on the institutional setting.

For the UK, Kanji (2011) finds that women are more likely to be continuously in full-time employment at higher rather than lower levels of household income. Similarly, Colonna and Marcassa (2013) show that in Italy the higher the husband's income the greater the probability that the wife is employed, while the association is negative in Germany and negligible in Spain and France.

2.2 Structural constraints and the importance of micro-level characteristics

Comparative studies have shown that context, such as welfare and labour markets, along with cultural norms regarding family relations, influence the employment of mothers. (Esping-Andersen, 2009). Among other things, the availability of public childcare can facilitate reconciliation between work and care responsibilities (Gornick and Meyers, 2003; Brilli et al., 2013). At the same time, strong inter-generational relationships and support can also ease this (Aassve et al., 2012). While the importances of the macro context and individual (and household-level) enabling characteristics are singularly well documented, the interaction between the two levels is much less clear. Two opposing relationships between the two levels have been suggested: the discount and the equalization mechanisms. On the one hand, Blumberg (1984) argues that when it comes to reaching a gender-equal outcome, be it in employment, earnings, or the division of domestic chores, women's individual characteristics are more consequential in countries where gender equality is widespread, because these are less likely to be 'discounted' by contextual macro-level characteristics. In other words, diffuse gender-unequal macro-level ideologies can undermine the effect of women's own endowments because the opportunity structure in these settings works against them (Blumberg and Coleman, 1989). Therefore, for example, according to the discount mechanism, women's employment will be less effective in bargaining a more equal division of domestic chores in the household in a context where female employment is under-valued than where it is highly regarded. On the other hand, the 'equalization' mechanism suggests that

individual characteristics are more important overall in countries that have high gender *in*equality. In unequal contexts, individual and household characteristics should make the difference because they represent the *extra quid* that only few subjects have and that therefore give them more leverage in a bargaining situation. In contrast, in high-gender-equity countries institutional features equalize more than individual characteristics because "the bar is set higher" for everyone (Hook, 2006: 643). For instance, in a country where female employment is the norm, men will contribute more to domestic work than in countries where women's labour force participation is low, independently of individual characteristics.

The empirical evidence supporting both these mechanisms is inconclusive. For example, Fuwa (2004) provides support for the discount mechanism by showing that women's education is more important in obtaining a gender-equal allocation of time spent on domestic chores in countries with overall higher levels of gender equality. By contrast, Mandel (2012) and Korpi et al. (2013) find support for the equalization mechanism by showing that individual skills are less beneficial to women in countries where gender equality is valued.

2.3 The national context

Overall, gender equality varies notably among the four countries considered in this study. According to the European Index for Gender Equality (EIGE, 2010), Italy is among the European countries with the lowest levels of gender equality, followed by Germany, which is also below the EU average (at least until 2010), while the score for the UK is slightly above average. Norway is not listed in the EIGE as it is not a member of the European Union, but it is the first country worldwide for another indicator of gender equality, the Gender Empowerment Measure (GEM, 2010).

Each of the four countries is characterized by a number of structural and cultural components that contribute to its overall level of gender equality. In *Italy*, which is representative of the Mediterranean countries, mothers and women in general are in large part out of the labour market: in the past 10 years, only about 46% of the female working-age population has been in employment (Eurostat, 2014). The highly segmented labour market (Barbieri, 2009) and the limited availability of part-time work (Del Boca and Sauer, 2009) play a decisive role in making it difficult to combine work and family life. In fact, public childcare is extensively available for children over the age of 3, but for younger children it is scant (Brilli et al., 2013) and therefore often needs to be replaced by informal childcare (Bettio and Plantenga, 2004). Moreover, average working hours tend to be long (ILO, 2010), paternity leave is virtually inexistent,[i] and parental leave is taken mostly by mothers, with the result that fathers are barely available around the house.

Germany is traditionally classified as a conservative welfare regime with rather generous leave provisions, where the (modified) male main breadwinner model is still relatively strong (Berger, 2013). From a cultural point of view too, support for working mothers with small children has been low for quite a long time in Germany (Drobnič, 2000), and the levels of fathers' uptake of paternal leave and help in the household are still low (Hook and Wolfe, 2013). Nevertheless, efforts to challenge the so-called 'male breadwinner family model' were made with a parental leave benefit reform in 2006 and this seems to have spurred important achievements in certain domains of gender equality (Spiess and Wrohlich, 2008). As an example, female labour force participation rates in Germany have been on the rise since 2007, while they have remained stable in Italy and Norway, and have only marginally increased in the UK (Eurostat, 2015).

The *United Kingdom*, belonging to the liberal welfare regime, is characterized by low levels of childcare and leave provisions (Hook and Wolfe, 2013) and reconciliation between work and family is addressed through flexible working arrangements (Davaki, 2010). This leads to a prevalence of the 'one-and-a-half-earner' model (Lewis et al., 2008), which – similar to Germany – sees mothers

mainly engaged in part-time jobs. While this allows a better reconciliation of work and family responsibilities, the prevalence of mothers in part-time rather than full-time jobs implies negative consequences for their earnings and careers (Kanji, 2011).

In *Norway*, childcare is public and widely available even for small children (Gornick and Meyers, 2003; OECD 2015). Moreover fathers' participation in childcare is encouraged through limitations on working hours and paternal leave schemes (Hook and Wolfe, 2013). With over 70% of women in the labour market, the dual-earner model is predominant and mothers are extensively in employment (OECD, 2015, Kitterød and Rønsen, 2013).

For analytical purposes, given the characteristics discussed, we define Italy as a low-equality context, Norway as a high-equality context, and Germany and the UK as being between the two. Obviously, these contexts are not immutable, and, as mentioned, especially Germany has recently witnessed relevant changes, which occurred, however, after the brief observation period covered by our empirical study.

2.4 Expectations

Employment generally increases as children grow older. However, the age of children is likely to play a variable role according to the country (OECD, 2014). It is reasonable to assume that the child's age is less important in Norway, and also in Italy, than in the other two countries (H1). The reason is that Norwegian mothers withdraw from the labour market less and return quickly to work. By contrast, Italian working mothers either withdraw altogether or not at all. In fact, the labour market attachment of Italian women is considered somewhat high (Del Boca and Sauer, 2009), which is usually explained in terms of a more selective population of employed women, given the overall lower participation rate.

Education is likely to be the strongest 'enabler' of maternal employment, yet the reasons why this is the case are manifold. These include: women's attitudes and work orientations (which we do not measure directly and therefore proxy through education); their possibly increased bargaining power within the household, leading to more support from the partner; limited gains from specialization of tasks within the couple; and finally higher wages leading to higher opportunity costs of not working. We thus expect highly educated mothers to be more often employed and particularly employed full-time (H2). If the 'discount' scenario were true, we would expect education to be more decisive for participation in the high gender-equality country, Norway (H2-a). By contrast, should the 'equalization' mechanism prevail, education will be more important in high gender-inequality countries (H2-b), therefore in Italy and less so in Germany and the UK. In Germany, educational difference might only be important for the decision to opt for full-time work.

Expectations regarding the roles of the characteristics of the partner and the household are less clear-cut. Overall, we expect higher household income (net of women's education) and long partner working hours to reduce the likelihood of mothers being in full-time employment (H3). Nonetheless, household characteristics might matter less in the 'defamilyised' country, Norway, where individuals receive greater income support from the state and therefore their labour market participation should be less contingent on household circumstances (H3-a).

Childcare is likely to be a prerequisite for a mother to work. We describe[ii] the role that different child care arrangements – formal or informal – have in different countries. Especially in the absence of publicly subsidized market care, childcare provided informally is an important way of allowing mothers to work (Jappens and Van Bavel, 2012; Glaser et al., 2013; Saraceno and Keck, 2010; OECD, 2014). We therefore expect an exclusive use of informal care to be more common in the southern European gender-unequal context than in the other countries.

3. Methodology

3.1 Data and variables

The data are derived from four cross-sectional waves of the European Union Statistics on Income and Living Conditions (EU-SILC, 2004, 2005, 2006 and 2007), and therefore before the start of the current economic crisis. We pool together several waves to maximize the number of observations. The data for Germany and the United Kingdom cover the years 2005, 2006 and 2007. For Italy we have all four years and Norwegian data are available for 2004, 2005 and 2007. The EU-SILC has the valuable feature of collecting information at the individual and at the household levels[iii] for various countries. Hence, it allows studying the interplay of different levels of analysis. Our sample includes mothers[iv] who have at least one child in the 0-12 age group and who are living with a partner.[v] We deliberately set a high age threshold (19-60) as higher education has been found to lead to postponement of childbearing (Klesment et al., 2014).

To investigate which individual and household characteristics are associated with mothers' labour market participation, we build a categorical dependent variable with three outcomes: full-time employment, part-time employment, and full-time homemaking. The last of these only includes those mothers who report that they only undertake domestic tasks and care responsibilities.[vi] In all cases we use the self-reported main status or activity rather than reported working hours (Kitterød and Rønsen, 2013). The distinction between full-time and part-time is important, as for mothers a part-time job can in itself be a strategy for reconciling work and family needs (Drobnič, 2000; Lewis et al., 2008). Our first predictor is the mother's level of education (low as reference category, medium and high).[vii] We also construct a variable based on the relative levels of education of the partners to capture the mother's potential 'bargaining power', distinguishing between whether she is more highly educated than her partner, both have equal levels of education or whether she has a lower level of education (reference category). Importantly, we control for these relative effects net of the mother's absolute level of education. We also account for the partner's

weekly working hours and income, the latter being measured as quartiles within the country's male income distribution. Including relative rather than absolute income is an appropriate strategy when comparing countries that may have wage ladders of different lengths (Mandel, 2012). Last, we provide descriptive evidence of the type of childcare used during a typical week (formal, informal or both) by mothers employed both full-time and part-time.

To investigate whether the 'enabling effects' vary according to the age of the children, we allow interactions with the age of the youngest child (0-2 reference category, 3-5, 6-9, 10-12). We distinguish between age groups as these require different types and intensity of care, and as formal childcare arrangements vary by the child's age in most countries. The models additionally control for the mother's age and its square, for her marital status (married as reference category vs. not legally married, given that there are known differences in the work participation of married and unmarried women (Seltzer, 2000)), for the partner's age, and for the number of children. Summary statistics for the variables used in the models are presented in Table 1.

(Table 1 here)

We estimate the probability of being employed full-time, part-time, or being a full-time homemaker using multinomial logistic regression models[viii] by country. As the multinomial coefficients are not immediately interpretable, we report the predicted probabilities of the three outcomes conditioning on the predictors of interest while keeping the others constant at the overall mean. Note that because of space limitations we graphically display the predicted probabilities with confidence intervals and report the coefficients for the multinomial models in Tables A1 to A5 in the supplementary material.

4. Results

4.1 Mother's employment and age of the children

Figure 1 shows the predicted probabilities of mothers being engaged in full-time employment, part-time employment and homemaking in the four countries by the age of the youngest child, holding all the other variables included in the models at their means. The distribution and timing of full-time, part-time and homemaking varies much among the countries.

(Figure 1 here)

The picture for Germany still depicts a traditional division of labour within households, with mothers mostly specialized in homemaking or engaged in part-time work. When the children are very small (0-2), maternal homemaking is the most common outcome (pr=0.68), and this is followed at a distance by part-time employment (pr=0.29). However, homemaking decreases and part-time work increases among mothers of older children. Indeed, the probabilities of German mothers being employed part-time are 0.60, 0.64 and 0.66 if their children are aged 3 to 5, 6 to 9 and 10 to 12 respectively. In contrast, working full-time is quite uncommon for all the age groups, with the highest probability being 0.14 for mothers of children in the 10-12 age bracket.

The graph for Italy shows a dualisation of the labour market participation of Italian mothers: mothers are almost as likely to be homemakers as employed full-time (with a minor prevalence of the latter, as the average probability across age groups is 0.40 vs. 0.38), independently of the age of the youngest child. Part-time work, instead, is less common, with an average probability around 0.22, again regardless of the youngest child's age.

Mothers in Norway are extremely likely to be employed – the probability is as high as 0.97 in the 10-12 age group. Averaging across groups, full-time work (0.66) is more common than part-time work (0.28), and homemaking is rare (0.06) almost regardless of the age of the youngest child.

The picture for the United Kingdom is more mixed. The overall probability of being employed is lower than in Norway but higher than in the other countries, and, as in Germany, it strongly depends on the age of the youngest child. Part-time employment is fairly stable across the child age groups

(0.43 on average), but full-time work increases at the cost of homemaking when children are older (from 0.18 when children are aged 0 to 2 to 0.46 for 10 to 12), presumably because childcare becomes less of an issue.

The description above highlights important cross-national differences in the extent to which the age of the youngest child is associated with maternal employment, providing preliminary support for H1-a. Indeed, in Italy and Norway there are very limited differences in mothers' employment probabilities by the age of the youngest child. In Germany, by contrast, the age of the youngest child matters for part-time employment, and it matters more for full-time employment in the UK.

4.2 Enabling effects and their variation between countries

Mother's characteristics: the importance of education

Education is a key to employment. Figure 2 shows the extent to which education enables mothers to participate in the labour force by reporting the predicted probabilities of being employed full-time and part-time in each of the four countries by the mother's level of education and by the age of the youngest child. All the other variables are set at their overall means. We do not report the predicted probabilities of being a full-time homemaker: they can easily be deduced from the graphs as the three probabilities add up to one. As expected, education increases the likelihood of being employed in all four countries, although there are some important cross-national distinctions between full-time and part-time employment. In Germany, education only matters for employment decisions as children grow older, especially for full-time employment. For example, for mothers whose youngest child is 10 to 12 years old the probability of being employed full-time increases from around 0.05 for mothers with low education levels to 0.25 for mothers with a high level. Education matters even more for part-time employment, as poorly educated mothers are less likely to be employed when their children are between 0 and 2 and between 3 and 5 than when the

children are older. Part-time work is extremely common even among highly educated women in Germany, while in the other countries highly educated mothers are more likely to be in full-time employment, suggesting that large parts of the cross-national differences in employment rates are due to a combination of different labour markets and different levels of female education. A completely different pattern emerges in Italy, where education has little effect on part-time employment (which overall is very rare), and a high education level reduces the likelihood of part-time work. Nonetheless, high levels of education come with dramatically increased chances of being employed full-time, driving the probability from 0.25 for the poorly educated to around 0.70 for the highly educated. Education also positively affects full-time employment in Norway, while higher levels of education slightly decrease the chances of being employed part-time. As for the UK, the 'enabling effect' of the mother's level of education for full-time employment is strongly related to the age of the youngest child: while education has no effect for mothers of children aged 0 to 2, the association is greater for mothers of older children. Furthermore, as in Germany, in the UK education particularly increases the probability of part-time employment for mothers of younger children, but it reduces the likelihood for those with older children, probably because they enter full-time employment.

Thus, as expected, the data supports the importance of education in stratifying mothers' employment (H2).[ix] More interestingly, there is clear evidence that the equalization mechanism prevails, as education is overall much more important in Italy – the high-inequality country – than elsewhere. In Germany and the UK, education also stratifies access to full-time employment, but only when the youngest child reaches school age. In the high-equality context – Norway – education matters the least. Hypothesis H2-b is thus confirmed.

As discussed, the relative resource distribution within the couple can also account for employment outcomes. The results indicate that in all the countries the mother's *relative* level of education has little or no effect on her employment situation, net of her absolute level of education,

which runs counter to the bargaining argument. The results can be found in Figure A2 in the supplementary material.

(Figure 2 here)

Partner's income and time availability

Beyond the conflictual 'bargaining scenario', resource pooling and the division of tasks among partners have been identified as important features of family life. Hence, a higher partner income and long partner working hours should come with less market engagement of the mother. We find some limited confirmation of this. Figure 3 reports the predicted probabilities of the mother being in employment by income quartile of the partner; the results regarding working time can be found in Figure A3 in the supplementary material. Homemaking is slightly more common among mothers with a high-income partner and one that dedicates most of his time to paid employment. Negative effects on full-time employment are slightly more visible, which provides some support for the idea of specialization among partners (H3). However, the effects are generally somewhat limited, not necessarily linear, and vary with the age of the youngest child. We therefore cannot confirm H3-a, i.e. that in the Nordic, defamilyised country the partner effect would be particularly limited. The effects are almost completely absent in Italy and Norway, and somewhat more pronounced in Germany and the UK. Regarding full-time employment in these two countries, among women with older children (6 to 9 and 10 to 12) the probability of being employed full-time notably decreases at higher levels of partner income. Regarding part-time employment, there are even situations where employment chances increase with the partner's income, indicating that part-time work might be a way of reconciling career and family beyond economic necessity.

(Figure 3 here)

Outsourcing: formal and informal child care

The availability of childcare facilities is often cited as one of the structural pre-requisites for women to remain employed after becoming mothers. As said, we cannot test the importance of childcare availability for employment decisions, but provide some descriptive results on childcare use[x] among employed mothers and, more interestingly, on the differences between the use of formal and informal care between countries. The results show that among employed German and Norwegian mothers, exclusive use of formal childcare is much the most common when children are young. Exclusive *in*formal childcare is the most common care solution among working mothers in Italy and the UK. Moreover, in both countries employed mothers are more likely to resort to a combination of the two types of childcare, while only a minority use formal childcare exclusively. In general, informal child care is certainly of importance for full-time working mothers in Italy and the UK. It plays a substantive role in Germany too – mostly for part-time employed mothers and especially for mothers of young children, while it is of only modest importance in Norway. For details on the distribution of childcare by country, the age of the youngest child and maternal employment status, see Table A6 in the supplementary material.

5. Summary and conclusion

This article has taken a comparative approach to investigating the individual and household characteristics that enable mothers to be employed full-time, employed part-time, or homemakers in four European countries. Compared to previous studies on maternal employment, the article has advanced a more nuanced understanding of the micro elements associated with mothers' employment status under different contextual characteristics.

As expected, mothers of older children are more likely to be employed than those with younger children at home, but the countries studied differ substantively in the extent to which full- or part-time employment depends on the child's age. This matters relatively little for mothers in Italy and Norway, confirming hypothesis H1, while in Germany and the UK full-time employment becomes more common as the youngest child grows older.

Education is confirmed as a strong enabling trait (H2), especially for full-time employment. However, education is much more decisive regarding participation in low- and, to some extent, medium-equality countries, thus clearly supporting the 'equalization' (H2-b) rather than the 'discount' (H2-a) scenario. Furthermore, in Italy the presence of young children does not offset the positive effect of education, while it does so in Germany and the UK. Part-time work is more strongly affected by education in the UK and in Germany, especially when there are young children. These results point towards a stronger specialization within couples in Germany and the United Kingdom, even among the highly educated, as long as the children are very young.

Employment decisions are partly also driven by economic necessity. Overall, full-time employment for mothers is lowest when the partner's income is high, thus confirming H3. Nonetheless, the strength of the effect largely depends on the age of the youngest child and on the country of residence. The partner's income is a stronger predictor in Germany than it is in Italy, Norway and, less so, the UK. The partner's working hours are of negligible importance. Overall, the results do not support H3-b, according to which the household level would be less relevant to the outcome in Norway.

Last, in contrast to common expectations, we do not only find informal care to be determinant for mothers' employment in Italy, the 'familiaristic' country. Informal care and a combination of it with formal care is also an important contribution to work-motherhood organization in the United Kingdom and Germany, albeit somewhat less. Whether resorting to exclusive informal childcare will be possible in the coming future remains an open question, given that female employment, age at first birth and age at retirement are all rising quickly (Van Bavel, J. and De Winter 2013).

In conclusion, the results confirm, once again, that despite being in decline (Lewis, 2001) the 'male breadwinner – female homemaker model' is still diffuse and specialization in tasks among couples is particularly strong when children are young, yet with notable and persistent country differences. We have added important new aspects to this old knowledge. The first is that if

European countries had more equal levels of female education, existing country differences in women's employment would certainly be less pronounced. The second point is that these 'individual enabling' characteristics, like education, count much more in gender-unequal countries such as Italy but to a lesser extent in Germany and the UK. Therefore, similar to previous research (Korpi et al., 2013), our results confirm the 'equalizing scenario', and we can certainly discard the 'discount mechanism' in this context. On the one hand, this is a sign of hope for countries like Italy, where in times of empty treasuries an extension of family and reconciliation policies is unlikely: individual characteristics like education can to some extent compensate for a lack of policy support. The other side of the coin is that in the absence of public intervention poorly educated mothers and their families are left behind. The implications of this are worrying, given that women's employment makes a difference by keeping families out of economically precarious situations, especially when children are young (Barbieri and Bozzon, forthcoming). Therefore, while an investment in individual resources – i.e. an increase in numbers of highly educated persons – is certainly an important step, in order to reduce the inequality of chances (also for future generations) and to set the bar higher for everyone, an investment in equity and public support is inevitable. The well-documented benefits of more equal and cohesive societies should largely justify the effort (OECD, 2011).

Disclaimer: This paper is based on data from Eurostat, EU Statistics on Income and Living Conditions 2004, 2005, 2006 and 2007.The responsibility for all the conclusions drawn from the data lies entirely with the authors.

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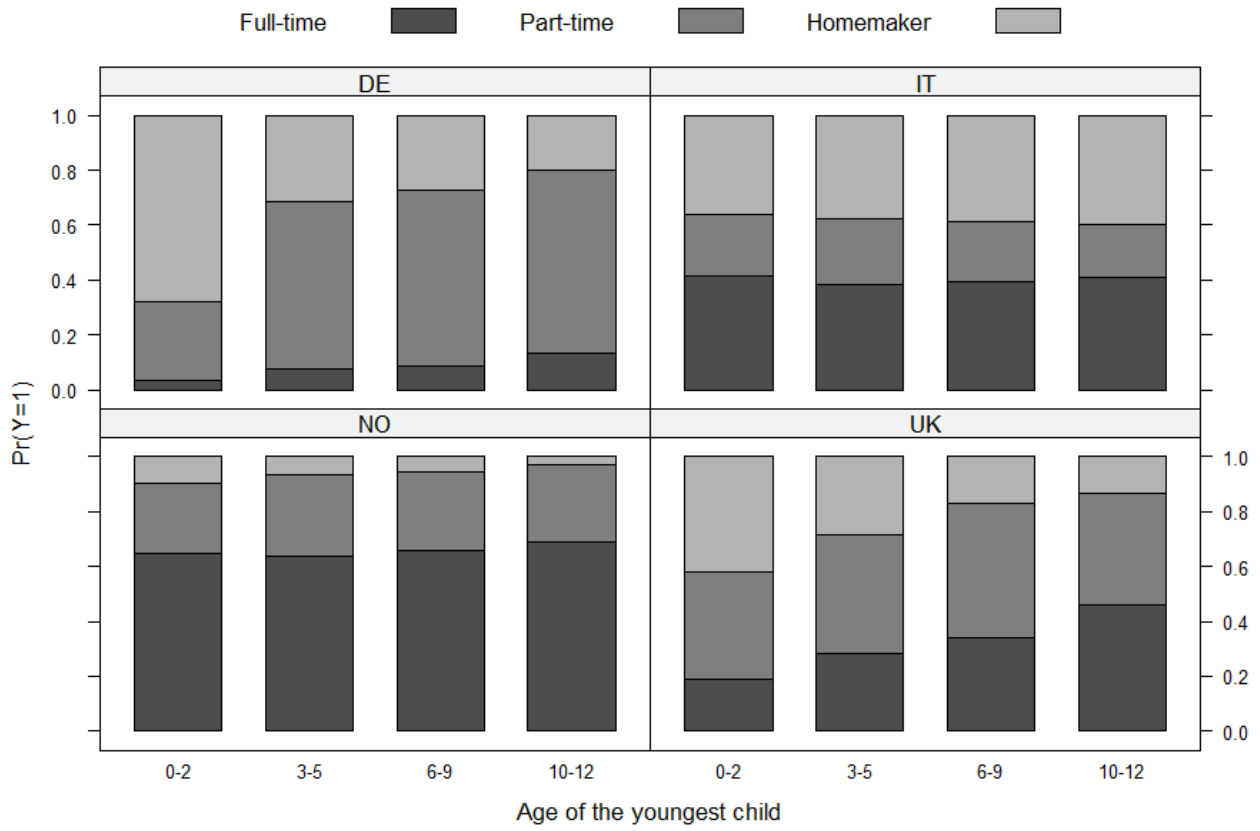
Tables and figures

Table 1 Summary statistics (means and proportions) by country. Mothers age 19 to 60.

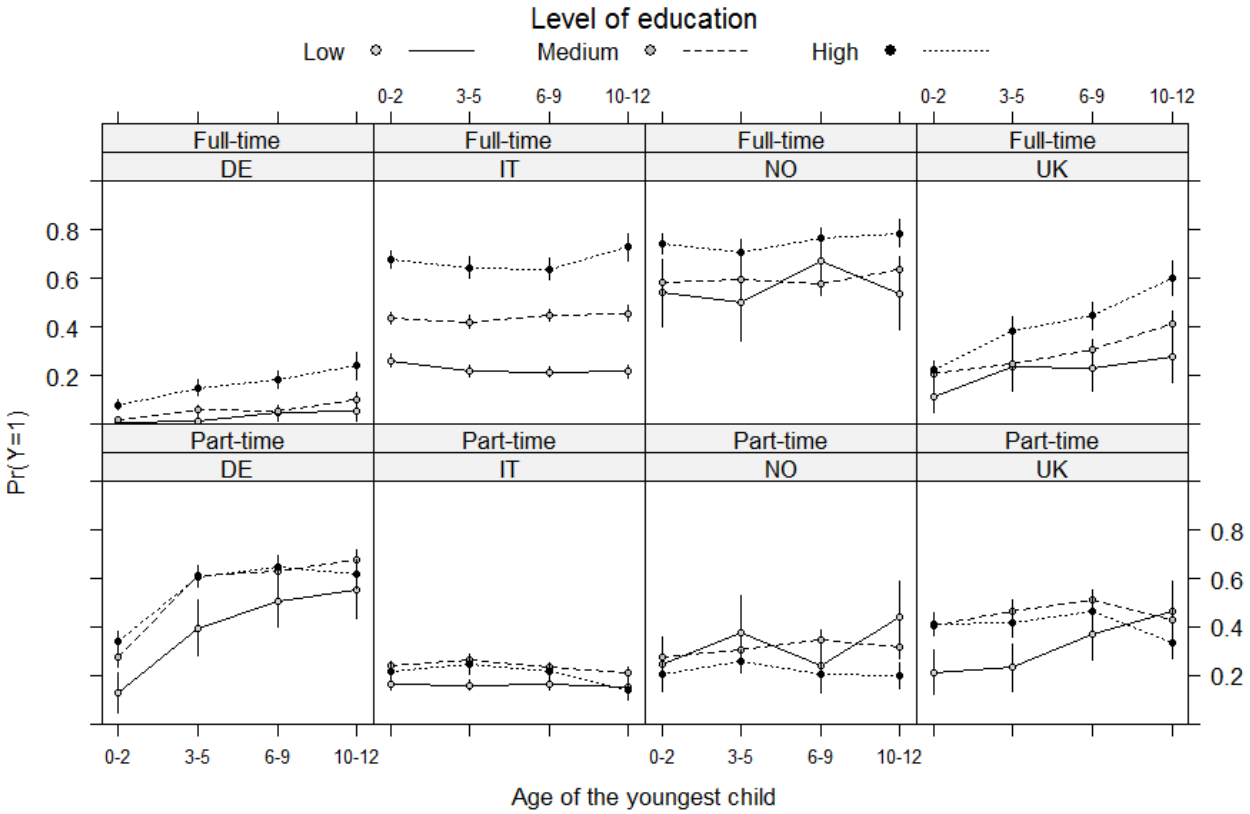
	Germany	Italy	Norway	UK	Total	Min	Max
Full-time	.108	.395	.642	.297	.352	0	1
Part-time	.518	.207	.279	.414	.313	0	1
Homemaker	.374	.398	.08	.289	.335	0	1
Age	37.7	37.7	36.8	36.6	37.4	19	60
Age of the partner	40.4	41	39.4	39.2	40.4	19	80
Married	.937	.942	.72	.824	.894	0	1
Low ed.	.058	.377	.06	.094	.225	0	1
Medium ed.	.573	.483	.504	.537	.513	0	1
High ed.	.369	.14	.435	.37	.262	0	1
Mother less education	.267	.17	.15	.166	.187	0	1
Equal education	.595	.599	.618	.624	.604	0	1
Mother more education	.138	.231	.232	.211	.208	0	1
Partner's income							
<25	.249	.25	.249	.248	.25	0	1
25-50	.252	.252	.25	.253	.252	0	1
50-75	.251	.248	.25	.253	.25	0	1
over 75	.248	.25	.25	.246	.249	0	1
Partner's employment hours	39.5	39.7	39	41.4	39.8	0	99
Age of the youngest child							
0-2	.265	.278	.307	.357	.291	0	1
3-5	.246	.244	.232	.222	.24	0	1
6-9	.299	.276	.27	.242	.275	0	1
10-12	.191	.201	.192	.178	.194	0	1
Number of children							
One child	.292	.365	.216	.291	.319	0	1
Two children	.508	.48	.48	.48	.486	0	1
Three or more	.2	.154	.304	.229	.195	0	1
Year of the survey							
2004	0	.265	.356	0	.181	0	1
2005	.323	.254	.349	.349	.295	0	1
2006	.346	.246	0	.335	.248	0	1
2007	.331	.235	.295	.315	.276	0	1
N	5743	13719	3576	4020	27058		

Figure 1. Predicted probabilities of being employed full-time, part-time and homemaking by age of the youngest child and country. Mothers aged 19-60.



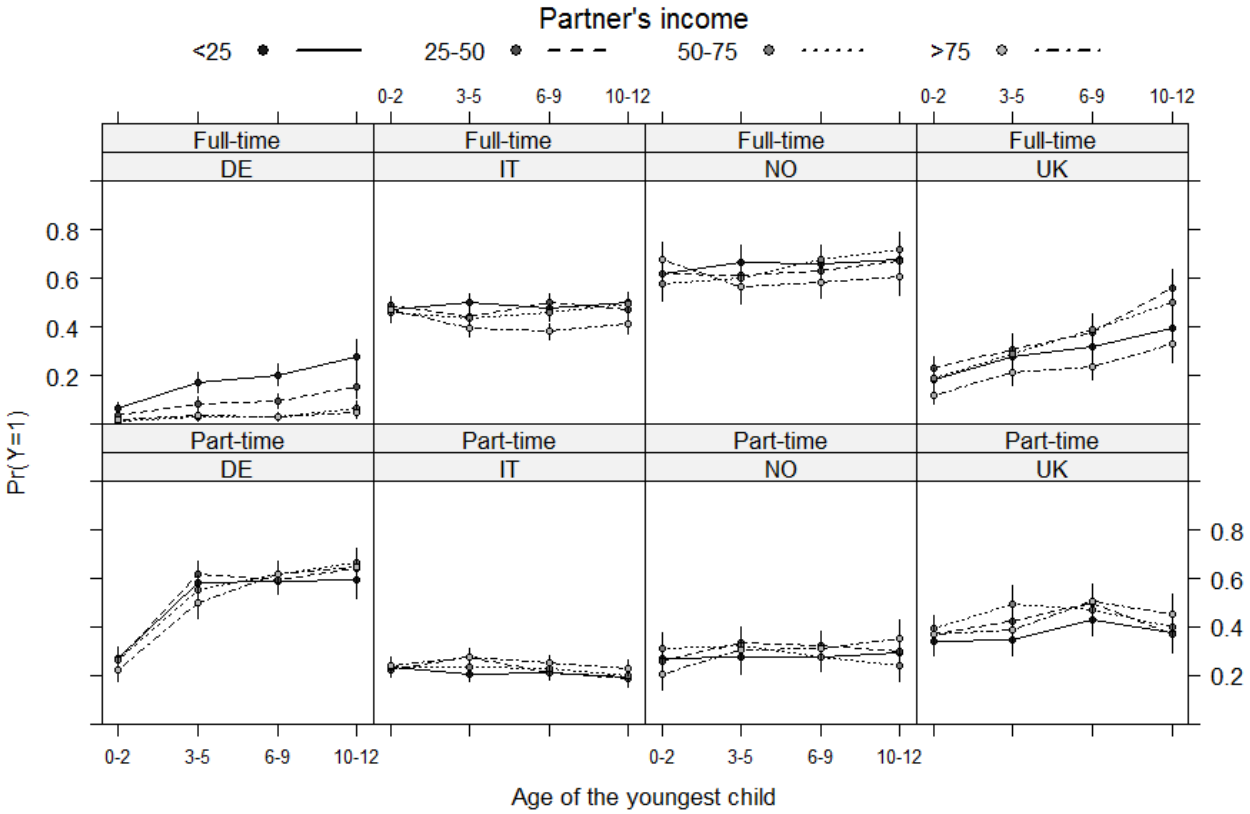
Source: EU-SILC 2004/2007, own calculation. The predicted probabilities are adjusted for the mother's age and age squared, the partner's age, marital status, absolute and relative education, partner's income and employment hours and number of children in the household.

Figure 2 Predicted probabilities with 95% confidence bounds of full-time and part-time employment by level of education and age of the youngest child. Mothers aged 19-60.



Source: EU-SILC 2004/2007, own calculation. The predicted probabilities are adjusted for the mother's age and age squared, the partner's age, marital status, relative education, partner's income and employment hours and number of children in the household.

Figure 3 Predicted probabilities with 95% confidence bounds of full-time and part-time employment by income of the partner and age of the youngest child. Mothers aged 19-60.



Source: EU-SILC 2004/2007, own calculation. The predicted probabilities are adjusted for mother's age and age squared, partner's age, marital status, absolute and relative education, partner's employment hours and number of children in the household.

[i] In Italy paternity leave is limited to one compulsory day off.

[ii] As the causal order among child care use and employment participation is not clear, we abstain from including the type of child care usage among the explanatory factors and limit the analysis to descriptive results.

[iii] We use the cross-sectional data as the information provided on households is much richer than in the longitudinal files. In addition, the longitudinal part is rather short with a maximum of four consecutive years, so that a longitudinal analysis would be based on few cases and cover a very short time span. We use the age of children to include some glimpse of dynamic aspects. The 2006 wave could not be used as data for Norway were missing for that year.

[iv] Obviously, studying maternal employment implies a selection of women who have children. See the online supplementary material for how we deal with this issue.

[v] Given our interest in the interplay between partners' characteristics, we inevitably had to exclude from our focus the study of work and family reconciliation for single mothers. This topic could be fruitfully addressed in future research.

[vi] Mothers reporting other employment statuses – the unemployed, students, in early retirement, disabled, unfit to work, and other inactive people who make up about 10% of the mothers – are excluded from the analyses.

[vii] Low education includes pre-primary, primary and lower secondary education. Medium education includes upper secondary and post-secondary non-tertiary education, while high education includes first and second stage tertiary education.

[viii] The multinomial logit model rests on the heavy assumption of an independence of irrelevant alternatives. We test for this and can be reasonably confident that our results are not affected by this assumption (see the comments in the supplementary material).

[ix] Our results also show very large confidence intervals for the poorly educated so these results hardly reach statistical significance. The reason is the low number of the poorly educated in all countries but Italy.

[x] Due to data availability, we only consider out-of-school childcare, i.e. pre-school and school hours are not included.