

Does European country-specific context alter motherhood penalty and fatherhood premium?

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Abstract

This paper contributes to the discussion on the effects of childbearing on men's and women's employment in the developed countries. While the literature on motherhood penalty due to childbearing is voluminous, there have been no empirical studies that systematically compare the size of the effect of fatherhood on employment cross-nationally net of selection into fatherhood. Furthermore, previous research for women has usually either compared the effects of childbearing across countries assuming exogeneity of family size to women's employment or examined these effects by using methods which deal with endogeneity of family size and simultaneously focused on single countries. In this paper we overcome these shortcomings. We use instrumental variable models and examine the cross-country variation in the causal effects of family size on employment of men and women across the groups of European countries with diverging welfare state regime and gender norms.

1. Background

The aim of this paper is to demonstrate the way in which country-specific context may alter the gains and losses related to family size among mothers and fathers. We examine the effects of the number of children in a family on mother's and father's involvement in the labor market net of individual-level influences such as human capital endowments, family orientation or motivation towards professional career and we compare the magnitude of these effects across European countries.

The relationship between family size and parental employment is very well grounded in existing theories. According to neo-classical economic models, division of labour within household is more efficient than sharing duties, which makes one of the parents specialize in market production and the other in home production (Becker 1965). Due to biological reasons and the influence of social norms, the role of care-provider is usually taken over by mothers (Brewster & Rindfuss 2000; Lehrer & Nerlove 1986). Hence, the effect of the number of children on parents' employment is expected to be positive for men and negative for women.

However, the effects of family size on parent's involvement in the labour market can be also moderated by the country context. This is the case particularly for women for whom family policies, labour market structures or gender norms may modify the magnitude of the opportunity costs (Lehrer & Nerlove 1986, Gornick et al. 1997). Nevertheless, the cultural context may also influence the effects of family size on father's employment. Namely, in countries where conservative attitudes dominate, fathers are expected to be "good providers" and to increase their involvement in paid work after arrival of a child (Maume 2006; Kaufman & Uhlenberg 2000; Townsend 2002; West and Zimmermann 1987). On the other hand, however, in more egalitarian societies where equal division of labor between men and women is promoted one can expect that fathers reduce their working hours in order to participate in childcare, a behaviour consistent with the "involved father model" (Kaufman & Uhlenberg 2000).

Empirical research provides very rich evidence on the effects of children on women's employment. This research is very consistent with the theoretical predictions showing that the larger the number of children that need to be taken care of, the poorer mothers' labour market opportunities and that this relationship is more pronounced in countries where the conditions for work and family reconciliation are worse (see the meta-analysis by Matysiak & Vignoli 2008, also Nieuwenhuis et al. 2012, Uunk et al. 2005, Stier & Mandel 2009). Much less is known about the effects of family size on fathers' employment (Lundberg 2005). Moreover, the existing studies provide evidence mainly for the US (Astone et al. 2010; Kaufman & Uhlenberg 2000; Knoester & Eggebeen 2006; Lundberg & Rose 2002; Percheski & Wildeman 2008; Sanchez & Thomson, 1997;

Weinshenker 2013), while less attention has been paid to the effects of family size in a comparative perspective (Koslowski 2011). In this paper we thus contribute to the knowledge on the effects of children on parents' employment, by focusing both on women and men and applying a comparative perspective.

2. European context and research hypotheses

European Union constitutes an interesting laboratory for research on the moderating effects of the institutional and cultural context on the impact of childbearing on parent's involvement in the labor market due to the substantial diversity of member states in welfare policies and gender norms. The conditions for reconciling paid work and family are certainly the best in Nordic countries which stand out for their exceptionally well-developed childcare services and individualised rights to parental leaves (Leira 2002) as well as the emphasis on gender equity in the labour market and care in the implemented policies and the public debate (Treas & Widmer 2000, Muszyńska 2007). At the other extreme, Southern Europe is characterised by very limited institutional support for working parents in terms of public childcare provision and strong social support for the traditional division of household labor (Lueck & Hoffaecker 2003, Mencarini & Tanturri 2006). Continental Europe lies somewhere in the middle between Nordic and Southern Europe, with Belgium and France providing nearly as good conditions for work and family reconciliation as Sweden or Norway, and Germany and Austria being characterised already by more conservative family policies and gender norms. The Anglo-Saxon countries constitute another, specific, group of countries where the cultural barriers for female work are not very strong, but the public childcare support is rather poor. The advantage of this country group is the flexibility of its labour market (Adsera 2004, 2005). Finally, the conditions for work and family reconciliation in Central and Eastern Europe are relatively poor with the exception of Slovenia and Estonia (Szelewa & Polakowski 2008, Matysiak & Weziak-Bialowolska 2013). An important characteristic of this country group is, however, a strong attachment of women to the labour force which is likely partly legacy of the state socialism and partly a result of lower living standards coupled with strongly increasing consumer aspirations (Sobotka 2011).

3. Data and method

In order to properly investigate the effects of children on parent's employment we need analytical methods which allow to control for all observed and unobserved characteristics that jointly affect fertility and employment. A failure to account for these characteristics usually leads to a bias in the estimated effects. For instance, among women one can expect family orientation to correlate negatively with their work orientation, leading to a selection of family oriented to the group of non-

employed (Hakim 2000; Francesconi 2002). A different pattern of selection may be prevalent among men: Studies of male fertility suggest that certain personality characteristics such as sociability may predict the likelihood of forming a family (Jokela et al. 2009; von der Lippe, 2010), these characteristics may be also positively related to labour market opportunities. Hence, ignoring selection into employment and parenthood may overstate the positive effects of children on men's employment and negative effect of on women's employment (Lundberg 2005).

So far only few studies accounted for selection problems. The majority of those that attempted to do it controlled only for time-constant unobserved characteristics, but not the time-varying ones (Aassve et al. 2006, Matysiak 2009, Matysiak & Vignoli 2013; Hyslop 1999; Carrasco 2001; Koslowski 2011). This assumption is not plausible, because family-related and work-related preferences may change with a birth order and work experience. There are only few studies which succeeded in accounting for both time-constant and time-varying unobserved characteristics of parents (Rosenzweig & Wolpin 1980; Angrist & Evans 1998; Jacobsen et al. 1999; Cruces & Galiani 2007; Caceres-Delpiano 2012). These studies focus on women and usually single countries.

Against this background the novelty of this study is that we investigate the effects of children not only on women's but also on men's involvement in the labor market, apply a comparative perspective and apply methods that account for both time-constant and time-variant observed and unobserved characteristics of individuals. To this end, we implement the twin-first approach proposed by Rosenzweig and Wolpin (1980). This pseudo-experimental approach relies on using the data on multiple births in order to construct a proper "control group" for parents with a given number of children. For instance, parents who experienced a twin birth at first birth may be regarded as a random "sample" that may be used for comparisons with parents who experienced a single birth at first birth. Thus, information on twin births can be applied to construct an instrumental variable and to get unbiased estimates of the impact of the number of children on parental employment.

In this study we are fortunate to have access to the European Survey of Income and Living Conditions (EU-SILC), which includes large samples and thus allows identifying a suitable number of parents who experienced multiple births. Additionally, the survey provides data on labour market situation of respondents and the structure of their families. Based on these data, cumulated from period 2004-2011, we can analyse and compare the effect of childbearing on parental employment in thirty European countries (all the members of the European Union and additionally in Norway, Iceland and Switzerland).

In our study we focus on parents aged 18-35, whose oldest child is less than 15 years old. The total number of twin births in our sample amounts to 1,437. The twinning probability amounts to 1.11, which is in line in the existing literature on multiple births (Martin & Park, 1999).

The main dependant variables of the study are: probability of doing work, which captures the extensive margin of parental labour market involvement, and the number of hours worked, which captures the intensive margin. EU-SILC provides also information on the number of hours usually worked per week in the main job. Regarding parents who were not working, we assumed zero hours of work, so that this outcome variable is not conditional on the labour market status. These two variables are regressed against family size, country group as well as a number of control in a two stage least squares (2SLS) framework with the occurrence as twins as an instrument. Family size is also interacted with the country group in order to examine if the country-specific institutional or cultural factors moderate the impact of family size on female employment.

4. Expected empirical results

We expect that the negative effect of children on mother's employment is weaker (or even non-existent) in countries where the conditions for work and family reconciliation are the best (i.e. Nordic Europe) as well as in countries characterised by strong attachment of women to the labour force (CEE countries) than in countries where the welfare support for working parents is weak and the gender norms are conservative (i.e. Southern Europe, Austria, Germany). Our preliminary results confirm the existence of such pattern.

We also expect that the positive effect of children on men's employment is weaker (or even turns negative) in countries where the gender norms are more egalitarian (i.e. Nordic countries) than in countries where they are more conservative (i.e. Southern Europe, Austria, Germany, CEE).

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