Father Involvement and Fertility in Norway

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Submission for the 2014 meetings of the Population Association of America

Do more father involvement in the family increase fertility? There is a global concern over low fertility in modern societies and father involvement and gender equality has become important features in the discussion about how to increase fertility. The main argument for why societies are experiencing low fertility is that a gap between high levels of societal gender equality, in particular in employment, and low levels of gender equality within the family produces an extra burden on women. This burden puts families under pressure and may limit their fertility (Goldscheider 2012; McDonald 2000). This view has been supported by evidence showing that in countries with a positive fertility reversal, gender equality is also very high (Myrskalä et al. 2011). High gender equality, on the other hand, seems to be related to generous family policy, especially those aiming at stronger father involvement in childcare and equal gender division of economic responsibilities. The aim of this paper is to investigate the role of father involvement in the society on childbearing in Norway. Thus we ignore why there might be high father involvement in some areas, but focus on the direct relationship between father involvement and fertility. Norway is an excellent case for this kind of investigating, i.e. relatively high fertility among low fertility countries and relatively high levels of gender equality.

The Nordic countries facilitate a family policy with strong emphasis on gender equality and a father's quotas in the parental leave program are aimed at encouraging father involvement at an early stage. At the individual level more father involvement may facilitate better work-family compatibility for mothers, possibly making it easier to realize childbearing plans. Previous studies from Norway and Sweden show that more share of leave taken by the father is associated with higher likelihood of having another child (Duvander and Andersson 2006; Duvander et al. 2010; Lappegård 2010). However, when investigating the causal relationship using the introduction of the father's quota reform as a natural experiment, there has only been detected small, if any, immediate effects of fathers' leave on fertility (Duvander and Johansson 2012; Duvander et al. 2013).

We argue that the introduction of the fathers' quota have changed father's behavior and thus the social norms towards more involved fatherhood. The level of father's parental leave use in a society may reflect the social norms about fatherhood, where higher share of leave taken by fathers signal stronger norms toward involved fathers. Our starting point is that individual decision-making about childbearing is embedded in a set of contextual characteristics including both opportunity structures in the society and social norms. In this paper we ask whether and how father involvement in the society is associated with individual fertility. As far as we know there are no studies that have investigated such relationship and our study will bring new insight about the relationship between father involvement and fertility. In general, we expect more father involvement at the community level to be positively associated with

fertility. However, the mechanisms behind the transition to parenthood are different from the transition to higher parities, and the transition to a second or a third child can be quite different and therefore it might be expected that the relationship differ depending on the parity. For this study we use unique data covering the whole Norwegian population and suitable statistical methods.

Background

As the first country in the world Norway implemented an earmarked part of the paid parental leave program to fathers in 1993, the so-called fathers' quota, which is leave days that the family lose if not taken by the father. The parental leave program provides parents the opportunity to be home with their baby for around a year with economic compensation of around 80% of their original salary. The father can not be on leave at the same time as the mother, and it is required that the mother either is working or being enrolled in education. When the fathers' quota was introduced in 1993, the quota was 4 weeks and later it has been extended to 5 weeks in 2005 and thereafter step-wise to 14 weeks in 2013.

The policy had an immediate effect on father's use of parental leave (Dahl, Løken and Mogstad 2012), and the proportion of fathers' taking any leave days went from almost non-existent (around 3%) till around 60% in just a few years. The aim of the policy was to have more fathers being involved in child care and thereafter to have a more gender equal division of labor in the family. By measuring father's actual use of parental leave, the policy has been considered as a success. A recent study show that parents exposed to the fathers' quota reform are more gender equal in terms of sharing housework more equally than those having children just before the reform was introduced (Kostadam and Finseraas 2011). However, the policy has been debated and one of the arguments against it is that not all fathers' are entitled to the father's quota or are in a work position where they can make use of the quota. The largest part of the parental leave program is to be shared by the parents, but the lion share of this part of the leave is taken by the mother. This indicates that fathers' actual use of parental leave depends very much on the fathers' quota.

In order to investigate how fathers' involvement on community level is associated with fertility we will construct two main indicators at municipality level. First, an important aspect of father's involvement is that he actually makes use of the leave that he is entitled to. Although most fathers' entitled to the fathers' quota make use of their rights, there still is a proportion that do not use leave and this varies across the country. We label this indicator *"engagement"* – which measures the proportion of fathers making use of the father's quota. Second, if the fathers' take more leave than the weeks included in the father's quota this has to be agreed on with the mothers as this is part of the shared leave. As the lion share of the shared leave is taken by the mother it is often argued that the mothers consider this leave as their leave. The more fathers' make use of the shared leave can thus be considered as an act of *"gender equality"* – which we label our second indicator, measuring the mean number of weeks taken by fathers in addition to the father's quota. Each of these measurements may indicate different social norms towards father involvement. To what extent these indicators are associated with fertility remains an empirical question, but one may assume that higher levels of both "engagement" and "gender equality" is associated with higher fertility.

Analytical strategy

For this study we use high-quality data from Norway including individual level records for men and women from several administrative registers that covers the total Norwegian population. The data cover the years 1974-2011, and we have information about date of birth for all children, mothers' and fathers' educational attainment and their age and municipality of residence. To calculate father involvement at community level we use data on individual use of parental leave and construct the two indicators for each of the 435 municipalities. The macro-level data also include a variable on male and female unemployment rate, respectively and a variable of the proportion of women in the labor market, made available through Statistics Norway. The variable on unemployment rate is included to control for variations in local labor market opportunities. The variable on women's employment is included to control for variation in dual-earner norms. In general there is a strong dual-earner norm in Norway, but there is extensive regional variation.

In order to estimate the determinants of timing and the number of births, we use a discrete-time hazard model, starting with the first and continuing though later births. Thus, we will estimate separate models for the births. The effects of father involvement and other variables are here allowed to vary by birth interval. Using the Heckman-Singer (1984) procedure, we also control for unobserved heterogeneity which allows correlation across birth intervals.

We jointly estimate the timing of the first through fifth birth. The reason we include that many births is that father's involvement is supposed to increase both timing of births and total fertility. Since we have register data covering all women in Norway, we can divide the mothers into 5 years age cohorts in the regression analysis. We will follow the females from age 19 until the fifth birth, age 43 or the end of 2011. We control for several individual characteristics relevant for the study, such as age, educational attainment and union status (from first birth and onward).

A potential problem of the model specification discussed so far, is that we have not included a separate measure of fathers actual use of the fathers' quota, measured at the individual level. Fathers differ in their involvement not only because of indirect effects through differences in aggregate involvement at the municipality level, but also because of differences in personality. In the model described above we can not separate these two effects. To deal with this fact, we also want to estimate an alternative model specification where we, in addition to the aggregate measure of father involvement described above, include a measure of fathers' involvement at the individual level. There are (at least) three potential problems with this type of specification. The first is that the variables determining father's involvement are typically latent to the researcher, at least in our dataset. The second problem is that one might reasonably assume that father involvement is endogenous. To deal with both problems we will estimate an instrumental equation which in the next step can be used to predict father involvement based on the variables available in our data. The third problem estimating this type of specification is that we should be able to identify the male partner during the couple's total planning period. In our data it is typically difficult to identify the male partner prior to the first birth of the woman. Thus, in this estimation we will follow the women from the age of her first birth, and the sample will be constrained to only include women that are married to the same partner during the total sample period.

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