

Non-technical summary for the Project RRC X-19

Effect of education on second births in Hungary. A test of the partner effect hypothesis

Abstract:

This paper examines the relationship between education and the transition to first, second and third births in Hungary. While a large number of studies in Western European countries report a positive effect of higher education on the transition to second birth rates, studies carried out in former socialist countries presented mixed results. Studies in Hungary have found a U-shaped relationship between education of the mother and her fertility. The fertility of highly educated women is higher than that of women with secondary education. This pattern is paradoxical since the economic theory of fertility would predict a decrease of fertility with education.

The study hypothesizes that the partner effect hypothesis explains the effect of higher education on second birth rates in Hungary. The hypothesis implies that highly educated women tend to marry or cohabit with highly educated men and the good career prospect of male college and university graduates enables couples to raise more children.

Transitions to births as well as the partner effect hypothesis are examined using panel data from the Hungarian Generations and Gender Survey, conducted in 2001, 2004 and 2008. Parity-specific durations to conceptions are analyzed using lognormal survival models.

The findings indicate that

- higher education of the mothers
 - increases the time to first conception
 - decreases the time to second conception
- the education of the male partner
 - reduces the waiting time to the second conception
 - turns the effect of women's own education insignificant
 - does not affect the transition to first birth
- the results remain robust after controlling for sample selection

The study concludes that

- the partner effect hypothesis explains the positive effect of tertiary education to the transition to second birth in Hungary

- the lower fertility of women with secondary education is due to their limited access to partners with high education

Keywords: partner effect hypothesis, Hungary, education, fertility

1 Introduction

The first objective of this paper is to describe of the relationship between education and fertility in Hungary. It was argued that fertility is likely to decrease with women's education in post-socialist countries (Muresan and Hoem 2010). Previous research into fertility in Hungary, however, found an U shaped relationship between education and total fertility (Husz 2006) and the probability of delivering a second child within a five year interval after the first birth (Spéder 2006). Our second objective is to explain why the fertility of highly educated women might be higher than that of women with secondary education.

A possible answer to this question is provided by the partner effect hypothesis (Kreyenfeld 2002). Highly educated women tend to marry (or live with) educated men, a phenomenon known as educational homogamy or assortative mating (Becker 1981, Kalmijn 1998). Using the language of the economic theory of fertility, the partner effect hypothesis states that the positive effect of family income on childbearing suppresses the opposite effect of the shadow price of raising high-quality children (Becker and Lewis 1973, Jones, Schoonbroodt and Tertilt 2008).

2 The partner effect hypothesis in the Hungarian context

The dramatic decline in fertility in the former socialist countries was often explained in terms of institutional changes that have occurred during the transition to capitalism, like the increase in income inequalities, consumption aspirations and labor market uncertainties, the expansion of higher education, and the decline in the free access to childcare (Kantorová 2004, Klasen and Launov 2006, Thornton and Philipov 2009).

Highly educated men face good career or earnings opportunities so that their income might be sufficient to invest in the human capital of more children. The patterns of earnings inequalities are related to family policy in Hungary, and the interplay of labor market and child-care institutions reinforce the male-breadwinner model.

Compared to women with secondary education, the fertility decisions of highly educated women are affected by two opposing mechanisms. On the one hand, they face better career prospects and they find the price of high-quality children relatively high (Becker and Lewis 1973). On the other hand, they have more income available to raise high-quality children, since they tend to be partnered to highly educated men, who face upward-sloping age-earnings profiles. It is possible therefore that due to this income effect, highly educated women have more children than women with secondary education. Besides, the transition to second birth might be faster among highly educated women. The generous cash benefits and the limited availability of child-care force most of the women to exhaust the 3 years of paid leave. This leads to a substantial depreciation of human capital and results in a male-female wage gap

among qualified employees. Highly educated women therefore are likely to prefer leaving the labor force once and squeezing births together over experiencing repeated spells of being out of the labor force.

3 Data and methods

Data from the three waves of the panel survey *Turning Points of the Life Course* (Hungarian Generations and Gender Survey) were used in the empirical analysis. Women born between 1966 and 1983 are looked at in order to examine fertility behavior under the conditions of transition to capitalism. Women born between 1946 and 1965 will be treated as a „control” group or „benchmark”, since the experiences of these cohorts mostly reflect the state-socialist area.

Our sample is restricted to women who were not enrolled in education at the time of the first wave interview. We also omitted respondents who got pregnant before turning 14 and respondents with incomplete or inconsistent life histories. Our sample includes 3235 women.

The Stata module *cmp* (Roodman 2008, 2009) is used to estimate survival models with sample selection and endogeneity.

4 Empirical results and discussion

First, in line with the prediction of the economic theory of fertility, education has a negative effect on the transition to first birth: the time to first conception is the longest among college and university educated women. Second, the transition to second birth is faster among highly educated women than among women with secondary education in the sample of women born between 1946 and 1983. To assess whether this effect reflects the transition from state-socialism to capitalism, we repeated the analyses to women who were born after 1965 and were 24 or younger at the beginning of the transition. We were unable to replicate the positive effect of education; this failure however might indicate that the time-squeeze mechanism operated during state-socialism.

After describing the relationship between education and fertility, we also made an attempt to explain this relationship. More specifically, we tested the partner effect hypothesis. After including the partner’s education in the parity-specific regression models, the significant effect of education turned into insignificant, and the partner’s higher education was found to have a significant negative effect on the time to second conception. This finding strongly supports the partner effect hypothesis. The effect of highly educated partners can be interpreted in terms of the income effect: highly educated men can afford the costs of investments into the human capital of children, which are likely to increase over time.

While our findings are consistent with the predictions of the partner effect hypotheses, the evidence presented here is not sufficient to gain a deeper insight into the mechanisms that link the partner’s education to fertility. A deeper analysis of the hypothesis is required for several reasons. First, similar to Kreyenfeld’s (2002) study, we found that the relationship between women’s education and the transition to second birth is spurious, and it can be explained in terms of partner’s education effect and educational homogamy. In contrast, other studies report that the effect of own education remains after controlling for partner’s education (Gerster et al 2007, Klesment and Puur 2010). In the latter case, the relationship between women’s education and fertility is likely to be a causal one and the partner effect hypothesis is

just another mechanism which strengthen the correlation between higher education and the transition to second births. Second, the validity of the partner effect hypothesis is parity-specific: high education of the partner leads to a fast transition to second births, but it cannot prevent highly educated women from postponing the first child. This implies that women seem to consider their own education when timing the first birth, but after becoming a mother, own education does not matter when it comes to time the second birth.