The Effect of Education on Fertility: Evidence from a Compulsory Schooling Reform

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Abstract

This study analyzes the effect of education on the number of children, childlessness, and the timing of the first birth. We use two large datasets: the German Mikrozensus, and the German Socioeconomic Panel (SOEP) to analyze the fertility of German women born between 1939 and 1959. We exploit a reform that extended mandatory schooling from 8 to 9 years to deal with the endogeneity of schooling. In particular, our identification strategy draws on the exogenous variation in education resulting from the lagged implementation of the reform in the West German states. By applying an instrumental variable approach we identify the causal effect of education on fertility. We find that education significantly increases the probability of remaining childless and reduces the number of children. In particular, one additional year of education raises the probability of childlessness by 5 percentage points and reduces the number of births by almost 0.2 children. While our evidence on the timing of first births does not suggest any postponement of motherhood away from teenage pregnancy, we find that more education suppresses the probability of first birth at ages 30-35 by 10 percentage points. Our findings for Germany are quantitatively and qualitatively important, because there is no previous evidence for developed countries suggesting that education causally restricts motherhood, and reduces family size. We attribute these findings to the particularly high opportunity costs of child-rearing in Germany, which are mostly related to high wage penalty for motherhood and low provision of public childcare. We show that our main results are robust to a number of changes in sample selection criteria and alternative variable definitions.

Key Words: Fertility, education, timing of first birth, childlessness, educational reform

JEL classification: I21, J13, J24

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