How do fertility intentions change after first birth?

Laura Castiglioni, Claudia Schmiedeberg & Petra Buhr

Abstract

Using the German Family Panel (pairfam), a large, randomly sampled longitudinal study of intimate relationships and families running since 2008, we investigate if fertility plans change after birth of the first child. We expect that desired number of children is adjusted according to the parent's experiences with the first child, e.g. regarding the child's behavior, but also measured by changes in subjective well-being and relationship quality across the transition to parenthood. Our hypothesis is that negative experiences, for instance, a drop in well-being or a steep increase in stress levels after birth, will be associated with a reduction in the desired number of children and – in the extreme case – cause parents to refrain from further fertility plans. To take into account that unobserved heterogeneity, e.g. the way individuals cope with stress, we apply a fixed-effects approach, i.e. we focus on intra-individual changes in fertility plans over time.

Extended Abstract

The negative fertility trends in the past decades have received considerable attention. One component of this trend in many developed countries is shrinking family sizes, as second parity progression can be regarded as a crucial factor for reaching fertility rates above replacement level (Van Bavel and Różańska-Putek 2010). Also in Germany, which has one of the lowest fertility rates in the European Union (European Commission 2011), diminishing family sizes have been observed (Kreyenfeld 2004, Dorbritz 2008).

As a consequence, a strong research focus in the past decade has been on higher parity births. Nevertheless, existing research has not reached a conclusion yet about the factors influencing a couple's decision for a second child. In sequential models (e.g. Udry 1983) it is argued that parents take into account family constellation and circumstances when deciding about an additional child because parents are more able to estimate costs and benefits of having (additional) children after the transition to the first child. In addition, the transition to parenthood brings major changes in parents' lives. For instance, recent research has shown that life satisfaction increases with the birth of the first child (Bauer et al. 2015). On the other hand, relationship quality is found to deteriorate after the transition to parenthood (Reichle 2002). Fertility plans might be adapted to these altered circumstances. Indeed, Heiland et al. (2008) provide evidence from German data that desired family size changes over time and that childbearing influences further fertility desires. According to Miller and Pasta (1993), child-number desires are driven by personality traits, value systems, family background factors, childbearing motivations, life-cycle factors, and situational factors. But empirical evidence about how the actual situation with the first child affects parents' fertility plans is scarce (an early exception being Miller & Pasta 1995).

Two contributions on this topic were published in the last few years: Lutz, Buhr und Boehnke (2013) use data from the first two waves of the German Family Panel (pairfam) to study how experiences with the first child influence parents' fertility intentions. In their cross-sectional analysis, however, they do not consider respondents' fertility intentions before first birth. Therefore, the associations found in this study could be a consequence of changed fertility plans due to negative experiences after first birth as well as caused by respondents with constantly low fertility intentions reporting more negative experiences with the first child. Margolis und Myrskylä (2015) use the Socio-Economic Panel (SOEP) for their analysis of second births and report that parents whose life satisfaction dropped after birth of the first child have a lower probability for having a second child. But again, as fertility intentions prior to first birth are not taken into account in this study, the problem of reversed causality cannot be ruled out, i.e. that parents who initially wanted to have one or even no child (before having their first child) are more likely to report a drop in life satisfaction after birth of the first child.

Our analysis builds on this work by including fertility intentions prior to first birth in the model. While Buhr & Lutz, who submitted an abstract to this conference as well, focus on progression to second parity, our study sheds light on the question how fertility intentions change with the birth of the first child. For this purpose, we use longitudinal data from the first six waves of the German Family Panel (pairfam), Release 6.0 (Brüderl et al. 2015) to estimate in a fixed-effects model how the number of realistically expected children changes with the birth of the first child. In pairfam, initially 12,000 randomly sampled respondents of the three birth cohorts 1991-1993, 1981-1983, and 1971-1973 are interviewed annually since 2008. As the survey spans topics such as intimate relationships, fertility,

intergenerational relationships, and parenting, it is well-suited for the aim of our study. By applying a fixed-effects model, we are able to (implicitly) control for time-constant unobserved heterogeneity as fixed-effects estimations are based on intra-individual changes over time. Hence, the potential bias due to unobserved heterogeneity in initial fertility plans compromising the two studies mentioned above can be ruled out by our empirical strategy. As explaining variables we focus on child behavior and changes in life satisfaction and relationship quality (such as conflict frequency and behavior and relationship satisfaction) across the transition to parenthood.

Our hypothesis is that parents whose life satisfaction or relationship quality drops after the first child is born will adjust their fertility intentions downwards. Similarly, if parents experience difficult behavior of the first child (e.g. with regard to crying and sleeping) they will reduce their fertility intentions. In contrast, parents with positive experiences are expected to keep their fertility plans or even adjust them upwards (in line with the findings of Miller & Pasta 1995). However, according to Udry (1983) fertility plans are sensitive only to major changes in circumstances, so that only very negative or positive experiences will lead parents to adjust their fertility intentions.

While the two above mentioned studies report about the conditions leading parents to desire or get a second child, we focus on a slightly different questions. Our contribution focuses on the conditions that make parents who had planned more than one child refrain from having a second child or, vice versa, those who had intended only one child start desiring a further child after birth of the first child.

Literature

Bauer, G., Brüderl, J., & Kneip, T. (2015). The effect of fertility on parents' happiness. Presented at the Workshop “Rational Choice Sociology: Theory and Empirical Applications”, November 16-18, 2015, Venice.

Brüderl, J., Hank, K., Huinink, J., Nauck, B., Neyer, F. J., Walper, S., … Wilhelm, B. (2015). The German Family Panel (pairfam). GESIS Data Archive, Cologne. ZA5678 Data file Version 6.0.0. doi:10.4232/pairfam.5678.6.0.0.

Dorbritz, J. (2008). Germany: Family diversity with low actual and desired fertility. Demographic Research 19, 557-598.

Heiland, F., Prskawetz, A., & Sanderson, W.C. (2008). Are Individuals' Desired Family Sizes Stable? Evidence from West German Panel Data. European Journal of Population 24, 129-156.

Kreyenfeld, M. (2004). Fertility Decisions in the FRG and GDR: An Analysis with Data from the German Fertility and Family Survey. Demographic Research Special Collection 3, 275-318.

Lutz, K., Buhr, P., & Boehnke, M. (2013). Die Bedeutung der Erfahrungen mit dem ersten Kind für die Intention zur Familienerweiterung. Zeitschrift für Soziologie der Erziehung und Sozialisation, 33, 169-186.

Margolis, R., & Myrskylä, M. (2015). Parental Well-being Surrounding First Birth as a Determinant of Further Parity Progression. Demography, 52, 1147-1166.

Miller, W. B., & Pasta, D. J. (1993). Motivational and Nonmotivational Determinants of Child-Number Desires. Population and Environment, 15, 113-138.

Miller, W. B., & Pasta, D. J. (1995). How does childbearing affect fertility motivations and desires? Social Biology, 42, 185-198.

Reichle, B. (2002). Partnerschaftsentwicklung junger Eltern: Wie sich aus der Bewältigung von Lebensveränderungen Probleme entwickeln. Zeitschrift für Familienforschung, Sonderheft 2, 75-93.

Udry, J.R. (1983). Do couples make fertility plans one birth at a time? Demography 20, 117-128.

Van Bavel, J., & Różańska-Putek, J. (2010). Second birth rates across Europe: Interactions between women's level of education and child care enrolment. Vienna Yearbook of Population Research, 8, 107-138.