Deliberate birth spacing before the fertility transition in France and Germany

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Introduction

Birth spacing in pre-transitional Europe is a controversial issue among historical demographers. In the last decades the earlier paradigm that fertility control was unregulated in Europe before the fertility transition has been questioned by several demographers. Recently examples of evidence of birth spacing have been found in Belgium (Van Bavel 2004), the Netherlands (Van Bavel and Kok 2004), Southern Sweden (Bengtsson & Dribe 2006) and Utah (Anderton & Bean 1985). We intend to examine the extent of deliberate birth spacing in France and Germany. Our primary variables of interests are a possible replacement effect from the death of a previous child and how changes in grain prices affect the interval to the next child.

Our Data

We are using individual-level micro level data from France and Germany for the period before the fertility transition. The data material are the extensive family reconstructions constructed by the demographers Henry (Fleury & Henry, 1965) and Knodel (1988). The data is available in the IDS structure (Alter et al, forthcoming), a recent attempt to standardize historical databases. We will follow mothers from their second to third conception or until censored at age 45. Because we are using family reconstructions data lacking information on migration only parents we can observe the end of the union are used. In other words we are restricted to “stayers”, people who spent most of their lives in the same village. We only use a woman’s first marriage and exclude illegitimate children and twins for the two first births.

The French data

Time period: 1668-1770
The data contains 40 rural villages
Size of our dataset: 8100 mothers of which 7134 have a third child
Data source: family reconstructions based on parish registers (baptism, marriage and burial certificates), supplemented with censuses

The German data

Time period: 1651-1889
The data contains 15 rural villages
Size of our dataset: 5821 mothers of which 5084 have a third child
Data source: genealogies (child cards and marriage cards)

Our primary variables of interests are a possible replacement effect from the death of a previous child and changes in grain prices effect the interval to the next child.

Piecewise Exponential Event History Model of the transition from Second Birth to the conception of the Third Child (controlling for individual frailty)

The data contains 15 rural villages

Strasbourg wheat prices, 1650-1875

Key variables

- **Wheat prices**: We want to measure the impact of economic conditions that might influence parents by controlling for wheat prices updated at a yearly basis. The data is wheat prices from Strasbourg that we believe are a reasonable representation of fluctuations in prices in both France and Germany. We measure the effect of a 10%p increase in prices calculated from an exponential trend line.

Death of the previous child: We have controlled birth for a possible replacement effect from the death of a previous child as well as the increase in fecundity when a mother stops breast feeding after the death of her child. The death of the second child is measured as a time varying covariate where the impact of the death of a child is differentiated for the death within 9 months after the second birth, 9-18 months after the second birth and after 18 months. In this way we can see the impact of breast feeding and also isolate the replacement effect after 18 months.

Main results

- **Similar reproductive behavior of married couples in pre-transitional France and Germany independent of time period.**

- During times of high wheat prices couples significantly delay the birth of their next child, a 100% increase in prices resulted in a delay to their next birth of around 23% in France and 17% in Germany.

- We find a replacement effect of the death of the previous child even after accounting for the effect of the discontinuation of breast feeding. Couples have their next child on average 37% faster in France and 47% in Germany if more than 18 months had passed after the birth of the child.

- We find very large regional differences in Germany (Southern Germany have shorter birth intervals) and also relatively large differences in France (Western France has longer intervals). In Germany we also find a significant preference for a balanced sex ratio, this pattern is not significant in France.

Conclusions

Our findings suggest that parents to some degree deliberately controlled the time to their next child in both pre-transitional France and Germany. This supports the recent findings of other historical demographers that parents might have had more control of their fertility in the West before the fertility transition than previously assumed.

References


