

Spatial diffusion of fertility decline in northern Sweden, 1850-1950

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The study background

One of the most compelling evidence for the role of normative changes and diffusion of behaviours for the fertility transition is the spatial patterns of decline in marital fertility that has been observed in Europe during the late 19th and early 20th century. One interpretation of this pattern is that people who live near each other know each other, and through social interactions create and diffuse new norms about family and fertility which made people strive for smaller families. This study contributes to the field by studying the spatial diffusion patterns on a much smaller geographical scale than previous studies and by analysing these patterns using individual-level data.

Objective

The objective of the study is to investigate how married couples' fertility behaviours were related to the behaviours of their married neighbours, in northern Sweden from 1850 to 1950.

Data and methods

The longitudinal database POPLINK contains both individual-level data on fertility as well as detailed spatial information on places of residence. The data is used to investigate the spatial patterns of neighbourhood level hazards of having another child. This is done by first, estimating neighbourhood level random effects using mixed effect Cox regression, and then exploring the spatial patterns of these effects. By measuring the spatial autocorrelations of these effects, using Moran's I, we can determine how similarities within and across neighbourhoods changed over time.

Results

The results show that couples in adjacent neighbourhoods had similar fertility at the onset and during the fertility transition and not after or before.

Main conclusions

The results suggest that married couples fertility was affected by social interaction mechanisms within networks of neighbours during the European fertility transition.