

# **The spatial dynamics of nonmarital births in France and Belgium (1968-2017): emergence, spatial diffusion and borders**

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## 1. Short Abstract (250-400 mots)

While extensive research has focused on family change in population science, the spatial dimension of these changes has been largely unexplored in the literature. Existing studies usually examine spatial patterns but often neglect the temporal aspect of the phenomenon, resulting in incomplete knowledge of how family behavior's spatial patterns evolve over time and how population spatial heterogeneity changes. Some studies have taken a spatio-temporal approach, highlighting a process of spatial diffusion and identifying explanatory factors for different periods. To do this, these studies use both a detailed geographical level and a long time coverage. However, to our knowledge, no study of this type has yet explored the spatial dynamics of family change in two countries simultaneously.

This research paper investigates the spatial dynamics of nonmarital births in the France-Belgium cross-border area from 1968 to 2017, how this process shapes spatial heterogeneity, and exploring whether state and cultural borders play as barriers to the spatial diffusion of this phenomenon, that's to say spatial heterogeneities across borders. The primary aim of this paper is to understand the emergence and evolution of a higher nonmarital birth rate. The study uses the percentage of nonmarital births in relation to all live births as the indicator for analysis, with data obtained from vital statistics for the specified period. The originality of this research lies in the fact that it combines the simultaneous study of two countries, a long study period (50 years) and a local geographical level.

Two analysis methods are used to answer their research question:

1. Thematic mapping: classic mapping techniques are used, ensuring comparability of maps through proper discretization of variables. This approach allows the observation of spatial dynamics in the cross-border area.
2. Spatial discontinuity indices: they identify the greatest gaps between two regions, allowing the determination of whether the largest discontinuities coincide with borders (national, cultural).

Overall, the research aims to contribute to the understanding of how family behavior's spatial patterns evolve and the role of state and cultural borders in shaping these patterns. By studying two countries over a long period at the local geographical level, the paper provides valuable insights into the spatial dynamics of nonmarital births.