Demographic boarders versus territorial boarders
A study of the spatial configuration of fertility and internal migrations in Belgium

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The territorial configuration of a given country has often an impact on the way the demographic behaviours are organised throughout the space. In fact, linguistic and administrative boarders may represent a discontinuity in mortality and fertility, as well as a barrier to migration. Nevertheless, this is not always the case: multiple territorial structures can compete among themselves in the determination of the spatial configuration of demographic features. In this context, a question arises: what is the link between the territorial organisation of a country (administrative boarders, historical regions, etc.) and the spatial configuration of demographic behaviours?

The Belgian territory offers a particularly interesting ground to investigate this question. A historical linguistic boarder splits the country in two main linguistic communities, which are also associated with the two main administrative regions. In addition, other territorial structures are superimposed to the regional-linguistic partition: historical, morphological-functional regions and large metropolitan areas.

The main purpose of this contribution is to identify demographic regions and demographic borders in Belgium using two spatial analysis methods and two demographic phenomena. The first exercise aims to identify regions in Belgium for fertility by using standardised fertility rates. Therefore we will use Clustering Analysis (with and without contiguity restraint) and Gaussien Smoothing in order to build fertility regions by minimizing intra-regional variation and maximizing inter-regional variation. The second exercise is based on internal migration flows and migrations at the municipal level (589 municipalities). It will identify regions experiencing larger intra-regional migration flows and lower inter-regional migration flows.

These two exercises will result in a spatial configuration of demographic behaviours, i.e. they will provide us with different partitions of Belgium's demographic space in terms of fertility and migration. In observing such demographic partitions, we will be able to examine (i) if the spatial configurations of fertility and migration correspond to specific territorial structures (linguistic regions, morphologic-functional regions, metropolitan areas, etc.); and (ii) if there is a link between the spatial configurations of fertility and migration as it may be assumed that regions with higher interaction (migrations) will probably show a higher homogeneity in terms of demographic behaviour and more specifically in terms of fertility.