Conference Theme:

Regional and Subregional Population Dynamics

PROJECTIONS OF SMALL-AREA POPULATION DYNAMIC IN AUSTRIA

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Abstract:

While the overall demographic change occurs at a rather slow pace in many European regions, there have been substantial reconfigurations in the internal demographic structure of many regions. Especially urban agglomerations have experienced a remarkable demographic alteration related to their repositioning in the urban system at national and European level and increasing openness to global flows, thus posing new challenges for local policy-making. Understanding the varying impacts of demographic changes at the local level is therefore a major concern of public officials, the academic community and the general public alike. Projections of future population development can provide a broad range of perspectives for several aspects of local infrastructure planning and thus be of essential interest for decision making.

STATISTICS AUSTRIA in recent years has accomplished quite a few small-area population projections, using the SIKURS multi-state, multi-component model for regional projections of population, labour force, household numbers and housing demand. Currently, the authors are involved in conducting a small area population projection for the Vienna Magistrate based on 262 traffic catchment areas. It is consistent on aggregate level with the latest official population projection by STATISTICS AUSTRIA for the Austrian Federal Länder published in autumn 2005, using the same methodological approaches as well as the same multiregional population model. Assumptions concerning fertility, mortality, interregional migration and international migration could therefore be synchronized on aggregate level.

However, modelling on micro level has to take into account the very diverse demographic structure of small geographical units in adopting and modifying the assumptions. The potential complexity of modelling demographic interactions for 262 projections units is to be greatly reduced by identifying “area types” that represent homogenous units in terms of different demographic components (fertility, mortality and migration). Consequently, for each area type specific sets of assumptions can be applied, allowing for their more concise implementation in the model.

Restricted availability of data for mapping of demographic components on micro level implies the use of different sources with incumbent problems of comparability. An extension and refinement of methodological approaches for modelling evolving population trends is therefore necessary to bring in line the different data structure. On micro level, factors influencing the distribution of the population (i.e. migration into newly constructed or existing housing) gain importance in their impact to the overall demographic evolution in relation to the natural population change through fertility and mortality. Thus special emphasis is put on the analysis and forecasting of internal migration dynamics. Thereby foreseeable new housing construction is also taken into account by identifying development areas with the prospective number, occupancy rates and demographic structure of housing to be built.

The projections will be used as basic input for tasks of urban planning with the Vienna magistrate as well as further detailed analysis and projection of key figures on education, labour force, health care and other topics relevant for public utility services.

This paper discusses the application of a methodology for improving population estimates on a specific projection, explaining the potential of extending the use of projections to local area population forecasting. It also includes a presentation of the main results of the latest small area population projection for Vienna and identifies possibilities for further methodological refinements. General analysis indicates that the use of the SIKURS model is promising for local-area applied demography, but a universal small area population projection model still has to be laid out.