

On the Results and Consideration of Prefectural Population Projections using the Multi-Regional Migration Model

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This paper investigates the merits and drawbacks of applying the multi-regional migration model to make population projections by prefecture and to calculate the results and number changes in population dynamics. The knowledge obtained from the results can be summarized as follows. First, the multi-regional migration model can offer stable projection results for the long term, even if applied by age (in a single year), and it is suitable for regional population projection because there are no contradictions in migration. Second, the net migration rate by age tends to decrease if the future population is projected using the multi-regional migration model, assuming that recent migration trends are fixed. This suggests that we can obtain population projection results close to those of fixing migration trends in the multi-regional migration model, by decreasing the net migration rate in the uni-regional migration model. Third, when the future population is projected over the long term using the multi-regional migration model and assuming that recent migration trends are fixed, the net migration number tends to reverse, suggesting that setting the migration assumption in the multi-regional migration model requires further consideration. This paper reconfirms the usability of the multi-regional migration model for regional population projections. On the other hand, it is indispensable for conducting detailed analyses of past migration trends by region to construct a reasonable migration assumption.