

On the Spatio-Temporal Population Change in Tokyo Metropolitan Area – A Population Dynamics Analysis Utilizing the Area Mesh Data –

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This paper intends to discover some regularity of the change of natural change and social change by focusing the population dynamics of small areas and analyzing the both changes spatially. In this analysis, inter-census natural change and social change of the third area mesh are estimated from age- and sex-specific population of the census 1980-2005. The estimated natural change and social change are added up and analyzed through the distance from center of Tokyo and along the selected railway lines. As a result, the following knowledge is obtained. Generally, social change spreads from central area to suburban area, and from west area to east area. On the other hand, natural change rate is gradually decreasing in almost all areas, and its spatial pattern is fairly stable. However, there are some cases that natural change rate is substantially different between neighboring railways because of the historical and cultural factors. These discoveries are supposed to be applicable to the various researches, such as projection of population distribution change in urban areas and estimation of transportation demand caused by the change.