An Age-structured Two-sex Model for Household Dynamics in Sydney

Mohammad-Reza Namazi-Rad*
SMART Infrastructure Facility, University of Wollongong, NSW 2522, Australia
mrad@uow.edu.au

Payam Mokhtarian
National Institute for Applied Statistics Research Australia, University of Wollongong, NSW 2522, Australia payam@uow.edu.au

Projecting the dynamics of family formation behaviors (family size, family structure and family life course) across time and place depends on compositional changes in the population socio-demographic structure. The main objective of this research is to present a reliable method for producing household projections in Sydney Metropolitan area across the time based on four vital rates components of fertility, mortality, marriage and divorce. For young single individuals, we also consider the probability of leaving the parental home and establishing their independence. We firstly generate a synthetic population from the census data provided by Australia Bureau of Statistics (ABS). Then, we use our model to project the household structures within the population over time.

Key words: Dynamic Modeling; Household Projection; Population Growth.