Abstract

Rapidly rising levels of car ownership in newly developed economies and increasing travel demand worldwide over the past several decades have intensified the negative externalities of transportation, such as traffic congestion and air pollution. To develop policies that mitigate these problems through managing and controlling travel demand, it is important to have a comprehensive understanding of the determinants of individuals’ activity-travel behavior. A considerable amount of research has been conducted around the impact of the built environment on travel behavior. As well, over the past decade, the social contexts of travel have gradually been recognized as important explanatory factors of activity-travel behavior. Thus, the link between social contexts and activity-travel behavior has become a much discussed research topic recently. This study aims to contribute to this growing literature by investigating three important but under-explored areas related to the connection between social contexts and activity-travel behavior: 1) how social network attributes influence the choice of companions for conducting daily activities and travel; 2) how personal social networks and neighborhood social environments influence activity location choices and time use; and 3) how the dynamics of social networks and changes in residential social environments induce activity-travel behavior changes as a result of home relocation.

This study adopts a longitudinal design and uses both cross-sectional data and longitudinal panel data. Multivariate modelling approaches including Structure Equation Modelling (SEM), multilevel logistic regression and a doubly censored Tobit model are employed. Findings from this study show that social network variables are significant determinants in explaining individuals’ engagements in joint/solo activities/travel and choices of companions for joint activities. Social network attributes and neighborhood
social environments are also found to significantly influence individuals’ choices between in- and out-of-neighborhood locations for activities and time use. The study also demonstrates that changes in travel after residential relocation are induced by changes both in the built and social environments as well as the geography of social networks. These findings contribute to the knowledge about the social contexts of activity-travel behavior.
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