

The use of time use surveys to study activity participation: emerging issues

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Time use surveys often are carried out to identify, classify and quantify social behaviour of people by focusing on the activities that people perform. Time use data, in the transportation field often referred to as activity-based data, can be used to study a variety of sociological, economic, and technological phenomena. Studying behaviour, social networks and transport patterns are a few of the topics that can be analysed based on these time use data.

This first introductory paper discusses some emerging issues in the collection of travel-related data such as automatic spatial information recording using cell phones and GPS, and survey design experiences. On the one hand new technology offers the opportunity to record at a relative low cost a wide variety of the data, while on the other hand new problems occur. One of such problems for instance is the problems of 'cold starts' faced with GPS devices, clouding the first minutes of recording after each restart of the device after it was turned off completely. Notwithstanding, applications of new technologies offer the opportunity for performing detailed space-time analyses in different fields ranging from epidemiology to transportation science. Some of these applications are highlighted in this session.

Next to the advantages and potential risks of new technologies, this introductory paper also discusses the combination of different modes to analyze space-time behaviour. In particular, this study investigates potential mixed mode design effects, observed in a large activity-based travel survey, using a PDA application on the one hand, and traditional paper and pencil diaries on the other hand. The mixed-mode effects are analysed using heteroscedastic linear regression models, taking into account not only mode-effects, but also potential fatigue-effects. The results show that in this mixed-mode survey no attrition effects are present, and that the survey mode (PDA versus paper and pencil) has no direct impact on the quantities investigated (number of out-of-home activities reported and number of trips).