

Regular events in travel behaviour research: setup of a longitudinal websurvey

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Abstract

One of the leading paradigms in modern travel behaviour research is the activity based approach, which considers travel as a derivative from the activities that individuals and households need or wish to perform. Longitudinal designs provide the required framework for a better understanding of the dynamics of travel behaviour. Longitudinal data can be used to analyze behavioural adjustments some time before (response leads) or after (response lags) the occurrence of an event, or for instance to analyze routine behaviour.

The questionnaire used to collect the data will be an activity diary. The respondents are asked to fill in all their activities performed that day. The diaries have to be filled in at least twice a week. These moments are randomly selected, but in weeks when a special event occurs, the days around this special event are questioned as well. Performing a longitudinal study has certain drawbacks however. The respondent burden can cause different side-effects, such as panel attrition, decreasing representativeness and, reporting errors. Thus, next to refreshing the sample regularly, trying to keep the respondents motivated is essential.

A first step in lowering the respondent burden is to make the activity diaries user-friendly. An internet-based questionnaire makes interaction with respondents possible. The respondent's current results can be graphically displayed (e.g. geographical map of activity-pattern), potentially awakening or strengthening the interest in the study. Logical rules (e.g. two activities on two different locations require a trip in between) can be formulated, and the interaction with the respondents allows the researcher to get feedback on "strange" answers, or on missing values, thus improving the data quality.

This paper describes some potential paths to minimise sample attrition (e.g. internet-based interaction with respondents) and ways to refresh the sample. These findings are applied to the study of travel behaviour of Flemish households around school holidays.

Keywords: minimising sample attrition, improving data quality, activity-based transportation modelling, longitudinal websurvey,