Life Transitions and Travel Behaviour

This briefing sheet describes an 18 month research project funded by the Economic and Social Research Council under their Secondary Data Analysis Initiative. The research project sets out to examine the relationship between **life transitions and travel behaviour**, using secondary data from the Understanding Society and British Household Panel surveys.

Background

Transport planners and policy makers are interested in how different population groups make decisions such as how many cars to own or which transport mode to use to get to work. This informs the development of transport policies and effective planning of transport networks.

Emerging research has established that significant changes in travel behaviour are often associated with *life transitions*. Life transitions involve a change in personal circumstances often marked by observable life events such as joining the labour force, moving home, having children or retiring. However, there remains a great deal to learn about the extent to which different life events trigger behavioural change and the conditions under which life events are more likely to trigger change.

The *Understanding Society* survey, the new UK Household Longitudinal Study (UKHLS), offers a previously unavailable opportunity to investigate interactions between life events and travel behaviour for a large, representative sample of the UK population (40,000 households and 100,000 individuals are interviewed each year). Understanding Society, together with its predecessor, the British Household Panel Survey (BHPS) tracks the lives of these individuals over multiple years. It records information concerning household car ownership and commuting behaviour, as well as a variety of other information about people's lives such as their relationships, employment and health. Accordingly, the survey data offers a unique opportunity to examine how individuals make changes to their travel behaviours over time in relation to life events.

Research objectives

Through an analysis of the Understanding Society and BHPS data, the project sets out to meet the following four objectives:

1. To identify the extent to which life transitions are associated with major turning points in travel behaviour related to car ownership and commuting;

2. To understand in what circumstances life transitions are likely to lead to turning points in car ownership and commuting behaviour;

3. To use the understanding gained above to identify how policy interventions can achieve desirable outcomes for transport; and

4. To build capacity in the transport field to use large-scale, longitudinal data sets to inform policy analysis.

Methods

The project will be undertaken through a sequence of four tasks:

Task 1: Scoping and data set generation. The Understanding Society and BHPS data sets are by their nature inherently complex. This first task will identify which travel behaviour and life event variables will be of relevance to the study's objectives. A further innovative step will be linking the longitudinal survey data to local spatial data drawn from Office for National Statistics sources and DfT accessibility indicators. This data will allow new insights into the effect of the spatial context on changes to travel behaviour associated with life events. The output from this task will be a single linked data set.

Task 2: Descriptive analysis. The initial analysis task is to gain an appreciation of the prevalence of life events and their co-variation with travel behaviour turning points. This will involve: an analysis of frequencies of life events and travel behaviour turning points by age group and other socio-demographic characteristics; and an analysis of contingencies between life events and travel behaviour turning points. Transition matrices will be used to obtain probabilities of specific travel behaviour changes (e.g. car ownership increase from one car to two cars) taking place during the same year as life events.

Task 3: Multivariate analysis of travel behaviour turning points. This will entail the estimation of binomial logit models from two-wave longitudinal data relating travel behaviour turning points (e.g. car ownership increases and decreases and commute mode changes) to life events, prevailing circumstances (individual, household and spatial) and life history. This will enable the relative significance of different life events and different contexts (individual, social and built environment) to be identified.

Task 4: Understanding influences on stability of travel behaviour. The final task will use the longer history data available through the BHPS to establish the stability of travel behaviour over time and how this affects responses to life events. For instance, it will be possible to examine whether remaining in a stable car ownership position for many years increases or decreases the probability of making a car ownership change in association with a life event.

Dissemination and impact

On-going developments will be reported on the project's website. The Department for Transport is a project partner and will chair a project advisory group and the findings from the project will be summarised in a final report to the Department to maximise the potential for policy impact.

An important output from the project will be the bespoke linked and documented data set (prepared in task 1). This will be deposited in the ESRC data repository and made available to the research community for follow up work. Department for Transport staff and transport academics will also be invited to take part in a data analysis training event, building capacity in the analysis of large scale, longitudinal data sets.

Through these activities, the project has the potential to significantly improve the evidence base concerning the key drivers of travel behaviour and the process of behavioural change, as well as having immediate and long lasting impact on transport policy and planning practice.

Contact details

Principal Investigator:
Dr Kiron Chatterjee (UWE)
Kiron.Chatterjee@uwe.ac.uk

Co-Investigators and Researchers:
Dr Ben Clark (UWE)
Ben4.Clark@uwe.ac.uk

Dr Steve Melia (UWE)
Steve.Melia@uwe.ac.uk

Professor Heather Laurie (University of Essex)
LaurH@essex.ac.uk

Dr Gundi Knies (University of Essex)
GKnies@essex.ac.uk

Mr Tom Gerlach (Department for Transport)
Tom.Gerlach@dft.gsi.gov.uk

University of the West of England