

Longitudinal Methods for Understanding and Modelling Travel Behaviour

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Transport policy context

- Previously – emphasis on anticipating travel growth and accommodating it
- Now – emphasis on influencing travel behaviour

Implies different analytical approach?



Types of longitudinal data

Repeated cross-sections	Repeated cross-sectional surveys across time for different individuals
Retrospective cross-sectional	Histories of events are recorded by respondents but collected at one time point
Panel studies	Same individuals asked similar questions at different points in time
Cohort studies	Samples from a particular age range followed up (often with long gaps)
Repeated measures	A measure taken a number of times from the same individual
Event history data	Data recorded in continuous time



Why is longitudinal data seldom collected?

- Increased complexity of:
 - data collection
 - model development

How can this be addressed?



SAGE – a wise approach from outside transport?

- SAGE (Simulating Social Policy in an Ageing Society) five-year study
- Studied the future of social policy within an ageing society
- Developed dynamic microsimulation model which projects future financial resources, health and dependency, and family circumstances
- Data used includes census (for base population), BHPS, LFS & ONS Longitudinal Study



My interest in longitudinal methods

- Travel behaviour/transport modelling wrt traveller information systems
- Concluded dynamic approaches needed generally



CTS research

- INTERNET (Susan Kenyon/Glenn Lyons)
 - Panel survey of c.100 people involving 7-day diary of on-line and off-line activities
- Residential re-location (Karen Stanbridge)
 - Retrospective cross-sectional survey of c. 200 people who have moved home
- Social interaction and learning in mode choice dynamics (Yos Sunitiyoso)
 - Panel surveys, laboratory experiments and agent-based simulation modelling



Today's programme

1. Policy needs
2. Understanding travel behaviour
3. Modelling travel behaviour
4. Parallel Workshops
 - Understanding travel behaviour
 - Modelling travel behaviour


