

Seminar on longitudinal methods

Using the National Travel Survey for quasi-cohort analysis

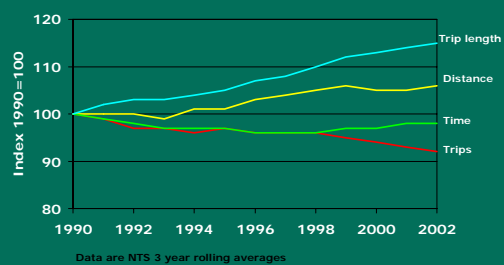
Barbara Noble, DfT

9 November 2005

NTS background

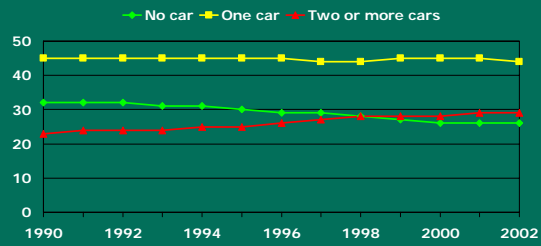
- Large household survey, sample now 15k households pa
- Continuous since 1989
- Earlier ad-hoc surveys- 1985/86 comparable, earlier surveys less so
- No longitudinal element, but heavily used to track trends in travel

Trends in travel: fewer trips, but longer- overall increase in distance travelled



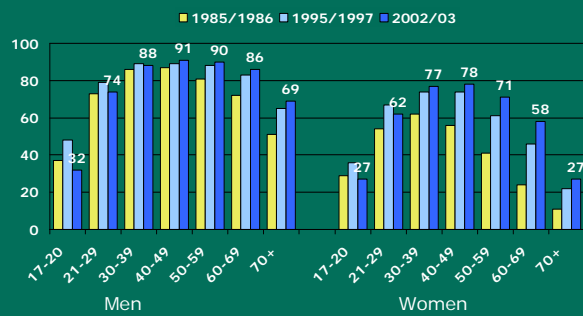
Now more two car households than no car households

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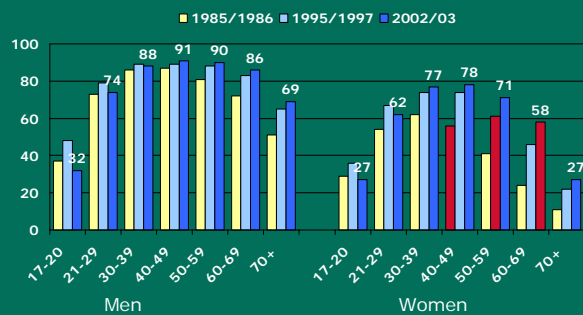
Proportions of men and women holding driving licences

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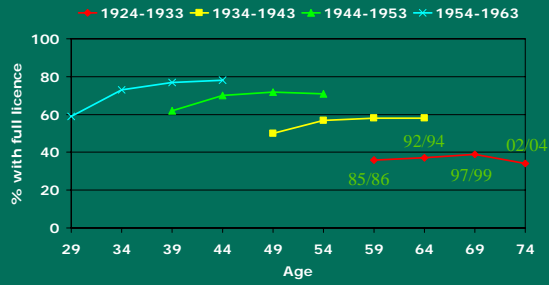
Proportions of men and women holding driving licences

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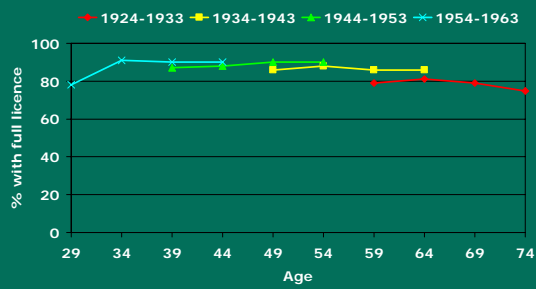
Female driving licence holders

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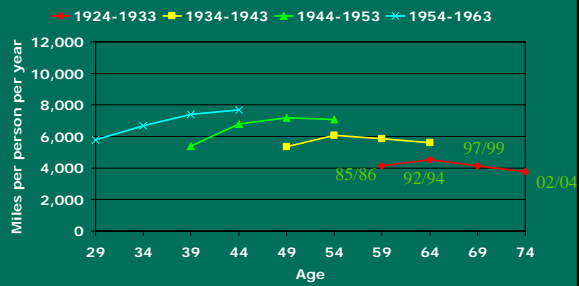
Male driving licence holders

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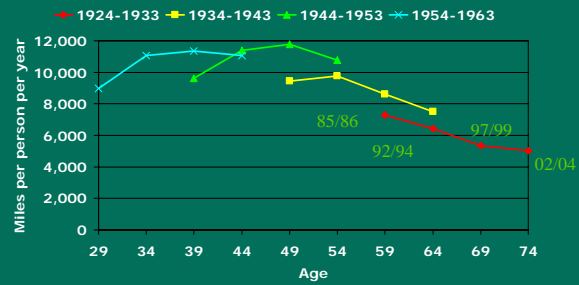
Female distance travelled

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Male distance travelled

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Longitudinal methods – where is the added value ?

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Russell Harris (ITEA division, DfT)

9th November 2005

Where is the scope ?

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- What can longitudinal methods offer the Department ?
- In which areas is there most scope for making a difference ?

Evidence-based policy

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- Understanding



- Quantified understanding



- Systematic quantified understanding (model)

Decision support

Uses of models

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- Forecasting
- Policy sensitivity

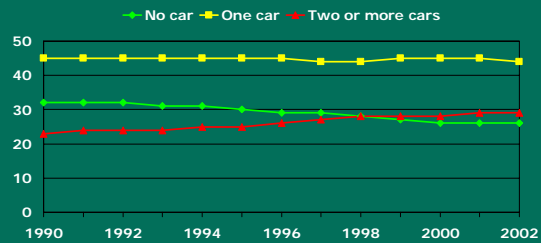
Typical modelling framework

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- Demographics - where will people live & work ?
- Economic forecasts - incomes & prices
- Car ownership - who has access to a car ?
- Trip rates - how many journeys ?
- Choice models - destination, mode, route, time?
- Impacts of transport - economic, environmental etc.

Car ownership trends

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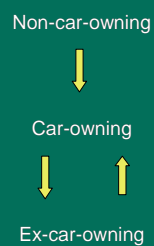
Advantages of disaggregation

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- more behavioural
- more accurate forecasts ?
- better estimates of sensitivities which change over time
- some information on sensitivity to a wider range of policies
- distribution of policy impact across different groups

Car ownership - longitudinal

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Longitudinal – benefits

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- Different equilibrium state reached ?
- Policy sensitivity
- Focus on factors affecting transitions rather than factors correlated with levels

Transitions

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- Demographics - moving house
- Economic forecasts – ?behaviour related to income?
- Car ownership - car purchase, driving test
- Trip rates - trip chaining
- Choice models - experience & information
- Impacts of transport – cold starts
