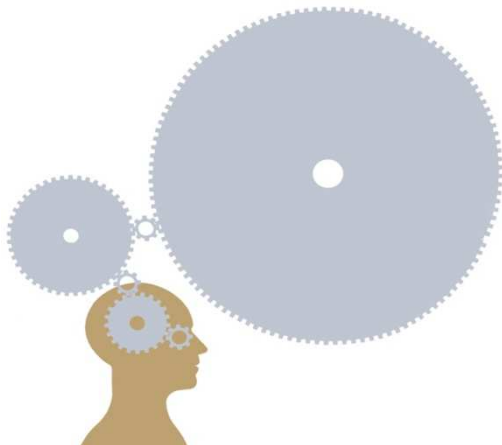


Understanding customer preferences for airport access: implications for forecasting

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Oxera



- one of Europe's foremost economics consultancies
- established 1982
- offices in Oxford, Brussels and London
- clients include major companies, regulators and governments
- we combine core economic skills with detailed industry expertise



Introduction

- Heathrow Express (Hex)
 - Express
 - Connect
- why is this important?
 - congestion/environmental impact
 - business planning: investment decisions require accurate forecasts of demand and revenue
- partners:
 - BAA
 - Accent
 - Dr Stephane Hess, Institute for Transport Studies



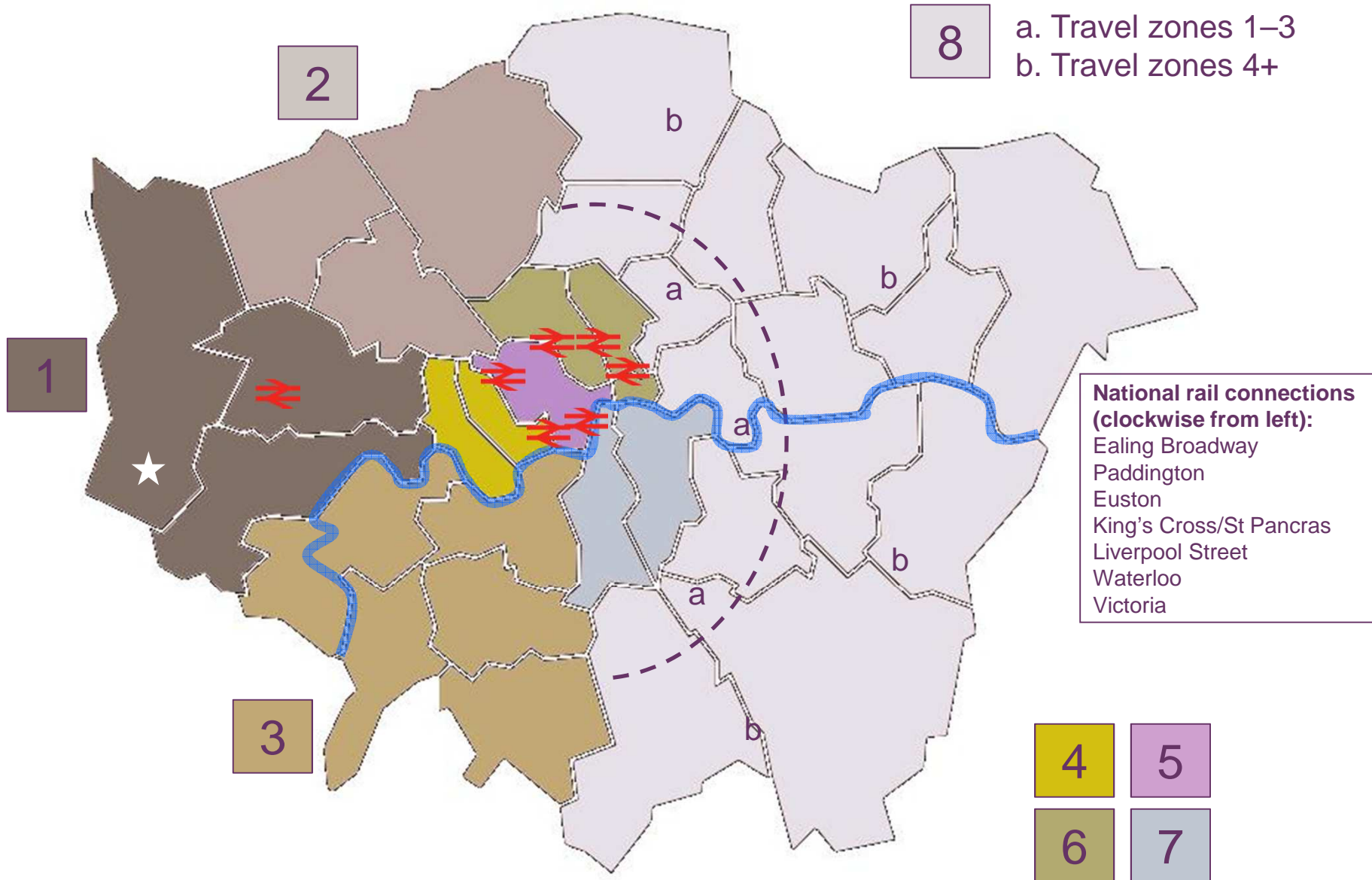
Model requirements

- demand and revenue for 15 months ahead
 - plus five-year long-term outlook
- the model was designed to capture the effects of:
 - changes
 - in price
 - in service frequency
 - to other modes of transport (eg, prices)
 - airline migration and terminal closure
 - the relationship between HEx and Connect
- the model does not account for:
 - marketing effects
 - future changes in consumer tastes and brand image
 - high-impact, low-probability events (eg, terrorism, ash clouds)

Market definition

- defining the market size: for whom could Express and Connect be a realistic choice?
 - passengers originating in London
 - passengers not originating in London but travelling via a London mainline station
 - excludes passengers not travelling via London and non-flying visitors
- defining the choice set:
 - London Underground (Tube), rail (Express and Connect), coach, car, taxi
 - others not included: buses, walking, cycling
- all have different product attributes:
 - fare, access cost, access time, journey time, egress time

Market definition



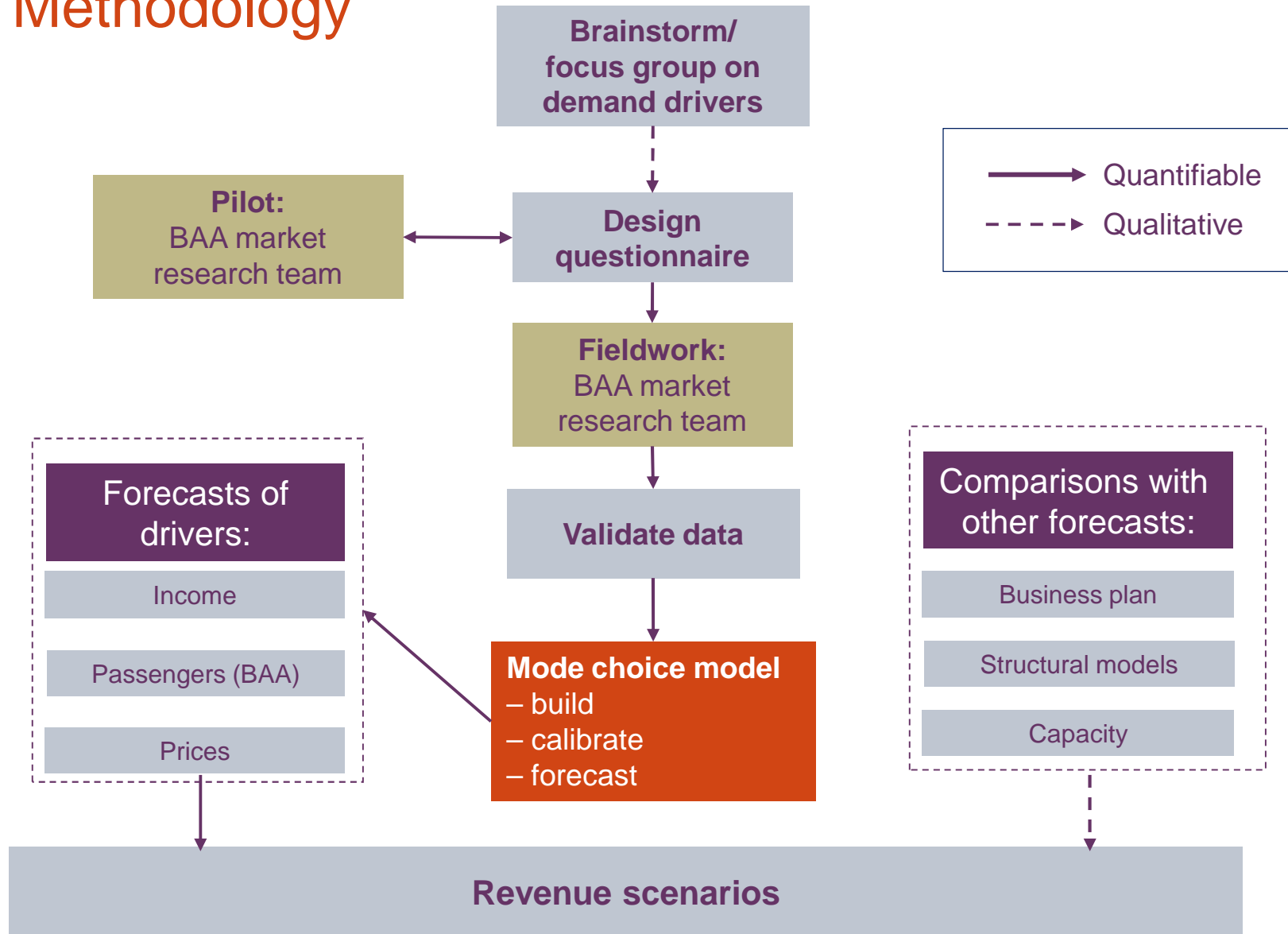
Modes of transport and their characteristics

Mode	Relative fare	Access cost	Access time	Journey time	Egress time	Waiting time
Express	Medium	Tube price	Tube plus five-minute walk	Low	Dependent on terminal	Medium
Connect	Medium	Tube price	Tube plus five-minute walk	Low–medium	Dependent on terminal	Medium
Park and fly	Very high	None	None	Medium	Dependent on terminal	None
Kiss and fly	Low	None	None	Medium	Low	None
Black cab	High	None	None	Medium	Low	None
Minicab	High	None	None	Medium	Low	None
Coach	Low	Tube price	Tube plus five-minute walk	High	Dependent on terminal	High
London Underground	Very low	None	Five-minute walk	High	Dependent on terminal	Low

Note: The park-and-fly fare includes the average cost of parking for a two-week holiday.

Source: Oxera.

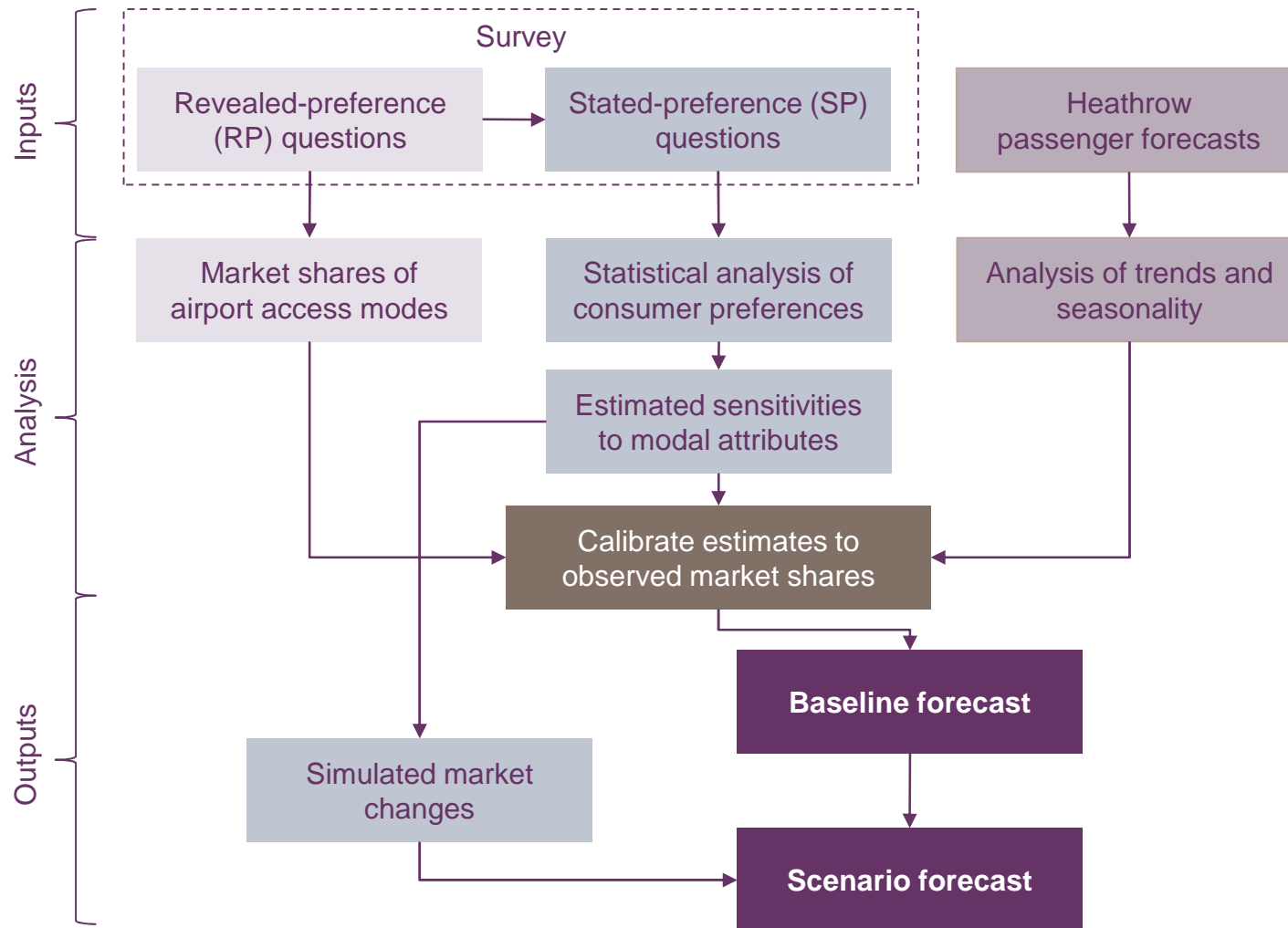
Methodology



Three main stages

1. passenger surveys
 - 1,000 passengers
 - revealed and stated preferences
2. analysis of survey data
 - multinomial logit model
3. constructing an interactive forecasting model using:
 - survey evidence
 - parameters/elasticities for ticket price, travel time, additional ticket types, airline migration, income levels
 - Heathrow passenger forecasts
 - calibration

Modelling process

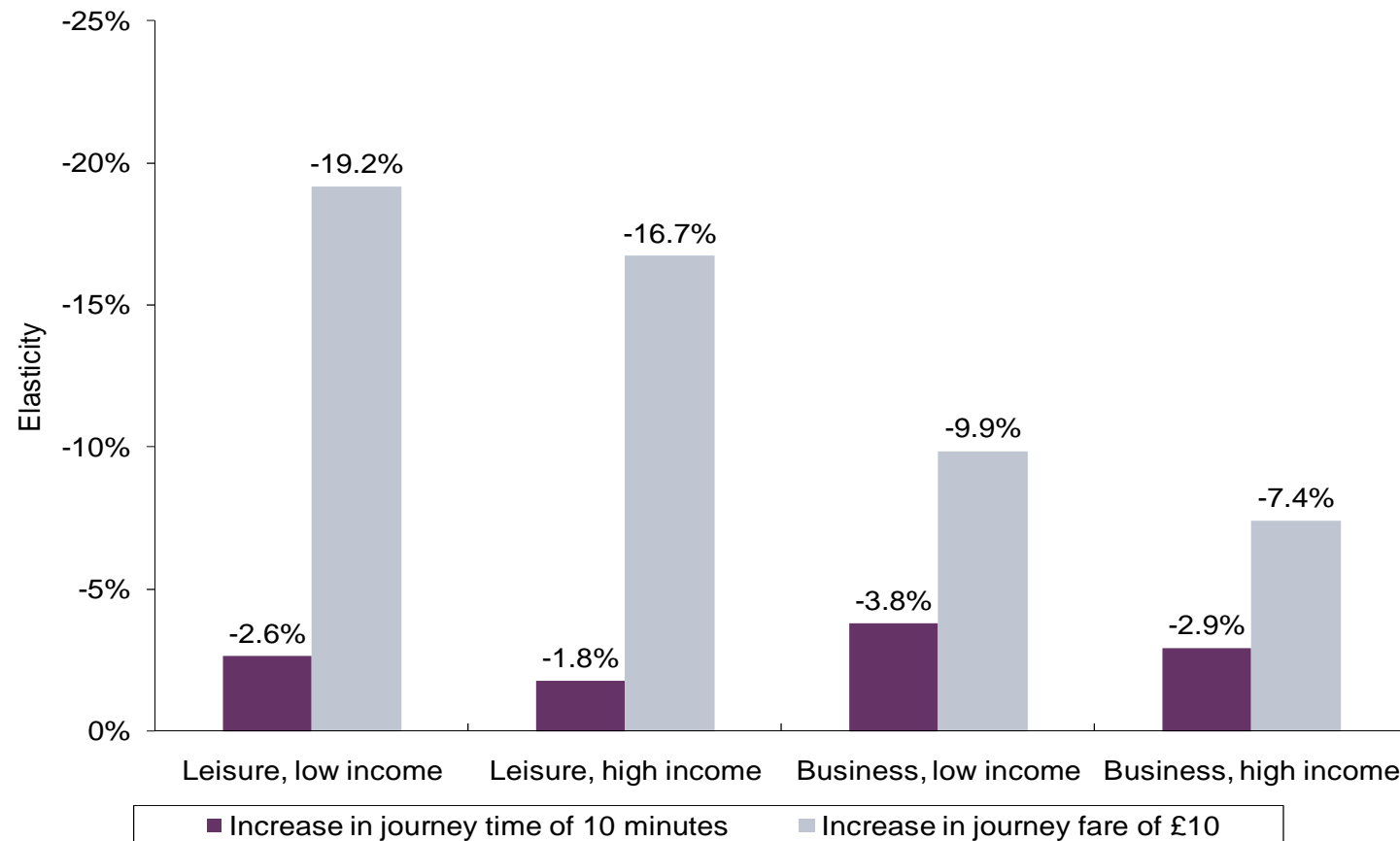


Insights from the survey (I)

- market shares by mode:
 - Tube (42%), minicab (20%), HEx Express Class (17%), kiss and fly (10%), black cab (4%)
- competitive interactions
 - closest HEx competitors are Tube and minicab
- insight into customer demographics
 - leisure passengers outnumber business passengers, on average, over all nine modes, by around 4:1
 - HEx has the highest proportion of business users of any mode
 - around 53% of respondents surveyed regularly used the Internet to buy products
 - the proportion of regular Internet shoppers is marginally higher for HEx/Connect customers (60%)

Insights from the survey (II)

Consumer responsiveness to changes in journey time and fare



Notes: Elasticities are approximate averages across all modes of transport.

Income groups were specified relative to the median in the sample.

Source: Oxera analysis.

Conclusions

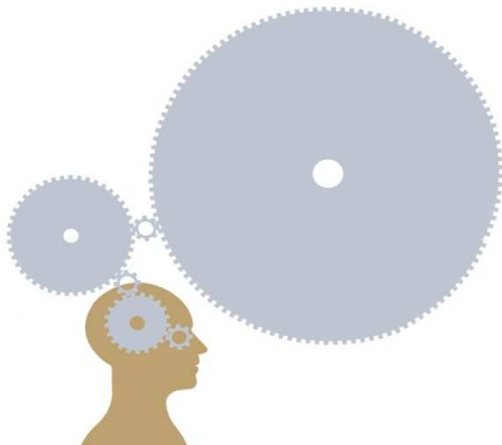
- the competitive landscape is one of the most important drivers of passengers' surface-access decisions
 - different passenger demographics will have different preferences for different modes; capturing this adequately within the modelling is important for accurate forecasting
- an appropriate definition of the market provides a key building block for the survey
- quantitative consumer surveys can provide valuable market intelligence
 - sometimes beyond that originally anticipated
- non-standard impacts—eg, airlines moving terminals—can have substantial implications for passengers' surface-access decisions
- ease of updating the model to incorporate the recent developments is important to keep forecasting accuracy high

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