The Consumer and Low Carbon Choices

Consumer attitudes to low carbon and fuel-efficient passenger cars

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Key findings arising from desk research conducted by Ecolane on behalf of LowCVP - March 2005

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Aims of research and definition of terms

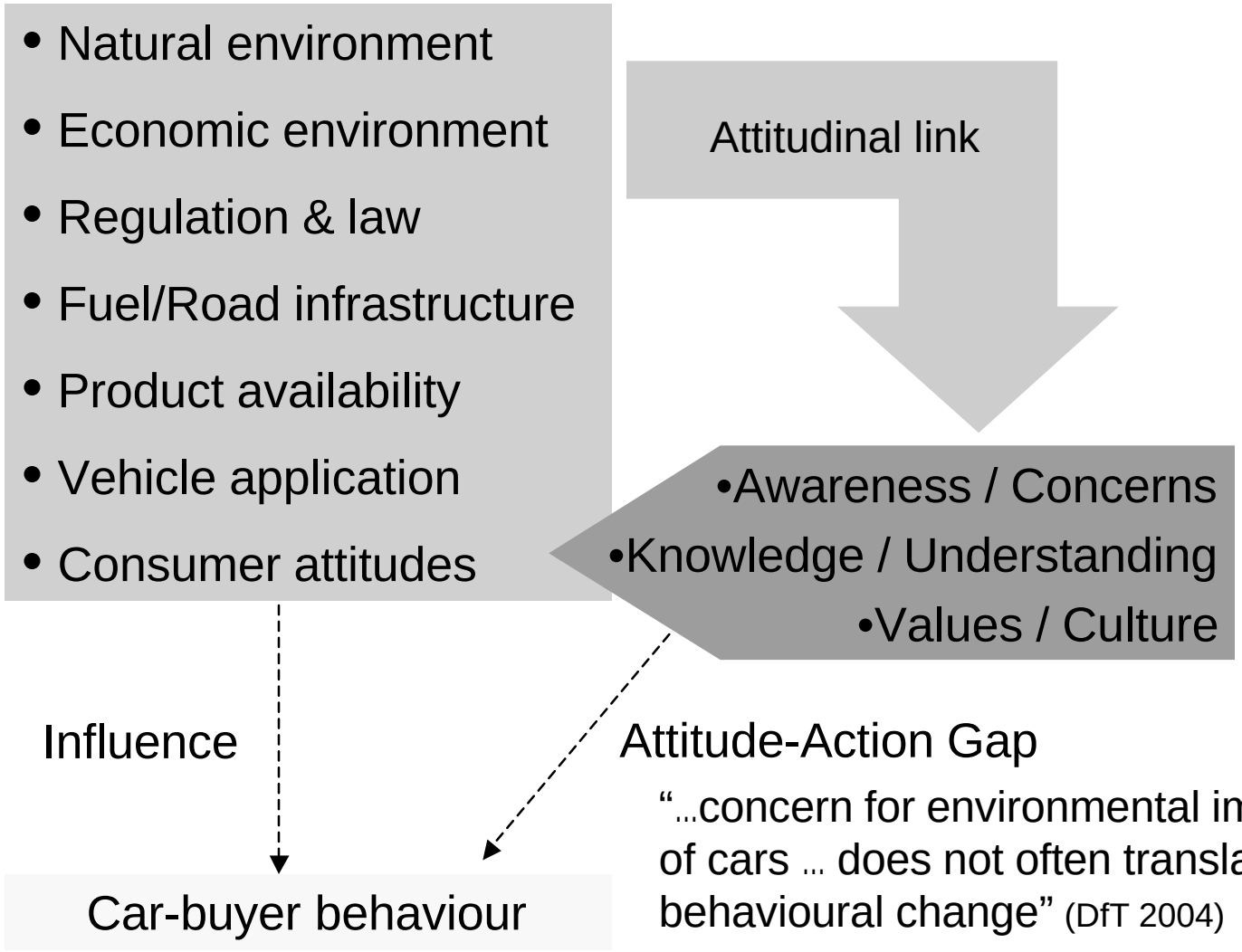
Desk research objectives were to investigate:

- Attitudes to fuel-efficient/low carbon passenger cars
- Attitudes to the environment/environmental impact of cars
- Across three sectors – private/company fleets/contract hire

'Attitudes' grouped into three categories:

- Awareness/Concerns – vague notions consumers possess
- Knowledge/Understanding –'facts' consumers believe true
- Culture/Values – deeply held beliefs that consumers hold

Car-buyer attitudes & behaviour - conceptual framework



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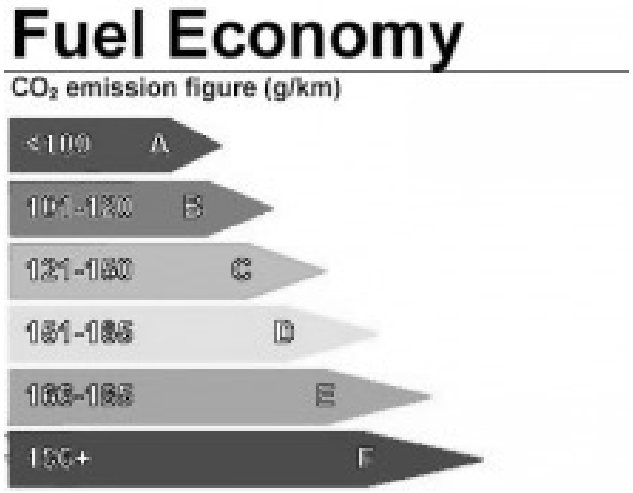
Key research questions

- Levels of awareness, knowledge and understanding of car technologies / environmental impacts / financial incentives?
- Decision-making process for each market sector? (Role of fuel economy, environmental issues, etc.)
- Market profile for new low carbon/fuel-efficient passenger cars?
- Promotional strategies that could increase sales of low carbon or cleaner fuel cars?
- Further field-based consumer research to help accelerate the market for low carbon vehicles?

Car-buyer attitudes to environmental impacts

- Environmental issues of most concern to public over next 20 years: traffic, air pollution, climate change (DEFRA 2002)
- Visible emissions (smoke) of most concern to car drivers – air quality of more concern than climate change (TRI/ECI 2000)
- Although public know that CO_2 leads to climate change, mobile phones + hole in ozone layer also blamed (DEFRA 2002)
- More members of public aware of CO than CO_2 (Ecolane 2000)
- "The relationship between inputs (fuel) and outputs (emissions) is only very generally – if at all – understood by most drivers" (DfT 2003)



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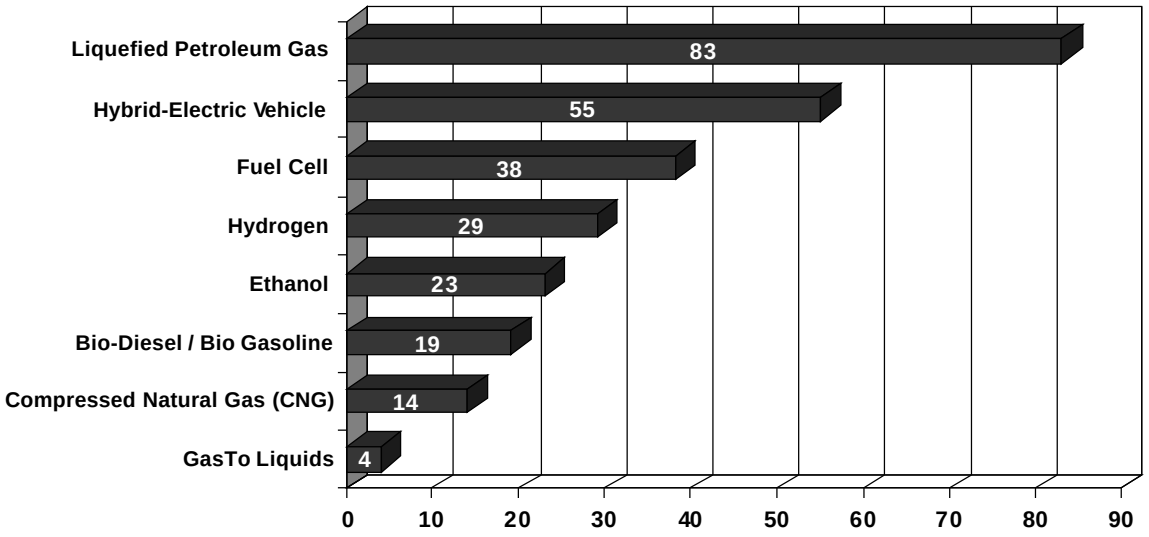
Car-buyer attitudes to new fuels and technologies

- Cambridge MBA study – many drivers aware of new fuels/ technologies (Shell 2004)



BUT more open-ended surveys suggest BEVs, solar cars, alcohol and hydrogen fuels are most known future options.
(DoE 2002)

- Drivers hold many negative misconceptions regarding new car fuels & technologies (Shell 2004, Ecolane 2000)

  'LPG is dangerous'; 'hybrid electric cars have limited range / need a special recharge point'; 'no positive tax incentives for biodiesel'

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Car-buyer attitudes to costs and incentives

- Motorists underestimate car costs by x2 – servicing and repair costs are underestimated to the greatest degree (RAC 2004)
- Private car owners most aware of fuel costs, road tax and insurance – largely unaware of depreciation rates (RAC 2004)
- 80% company car drivers don't know car's CO_2 emission figure; only 29% aware of 3% supp. for non-Euro IV diesels (IR 2004)
- "Understanding that VED is based on carbon emissions is patchy" and awareness of PowerShift grants is low (DfT 2003)
- Although car buyers say cost is paramount, they are prepared to endure an extra £1,100/yr before changing to a different fuel/smaller engine/smaller car (RAC 2004)

Decision-making process for private car sector

Factors reported when deciding what car to buy
(DfT 2004)

10%-30%
- Price
- Fuel consumption
- Size/Practicality
- Reliability
- Comfort
- Safety
- Running costs
- Style/Appearance

5%-10%
- Performance
- Image
- Brand
- Insurance
- Engine size
- Equipment levels

<5%
- Depreciation
- Experience
- Sales Package
- Dealership
- Environment
- Vehicle Emissions
- Road tax
- Alternative fuel

Car-buyer behaviour

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Decision-making process for private car sector

Car-buying process two-stage: (DfT 2003/04)

1. Capabilities/purchase price determines models considered
2. More sophisticated consideration of running costs (including mpg), performance, safety, styling, brand, reliability, etc

Although 'mpg' reported as a key decision factor,

- "For most [car-buyers], little effort is expended in comparisons of fuel consumption during the decision-making process" (TRI/ECI 2000)

Several reasons suggested for 'mpg' not being important:

- Assume similar 'mpg' for all cars within a class ;
- 'Buying new is buying best';
- Little confidence in published fuel economy data;
- Improving 'mpg' compromises performance and safety.

Decision-making process for fleet sector

- Whole life costs are paramount in fleet managers decisions – not willing to pay more for new technologies (Shell 2004)
- Fleet managers have to balance cost issues with duty of care and other legislative responsibilities (Lex 2004)
- Other than costs, fleet vehicle purchasers are particularly sensitive to technology reliability and functionality (Shell 2004)
- Fleet managers take what action they can to reduce risks and future uncertainties (Lex 2004)
- Fleets mangers look for high degree of certainty regarding future policy incentives, fuel differentials, grants, etc. (HC Select Committee 2004)

Attitudes and links to decision-making process

ENVIRONMENTAL ISSUES
Concerns/awareness high BUT knowledge/understanding low

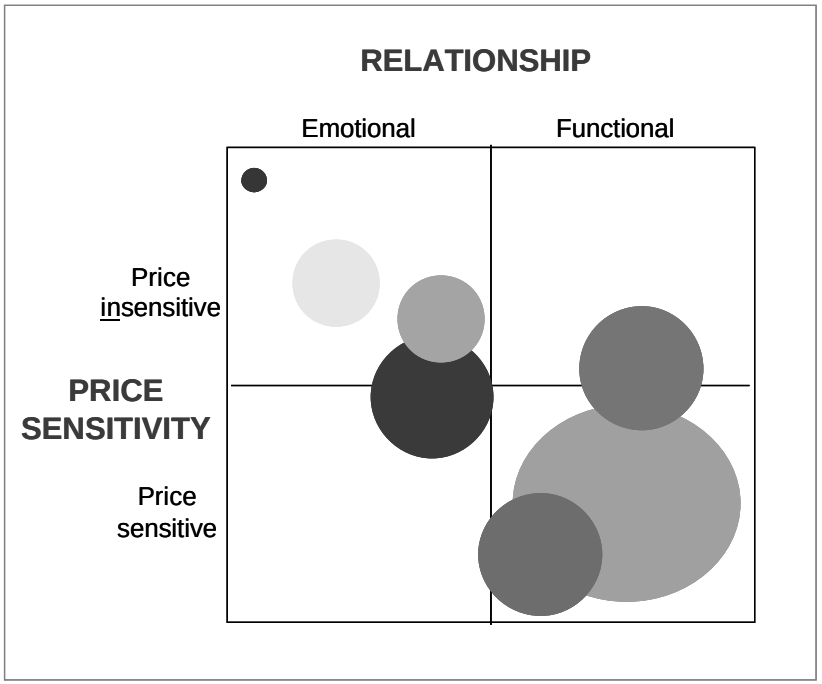
NEW FUELS & TECHNOLOGIES
Awareness moderate BUT knowledge/understanding low

COSTS & INCENTIVES
Economic concerns high BUT knowledge/understanding low

ATTITUDE-ACTION GAP
Large: concerns great BUT knowledge low and (for private buyers at least) action minimal (DfT 2003/04)

Market profile for new low carbon/fuel-efficient cars

- Cambridge MBA identifies seven early adopter segments for new car fuels/technologies within the UK (Shell 2004)



- Stars
- Individuals
- Mr Fast-tracker
- Mrs Fast-tracker
- Long haulers
- Green papas
- Fleet buyers

Shell 2004

- Fleets largest segment - 50% of total car market; other 6 segs account for 10%-20% private UK car market

Promotional strategies to increase sales of low carbon cars

Four approaches to 'attitudes management':

1. Improving information provision and educational campaigns

- Increasing env. knowledge à increases concern, reduces fatalism and increases intention to change consumer behaviour (Walton 2004)
- New car label a move in the right direction - BUT information is necessary but not sufficient to change consumer behaviour (Eden 1996)

2. Increasing economic incentives and reception of price signals

- Circumvents need to convey complex issues – 80% car-buyers say they would buy a greener car with financial assistance (EST 2004)
- BUT car owners are already confused about car costs – and are resistant to change even if price signals are beneficial (RAC 2004)

Promotional strategies to increase sales of low carbon cars

3. Promoting image and amenity value of low carbon cars

- The car as status symbol has been shown to be a key factor in reinforcing anti-environmental car travel behaviour (Golob & Hensher 1997)
- Need to exploit style factor - Ford Escape the “automotive equivalent of the iPod” (HybridCar.com)

4. Targeting early adopter segments

- Fleets play key role in early stages of market development - drivers of infrastructure/vehicle development/awareness raising (Shell 2004)
- Speculative exercise - assuming10% LC car sales-target (2012), Fleets >8% sales; Most important private early adopters: Mr Fast-tracker, Individualists and Long haulers (1.2% sales) (Ecolane 2005)

Further field-based consumer research

Recommendations of report

- To inform educational/informational campaigns, more detailed understanding of consumer misconceptions is required
- For economic incentives to be effective, a better understanding of how price signals for cleaner cars are received is required
- Identify how low carbon cars can be made more attractive to consumers through the use of non-fiscal incentives
- Confirm UK early adopter segments and identify how low carbon cars can be made more attractive to these groups through the use of targeted incentives
- Insights into the role of attitudes only generated through surveys that link attitudes with travel/consumer behaviour

Car buyer research report

Consumer attitudes to low carbon and fuel-efficient passenger cars

Report by Low Carbon Vehicle Partnership

- desk research conducted by Ecolane

March 2005

Full report now available - www.lowcvp.org.uk

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