

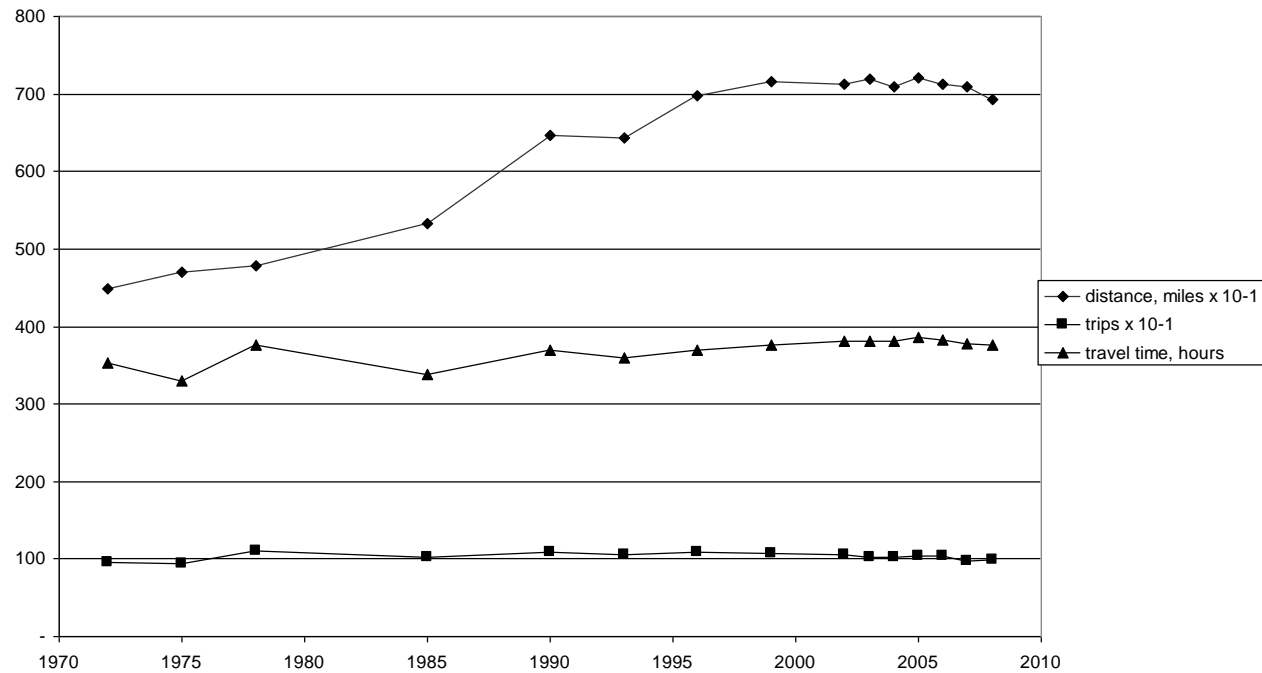
# Saturation of demand for daily travel?

David Metz

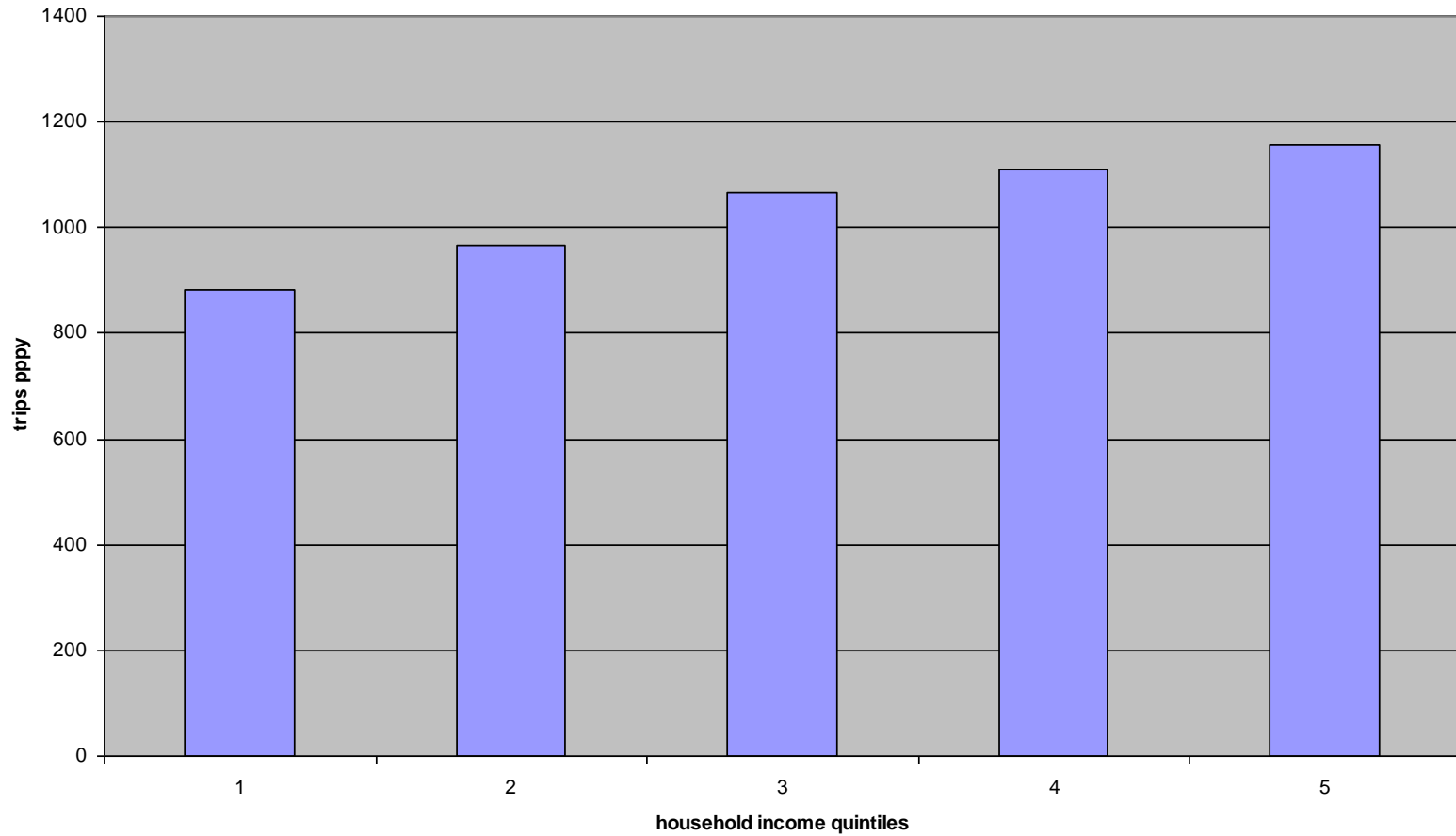
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University College London

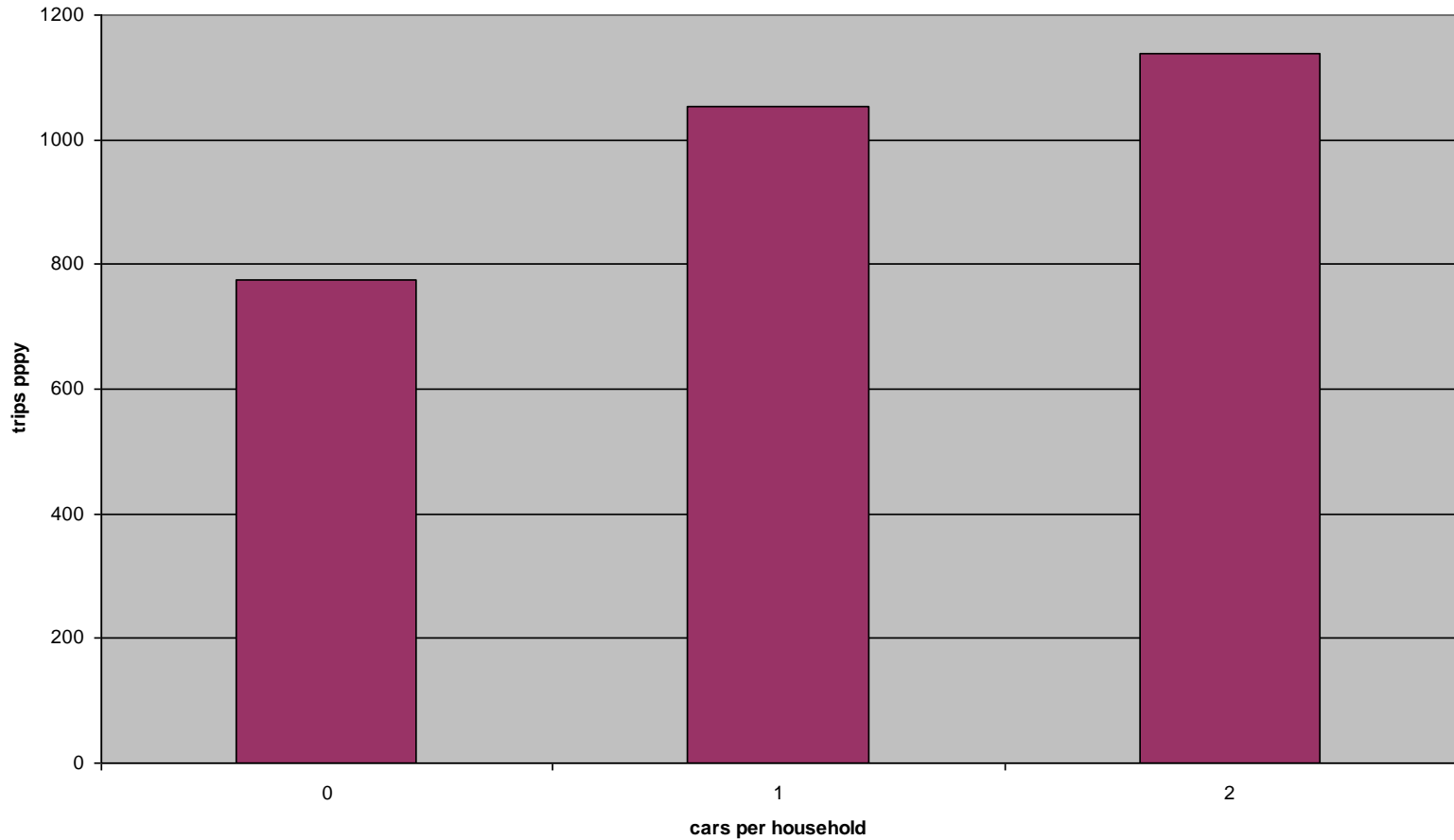
# National Travel Survey: daily travel



# Trips according to income



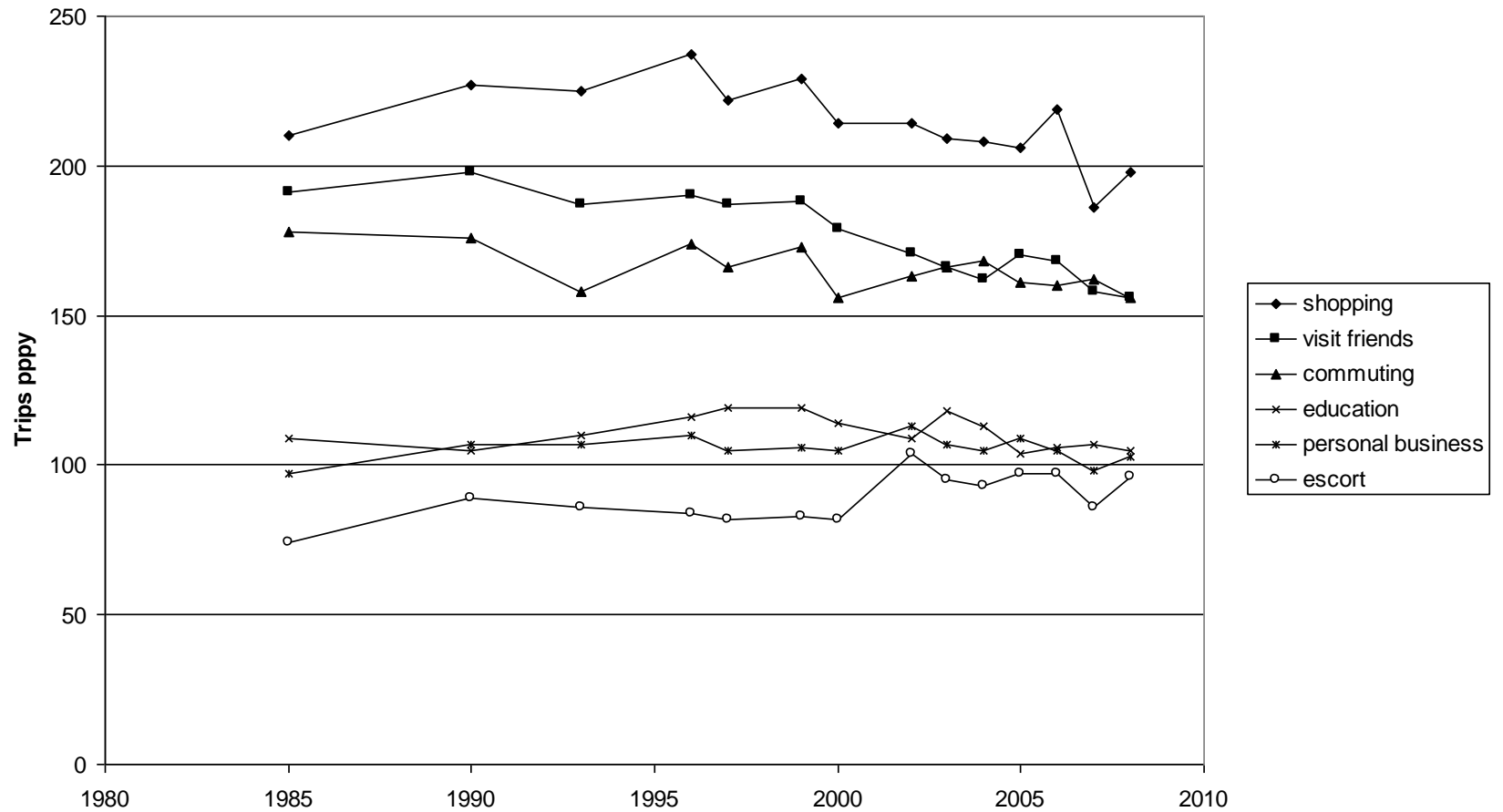
# Trips according to car ownership



# Trips by socio-economic category

- Higher professional 1,228
- Higher managerial 1,179
- Lower managerial 1,190
- Intermediate occupations 1,111
- Small employers, self-employed 1,021
- Lower supervisory and technical 1,054
- Semi-routine occupations 1,030
- Routine occupations 932
- Never worked, long-term unemployed 746
- Students 937

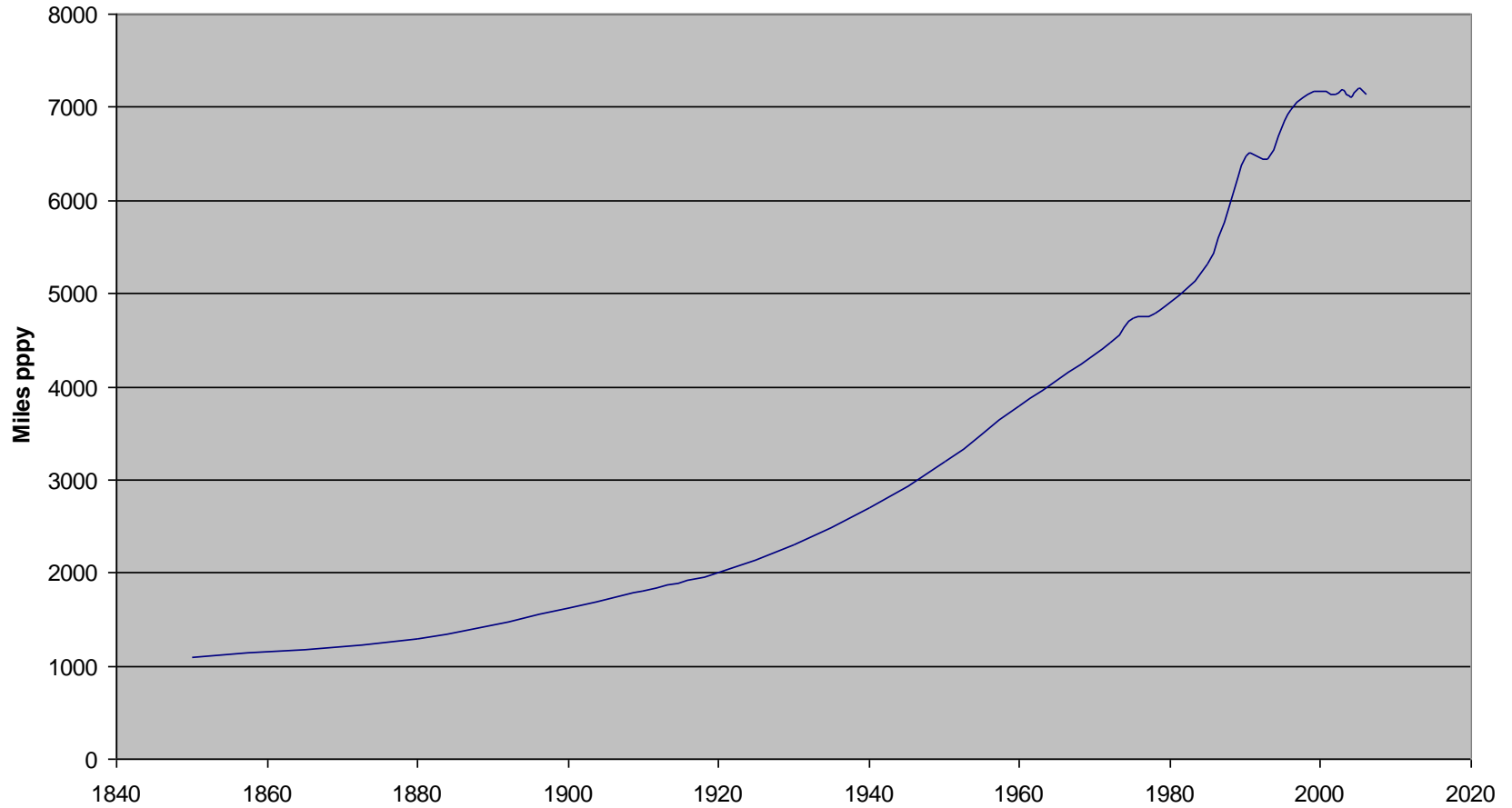
# Trips by purpose



# Unchanging personal daily travel

- 1000 journeys a year, for same purposes, taking same amount of time.
- Distance has increased because car ownership has increased.
- Why travel further for same purposes?
- To increase access and choice.

# Personal mobility





# Proposition: daily travel demand has saturated

- Access and choice increase with square of speed
- Value of additional choice characterised by diminishing marginal utility
- Hence saturation to be expected
- Prediction: sufficient choice available through mobility

# Accessibility Indicators

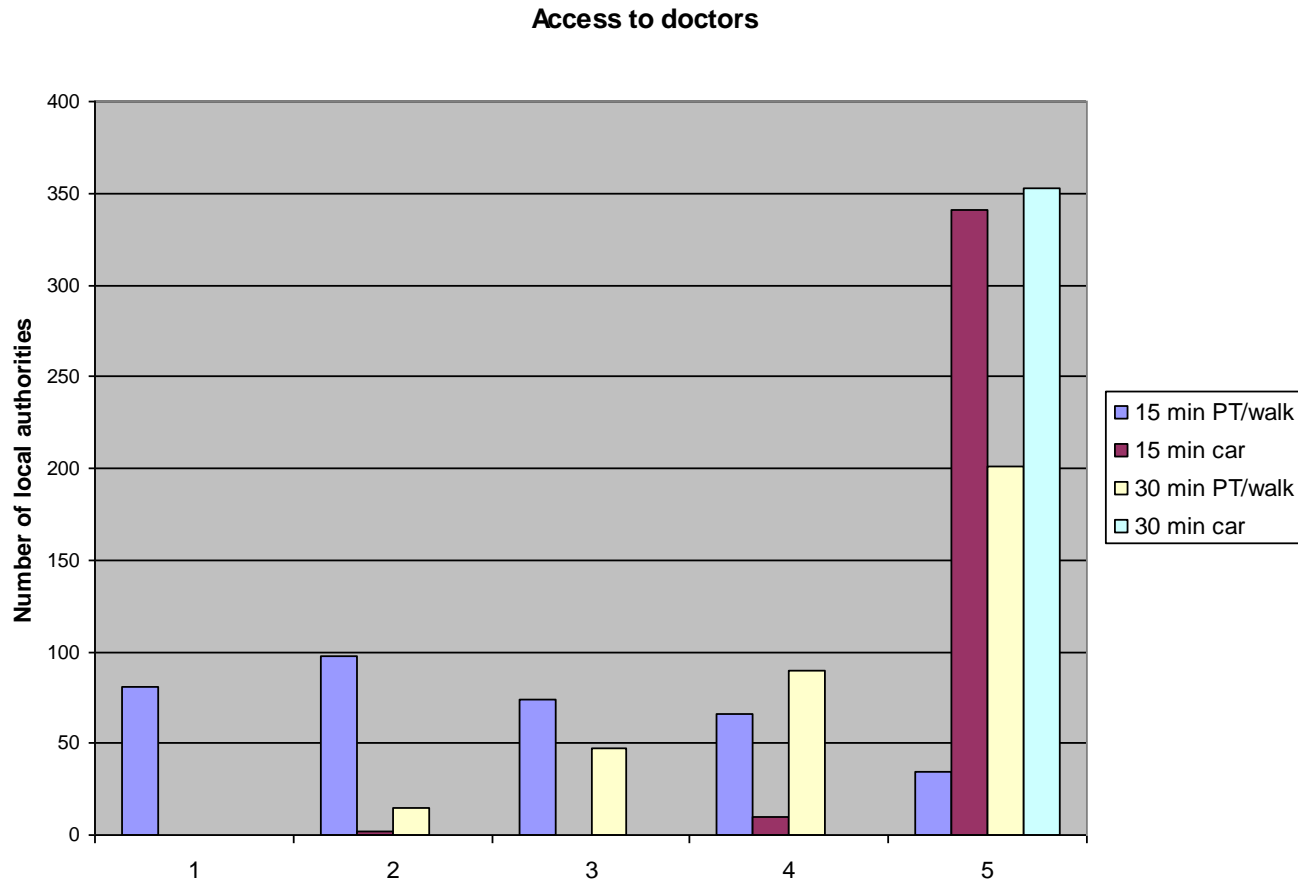
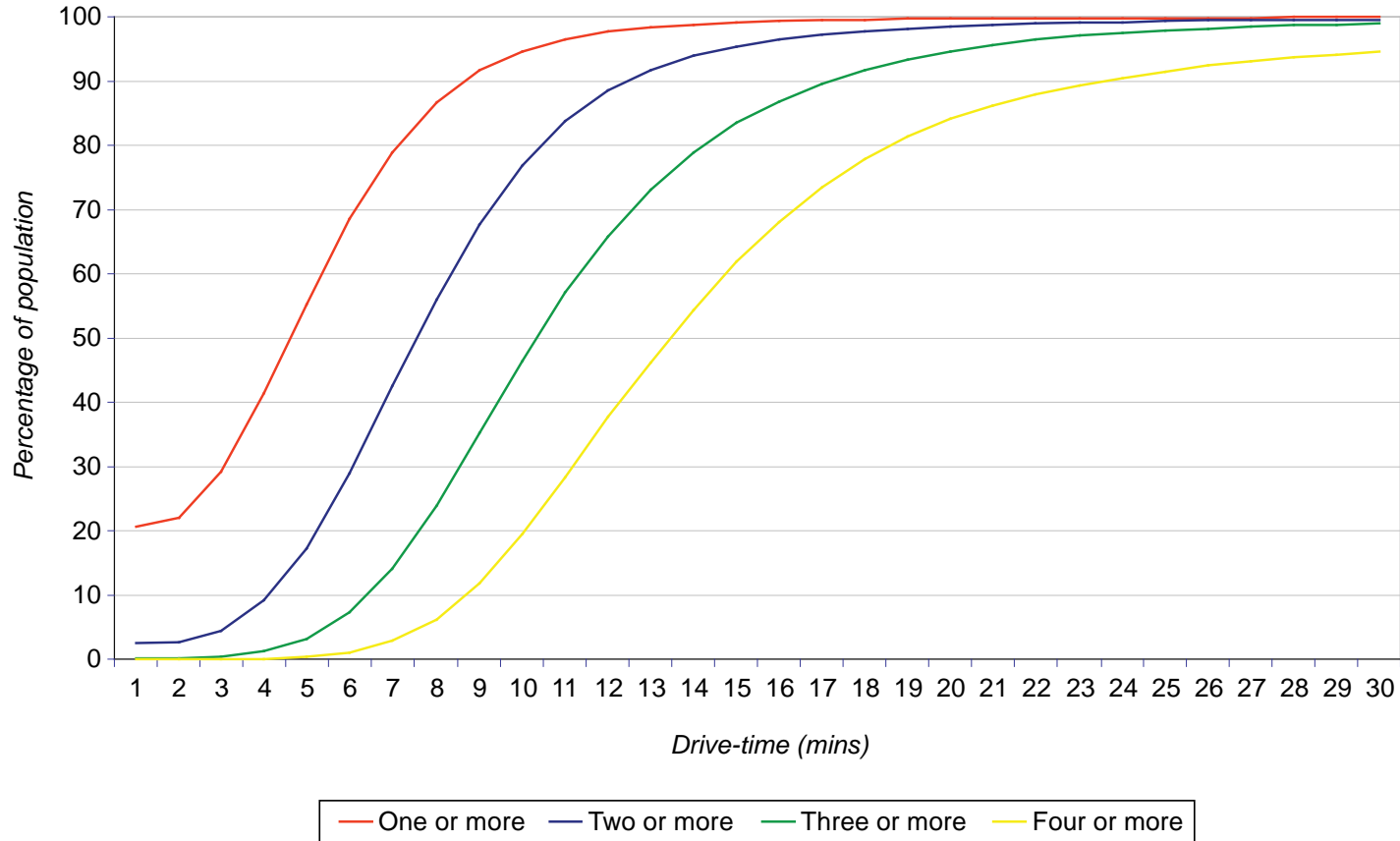


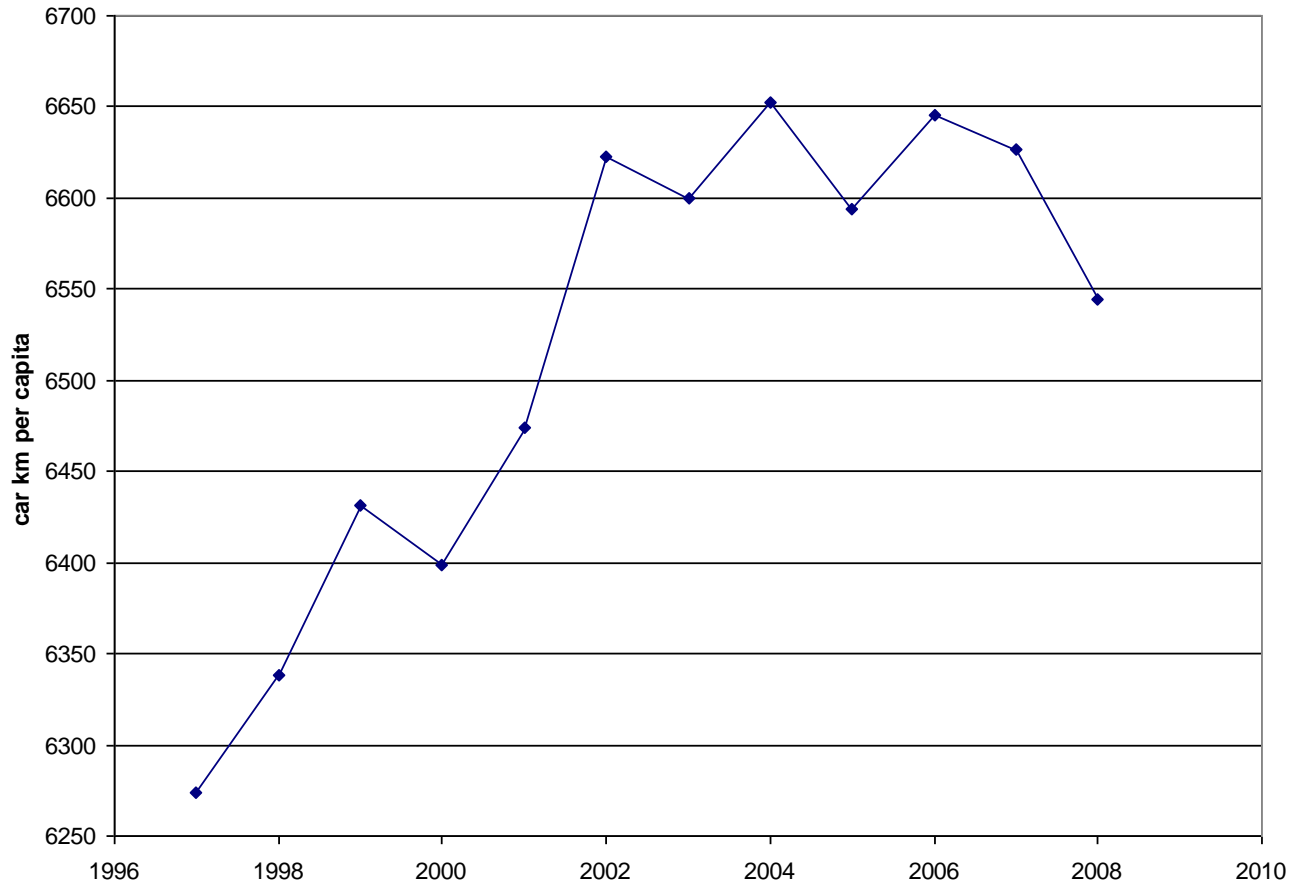
FIGURE 3.9

**Proportion of the UK urban population with a choice of one, two, three or four grocery stores each with a different fascia and larger than 1,400 sq metres**



Source: CACI Limited analysis of parties' data submissions – from Competition Commission: *The supply of groceries in the UK market investigation* report, May 2008.

# Personal travel by car



# A simple model of personal daily travel behaviour

- Population level (not household, individual)
- Constant parameters: travel time, trip rate
- Stable patterns of variation with life stage and socio-economic status
- Main purpose: access and choice
- Choice saturates, hence travel demand saturates. Distance travelled stabilises.

# Business-as-usual scenario

- Stable average annual personal travel behaviour:
  - 7000 miles
  - 1000 trips
  - 370 hours
- Technology: incremental improvement + decarbonisation
- Allow for population growth
- Does not include freight or international aviation

# Policy implications of model

- Saturation of travel demand helpful for transport policy:
  - road construction
  - managing congestion
  - sustainability
- Interventions that have *effect* of reducing speed will tend to reduce access and choice.

# Conclusions

- Per capita daily travel constant in UK since 1995
- Demand saturation a reasonable explanation
- Helpful for meeting carbon emission targets



# References

- *Saturation of demand for daily travel*,  
Transport Reviews (forthcoming)
- [www.limitstotravel.org.uk](http://www.limitstotravel.org.uk)
- [david.metz@transport.ucl.ac.uk](mailto:david.metz@transport.ucl.ac.uk)