Generational Change in Travel Demand

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Commission for Travel Demand (4/5/17)

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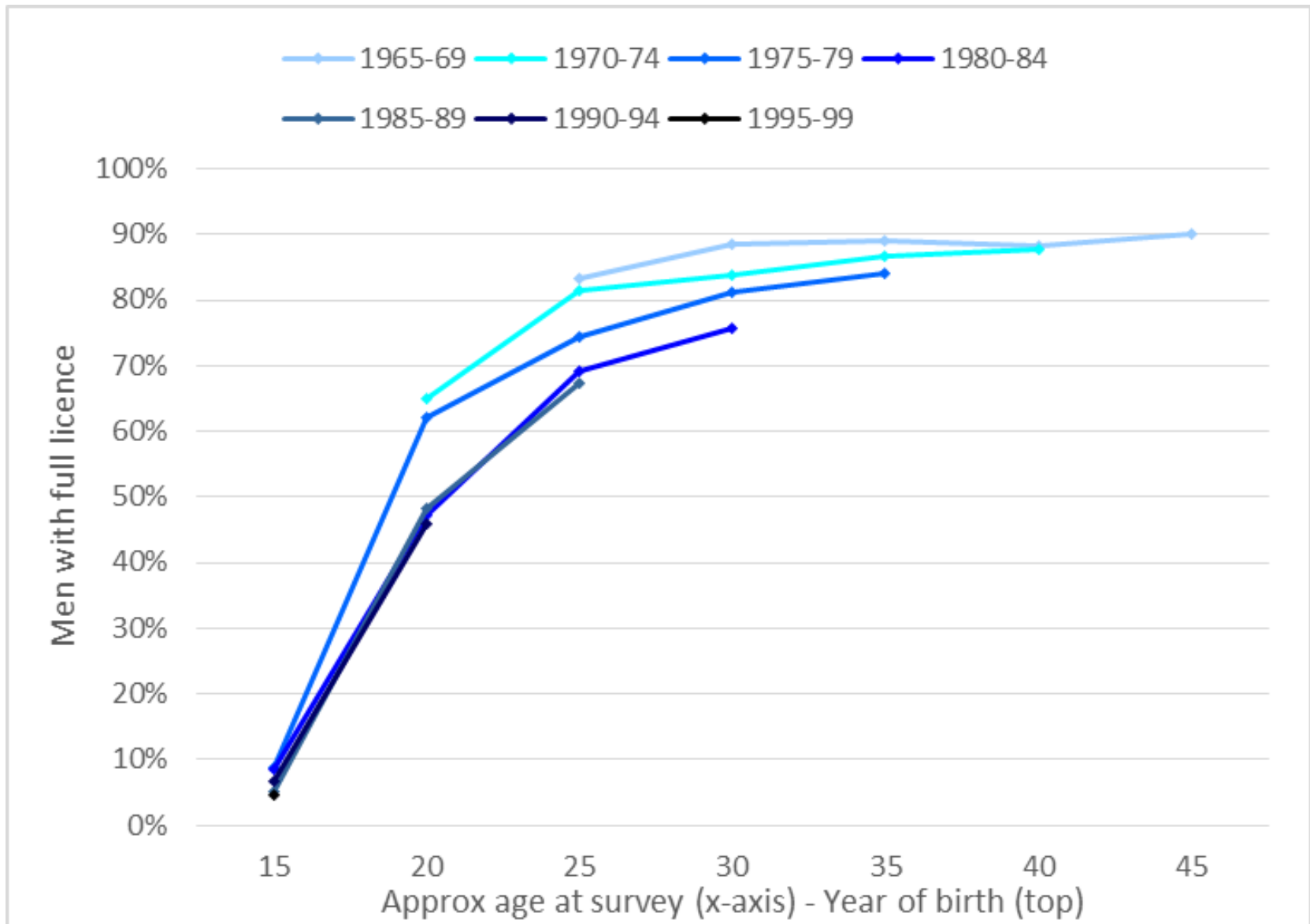
Centre for Transport & Society

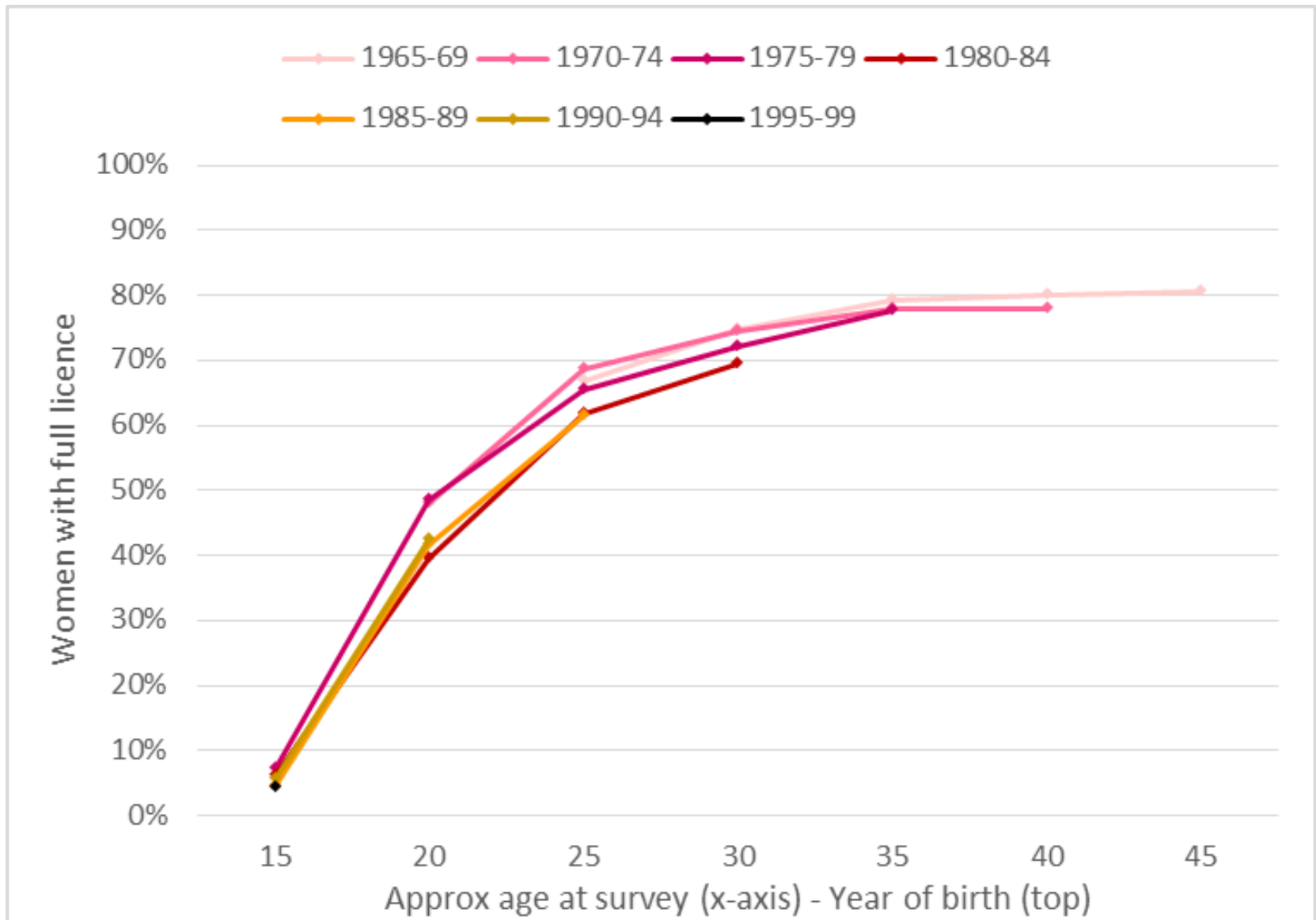# Car ownership over the life cycle 1970-1995
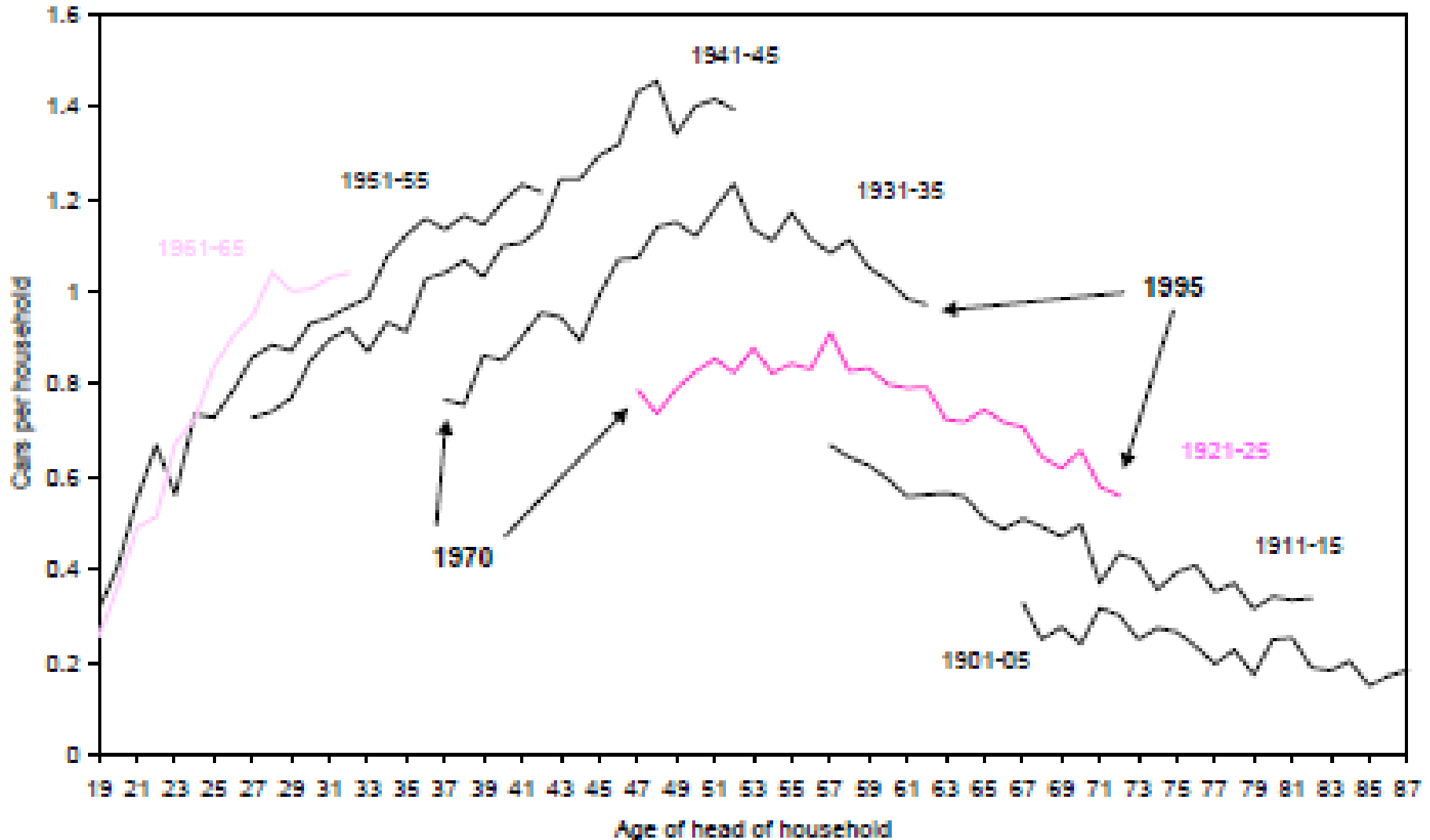
Source: Dargay and Vythoulkas (1999)

Driving licence in early adulthood 1995-2014

Source: own analysis of NTS data

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Diverse pathways to adulthood

	Employed	College	Live ind.	Couple	Has a child	Share of pop	N
Fast starters	Yes	No	Yes	Yes	16-32%	13-18%	609
Parents w/o careers	No	No	Yes	Yes	Yes	1-2%	77
Educated partners	79-92%	Yes	Yes	Yes	No	9-14%	541
Educated singles	55-83%	Yes	Yes	No	No	4-7%	252
Working singles	Yes	No	32-43%	No	3-8%	31-38%	1,378
Slow starters	No	No	No	No	4-22%	5-7%	324
Grads at home	70-86%	Yes		0-2%	1-3%	12-17%	746
Getting by alone	No	No	Yes	41-64%	No	7-12%	369

- Ralph found travel behaviour strongly associated with pathways to adulthood

Source: Ralph (in press)

We know life events influence travel behaviour, e.g. car ownership (Clark et al, 2016)

For example…
43% of households lost a car when a household member lost a partner

Life event experienced by any household member	n	% households gaining a car		% households losing a car	
		with life event	without life event	with life event	without life event
Lost a partner	372	7.0	9.0	**42.7**	8.4
Gained a partner	447	**38.7**	8.2	14.8	8.9
Gained a driving licence	794	**34.0**	7.9	5.7	9.2
Residential relocation	1426	**14.4**	8.5	**23.4**	7.9
Entered employment from non-empl.	1525	**15.0**	8.4	9.8	9.0
Lost employment (excl retirement)	1023	9.4	8.9	**14.8**	8.7
Changed employer	1647	**15.6**	8.3	**11.4**	8.8
Had child	622	**11.4**	8.9	**11.9**	9.0
Retired	355	6.8	9.0	**12.7**	9.0

Source: Understanding Society Wave1 and Wave 2 (2009/10 to 2010/11); n=19,344
Bold figures highlight greater prevalence of car ownership changes amongst the group of households experiencing the life event
The table illustrates simple bivariate associations. Households may experience more than one life event at a time.

while only 8% of households lost a car in the absence of this life event

Implications

Need to recognise:

- Age effects: changing mobility over the life course
- Period effects: temporary circumstances that affect everyone simultaneously
- Cohort effects: differences in mobility for groups of individuals who experience an initial event together, such as birth year
- Diversity of effects within the population

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- Period effects may disproportionately affect particular cohorts (e.g. housing costs)
- Cohort effects may become the norm and hence age effects (e.g. higher education participation)

Existing forecasting

- Has over-estimated travel demand

- Due to unforeseen economic drivers?

- But socio-economic variables only partly explain decline in young people's licensing and car use

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- Cannot assume stable demand relationships over time

- Cannot assume the same relationships apply within the population

Key aspects of a way forward

- Project the population forward over time (demography, employment, housing)

- Consider key behaviours (licence acquisition, car access, trip rates, etc.)

- Account for differences in travel behaviour between age and birth-cohort groups (and potentially other sub-groups)

- Test different scenarios (population change, economic/transport conditions)