

Are 'poor' pensioners 'deprived'?

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Three reports commissioned by the **Department for Work and Pensions**

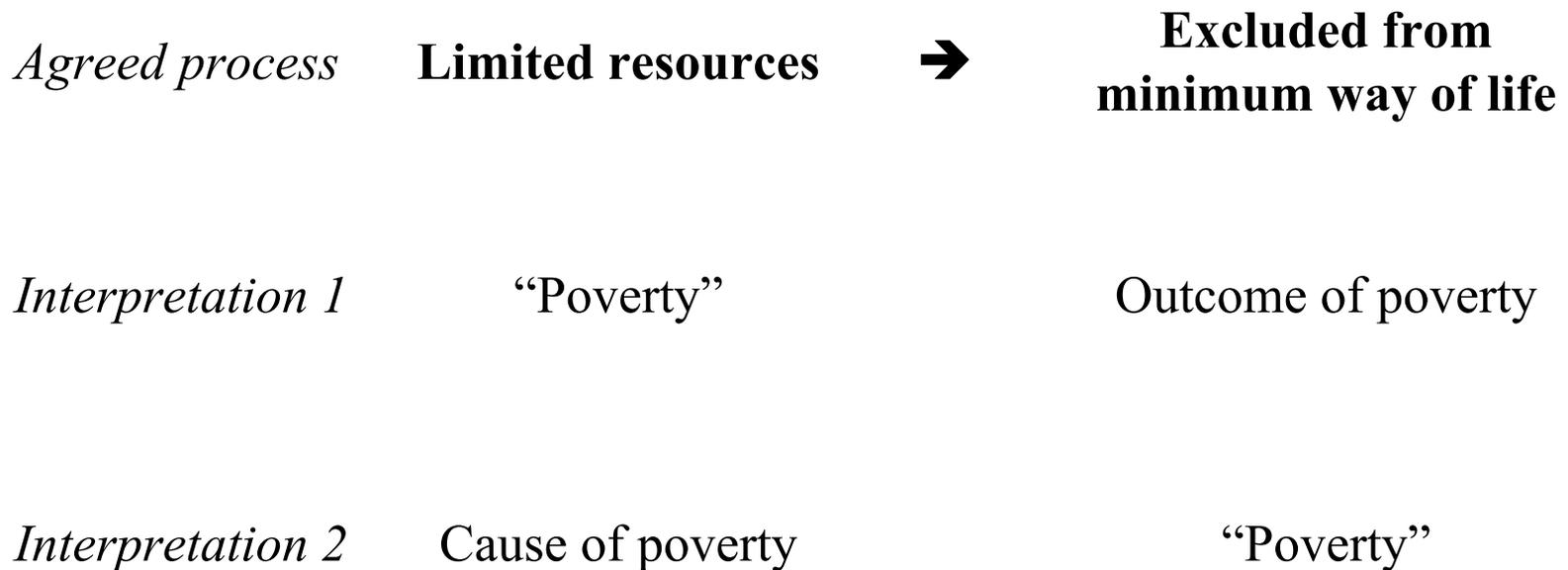
1. Are 'poor' pensioners 'deprived'? (ISER, Essex)
 2. Which pensioners don't spend their income, and why? (SPRU, York)
 3. Understanding older people's experiences of poverty and material deprivation (PFRC, Bristol)
- Google: [dwp/pensioners/deprived](https://www.google.com/search?q=dwp/pensioners/deprived)
 - See also *The Dynamics of Deprivation* (ISER, Essex)

Background

- A puzzle: pensioners tend to have low incomes, but are not very 'deprived'
- Policy/politics: DWP is using deprivation scores in addition to low income to assess poverty

Two interpretations of the essence of poverty

EU: The poor shall be taken to mean persons whose resources are so limited as to exclude them from the minimum way of life of member states in which they live.



Poverty and Social Exclusion in Britain (PSE)

Pantazis, Gordon and Levitas

*Percentage in PSE “can’t afford” hardship, by income:
pensioners vs non-pensioners*

	Below pension age	Above pension age
Low income (below 60% of median)	67%	34%
Non-low income	20%	12%

Two possible conclusions

- **either:**
 - income turns out to be an unreliable measure of living standards;
 - concerns about pensioners' low levels of income have been misplaced;
- **or:**
 - the index derived from the PSE turns out to be an unreliable measure of variations in living standards across age groups;
 - the approach understates the level of poverty among older people.

Objectives of this study

- Part 1: Test sensitivity of (cross-sectional) relationship between age and living standards to questions asked and construction of index
 - Uses PSE data
- Part 2: Are variations by age the outcome of cohort effects, or does the experience of individuals change as they grow older?
 - Uses BHPS data

Part 1: Test sensitivity of relationship between age and living standards to questions asked and construction of index

PSE data

- Follow-up from 1999 General Household Survey
- 1,397 adults (833-effective, after weighting)
- Standard measure of household income before housing costs – unequivalised
- Questions about 51 items

PSE questions

- Which of 51 items and activities are “necessary, which all adults should be able to afford and which they should not have to do without”
- Which items and activities
 - do you have?
 - do you not have because you don’t want them?
 - do you not have because you can’t afford them?

PSE deprivation-poverty (“hardship”)

- Items in the list which more than half the sample considered necessary were defined as “agreed necessities”. (32/51)
- Deprivation scale was based on the number of these agreed necessities which members of the sample “can’t afford”.
- People labelled “poor” (in hardship) if they “can’t afford” two or more necessities.

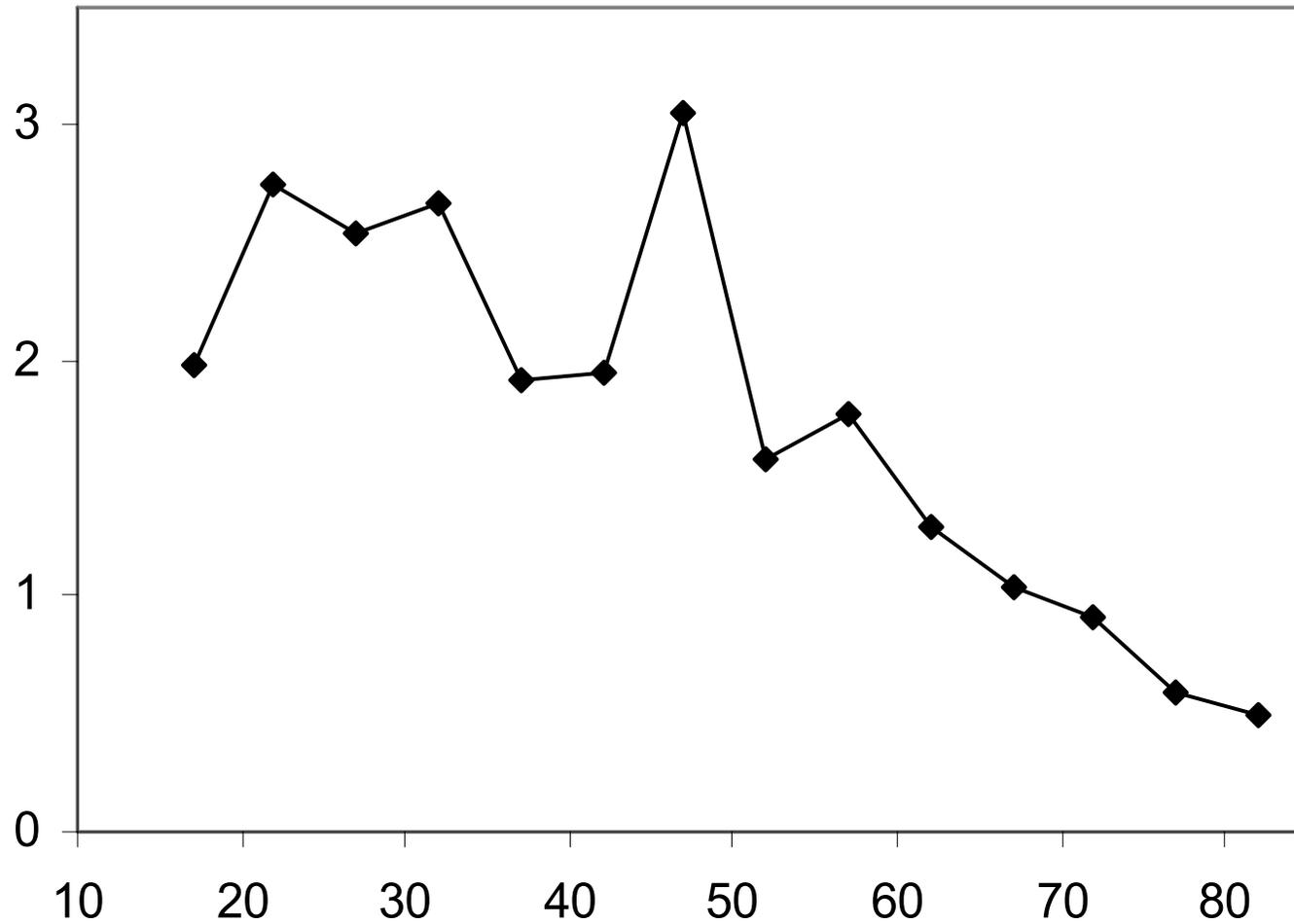
Ordered logistic regression equation predicting the number of necessities an individual “can’t afford”.

Income	per unit of log income	-1.640
Age (spline)	per 10 years up to 50	-0.044 ^{ns}
	per 10 years 50 plus	-0.601
Family structure	householder	-2.010
	couple	0.844 ^{ns}
	per other adult	0.083 ^{ns}
	per child	0.342
Health	if limiting long-standing illness	0.443
<i>Pseudo R²</i>		9.2%
Ratio age/income	Up to 50	3%
	50 plus	44%

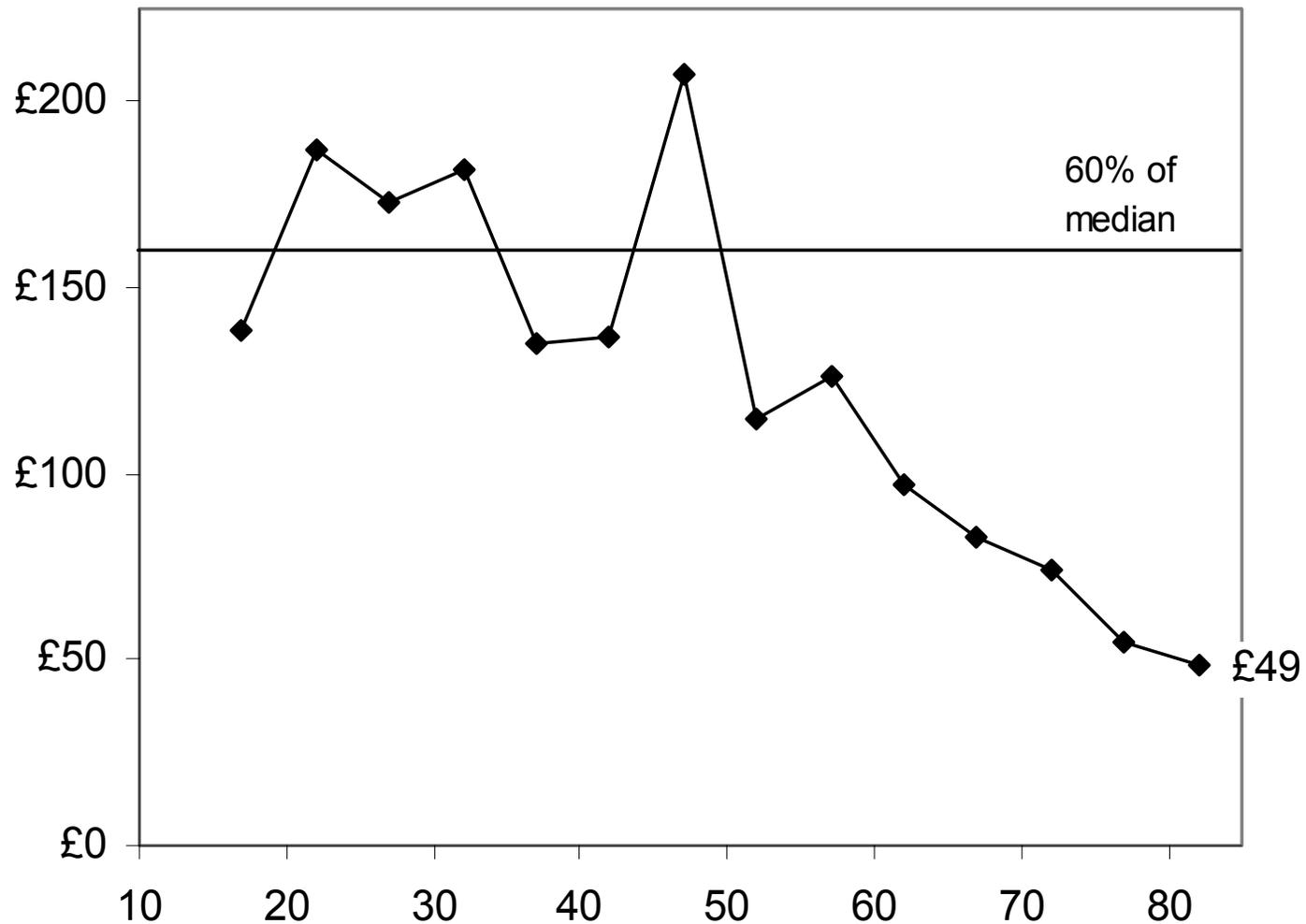
Note: All coefficients are significant at the 95% level unless marked ^{ns}

- Being ten years older reduces “can’t afford” deprivation by the same as a 44 per cent increase in income

Estimated number of necessities “can’t afford” at £200 pw, by age group

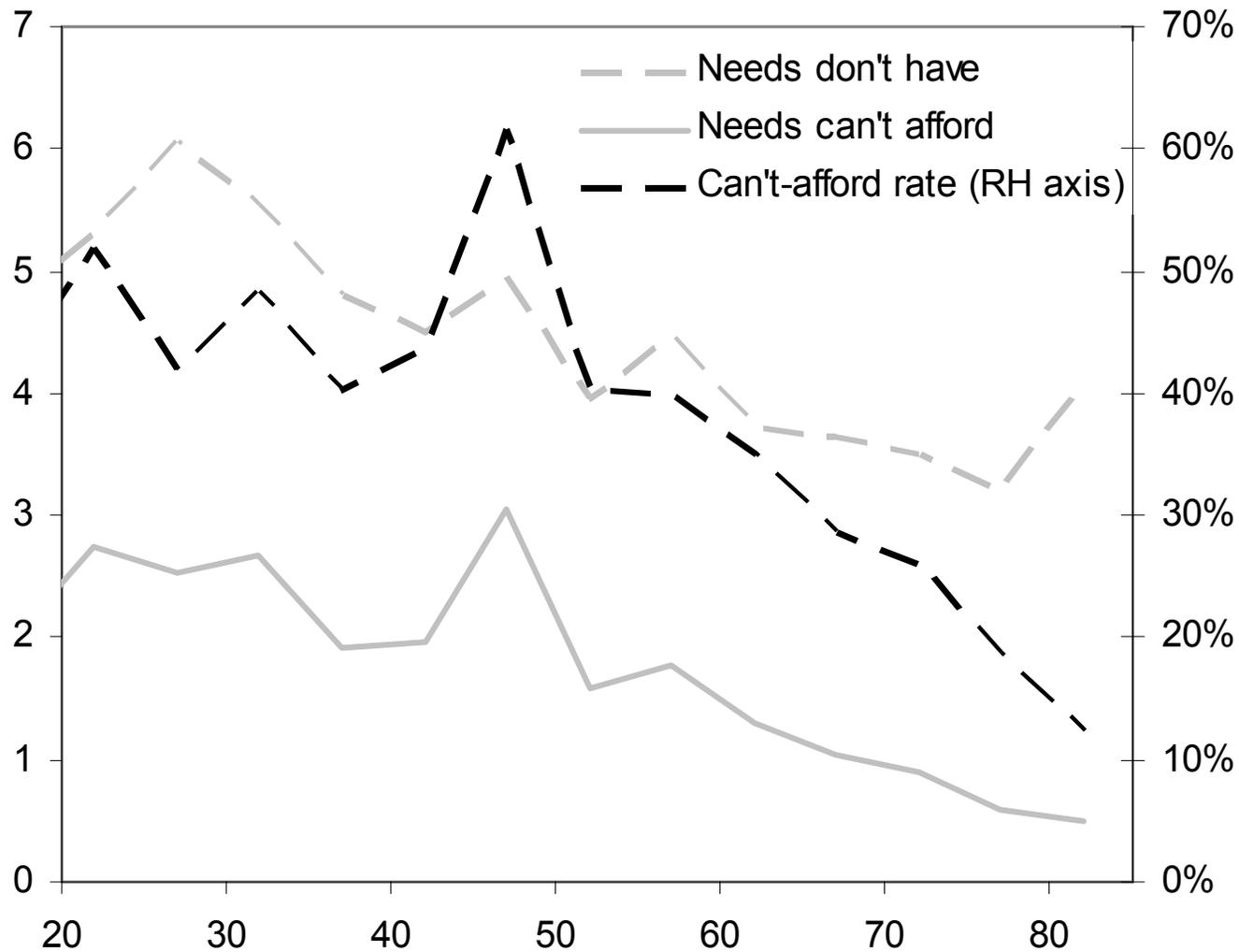


Income required to reduce risk of hardship below 50 per cent, by age band



- Comparing items people “can’t afford” with items they “don’t have”

Estimated number of necessities “can’t afford” and “don’t have” at £200

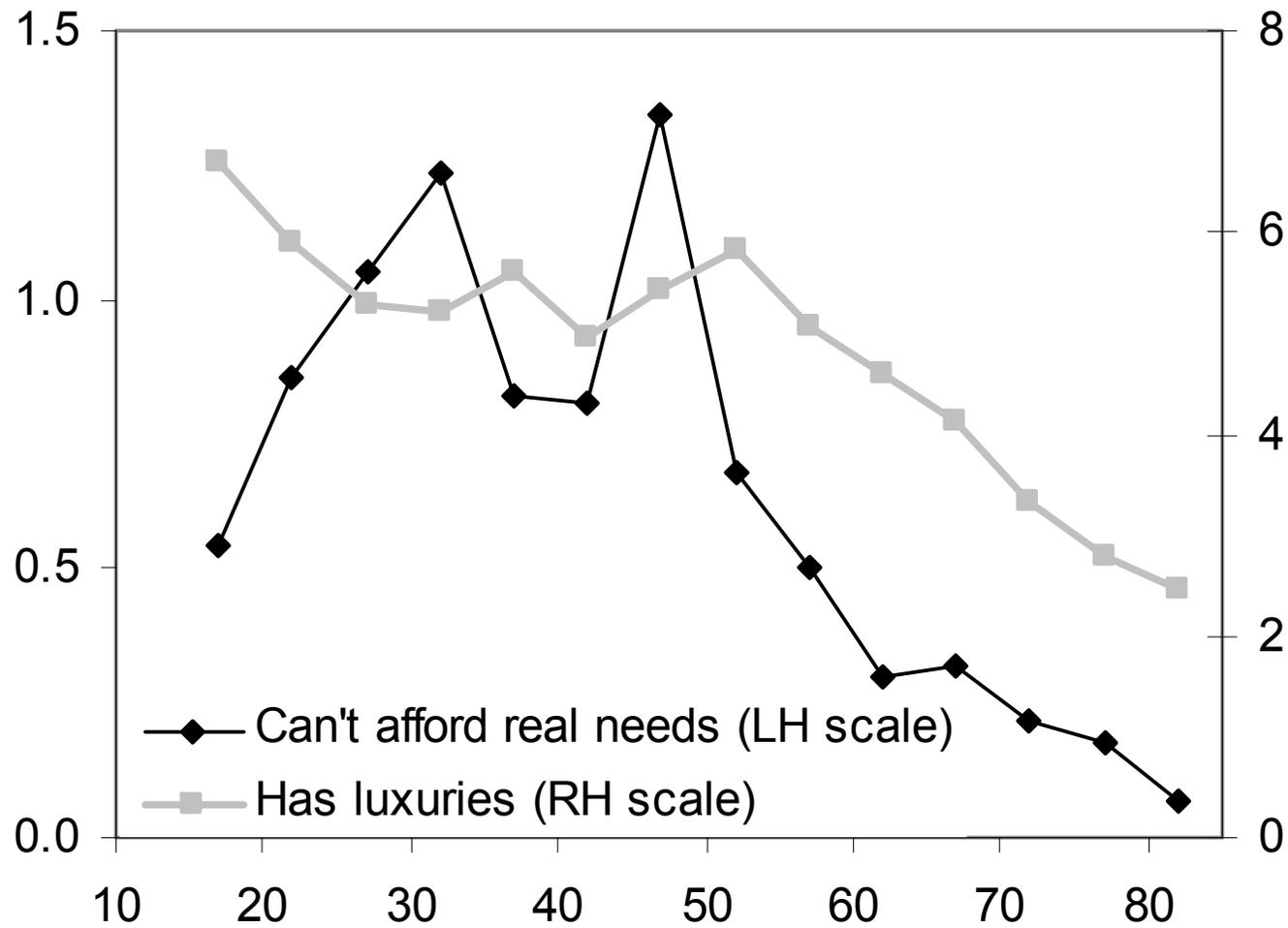


Index**Income
equivalence**

Can't afford, controlling for don't have**186%****Can't afford necessities****44%****Don't have necessities****19%**

- Comparing “luxuries” with “real needs”

“Can’t afford” *real needs* vs actually has *luxuries*



Index	Income equivalence
Can't afford, controlling for don't have	186%
Can't afford real needs	64%
Can't afford necessities	44%
Don't have necessities	19%
Balance of real needs minus luxuries	-22%
Do have luxuries	-48%

- Identifying items which are highly sensitive to income

Index	Income equivalence
Can't afford, controlling for don't have	186%
Can't afford real needs	64%
Can't afford necessities	44%
Can't afford income-elastic items	33%
Don't have necessities	19%
Don't have income-elastic items	6%
Balance of real needs minus luxuries	-22%
Do have luxuries	-48%

Index	Income equivalence
Can't afford, controlling for don't have	186%
Arrears	181%
Gone without	106%
Can't afford real needs	64%
Can't afford necessities	44%
Can't afford age-specific necessities	37%
Can't afford income elastic items	33%
Don't have necessities	19%
Subjective (in relation to minimum income)	14%
Don't have age-specific necessities	11%
Don't have income-elastic items	6%
Balance of real needs minus luxuries	-22%
Do have luxuries	-48%

Conclusions of the cross-sectional comparisons

- Deprivation often declines with age, controlling for income
- But very wide range of results, so conclusion is not robust
- Subjective indicators more sensitive to age than objective ones? (eg “can’t afford”)
- Caution about treating any indicator as a ‘measure’ of poverty

Part 2: Are variations by age the outcome of cohort effects, or does the experience of individuals change as they grow older?

BHPS data

5,000 households, all members interviewed every year since 1991

This analysis uses seven waves, 6 to 12

7827 individuals covered, including 3726 over 50

Indices:

- Standards of daily living
- Consumer durables
- Financial strain

Daily living

- Pay for a week's annual holiday away from home
- Replace worn out furniture
- Buy new, rather than second hand, clothes
- Eat meat, chicken, fish every second day
- Have friends or family for a drink or meal at least once a month

One '***don't have***' index

One '***can't afford***' index

- both constructed as in the PSE analysis

Consumer durables

- colour TV
- video cassette recorder
- washing machine
- dish washer
- microwave oven
- home computer
- cd player
- telephone
- cable/satellite TV
- cars (0-2)

Financial strain

- How well would you say you yourself are managing financially these days? Would you say you are living comfortably (1) ... , or find it very difficult (5)
- Please tick the number (from 1 to 10) which you feel best describes how dissatisfied or satisfied you are with the income of your household

In longitudinal data we can see what happens when circumstances change

- **Period effect:** changes affecting everyone from calendar year to year
- **Ageing effect:** changes as people get older
- **Other changes:**
 - Retirement
 - Deteriorating health
- **Cohort effect:** fixed effect depending on when people were born

Current age analysed by year of birth and year of observation

Wave	Year of birth					
	1930	1931	1932	1933	1934	1935
1996	66	65	64	63	62	61
1997	67	66	65	64	63	62
1998	68	67	66	65	64	63
1999	69	68	67	66	65	64
2000	70	69	68	67	66	65

Absolute deprivation – baseline living standard is fixed

Relative deprivation – baseline is adjusted year by year

Relative deprivation sets *period* effects to nil, so we can estimate *ageing* and *cohort* effects

Analytical procedures

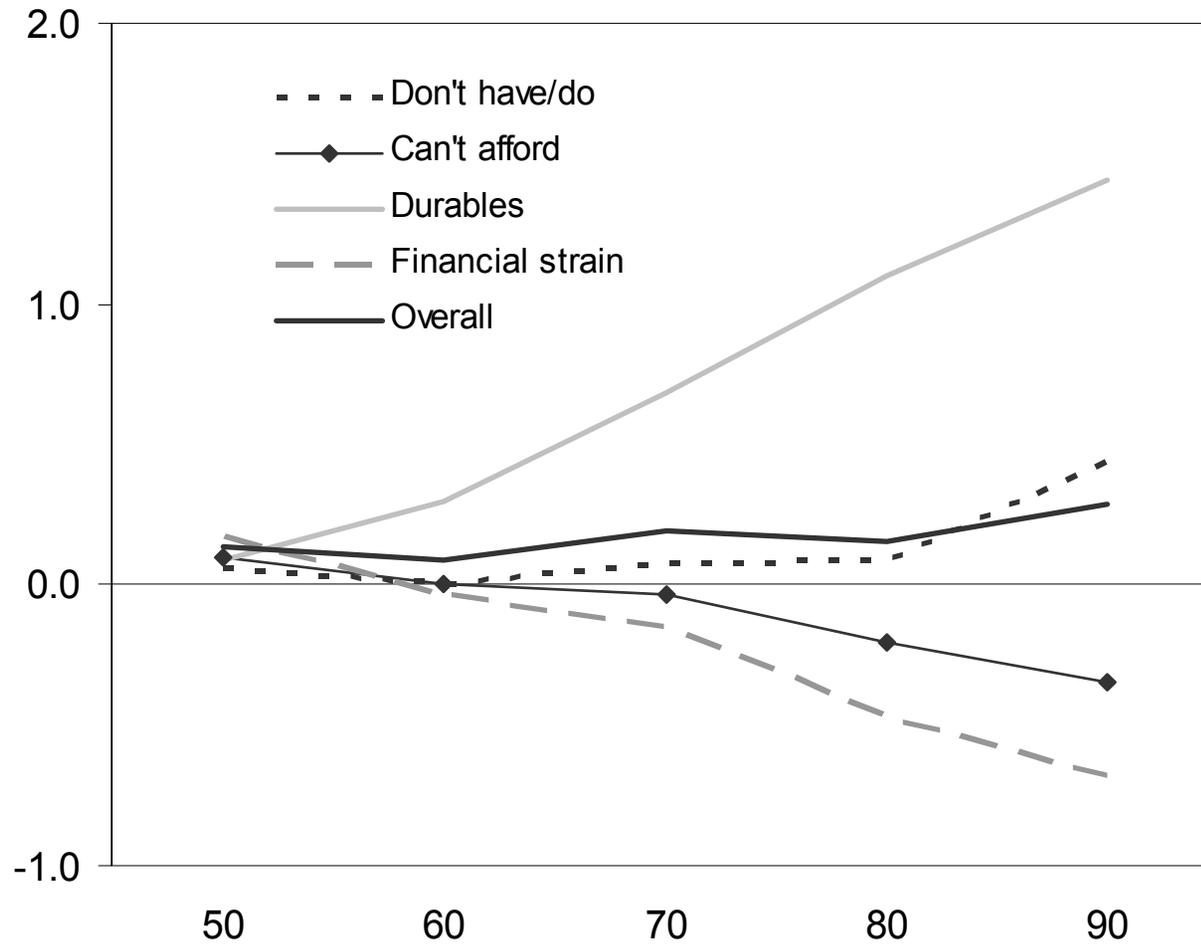
Focus on age-range above 50

1. Pooled cross-sections (for comparison with other/previous studies)
2. Quasi-panel - pooled cross-sections with cohort (year of birth)
3. Fixed effects model (best estimates of ageing effects)
4. Random effects model (can estimate cohort effects)

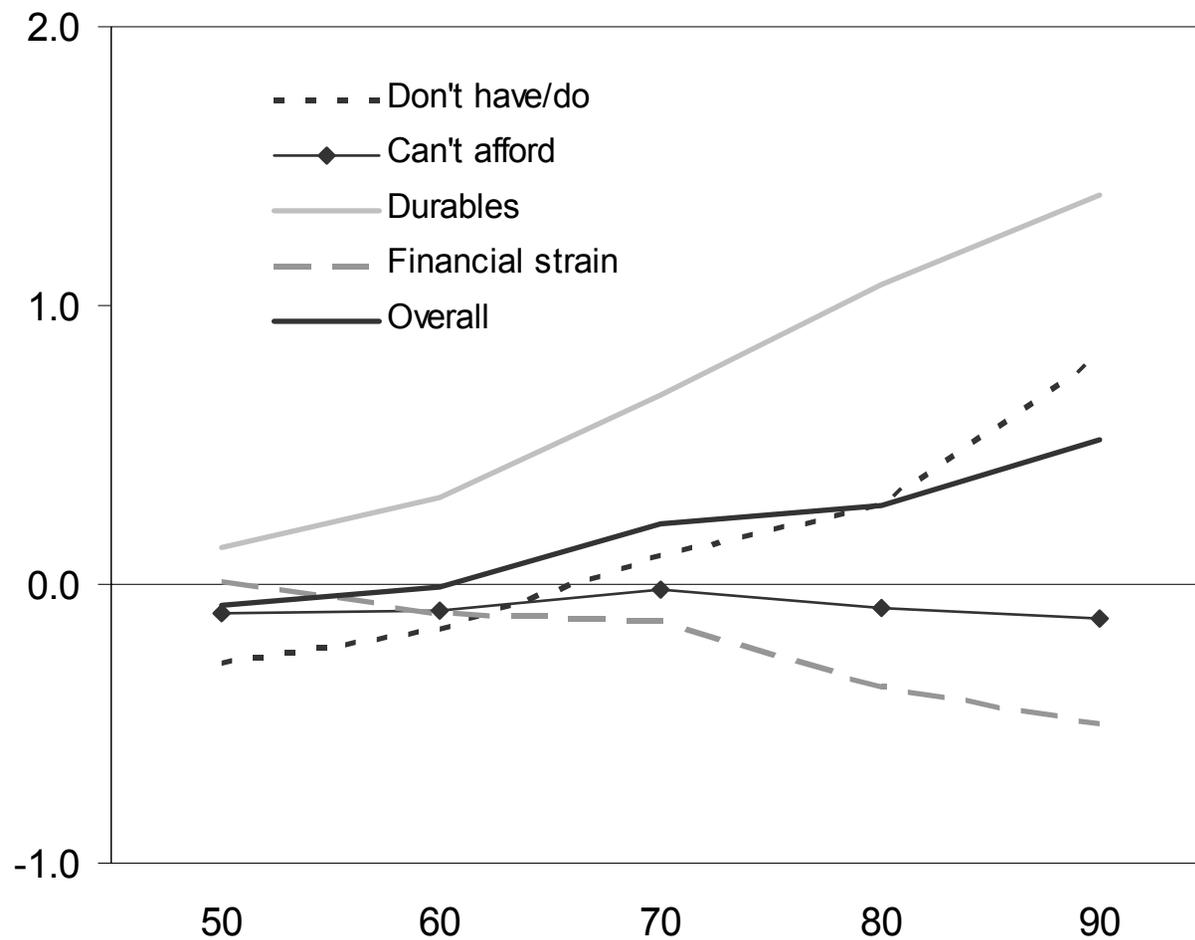
Pooled cross-sectional estimates

	Daily living don't have/do	Daily living because can't afford	Consumer durables	Financial strain	Combined score
Log (AHC) income	-0.31	-0.34	-0.42	-0.58	-0.57
No of kids	0.13	0.15	-0.12	0.22	0.11
Has a partner	-0.32	-0.12	-0.43	0.11	-0.25
Has retired	-0.13	-0.10	-0.03 ^{ns}	-0.17	-0.14
Age 50–60 ^a	-0.06^{ns}	-0.10^{ns}	0.21	-0.20	-0.05^{ns}
Age 60–70 ^a	0.08^{ns}	-0.04^{ns}	0.39	-0.12^{ns}	0.11^{ns}
Age 70–80 ^a	0.01^{ns}	-0.17	0.42	-0.32	-0.04^{ns}
Age 80 plus ^a	0.35	-0.15^{ns}	0.35	-0.21	0.13^{ns}
Constant	2.00	2.05	2.54	3.35	3.43
<i>R-squared</i>	12.1%	8.4%	44.5%	16.2%	27.5%

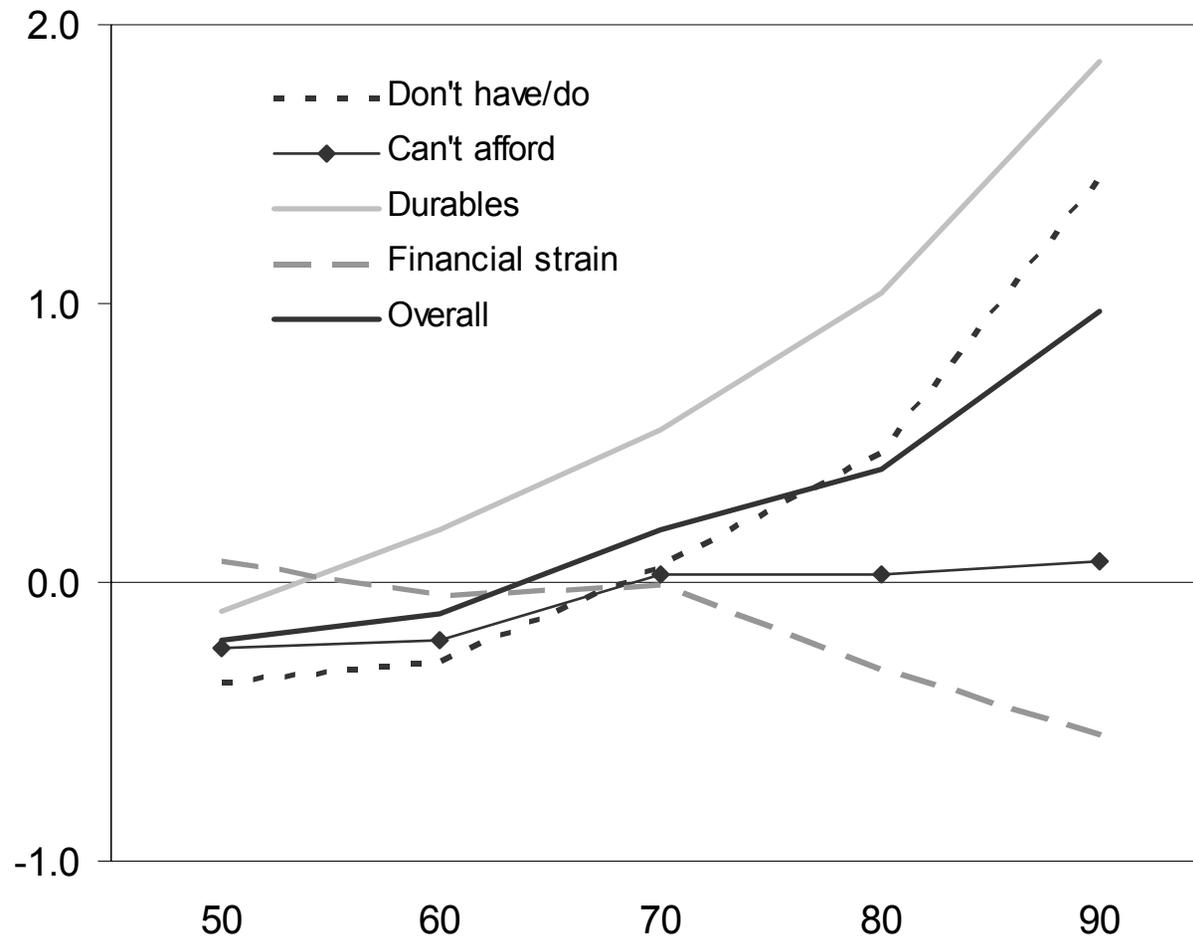
Age variation from cross-sectional models



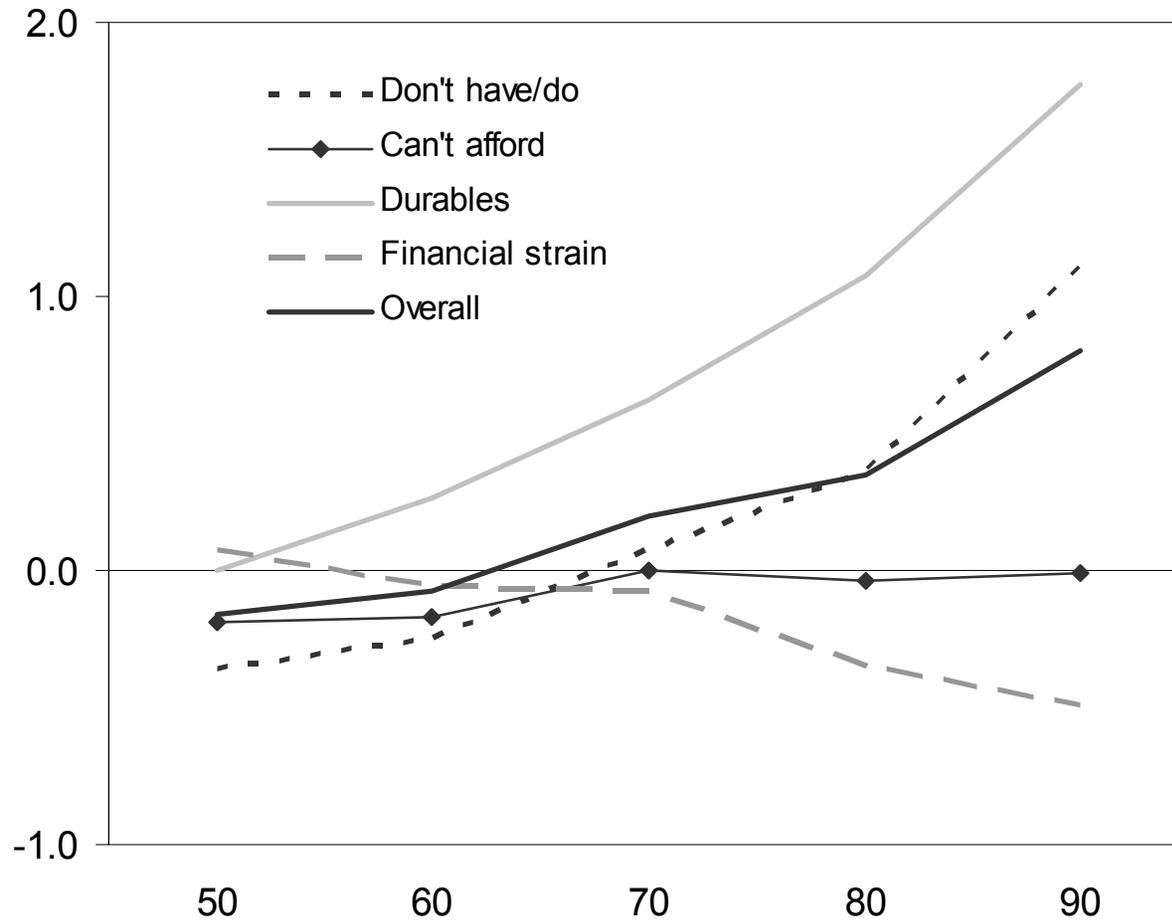
Age variation cross-sectional analysis with cohort



Age variation using fixed effects estimates



Age variation using random effects estimates



Summary of age/ageing and cohort effects

assuming constant rates of change per year of age

	Age variation	Ageing effect	Cohort effect
Deprivation index			
Daily living - don't have/do	0.06	0.32	0.19
Daily living - can't afford	-0.11	0.08	0.12
Consumer durables	0.36	0.41	-0.04 ^{ns}
Financial strain	-0.21	-0.13	0.08
Combined score	0.03 ^{ns}	0.22	0.12

	Cross- section	Fixed effects model	Random effects model
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Current age analysed by year of birth and year of observation

Wave	Year of birth					
	1930	1931	1932	1933	1934	1935
1996	66	65	64	63	62	61
1997	67	66	65	64	63	62
1998	68	67	66	65	64	63
1999	69	68	67	66	65	64
2000	70	69	68	67	66	65

Stylised deprivation score, analysed by year of birth and year of observation

Wave	Year of birth					
	1930	1931	1932	1933	1934	1935
1996	0.50	0.40	0.30	0.20	0.10	0.00
1997	0.72	0.62	0.52	0.42	0.32	0.22
1998	0.94	0.84	0.74	0.64	0.54	0.44
1999	1.16	1.06	0.96	0.86	0.76	0.66
2000	1.38	1.28	1.18	1.08	0.98	0.88

Possible explanations of ageing effects

- Retirement?
- Increasing ill-health?

Conclusions (parts 1 & 2)

- (1) **Age variation is very sensitive to deprivation indicators used**
 - Objective and subjective show different patterns

- (2) **Longitudinal evidence is different from cross-sectional evidence**
 - The currently old have the **advantage** of being born early (cohort effect)
 - But they have become relatively **worse off** as they have grown older (ageing effect)
 - These effects tend to cancel each other out when comparing age groups at a point in time

Are 'poor' pensioners 'deprived'?

Are 'poor' pensioners 'deprived'?

Hmmm...

Pooled cross-sectional estimates with cohort (year of birth)

	Daily living don't have/do	Daily living because can't afford	Consumer durables	Financial strain	Combined score
Log income	-0.31	-0.34	-0.42	-0.58	-0.57
No of kids	0.13	0.15	-0.12	0.22	0.11
Has a partner	-0.32	-0.12	-0.43	0.11	-0.25
Has retired	-0.12	-0.10	-0.03 ^{ns}	-0.17	-0.14
Age 50–60 ^a	0.12^{ns}	0.01^{ns}	0.19	-0.12^{ns}	0.06^{ns}
Age 60–70 ^a	0.27	0.08^{ns}	0.36	-0.03^{ns}	0.22
Age 70–80 ^a	0.18	-0.06^{ns}	0.40	-0.24	0.06^{ns}
Age 80 plus ^a	0.53	-0.04^{ns}	0.32	-0.13^{ns}	0.24
Cohort ^a (born 1930/10)	0.18	0.11	-0.02^{ns}	0.09	0.11
Constant	1.67	1.85	2.58	3.20	3.23
<i>R-squared</i>	12.2%	8.4%	44.5%	16.2%	27.6%

Fixed effects estimates

	Daily living don't have/do	Daily living because can't afford	Consumer durables	Financial strain	Combined score
Log income	-0.02 ^{ns}	-0.09	-0.08	-0.22	-0.15
No of kids	0.03 ^{ns}	0.01 ^{ns}	-0.12	0.04 ^{ns}	-0.01 ^{ns}
Has a partner	-0.02 ^{ns}	0.12	-0.18	0.03 ^{ns}	-0.01 ^{ns}
Has retired	-0.06	-0.04 ^{ns}	0.03 ^{ns}	0.07	0.00 ^{ns}
Age 50–60 ^a	0.08^{ns}	0.03^{ns}	0.28	-0.12	0.09^{ns}
Age 60–70 ^a	0.34	0.23	0.36	0.03^{ns}	0.31
Age 70–80 ^a	0.41	0.00^{ns}	0.49	-0.30	0.22
Age 80 plus ^a	0.98	0.05^{ns}	0.82	-0.24^{ns}	0.57
Constant	-0.18	0.24	0.39	1.14	0.60
<i>Rho</i>	62.9%	63.5%	78.2%	67.0%	74.7%

Random effects estimates

	Daily living don't have/do	Daily living because can't afford	Consumer durables	Financial strain	Combined score
Log income	-0.12	-0.18	-0.14	-0.32	-0.25
No of kids	0.08	0.07	-0.11	0.12	0.04 ^{ns}
Has a partner	-0.31	-0.12	-0.37	-0.02 ^{ns}	-0.26
Has retired	-0.08	-0.06	0.02 ^{ns}	0.01 ^{ns}	-0.03 ^{ns}
Age 50–60 ^a	0.11	0.02^{ns}	0.27	-0.13	0.09
Age 60–70 ^a	0.32	0.17	0.36	-0.01^{ns}	0.28
Age 70–80 ^a	0.29	-0.03^{ns}	0.45	-0.27	0.15
Age 80 plus ^a	0.74	0.02^{ns}	0.69	-0.15^{ns}	0.45
Cohort ^a	0.20	0.14	-0.04	0.09	0.12
Constant	0.52	0.88	0.90	1.79	1.35
<i>Rho</i>	54.0%	55.5%	75.0%	62.1%	68.7%