MANCHESTER 1824

The University of Manchester

Institute for Fiscal Studies

Extending Working Lives

A solution to the challenges of an ageing population?

James Banks

IFS and University of Manchester

IFS Annual Lecture, 14 December 2015

ELSA English Longitudinal Study of Ageing

Overview

The ageing of the population is well known. A remarkable success story of human development, although one that creates challenges as well as opportunities for government and for familes

Extending working lives

- Recent trends have been to work longer
- What are the key drivers and/or limiting factors? How much more is to come?
- And is this the solution to the challenges of an ageing population?

Overview

Need to understand both long term and more recent trends

And need to dig deep — there are lots of different stories for different groups of population

Bring together all available micro data

- Family Expenditure Survey / Labour Force Survey: 1968-2014
- English Longitudinal Study of Ageing: 2002-2013

Based on joint work with various combinations of IFS colleagues – Richard Blundell, James Browne, Antoine Bozio, Carl Emmerson, Gemma Tetlow – and including our contributions to NBER International Comparisons of Social Security project

Funding from the Economic and Social Research Council and the National Institute of Ageing is gratefully acknowledged

The demographics of ageing

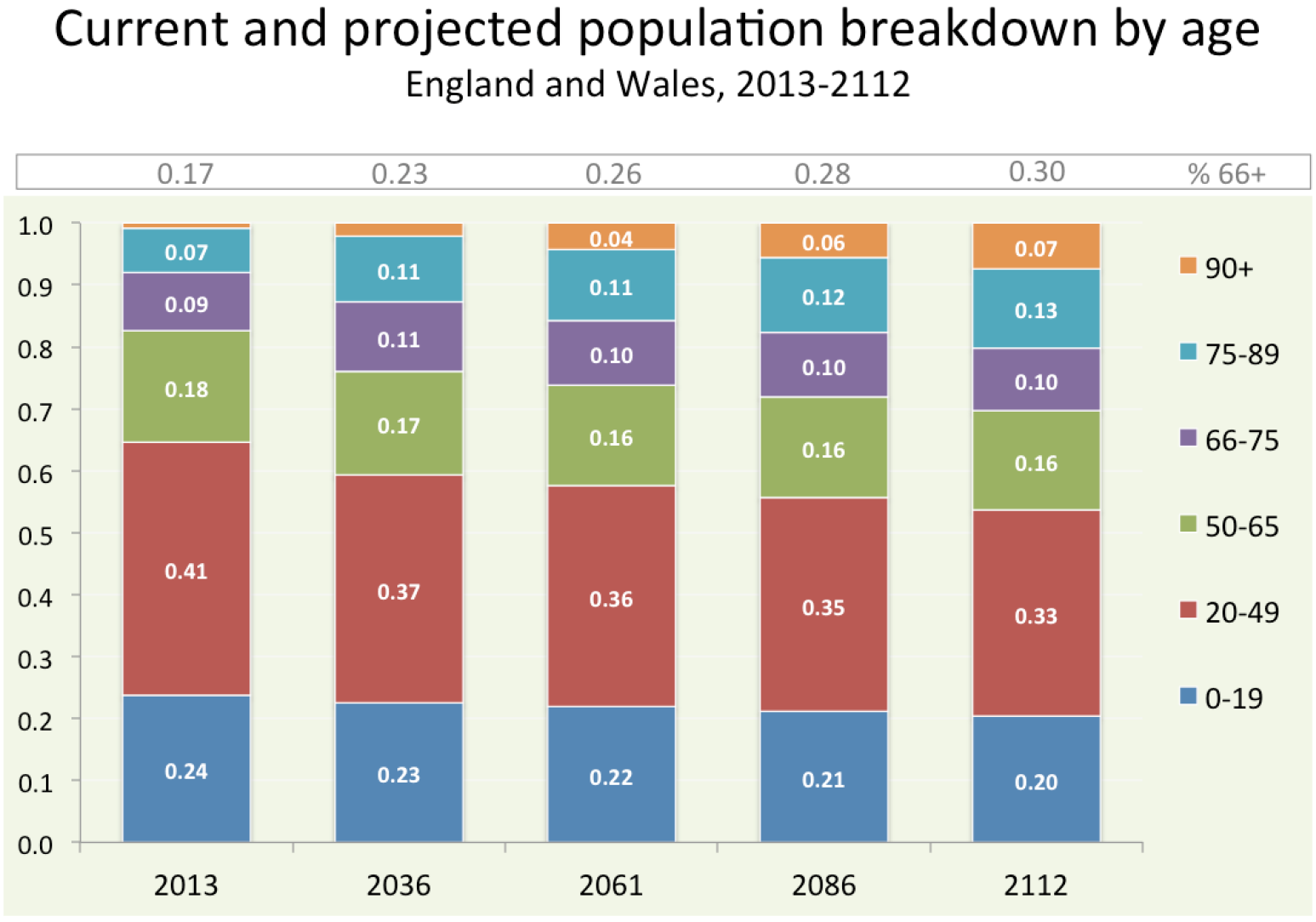
The ageing of the population is due to a combination of factors:

- Falling fertility
- Reductions in early-life mortality
- Reductions in late-life mortality

Reductions in late-life mortality have been large in recent decades, leading to rapid rises in Life Expectancy at older ages.

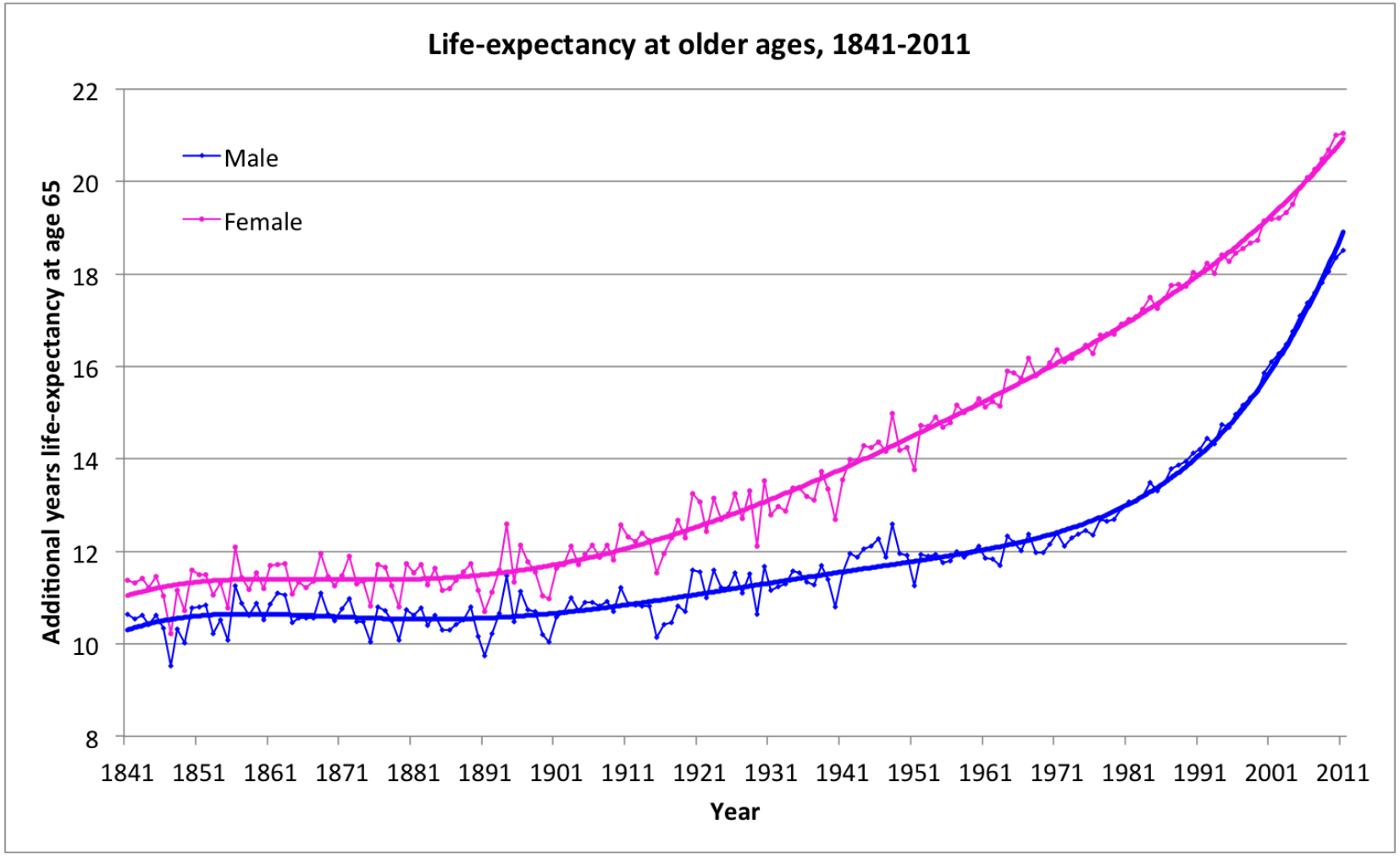
Important to remember these distinctions– understanding population ageing requires understanding individual ageing processes, which are affected differently by each element.

The ageing of the population is well known



ONS projections, November 2013

Late life life-expectancy increasing fast



Source: Office for National Statistics Life Tables

Age is just a number

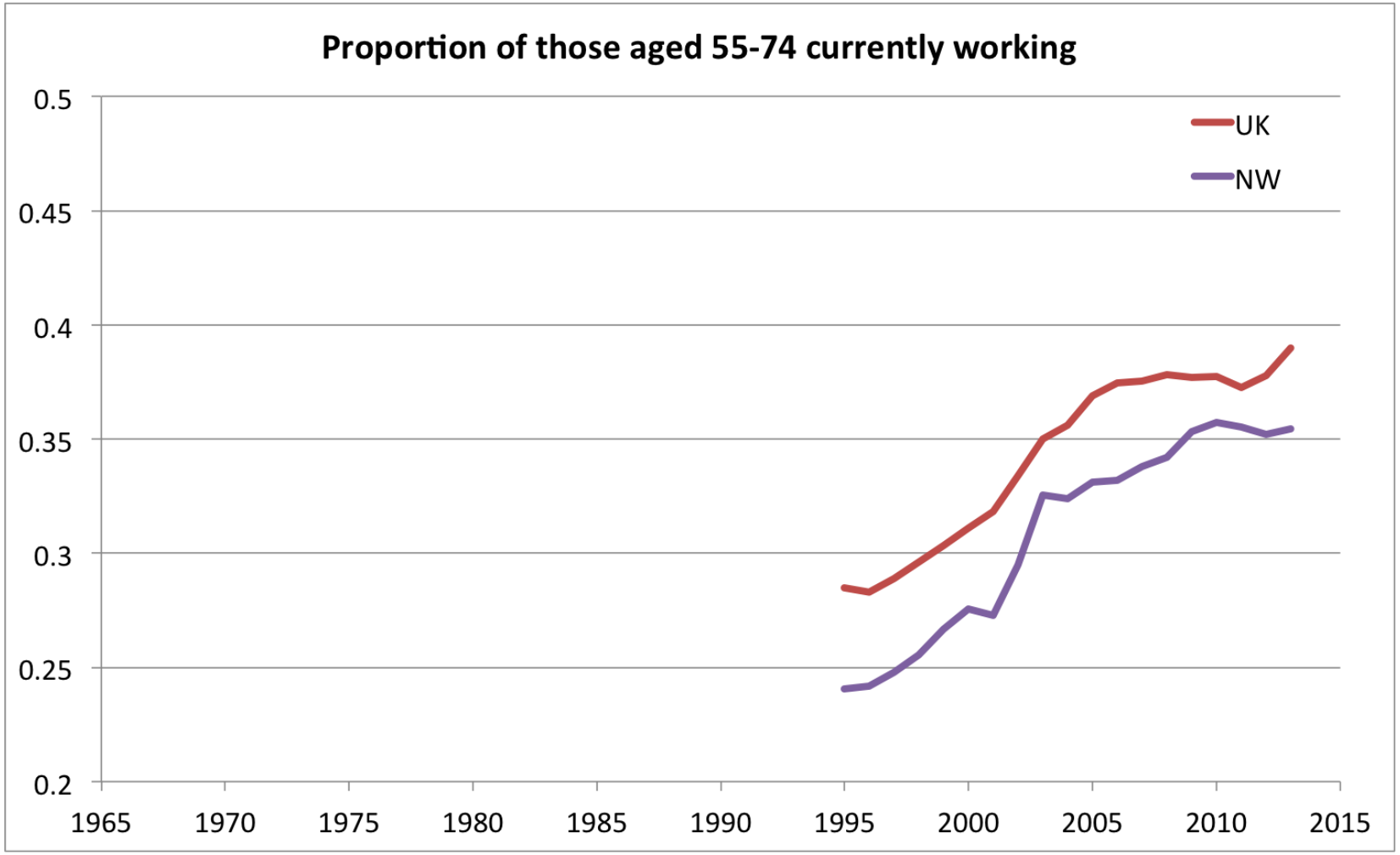
It is also well-known that demographic 'dependency ratios' are not the whole picture

What matters is the economic and/or social support ratio – the projected number of dependent individuals relative to the supporting (or productive) population.

And over the last twenty years the fraction of those working at older ages has been increasing.

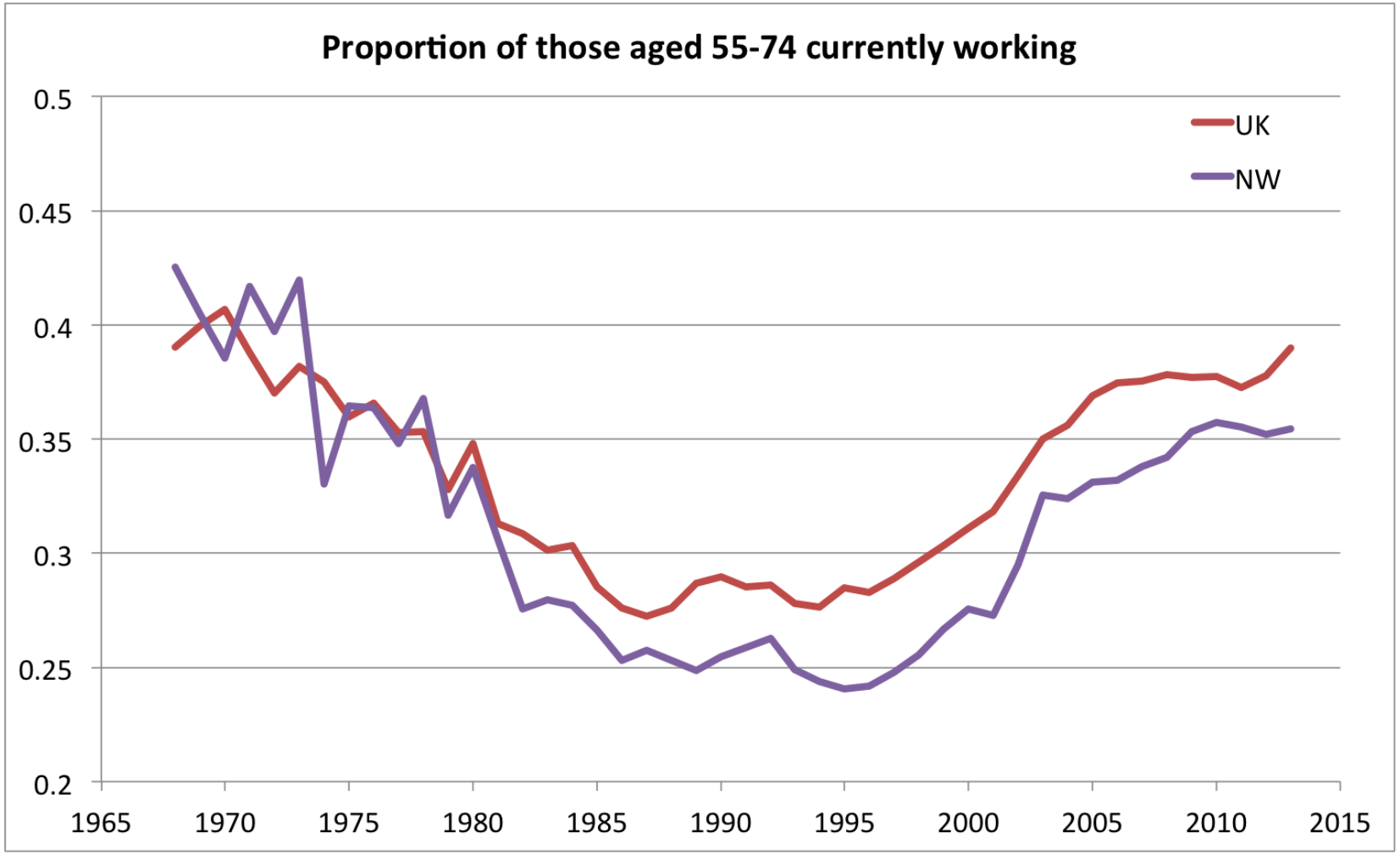
- There are many ways one can interpret and decompose these recent trends though

Employment rates increasing steadily at older ages...



Source: Labour Force Survey microdata

... but not back to their 1970 levels



Source: Family Expenditure Survey and Labour Force Survey microdata

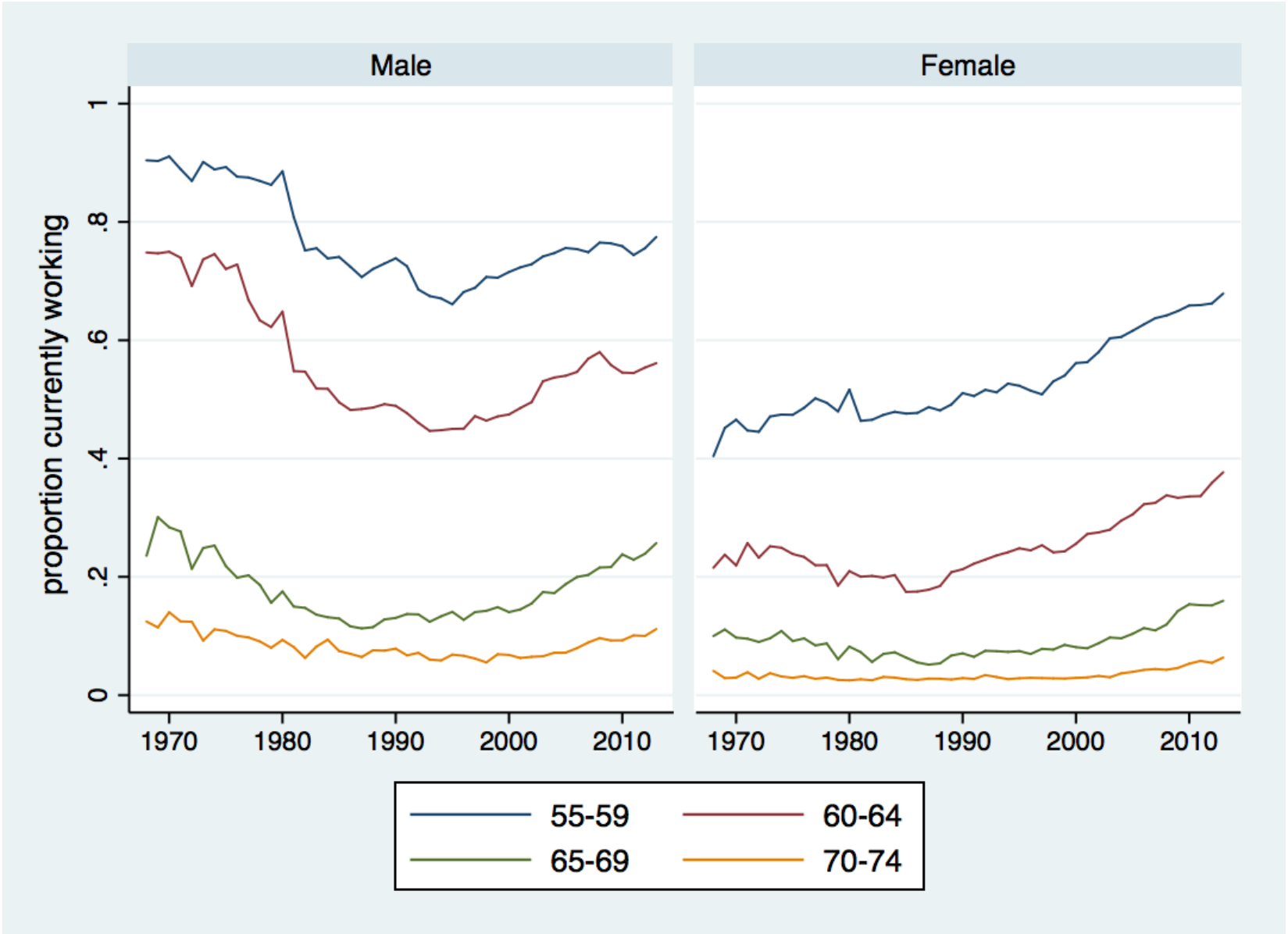
Decomposing recent trends

Aggregate trends for 55-74 mask considerable variation by age-group and sex

Cohort trends dominate for women– levels much higher than in the past (comparable and low for 70-74)

55-64 year old men still considerably less likely to be working than in the past. 65-74 year old men only just approaching their 1970 levels

Trends are very different trends for men and women



Source: Family Expenditure Survey and Labour Force Survey microdata

How much have past cohorts worked?

Early cohorts left school and entered labour market earlier, retired later and died younger

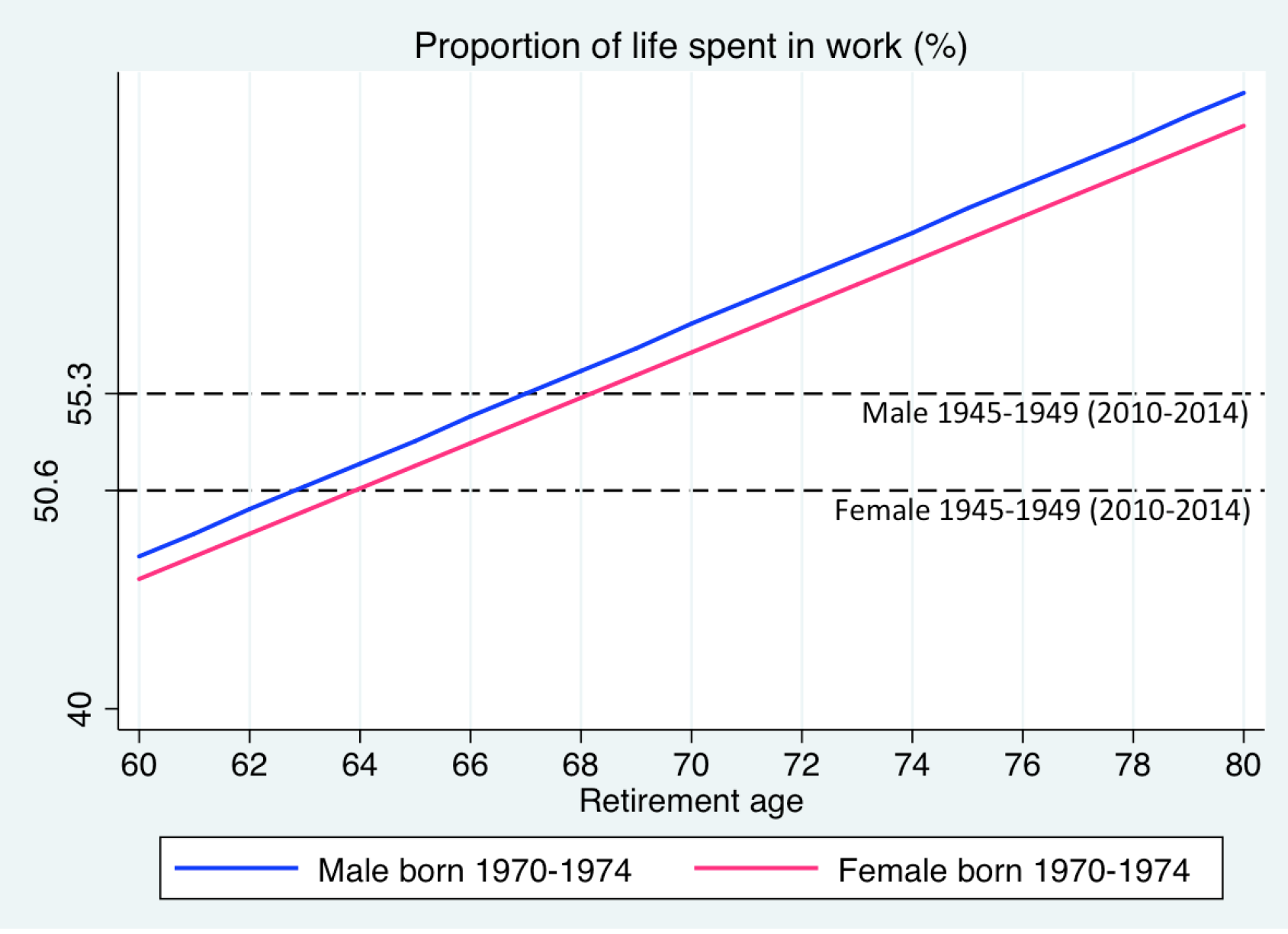
- They spent a considerably greater fraction of their life working

Cohort Born	Age 65 in..	Age left educ	LE65 (period basis)		Median Retirement Age		Proportion life in work (%)	
			Male	Female	Male	Female	Male	Female
1970-74	2035-39	17.8	22.3	24.2				
1945-49	2010-14	16.4	18.4	21.1	64	60	57.1	50.6
1930-34	1995-99	15.5	15.2	18.6	61	58	56.7	50.8
1920-24	1985-89	14.8	13.2	17.8	63	57	61.6	52.9
1900-04	1965-69	14.1	12.4	16.2	65		65.8	

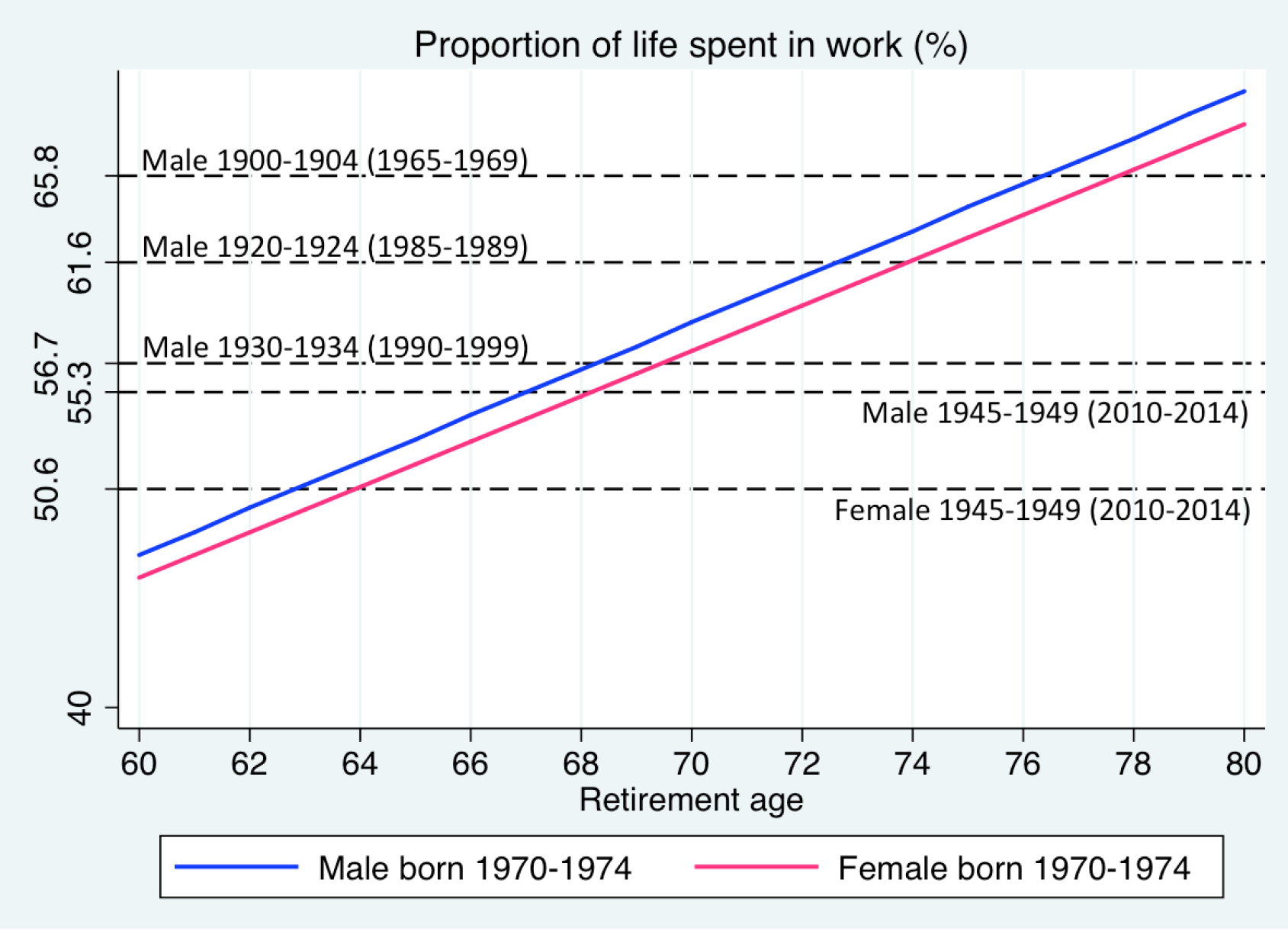
Note: Education and retirement ages calculated from Labour Force Survey microdata, life expectancy data from Office for National Statistics

How much might future cohorts work?

How much might future cohorts work?



How much might future cohorts work?



A difficult question

In order to think about how much of their lives future cohorts may need to, be able to, and be willing to work, we need to understand the links between:

- Employment and pension arrangements
- Wealth and retirement savings
- Entitlement to government benefits
- Health and disability
- Social and family circumstances

Covariances and correlations within and between individuals and families are important. So we need the data on the same people.

http://www.ifs.org.uk/elsa

▸ More details

Understanding recent trends

State and private pensions have been constantly changing over this time. What role might these have played?

And what about the effects of other welfare programmes such as Disability Insurance?

In general, both types of programmes might have disincentive effects — by their design they may place an implicit tax on work

▸ Examples

And in both cases these disincentives to work have been falling since 1995

Changing work incentives at older ages

In the UK there has **already** been a steady removal of work disincentives and distortions at older ages

- Gradual switch from DB to DC pensions, 1990 –
- Tightening of rules for disability benefits, 1995 –

Plus changes in 'retirement ages'

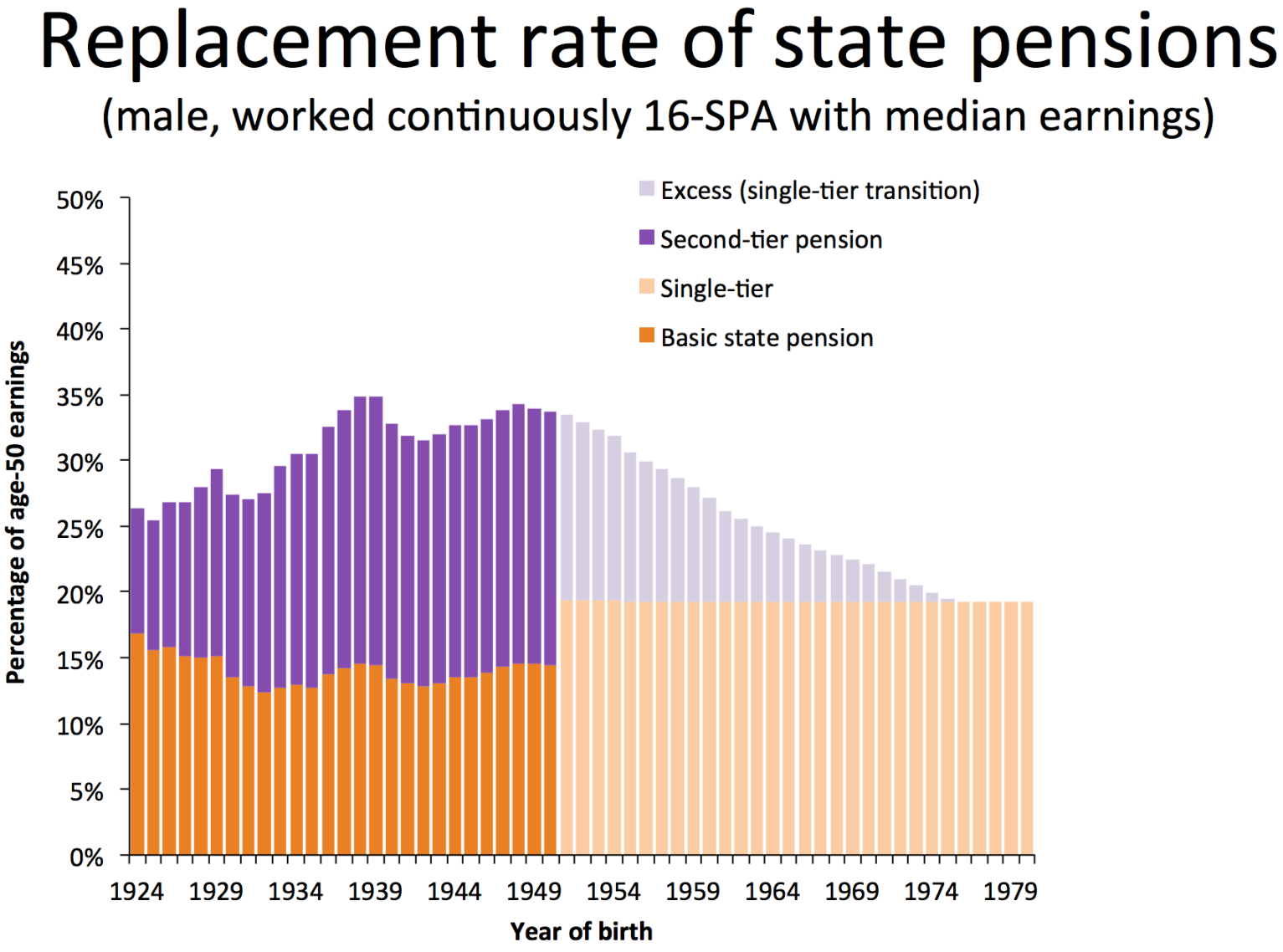
- Increase in Female SPA 2010-14, and ongoing pre-announced increases for both women and men
- Abolition of mandatory retirement age, 2011

but more importantly, a breaking of the link between pension eligibility and work incentives

- Abolition of earnings test in State Pension, 1989
- Removal of work restrictions when drawing DB pension, 2010

And a general reduction in generosity of state pensions

State Pension Generosity by Year of Birth cohort

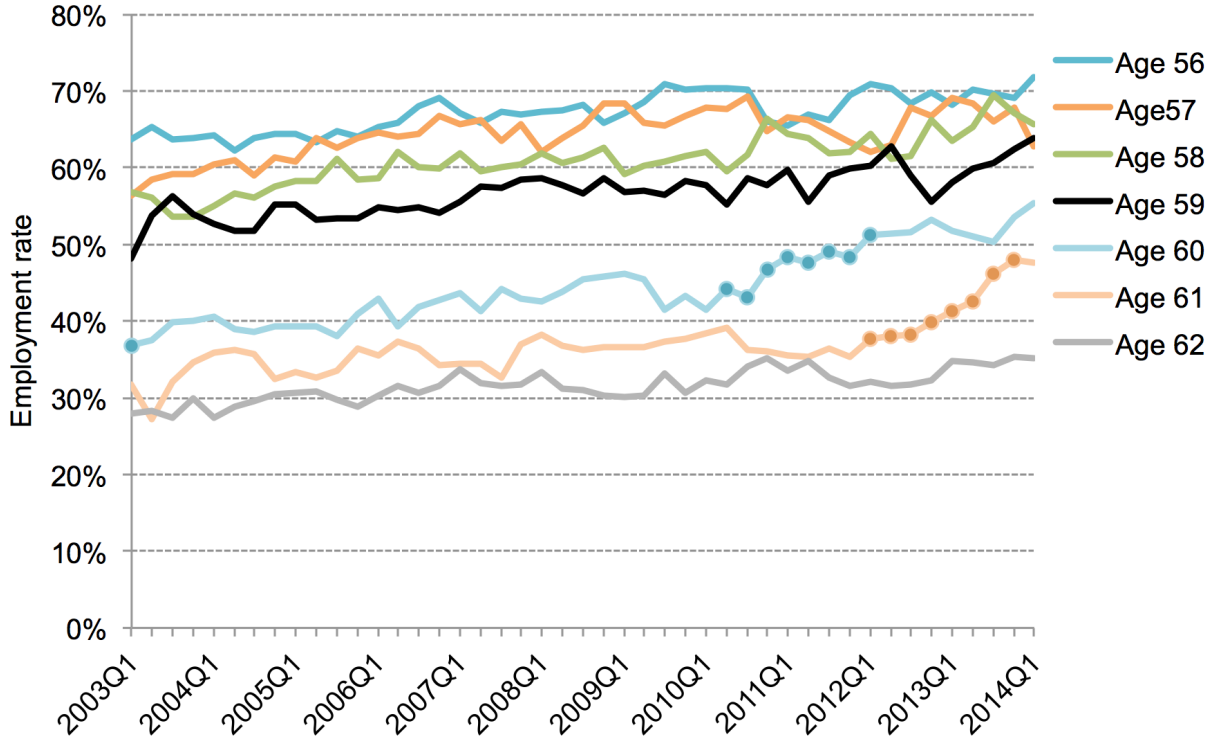


Source: IFS calculations

'Pension' reform is not just about incentives though

The rise in SPA has had effects over and above financial incentives. Suggestive of further increases in work for women 62-67 and men 65-67

Figure 2.1 Employment rates of older women, 2003 to 2014, by single year of age



Source: Authors' calculations using the LFS, 2003 to 2014. Based on 219,502 observations

Cribb, Emmerson and Tetlow, 'Labour supply effects of increasing the female state pension age in the UK from age 60 to 62', IFS, July 2014

Changing work incentives at older ages

In the UK there has **already** been a steady removal of work disincentives and distortions at older ages

- Gradual switch from DB to DC pensions, 1990 –
- Tightening of rules for disability benefits, 1995 –

Plus changes in 'retirement ages'

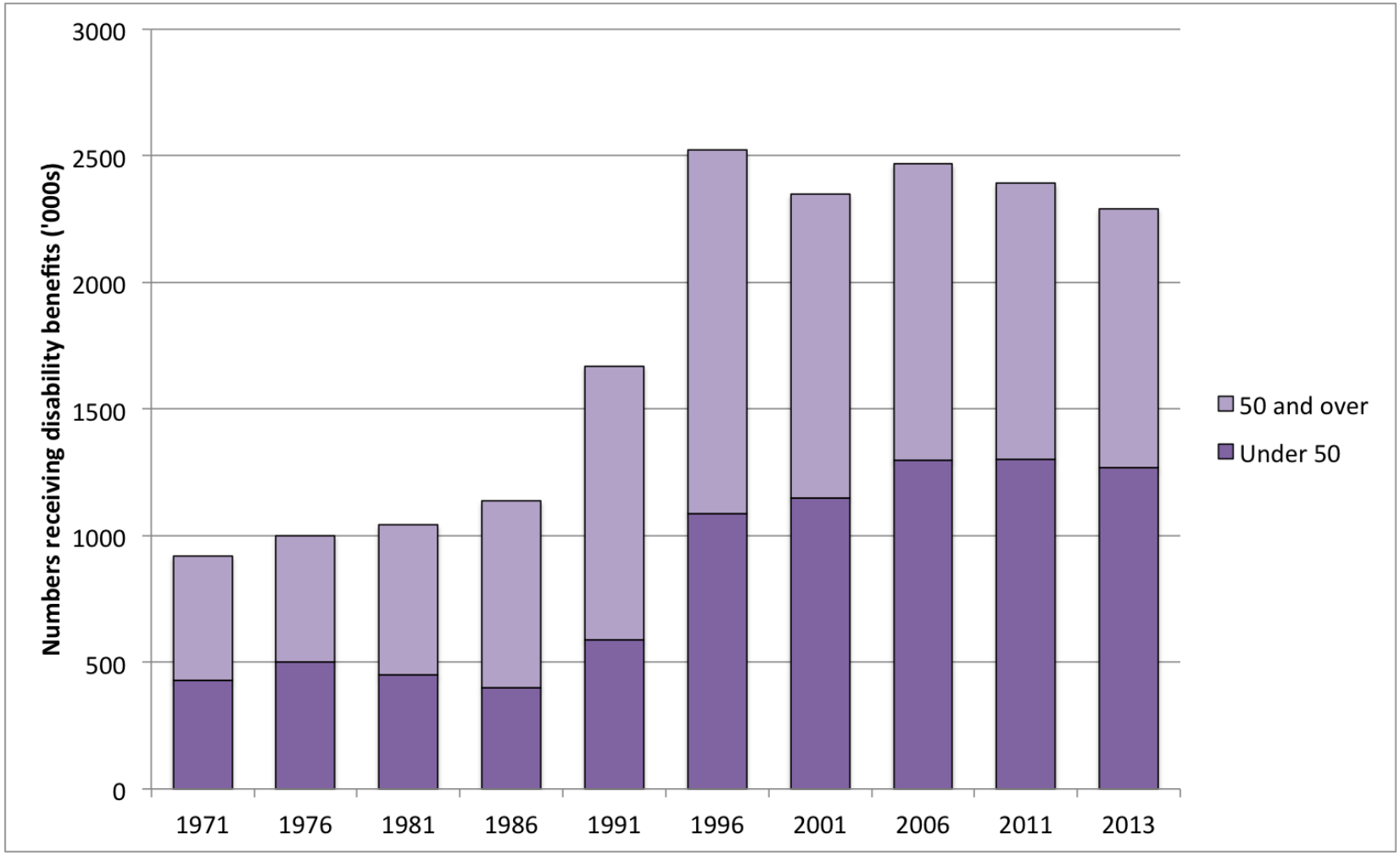
- Increase in Female SPA 2010-14, and ongoing pre-announced increases for both women and men
- Abolition of mandatory retirement age, 2011

but more importantly, a breaking of the link between pension eligibility and work incentives

- Abolition of earnings test in State Pension, 1989
- Removal of work restrictions when drawing DB pension, 2010

And a general reduction in generosity of state pensions

Rise in numbers on Disability Benefits has stopped

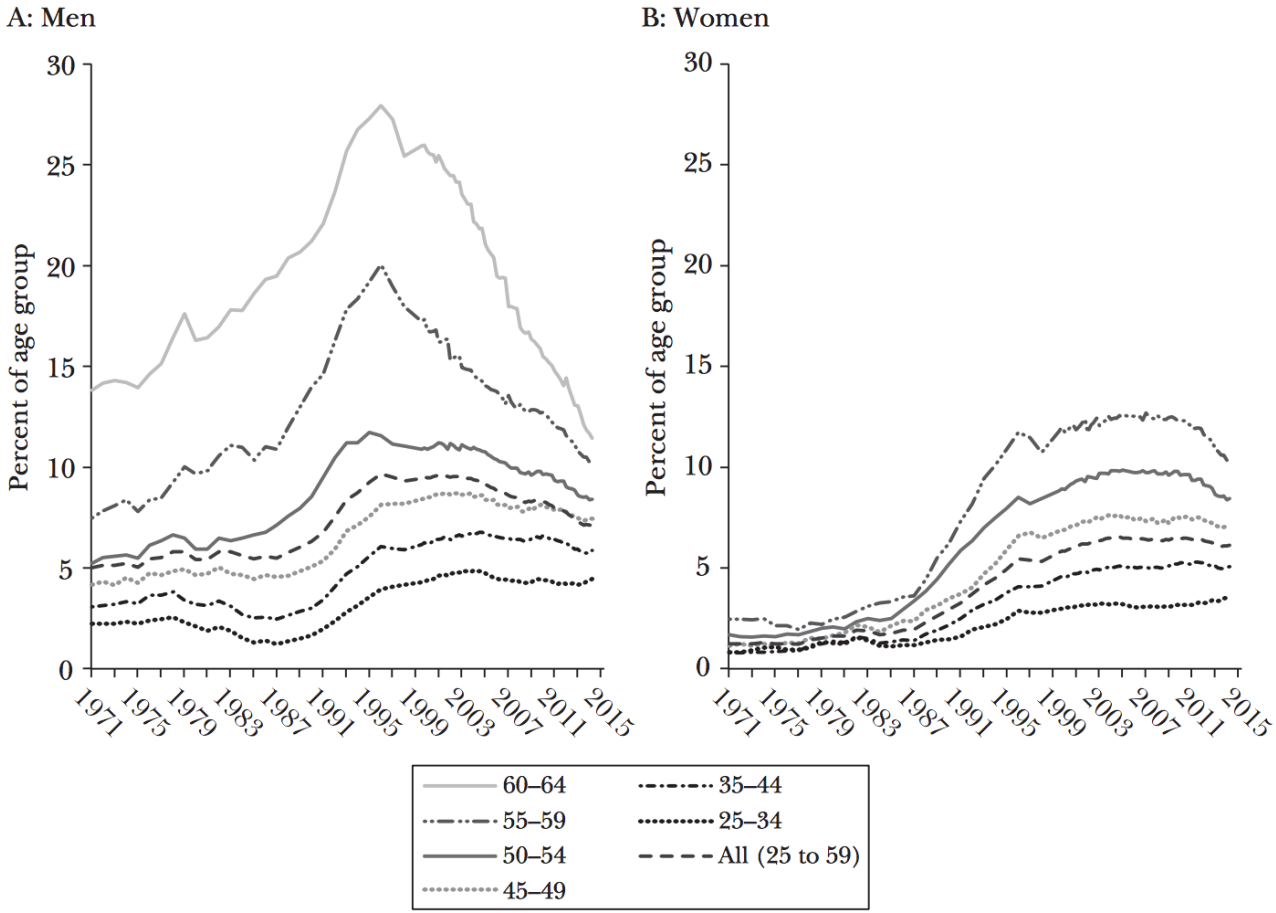


Source: DWP Administrative statitics, compiled and reported in Banks, Blundell and Emmerson, 'Disability Benefit Receipt and Reform: Reconciling Trends in the United Kingdom', Journal of Economic Perspectives, 29(2), Spring 2015, 173-190

Rates of receipt have fallen sharply for older adults

Figure 2

Disability Benefit Claimant Rates of Men Aged 25 to 64 by Age Group, 1971 to 2014



Banks, Blundell and Emmerson, 'Disability Benefit Receipt and Reform: Reconciling Trends in the United Kingdom', Journal of Economic Perspectives, 29(2), Spring 2015, 173-190

Measuring work disability in ELSA

Disability index: Coverage of PCA dimensions in ELSA, by broad disability type

Measured in ELSA 2002-2012	Not measured or measured only inconsistently in ELSA, 2002-2012
Sitting Rising from sitting Walking Walking up stairs Reaching Lifting and carrying Manual dexterity	Bending/kneeling Standing
Vision	Speech Hearing
Incontinence	Epilepsy/seizures
Depressive symptoms Previous job too stressful	Concentration Anxiety Other mental health issues

Different trends by education and disability level

Table 1

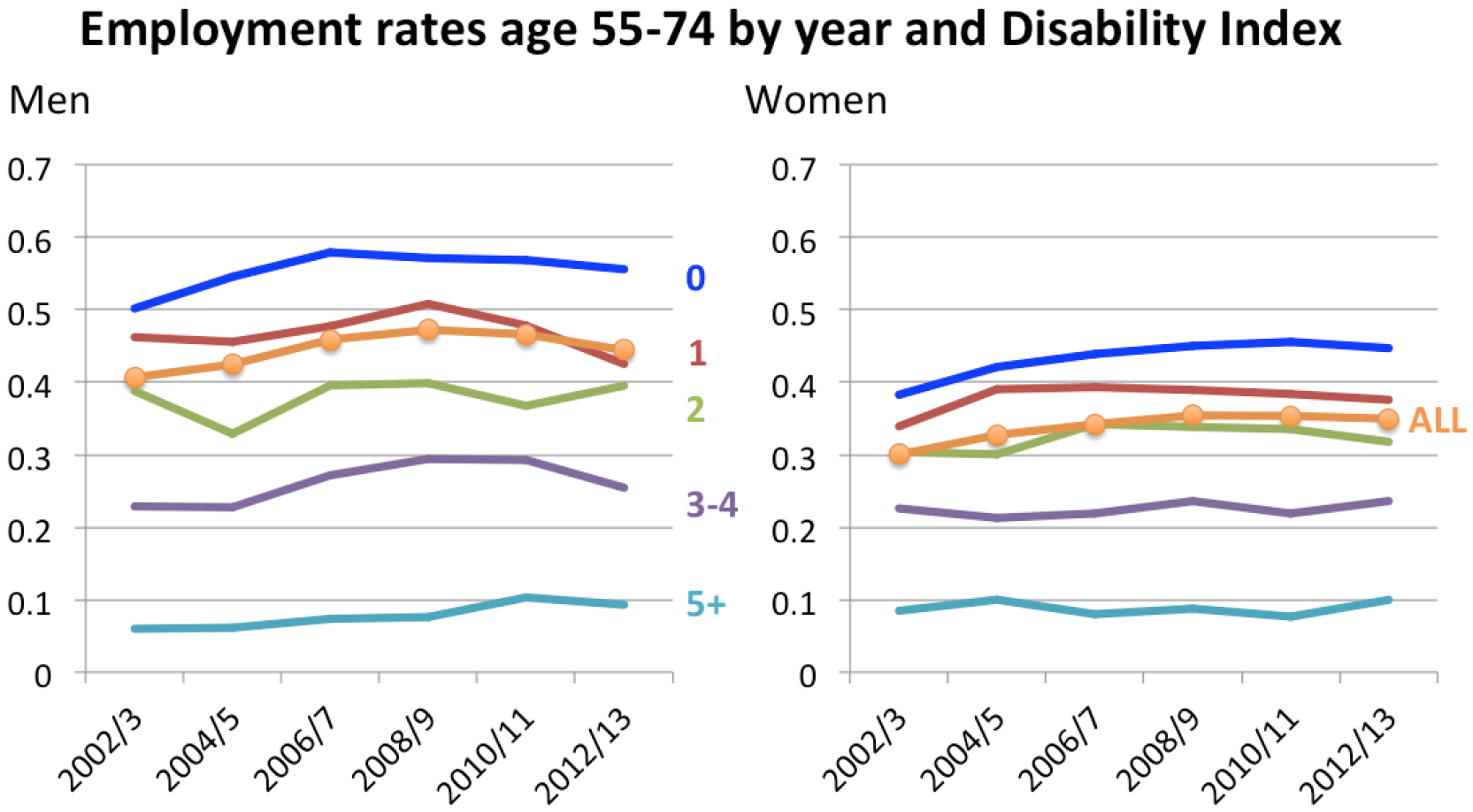
Disability Benefit Receipt Rates, by Age, Sex, and Disability Level

Year	*All aged 50–State Pension Age*	*Male, low education*	*Male, high education*	*Female low education*	*Female, high education*
2002					
None (0–1)	2.9	5.5	2.7	1.7	1.4
Mild (2, 3)	15.0	25.7	13.9	11.1	9.8
Moderate (4, 5)	34.4	50.9	33.3	29.8	16.2
Severe (6+)	55.3	72.2	54.3	37.9	45.2
2012					
None (0–1)	0.9	3.0	0.9	0.6	0.1
Mild (2, 3)	6.8	11.2	7.0	5.7	4.4
Moderate (4, 5)	15.5	21.1	18.6	8.2	14.7
Severe (6+)	37.2	51.8	34.2	31.1	31.7

Notes: Authors' calculations from waves 1 and 6 of the English Longitudinal Study of Ageing. 2002 numbers are receipt of Invalidity Benefit; 2012 numbers are receipt of either Invalidity Benefit or Employment and Support Allowance.

Banks, Blundell and Emmerson, 'Disability Benefit Receipt and Reform: Reconciling Trends in the United Kingdom', Journal of Economic Perspectives, 29(2), Spring 2015, 173-190

Recent trends in work by health/disability



Source: Calculations from ELSA microdata

Health and the capacity to work

Consider an extreme example where individual health is the only factor affecting whether someone could or would work. How much capacity to work is there?

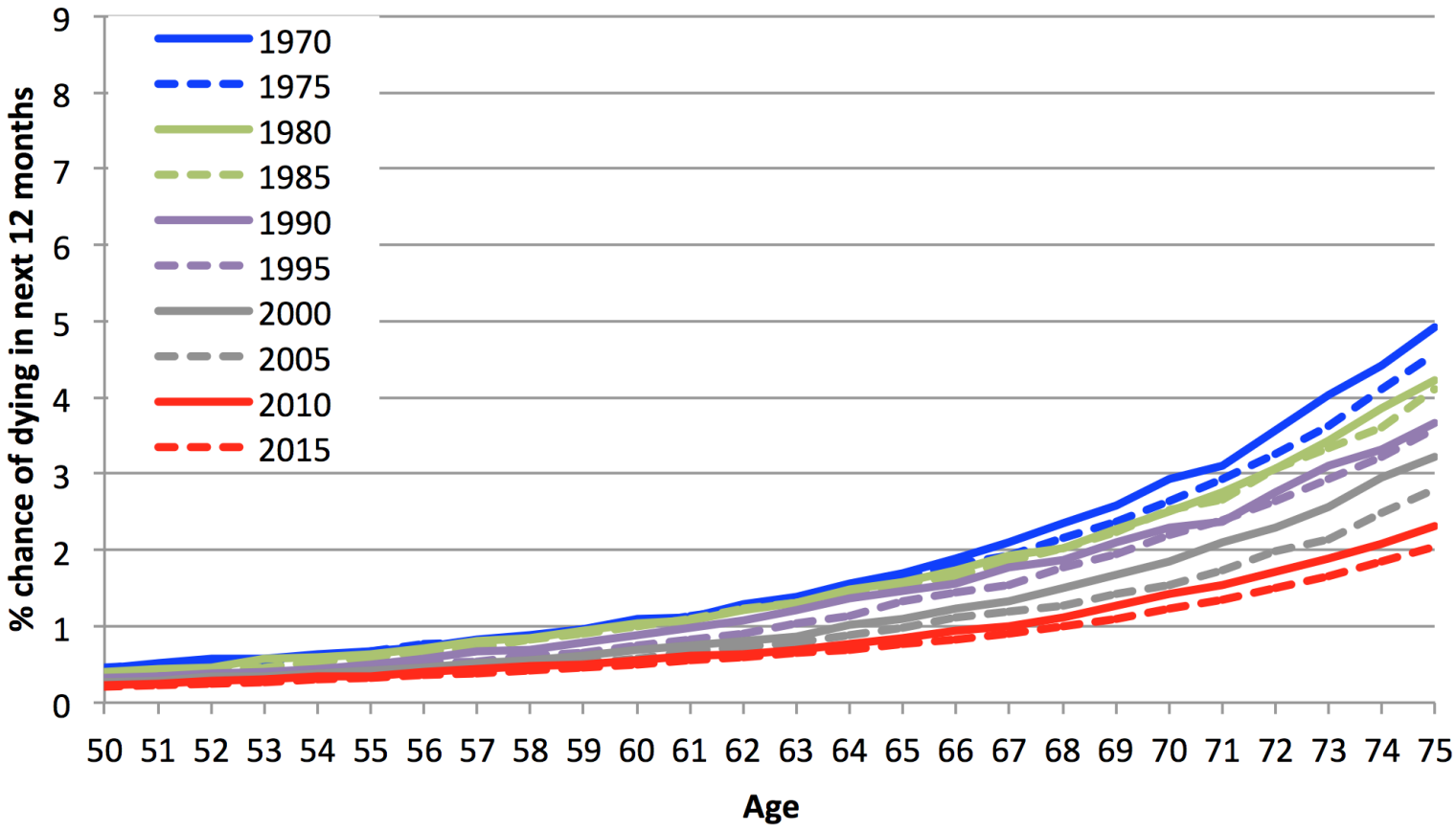
Identify different periods in time, or different ages, and compare how health and work are related. Then use this to construct a counterfactual suggesting how much work the 55-74 year olds 'could' do

- Method 1: Look back through past years, based on probability of dying
- Method 2: Look at earlier ages, based on full set of health conditions

Problem: Prior to ELSA, health data is not great

Mortality rates at older ages, Women

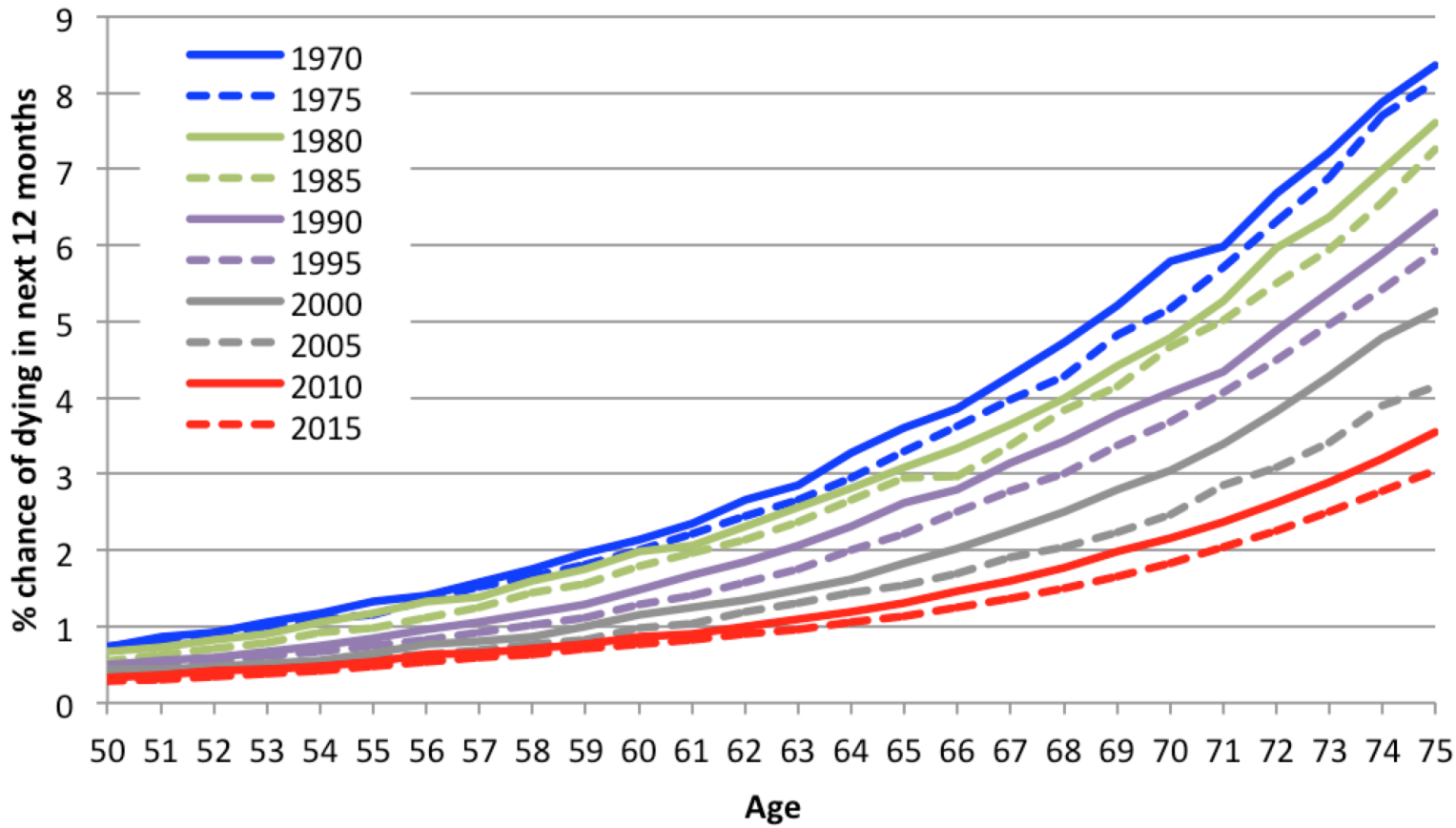
Figure 3. Probability of dying in the next 12 months, by age and year (women)



Banks, Emmerson and Tetlow, 'Health capacity at older ages: Evidence from the UK', NBER working paper, April 2015, forthcoming in D.Wise (ed), International Social Security Book Series, vol.6

Mortality rates at older ages, Men

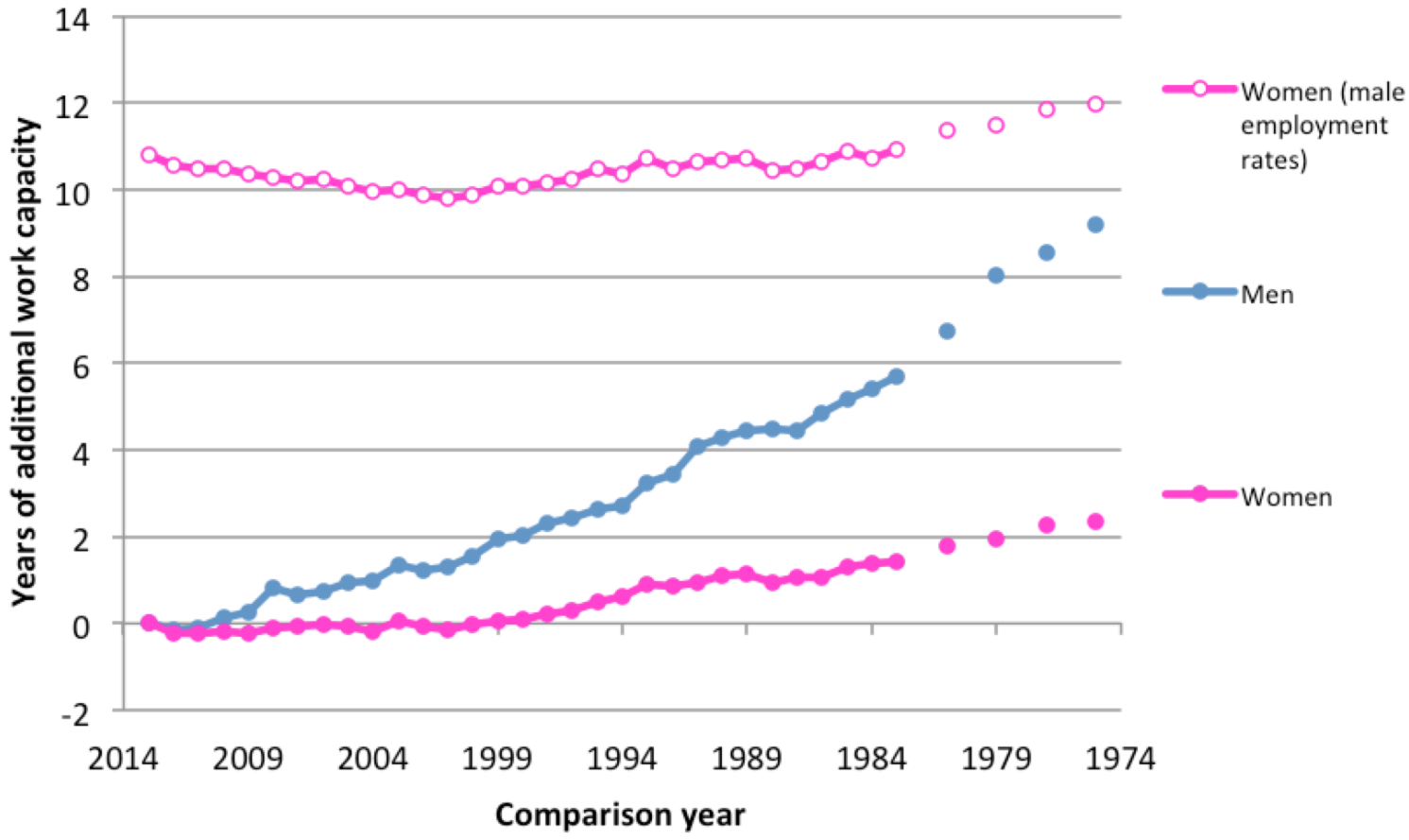
Figure 2. Probability of dying in the next 12 months, by age and year (men)



Banks, Emmerson and Tetlow, 'Health capacity at older ages: Evidence from the UK', NBER working paper, April 2015, forthcoming in D.Wise (ed), International Social Security Book Series, vol.6

Estimating 'Capacity' to work: 1

Figure 11. Estimated additional employment capacity by year of comparison, by sex



Banks, Emmerson and Tetlow, 'Health capacity at older ages: Evidence from the UK', NBER working paper, April 2015, forthcoming in D.Wise (ed), International Social Security Book Series, vol.6

Health and the capacity to work

Method 1

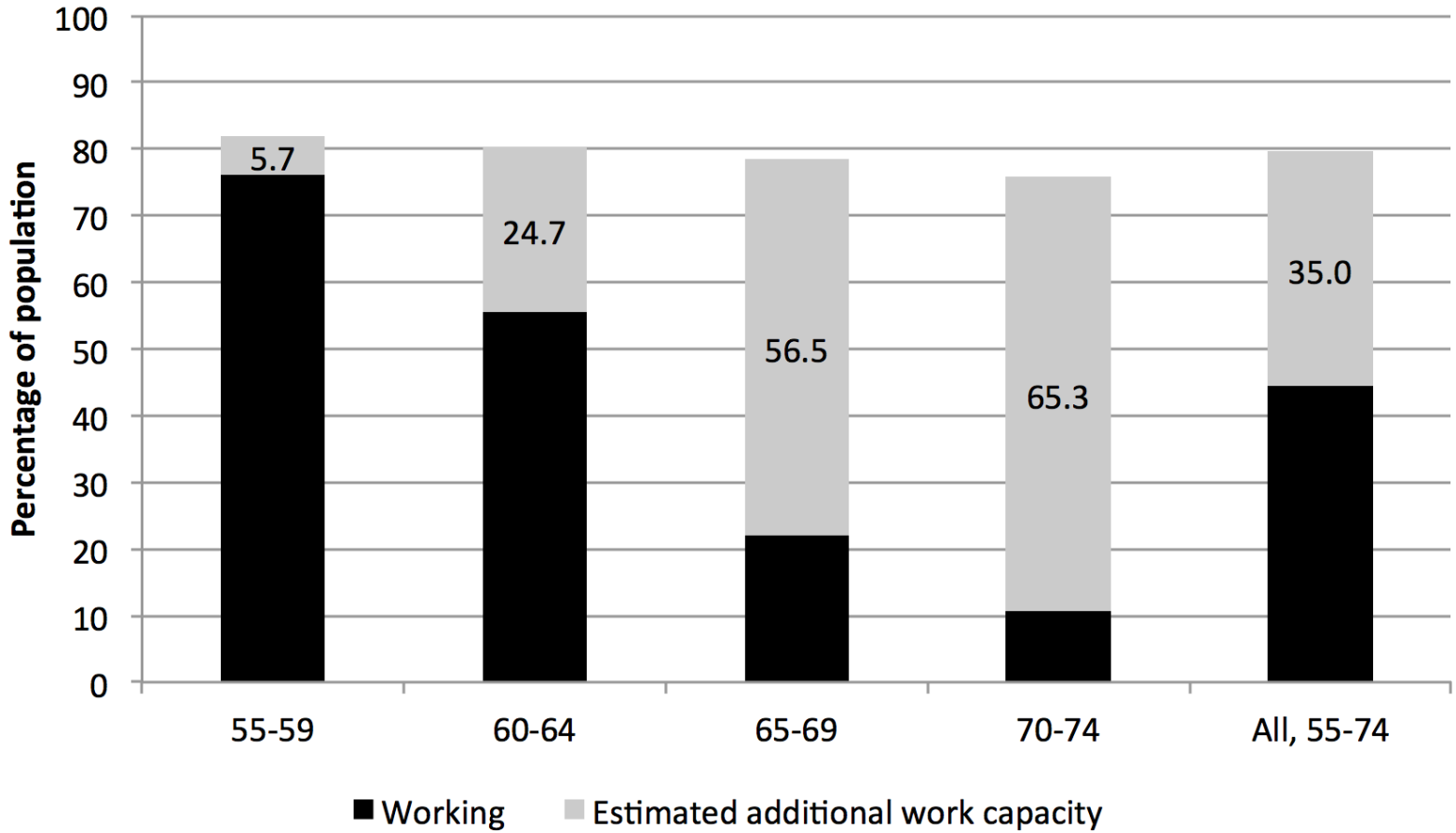
- Depends on choice of comparison year
- If compare to early 1970's there are 8 potential years more work for an adult male going through ages 55-74
- For women, proportion working has 'kept up' with mortality improvements since 1999, around 2 more years potential work if compare to earlier years
- If men in the past are the right counterfactual for women now, potential years worked are much greater

How plausible is this? Contrast with Method 2

- Look at health and work of 50-54 year olds
- Consider as many health factors as possible
- Predict whether 55-74 year olds could work based on their observed health

Estimating 'Capacity' to work: 2

Figure 12. Share of men working and additional work capacity, by age

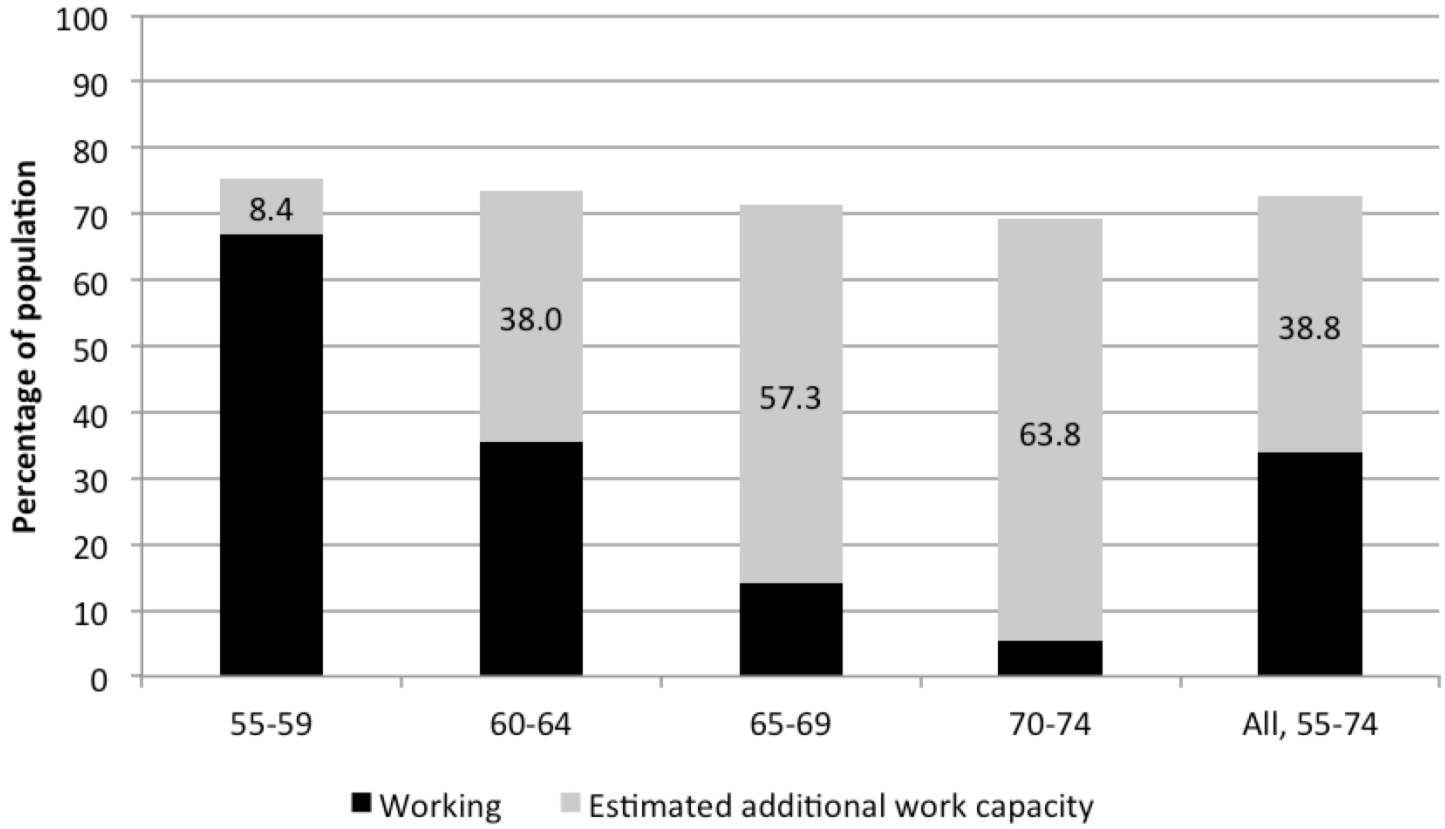


Source: Authors' calculations using the English Longitudinal Study of Ageing (2002–03 to 2012–13).

Banks, Emmerson and Tetlow, 'Health capacity at older ages: Evidence from the UK', NBER working paper, April 2015, forthcoming in D.Wise (ed), International Social Security Book Series, vol.6

Estimating 'Capacity' to work: 2

Figure 13. Share of women working and additional work capacity, by age – using female regression coefficients



Source: Authors' calculations using the English Longitudinal Study of Ageing (2002–03 to 2012–13).

Banks, Emmerson and Tetlow, 'Health capacity at older ages: Evidence from the UK', NBER working paper, April 2015, forthcoming in D.Wise (ed), International Social Security Book Series, vol.6

So what happens next?

Thinking of the main drivers of work and retirement behaviour, what can we say about the way forward?

- Pensions: Is there still anything left to say?
- Health: How much will health limit the ability to work?
- 'Other' factors
  - Labour demand
  - Labour supply: Caring responsibilities
  - Labour supply: Wealth effects and the demand for leisure (versus the need for saving)

The Demand for Older Workers

Aggregate issues

- There is no crowd out between older and younger workers

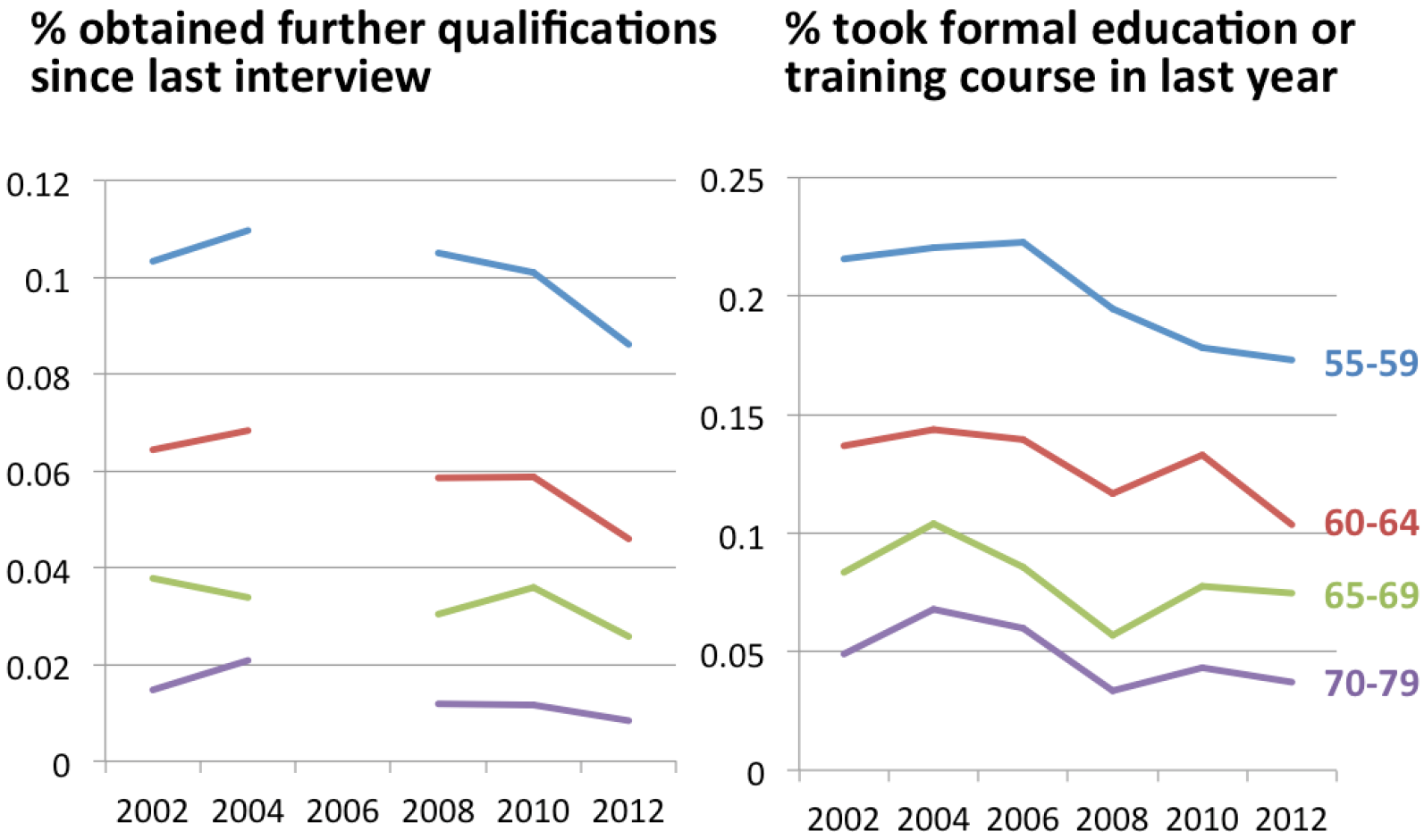
  ▸ Women ▸ YoungerWorkers

- The workforce is ageing faster than it is growing so employers face a substitution of young workers for older workers (and/or machines)

There are real issues relating to:

- Human capital, training and skills. How much are the skills of older workers vintage-specific? How effective is retraining?
- Employers' accommodation of the particular needs of older workers

Training and education is quite common amongst older adults, although has been declining recently



Source: Calculations from English Longitudinal Study of Ageing microdata

The nature of work at older ages is already changing

- Shift to managerial and technical ▸ More
- Importance of part-time and self-employment ▸ More
- Other changes? (multiple jobs, flexible jobs, working from home etc.) ▸ More

Some very important questions:

- What will the new labour market for older workers look like?
- What will be the link between wealth accumulation, health care needs, caring responsibilities and willingness/ability to work?

Future health and care needs

One major unknown is the 'need' for resources in retirement relative to the ability to work

- Relates to healthy life-expectancy and the compression of morbidity
- But also to the UK system for funding social care
- Particularly important given expected increases in dementia and the movement even further away from acute towards chronic conditions

Existing forecasts and estimates are uncertain, controversial, and typically do not take account of any potential feedbacks between health/disability/cognition and other economic or social factors over the life-course.

What about inequality?

In the days of a traditional Pay-As-You-Go system productivity (and hence work) was the main answer.

Nowadays we have:

- Smaller welfare state with more individual provision
  - Much more so if you count health
- More global nature of economic activity
- Increased inequality

Inequality in life-expectancy is increasing

Much more analysis needed, but we already know:

Life Expectancy at age 65 by NS-SEC

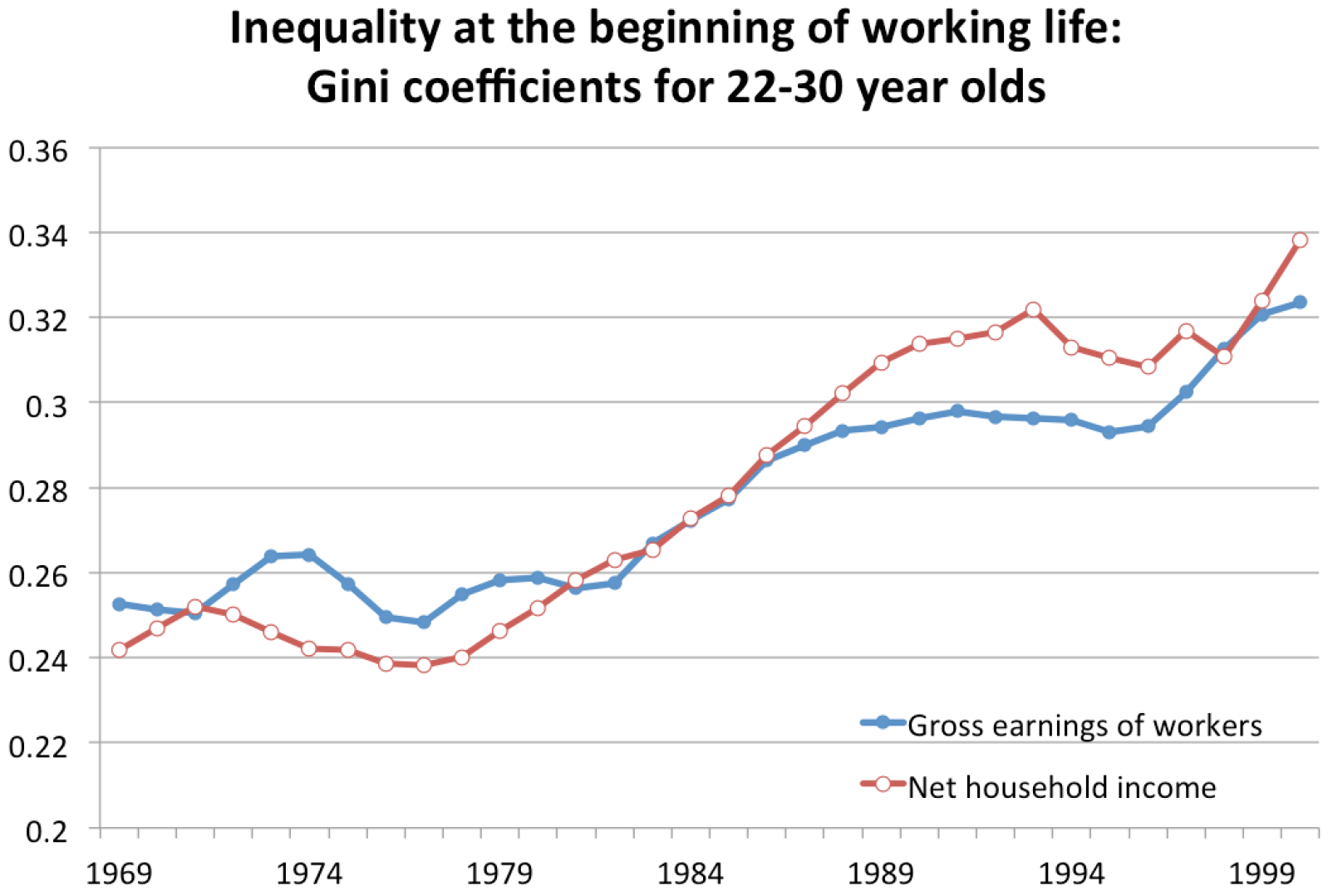
Male	1982-1986	2007-2011	Change
Highest	15.3	20.3	33%
Lowest	12.9	16.4	27%

Female	1982-1986	2007-2011	Change
Highest	19.7	22.5	14%
Lowest	16.8	19.4	15%

Highest: NS-SEC Higher managerial and professional
Lowest: NS-SEC Routine

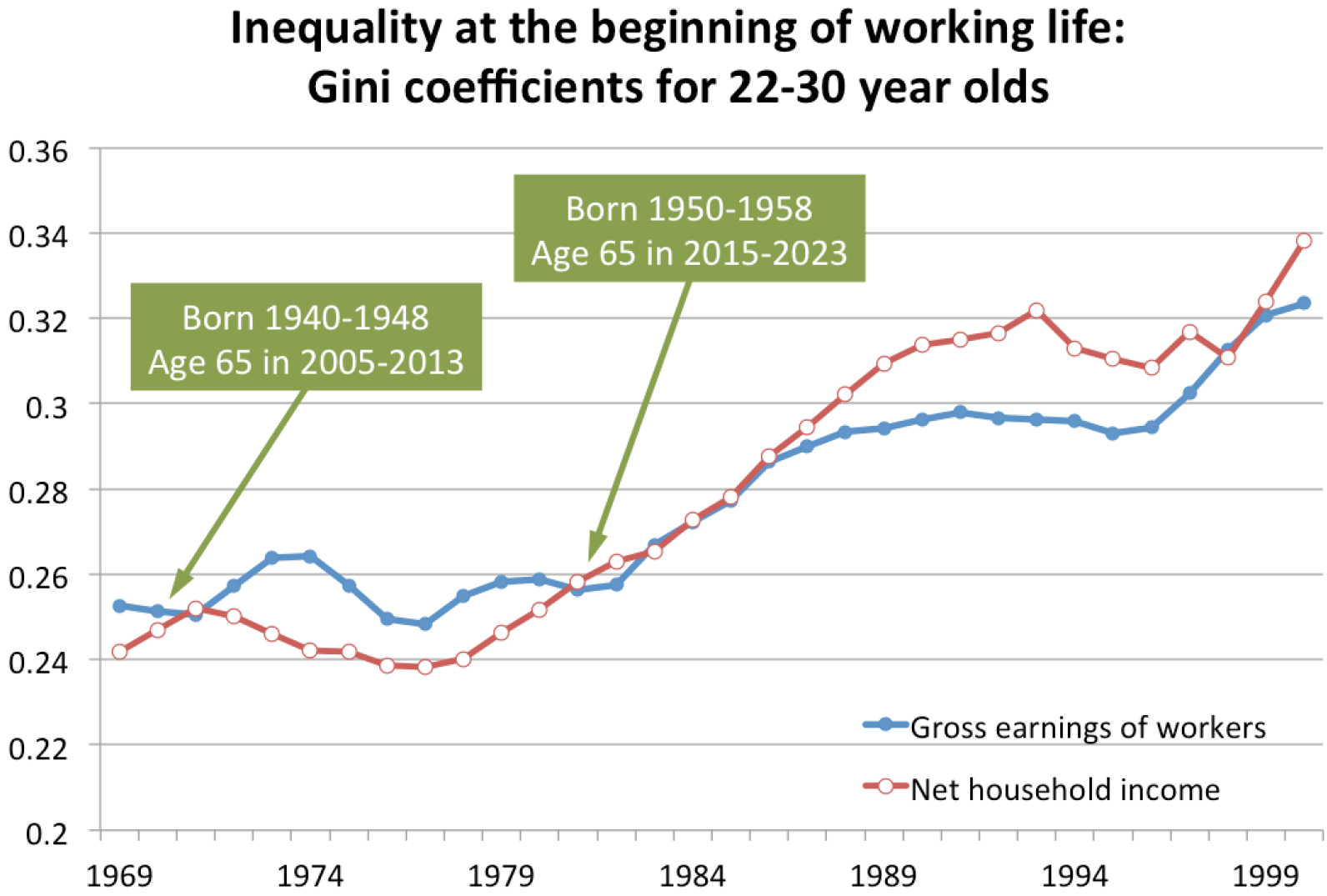
Note: Data relate to England and Wales
Source: Based on ONS analysis of ONS Longitudinal Study, ONS Statistical Bulletin, 21 October 2015, `http://www.ons.gov.uk/ons/dcp171778_420190.pdf`

Life-time labour market inequality increasing?



Source: IFS calculations from FES/FRS microdata

Life-time labour market inequality increasing?



Source: IFS calculations from FES/FRS microdata

Why does this matter?

- When comparing across time periods (or countries) with different amounts of inequality we need to take care about linking distributions with skewness (e.g. income) to those without (e.g. health)
  - A crude measure such as GDP growth can be misleading. We need to look at gains across the distribution.
- Dimensions of inequality are linked. How much people are able to provide for themselves in a complicated individual-provision system may be linked to how much they need to provide.
- Many aspects of insurance-type markets might not function well due to information asymmetries and these may actually be getting worse. Can, and should, we rely on them?

Why does this matter?

Links between health and human capital, along with 'dynamic complementarities' in investments over the life-cycle, suggests inequalities in working lives will be increasing for future cohorts

The problems of an ageing population are not simple anymore. We need a truly microeconomic analysis that acknowledges:

- Two-way links between economic and non-economic factors
- The heterogeneity of potential work choices, earnings capacity and health
  - i.e. how to set up institutions to help those who can't work without recreating previous disincentives and distortions for those who can
- Within and between generation effects
  - Political economy and intergenerational transfers
  - Incidence, intergenerational transfers and the propogation of inequalities across cohorts

Conclusions: 1

Past trends in work at older ages are consistent with:

- increasing wealth of cohorts
- an increase and then reduction in disincentives from pensions and disability benefits

Looking forward, and considering levels of health as well as future changes to SPA, this suggests work at older ages could increase substantially

However, much will depend on:

- Productivity of older workers and the match to employers
- The potential changing nature of work arrangements

Conclusions: 2

The extension of working lives is certainly a necessary component of the solution to the challenges of an ageing population.

- Recent trends are encouraging in this respect

But is it a sufficient solution?

Thank you!

MANCHESTER 1824

The University of Manchester

Institute for Fiscal Studies

Extending Working Lives

A solution to the challenges of an ageing population?

James Banks

IFS and University of Manchester

IFS Annual Lecture, 14 December 2015

ELSA English Longitudinal Study of Ageing

Additional detailed evidence behind bullet points

The English Longitudinal Study of Ageing

Nationally representative study of age 50+

- Aims to measure all aspects of life at older ages
- Acknowledging dynamic trajectories are integrally linked

Multidisciplinary collaboration

- Economists, epidemiologists, sociologists, also with psychology, genetics, geriatric medicine, social statisticians
- IFS, UCL, Manchester, Natcen, + UEA, Exeter, Cambridge

Funded by US NIA and UK Government

- Particularly DWP and DH
- UK contributions coordinated by ONS and subsequently ESRC
- All support gratefully acknowledged

The English Longitudinal Study of Ageing

Nationally representative study of age 50+

- Individuals interviewed every two years since 2002, 18,000+ individuals to date (62,000+ interviews, 24,000+ nurse visits)

Full details on all aspects of life at older ages

- Pensions, savings, debts, employment, earnings, benefits etc.
- Health, disability, biomarkers, anthropometric, cognition
- Social, family, psychosocial, subjective, expectations
- Linkages to adminstrative data
- Internationally comparable with other sister studies

Public release data

- More than 150 scientific papers published to data
- Many policy briefings, reports etc.

Back

Implicit taxes on work in pension systems are highly correlated with older adults not working

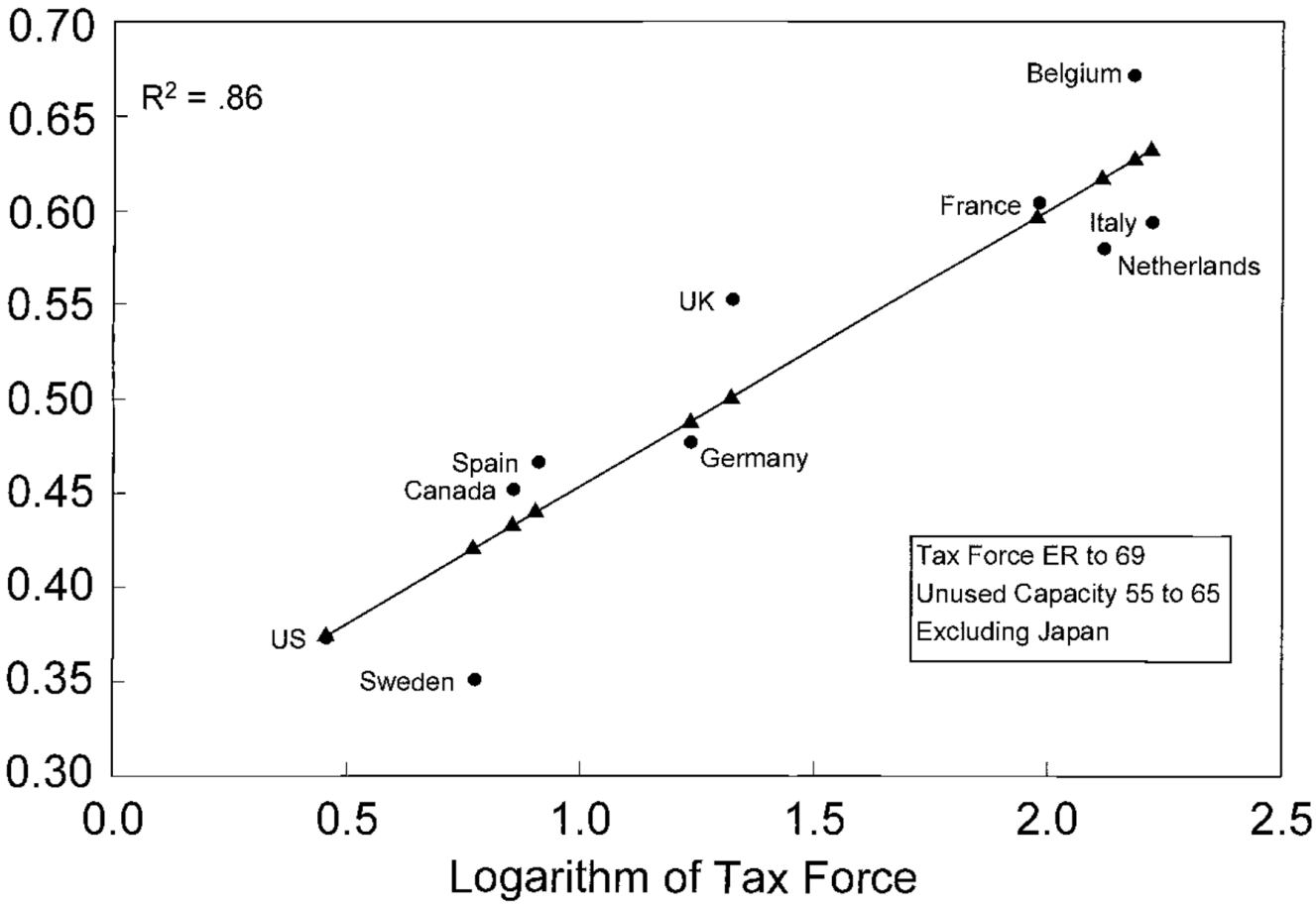


Fig. 4 Unused capacity versus tax force

▸ Back

Gruber and Wise (eds), Social Security and Retirement around the world: Micro estimation, NBER, University of Chicago Press, 2004

Simulated changes in pensions imply reductions in older adults out of labour force

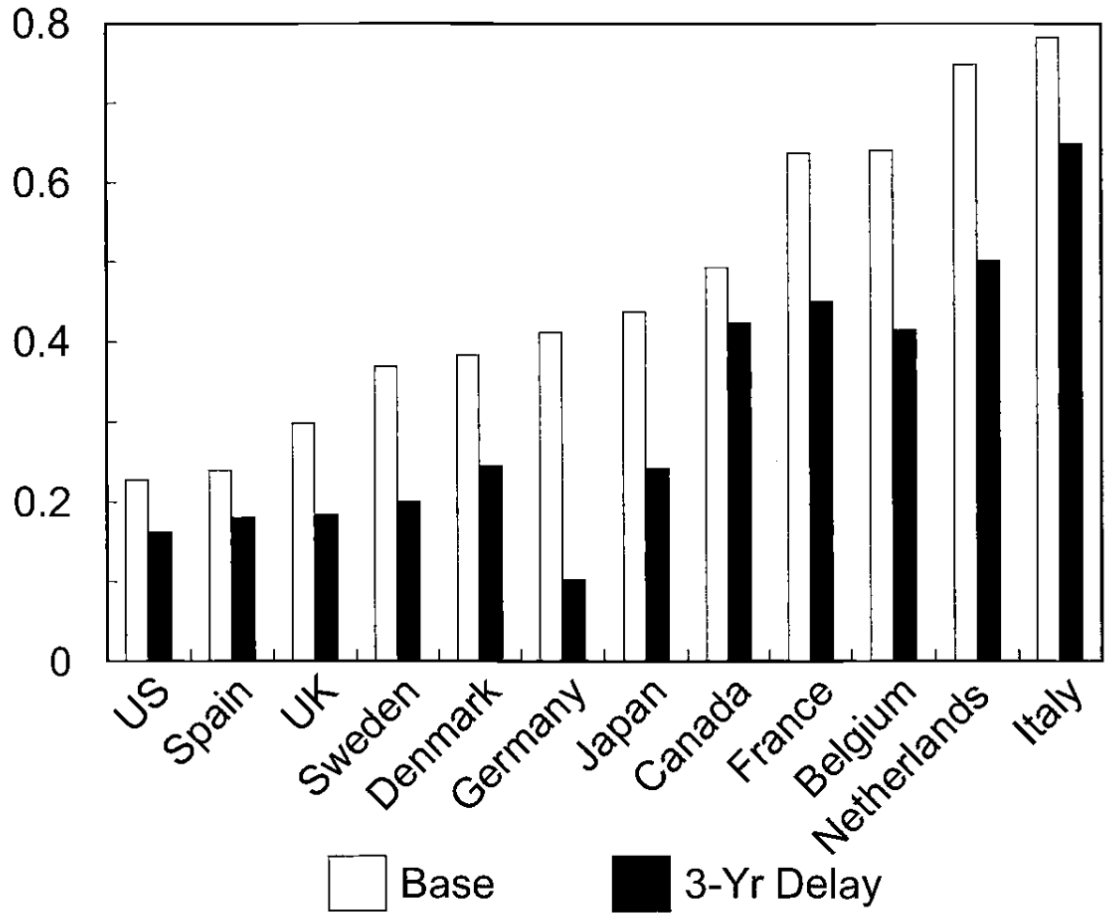


Fig. 13 OLF ages 56–65: Base versus three-year delay, OV-S3

▸ Back

Gruber and Wise (eds), Social Security and Retirement around the world: Micro estimation, NBER, University of Chicago Press, 2004

More women working has not meant fewer men working

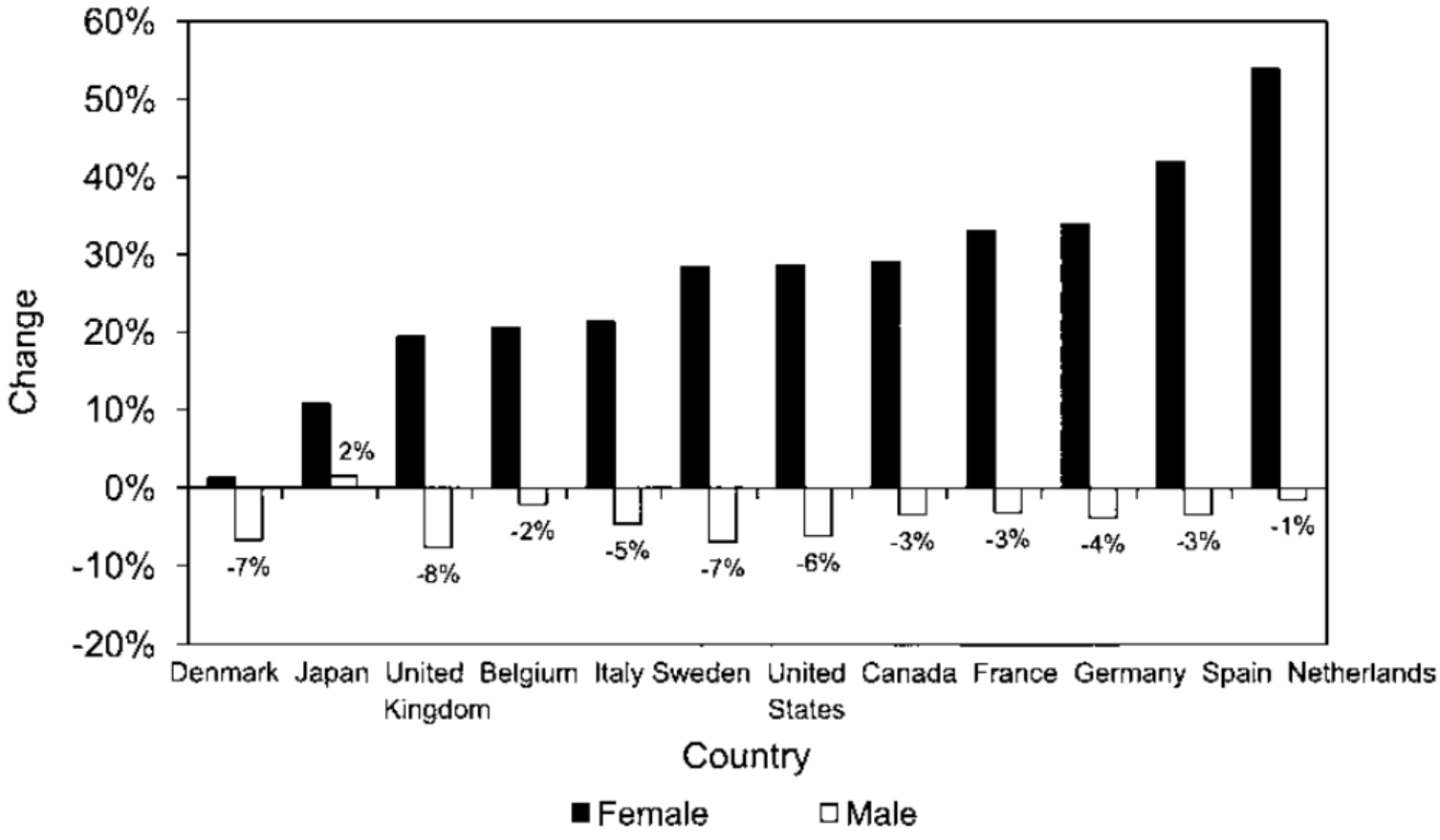


Fig. 1 Relationship between the increase in female employment rates and change in male employment rates, years vary by country

▸ Back

Gruber and Wise (eds), Social Security Programs and Retirement around the World: The Relationship to Youth Employment, NBER, University of Chicago Press, 2010

Pension incentives correlate with participation of older workers but not with unemployment of younger workers

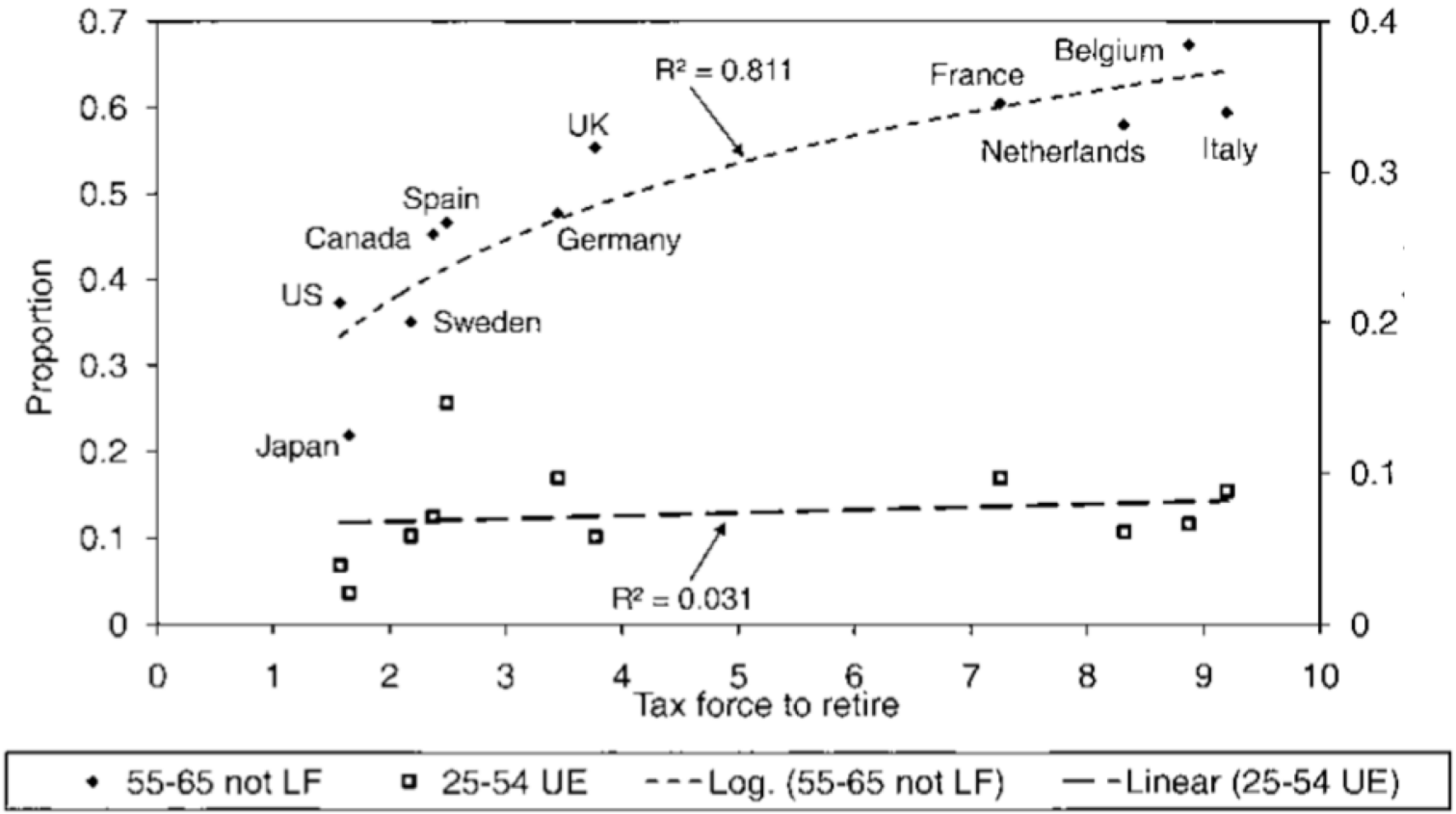
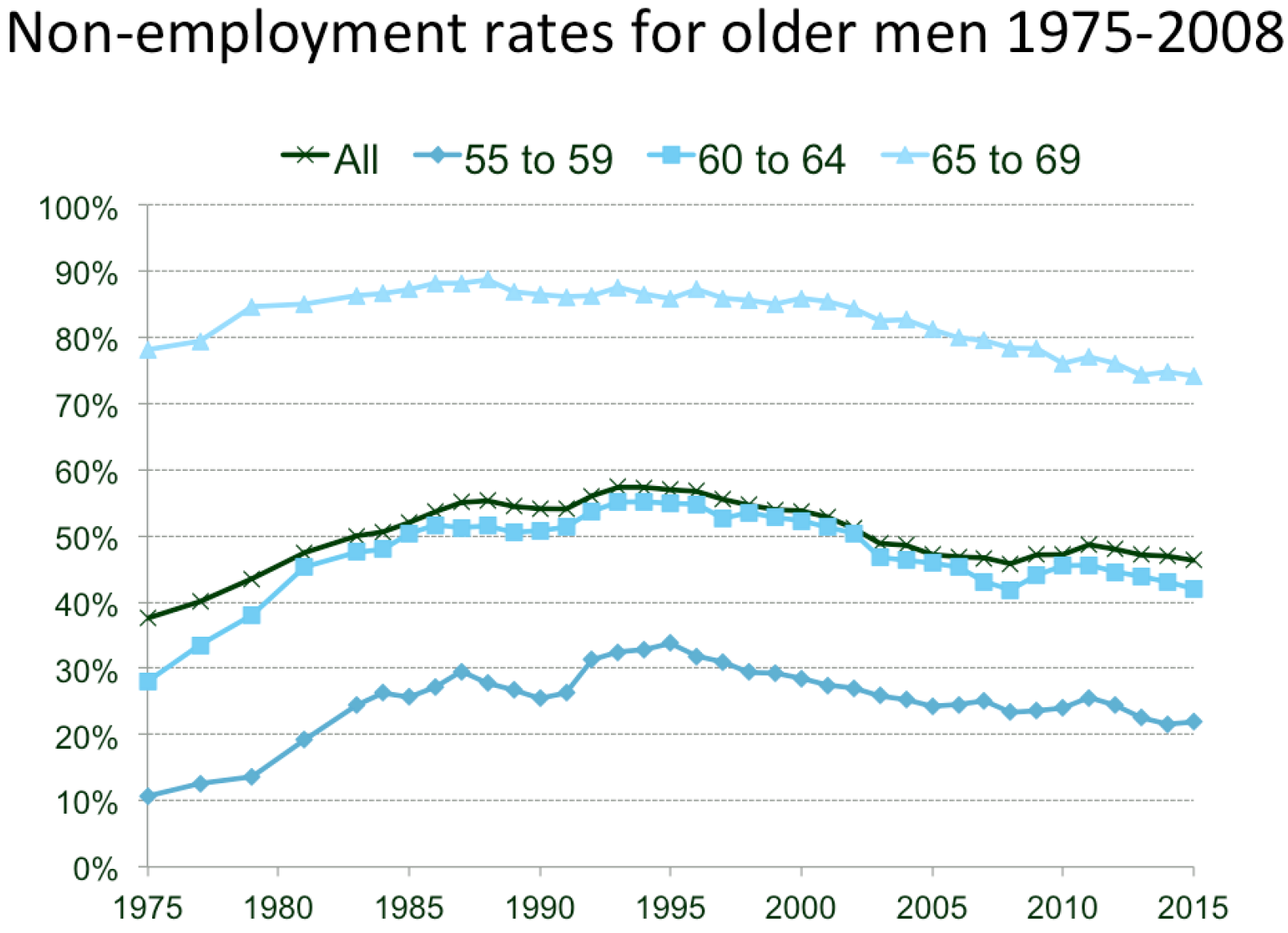


Fig. 19 Tax force to retire, men fifty-five to sixty-five out of the labor force, prime age twenty-five to fifty-four unemployed (1995)

▸ Back

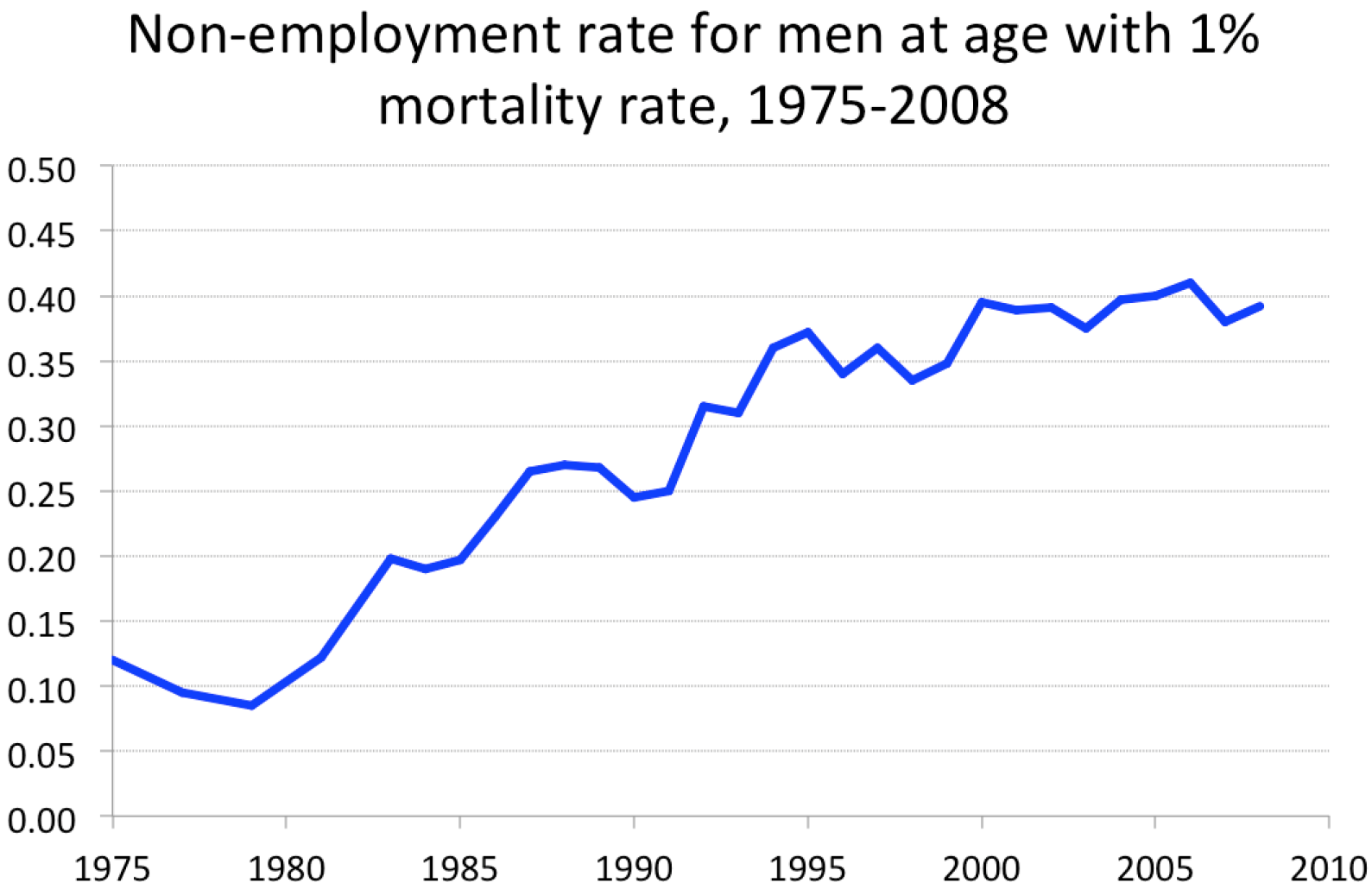
Gruber and Wise (eds), Social Security Programs and Retirement around the World: The Relationship to Youth Employment, NBER, University of Chicago Press, 2010

Another look at labour market trends



Calculations from Labour Force Survey

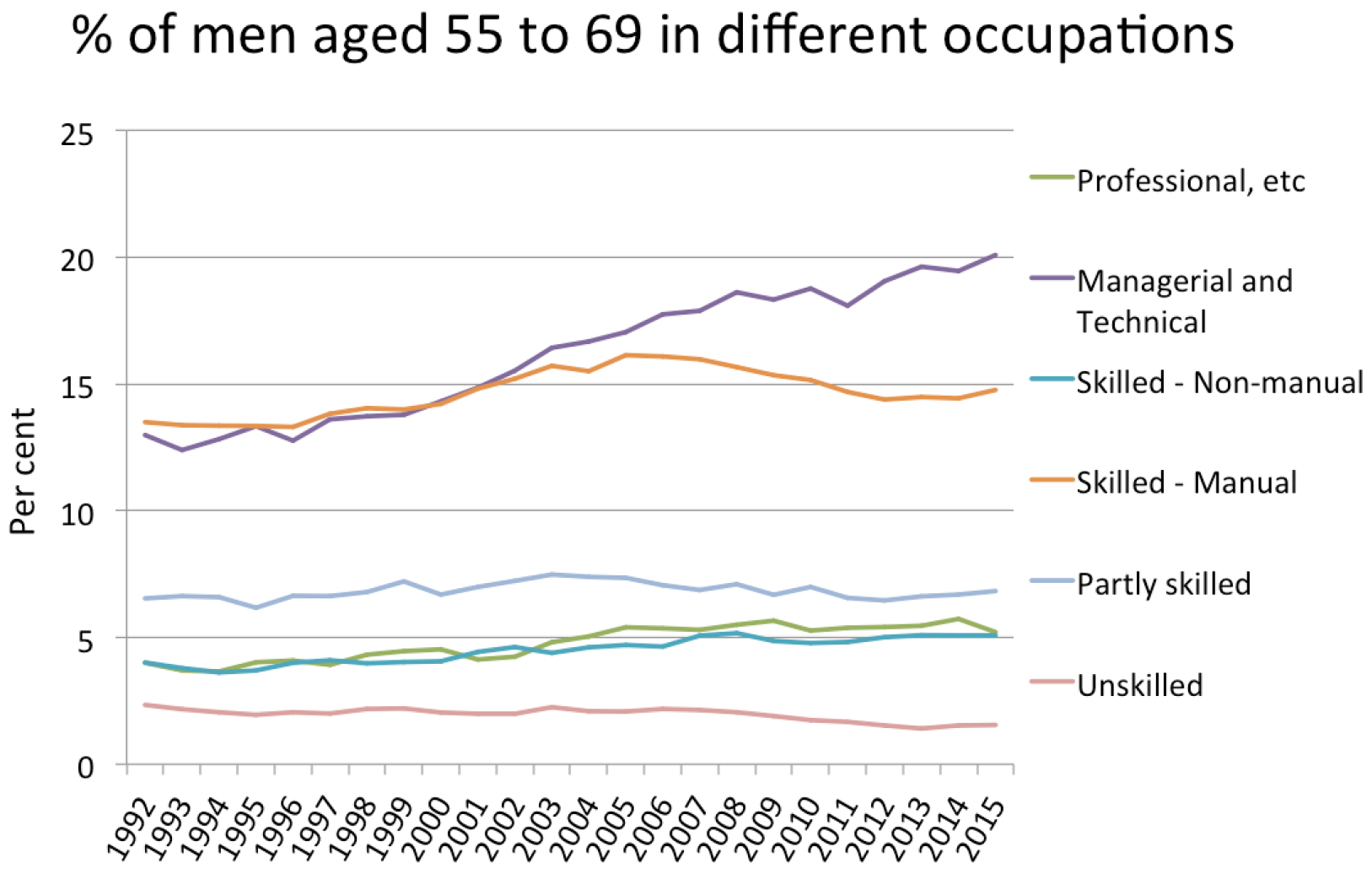
Another look at labour market trends



Back

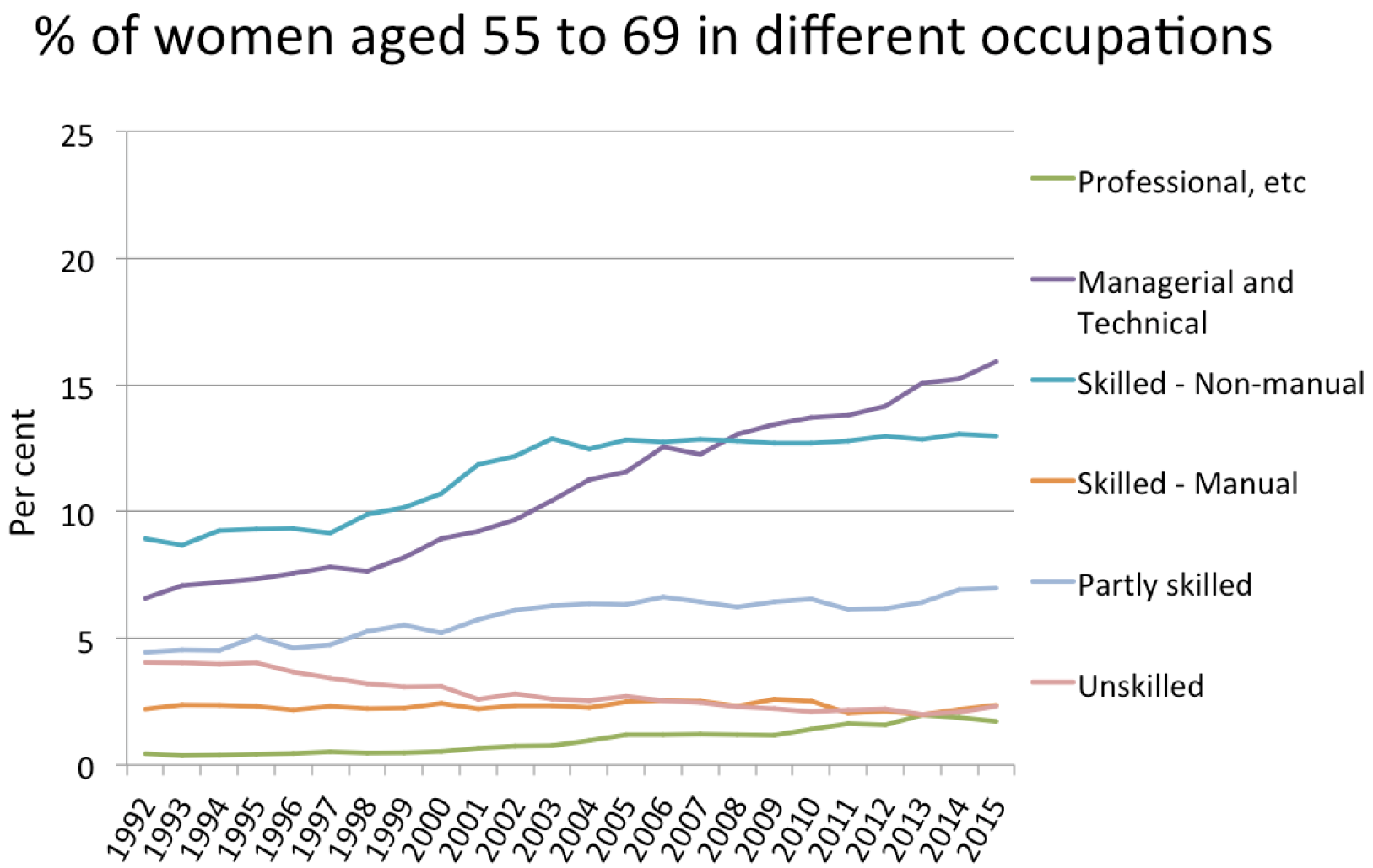
Calculations from Labour Force Survey
Source: Banks, Blundell, Bozio and Emmerson, "Disability, Health and Retirement in the United Kingdom." In Social Security Programs and Retirement around the World, ed. D. Wise, Chicago University Press, 2012

The march of the managers



Source: Labour Force Survey

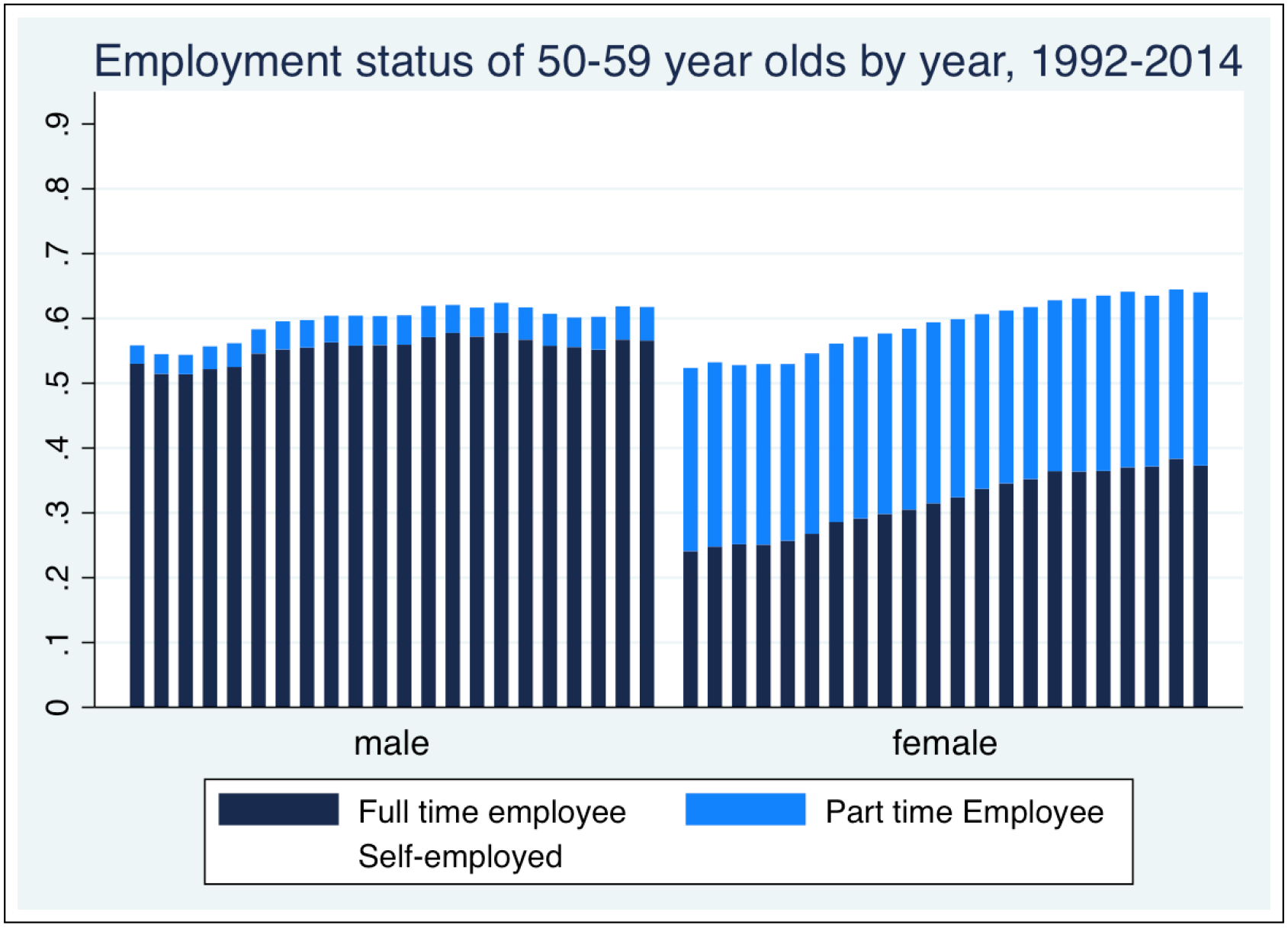
The march of the managers



Source: Labour Force Survey

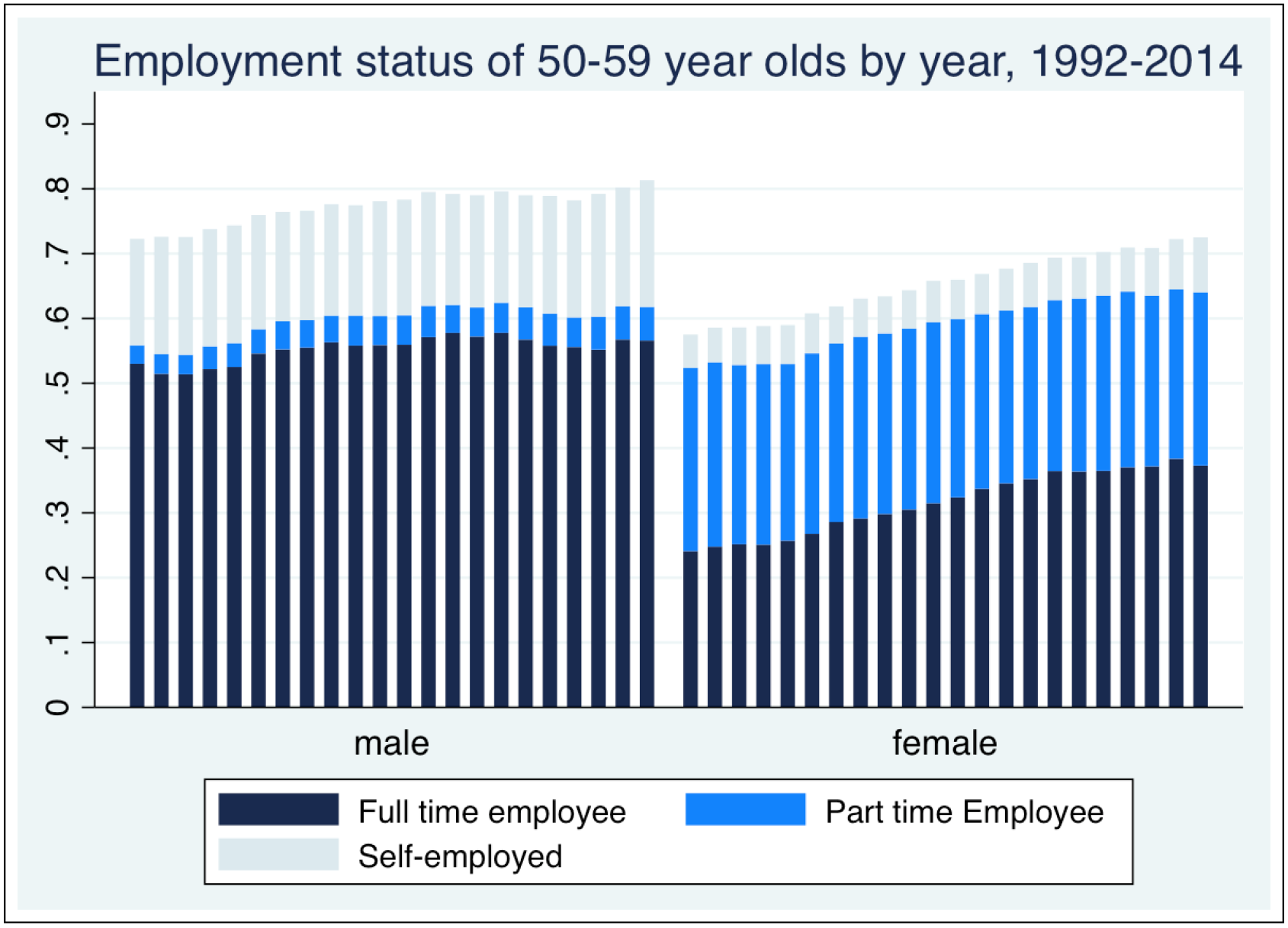
Back

The changing nature of work at older ages



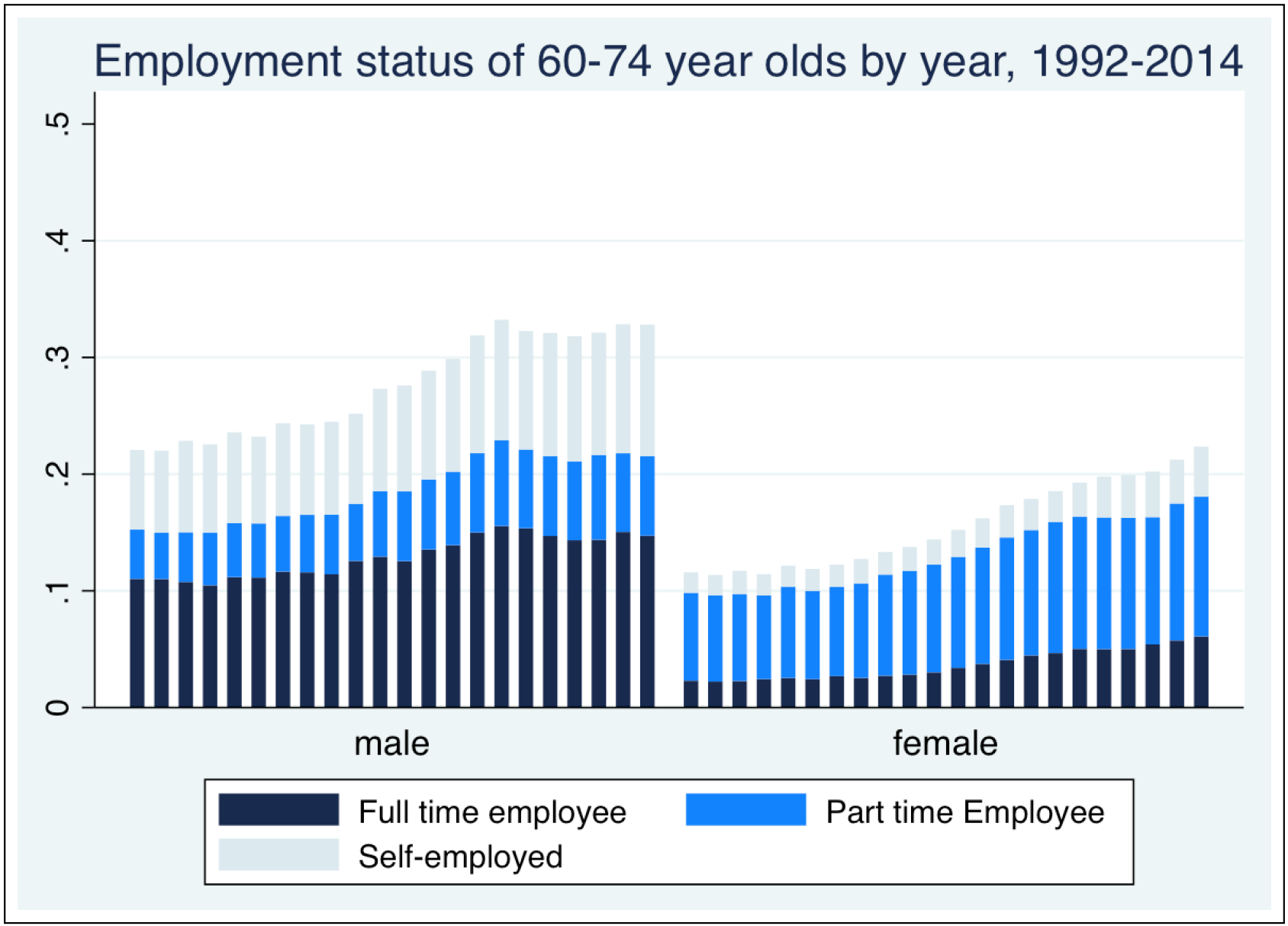
Source: Labour Force Survey

The changing nature of work at older ages



Source: Labour Force Survey

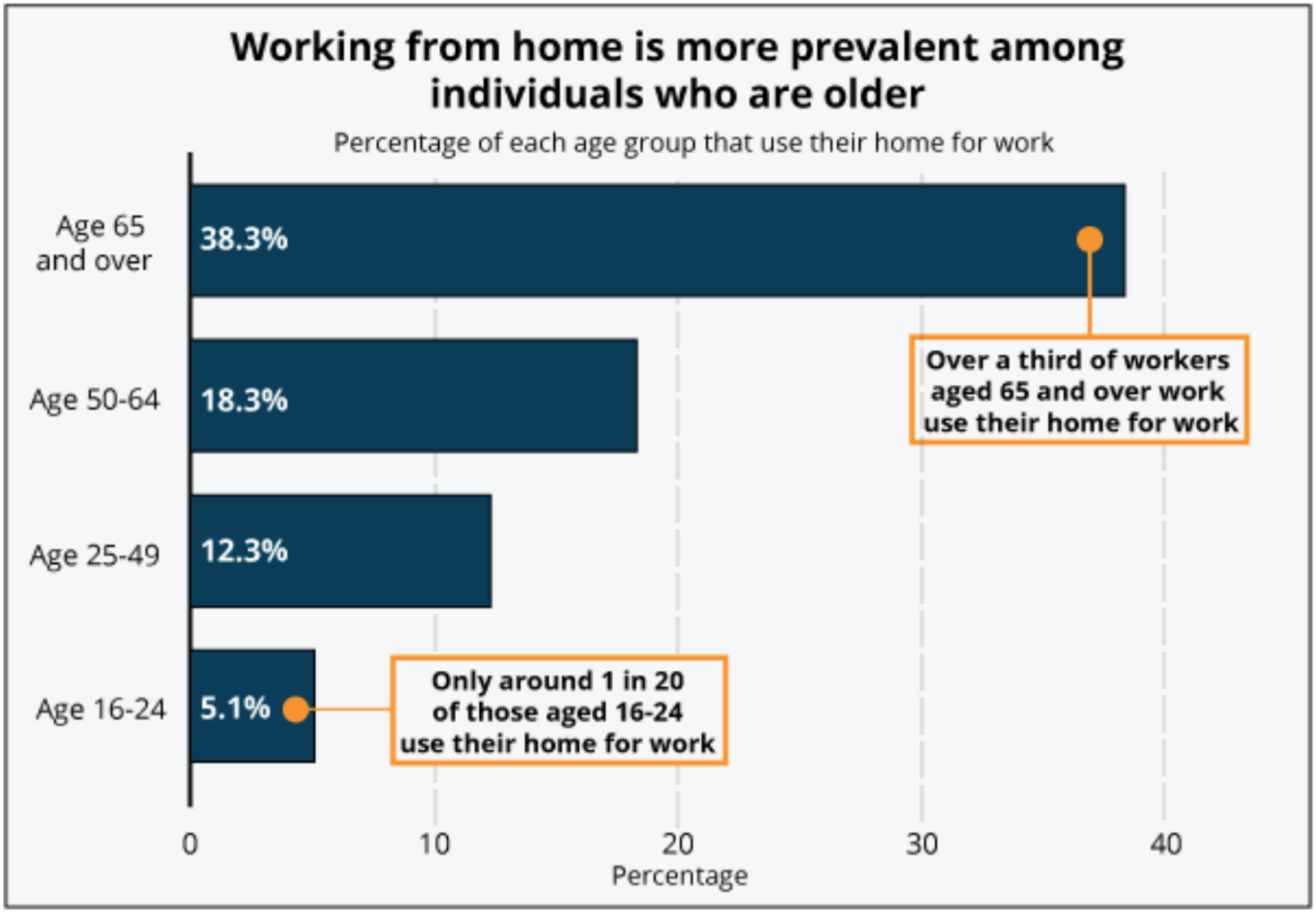
The changing nature of work at older ages



Source: Labour Force Survey

Back

Not just what but where



Source: ONS analysis of Labour Force Survey data in ONS Characterisation of Home Workers, 2014, `http://www.ons.gov.uk/ons/dcp171776_365592.pdf`

Back