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Research Report

Retirement in the 21st century

IFS Report, No. R98

Provided in Cooperation with:

The Institute for Fiscal Studies (IFS), London

Suggested Citation: Chandler, Daniel; Tetlow, Gemma (2014) : Retirement in the 21st century, IFS Report, No. R98, ISBN 978-1-909463-62-2, Institute for Fiscal Studies (IFS), London, <https://doi.org/10.1920/re.ifs.2014.0098>

This Version is available at:

<https://hdl.handle.net/10419/119788>

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Retirement in the 21st Century

IFS Report R98

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ISBN 978-1-909463-62-2

Preface

The authors gratefully acknowledge funding from the Joseph Rowntree Foundation (project reference 1112004A) and co-funding from the ESRC-funded Centre for the Microeconomic Analysis of Public Policy at IFS (grant reference ES/H021221/1). We are also grateful to Rowena Crawford, Aleks Collingwood, Richard Disney and Paul Johnson for comments on an earlier draft of this report. Any errors are the authors' alone.

Data from the English Longitudinal Study of Ageing (ELSA) are made available through the UK Data Service. ELSA was developed by a team of researchers based at the National Centre for Social Research, University College London and the Institute for Fiscal Studies. The data were collected by the National Centre for Social Research. The funding is provided by the National Institute of Aging in the United States and a consortium of UK government departments co-ordinated by the Office for National Statistics. The Labour Force Survey is collected by the Office for National Statistics and was made available through the UK Data Service. The developers and funders of ELSA and the LFS, and the UK Data Service do not bear any responsibility for the analysis or interpretations presented here.

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Executive Summary

Since 1995, employment rates of men in their 50s and 60s have steadily increased, following a long period of decline from the late 1960s. At the same time, employment rates of older women have continued to increase. This growth in employment rates was only somewhat arrested during the recent recession. This report looks at the factors that have contributed to this growth in employment rates and, in particular, what might explain the turnaround in the trend for older men in the mid-1990s. We survey the recent literature and present a new analysis of data from the English Longitudinal Study of Ageing, which covers the period from 2002–03 to 2012–13.

In this report, we distinguish between factors affecting mainly the demand for older workers and those affecting mainly the supply of older workers. However, in practice, it is very difficult to disentangle the effects of the two.

Background: late 1960s to mid-1990s

- Between the late 1960s and the mid-1990s a number of factors – affecting both the demand for and supply of older workers – put downward pressure on the labour force participation of older people.
- On the demand side, the factors that have been identified in the literature as contributing to this trend include: the lasting effects of recessions in the early 1980s and (to a lesser extent) early 1990s; a fall in employer demand for low-skilled workers relative to high-skilled workers, combined with the fact that older workers were disproportionately low skilled; a shift in industrial composition from manufacturing to services (affecting older men, though less so women); government policies to encourage firms to substitute younger workers for older workers.
- On the supply side, increases in the coverage and generosity of occupational pensions are likely to have led to earlier retirement, while employers made use of generous early retirement incentives through occupational defined benefit pension schemes; in addition, disability benefits were increasingly used as a route to early retirement.
- For women, these downward pressures were more than offset by substantially higher labour force attachment among successive cohorts of women. Labour force participation at a given age increased steadily across cohorts born between the 1920s and 1960s. There was a particularly marked difference in labour force participation between those who entered the labour market after the significant reforms to equal pay and maternity provision legislation in the 1970s and those who had come before.

Factors affecting the demand for older workers in the 2000s

- The shift from manufacturing to services, which continued through the 2000s, may have increased the demand for older workers to the extent that such jobs place a greater importance on interpersonal skills (which

accumulate with experience) rather than physical functioning (which can decline with age).

- Strong economic growth from 1995 to 2007 will also have increased the demand for older workers.

Factors affecting the supply of older workers in the 2000s

- Rising levels of wealth among successive cohorts of older people – both from private pensions and from sharp rises in housing wealth in the late 1990s and early 2000s – would have been expected to reduce labour supply among this group.
- Improvements in health continued through the 1990s and 2000s, which is likely to have contributed to growing labour force participation.
- A major reform of disability benefits in 1995 also substantially cut the on-flow to these benefits and a second set of reforms in the mid-2000s started to increase the off-flow. Although these reforms did affect the volume of people claiming disability benefits, the evidence is weaker on whether this fed through into an increase in employment rates.
- Regulatory, tax and accounting changes made during the 1980s and 1990s, as well as a fall in inflation, increased the cost to employers of offering generous early retirement packages through defined benefit pension schemes. The impact of this was mitigated by strong equity market returns in the 1980s and early 1990s and so did not affect employers' behaviour until more recently.
- Reforms to the funding of ill-health retirement packages in the public sector have also reduced the use of such provisions among public sector employers.
- A number of policy changes are also likely to have contributed to rising labour force participation of older people. These include: changes to legislation to allow people to draw a pension from an employer's pension scheme while continuing to work for the same employer; strong anti-age discrimination legislation; the increase in the female state pension age; and the extension of the right to request flexible working to all employees.
- A number of these trends that have contributed to rising labour force participation over the last decade are expected to continue for the next decade and the impact of some changes to legislation (such as flexible working provisions) is yet to be fully felt. We might, therefore, expect to see a continued increase in labour force participation of older people over the next decade.

Gradual retirement

- Retirement is increasingly becoming a gradual process rather than a discrete event. Government policy over recent years has been encouraging this behaviour.
- Almost a quarter of those who exit full-time employment experience a period of part-time work before they fully 'retire'. A smaller group will spend a period in self-employment, either part-time (3%) or full-time (2%).

- Reducing hours of work seems to be more common among those who change jobs (either with the same employer or by also changing employer) than among those who remain in the same job. For more educated people, switching to self-employment in particular is associated with a large and significant cut in average hours of work. This sheds some interesting light on the growing role of self-employment among older people over recent years.
- Exiting work during ones 50s and 60s is far from an 'absorbing' state: many people in their 50s, and even some in their 60s, return to work after a period out of the labour market.

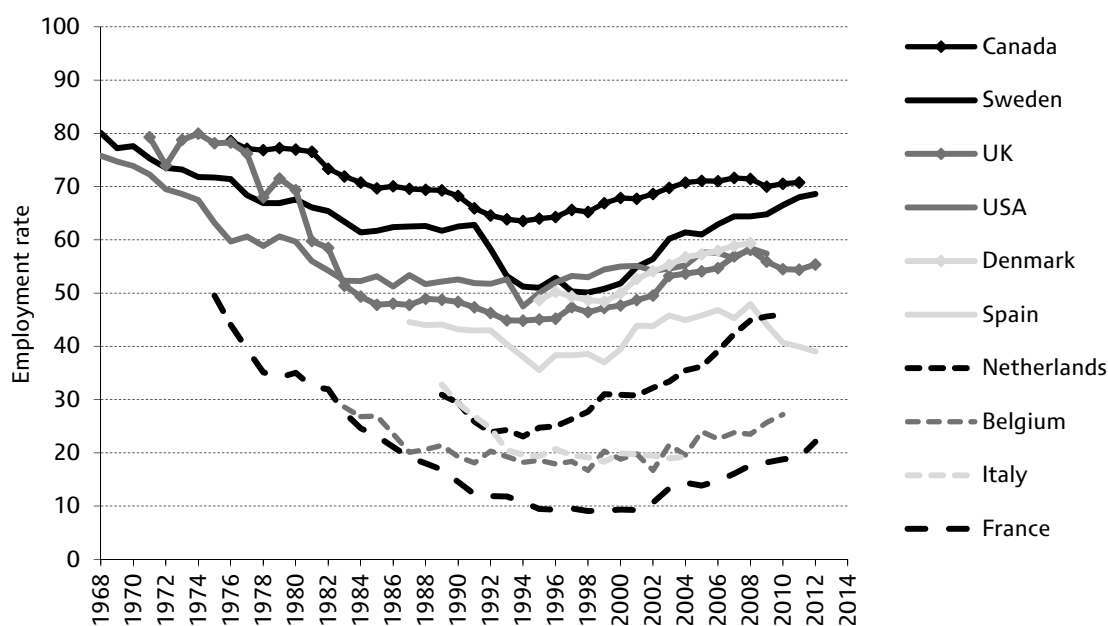
1. Introduction

Employment rates of older people in the UK have changed markedly over time, with some noticeable trends being evident over long periods. Between (at least) the late 1960s and mid-1990s, employment rates of older men fell sharply. This was a trend that went into reverse over the following two decades. A rather similar pattern has also been seen in a number of other industrialised countries, as shown in Figure 1.1. However, employment rates of older women have increased almost continually over this period (the exception being during the recession of the early 1980s). Over the last two decades, employment rates of women have, if anything, increased slightly faster than they did before that. This increase in employment rates for older men and women continued – perhaps surprisingly – almost unabated during the recent recession.

Considerable attention has been paid in the literature to explaining the decline in employment rates of older men during the 1970s, 1980s and early 1990s; for an overview, see, for example, Disney (1999), Campbell (1999) and Phillipson and Smith (2005). In this report, we draw together evidence on factors that have affected employment rates of older men and women since the mid-1990s and put them in the context of explanations that have been put forward to explain the earlier trends.

Much of the evidence we present in this report focuses on the last decade, using data from the English Longitudinal Study of Ageing (ELSA), which have been collected since 2002–03. We supplement this with data over a longer period from

Figure 1.1. Employment rates of men aged 60–64 in different countries



Source: Figure 1–5 from Wise (forthcoming).

the Labour Force Survey (LFS). The LFS has, since 1992, surveyed households quarterly for five consecutive quarters, and is representative of the UK population; prior to 1992, the LFS was conducted annually. ELSA has followed a representative sample of the English household population aged 50 and over through biennial interviews from 2002–03 to 2012–13. We present new analysis of these data and also summarise findings from other work of our own and that of others.

In Chapter 2, we briefly summarise the trends in employment of older men and women in the UK since 1968 and review the explanations for these trends that have been put forward in the earlier literature. Some of the factors that have been proposed as being important include: changes in the demand for different types of workers, changes to the availability of disability benefits, and the prevalence and features of occupational pensions.

In Chapter 3, we assess how employment rates changed between 2002–03 and 2012–13 and explore what factors could explain this. In part, the increase in employment rates over this period reflects the reversal of some factors that contributed to the earlier decline. However, there also seem to have been some new factors at play.

While in Chapters 2 and 3 we focus simply on whether or not specific individuals are engaged in some form of paid employment or self-employment, in Chapter 4 we examine the process of moving out of employment and into ‘retirement’, and describe the (growing) role of gradual retirement over the last decade. We conclude in Chapter 5 and highlight some questions for future research.

2. Background: Employment of Older Workers, 1968–1995

In this chapter, we describe the trends in employment rates of older people from the late 1960s to the mid-1990s and provide a brief summary of the extensive literature that has attempted to identify the key factors that drove these trends. In Section 2.1, we describe changes in employment rates for older men from 1968 onwards and summarise the main factors that have been suggested to explain these trends. We focus our discussion on male employment because much of the existing literature in this area has focused on male, rather than female, participation. However, many of these factors have also affected the employment rates of older women; where possible, we also refer to this in Section 2.1.

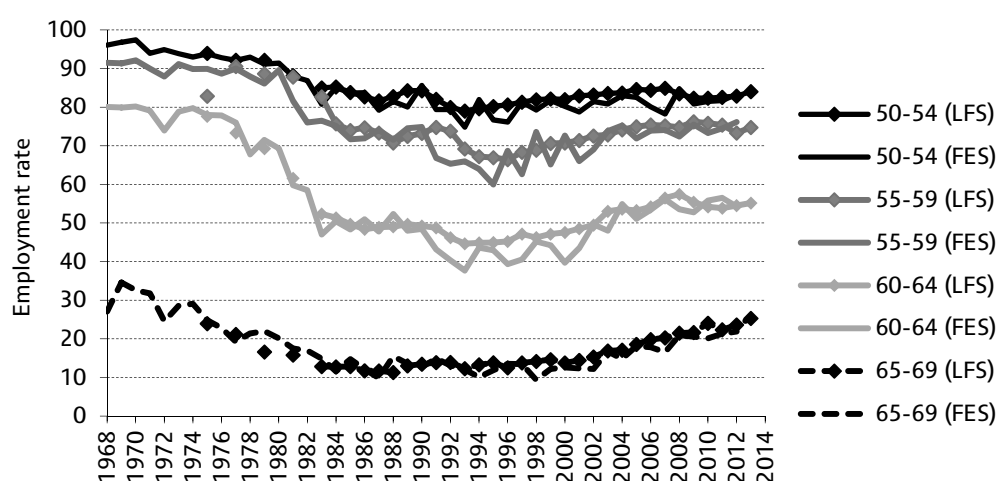
The employment rates of older women have also been affected by the long-running trend towards greater labour market attachment among successive cohorts of women. In Section 2.2, we focus on describing the labour market participation of different cohorts of women and the factors that have influenced this.

In Chapter 3, we discuss how these factors – that were identified as being important in explaining the decline in older age employment rates up to the mid-1990s – played out in the 2000s, when employment rates rose.

2.1 Male employment since the late 1960s

Employment rates among older men have changed significantly over the past 50 years. From the late 1960s until the early 1990s, employment rates of men in

Figure 2.1. Employment rates of older men, 1968–2013



Source: Family Expenditure Survey/Expenditure and Food Survey (1968–2012) and LFS (1975–2013).

their 50s and 60s declined substantially. As Figure 2.1 shows, 80% of men aged 60–64 were in paid work in 1968, but this had fallen to just 45% by 1993, with the largest fall occurring in the early 1980s. In the mid-1990s, this trend went into reverse and employment rates among older men have increased steadily, although they are still significantly below their previous peak. Between 1993 and 2008, the employment rate of men aged 60–64 rose from 45% to 57%, and in 2013 was 55%, following a 4 percentage point fall during the recent recession.

A number of reasons have been put forward to explain the trends between the late 1960s and mid-1990s, reflecting both the demand and supply side of the labour market for older male workers. Many of these factors have also affected women, although sometimes to differing extents. The rest of this section summarises the main findings from earlier work which has examined the decline in employment rates among men over most of the last three decades of the 20th century.

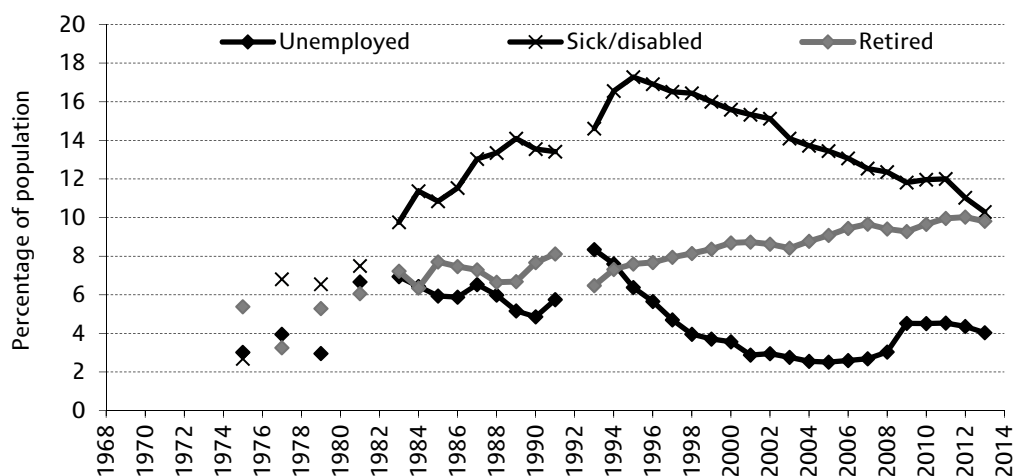
We divide these explanations into those principally affecting the demand for older workers and those principally affecting the supply of older workers.

However, in reality these two sides are closely related: for example, low demand for older workers led to increased use of early retirement incentives by employers, which in turn reduced potential employees' willingness to work.

Changes in demand for older workers

There is widespread acknowledgment in the literature that changes in the demand for older workers are important for explaining the trends in employment outlined above. Both cyclical and structural changes in demand seem to have played a role.

Figure 2.2. Rates of inactivity among older men, 1968–2013 (aged 50–64)



Source: LFS (1975–2013).

Cyclical changes in demand

The recessions of the early 1980s and (to a lesser extent) the early 1990s had a particularly large and lasting effect on the employment of older men. Although employment rates of older men were falling from the late 1960s, they dropped particularly sharply during the recession of the early 1980s, as shown in Figure 2.1, and rates of unemployment and sickness and disability rose, as shown in Figure 2.2.

Employment rates for older men did not return to their previous levels after either recession, suggesting that – once they left work – older men were less likely to have returned to work and more likely to be absorbed into unemployment, sickness or early retirement (Campbell, 1999). One possible explanation for this is that employers appear to have been less willing to hire older workers than younger workers. Disney, Hawkes and Heden (2000) found that few occupations hired older workers, even though a number did employ older workers (i.e. those who were hired at a younger age and then continued to work in the same occupation). Hurd (1996) suggests that one reason for this may be the costs associated with hiring and retraining workers, which deters employers from taking on older workers who might be expected to leave more quickly, while Daniel and Heywood (2007) argue that employers who use delayed compensation in order to motivate employees are more likely to hire younger workers (whom they expect to stay for longer). However, it is difficult in this context to distinguish between demand and supply responses. That is, the fact that we do not observe employers hiring older workers may either be because the employers prefer to hire younger workers instead or because older workers do not take up the available jobs.

Industrial composition

Changes in industrial composition during the 1970s, 1980s and 1990s may also have affected employment of older workers in this period. Employment in manufacturing declined steadily over this period: in 1951, 38% of the workforce was employed in manufacturing, and this fell to just 21% by 1991. In contrast, employment in service industries increased substantially: in 1966, service industries accounted for just under half of all employment, and this had grown to more than two-thirds by 1991. In part, this expansion of the service industry was the result of the expansion of the welfare state, as employment in education and medical services and in central and local government grew substantially. These trends continued through the 1990s (Gallie, 2000).

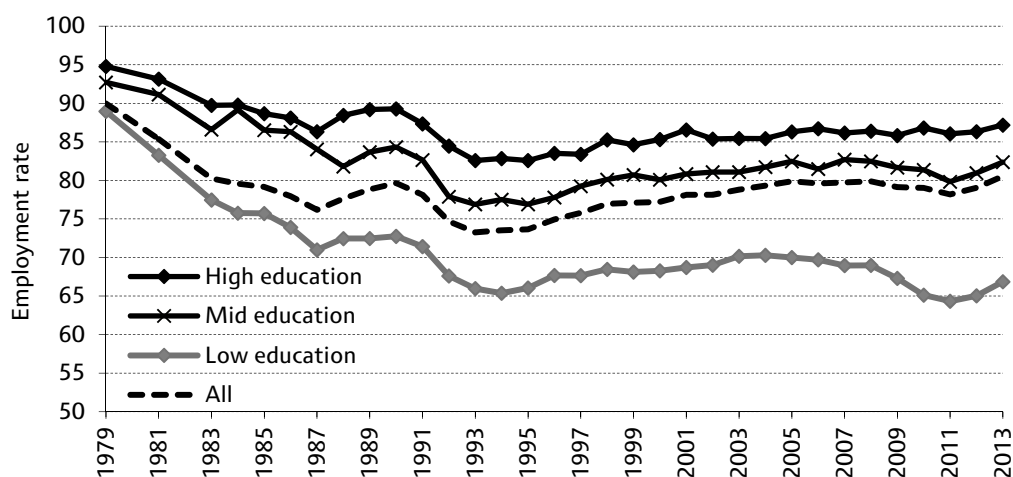
Campbell (1999) shows that – in the early 1990s – older male workers were much more likely than younger counterparts to be working in declining industries. He found that aggregate employment fell by 0.75% a year, on average, between 1990 and 1995. However, men aged 45 and over typically worked in industries that saw larger falls in employment. For example, the median experience for this group of men was for employment in the industry where they worked to shrink by more than 2.5% a year, on average, between 1990 and

1995.¹ Campbell (1999) also shows that being in a declining industry is associated with a significant increase in the chance of being displaced from work.

Demand for skills

Another explanation that has been put forward for the decline in employment rates of older workers (which exceeded that of younger workers) is that employers' demand for low-skilled workers fell relative to their demand for higher-skilled workers, and that older people were disproportionately low skilled. For example, in 1979, 79% of men aged 50–59 had only low-level educational qualifications (defined as qualifications at NVQ level 1 or below); the prevalence of low education was virtually the same (78%) among men in this age group who were in work. This compared to 61% of all men aged 16–59 (and 60% of working men in this age range) having low education. Education levels have increased over time (and across successive cohorts). In 2013, 22% of men aged 50–59 had only low education, compared to 18% of all men aged 16–59.²

Figure 2.3. Employment rates of older men, by education (men 50–59)



Note: 'High education' is defined as having at least a degree-level qualification, or equivalent. 'Low education' is defined as having no more than an NVQ level 1 qualification. 'Mid education' covers all other levels of qualification in between NVQ level 1 and degree. We focus on those aged between 50 and 59 because, prior to 2008, the LFS only collected information on educational qualifications for those who were aged below the state pension age, which was 60 for women at the time. To aid comparisons, we show the same age range here for men as we show for women in Figure B.1.

Source: LFS (1979–2013).

¹ While men were adversely affected by the changing composition of the UK economy during the 1980s and 1990s (broadly, from manufacturing to services), the evidence suggests that women were less affected by this particular shift (Campbell, 1999). Indeed, these structural changes may have worked to raise female employment, because women were concentrated in growing service industries, whereas men tended to be concentrated in declining manufacturing industries.

² Figures are authors' calculations based on LFS data. A similar pattern emerges for women. In 1979, 68% of women aged 16–59 had low education, compared to 84% of women aged 50–59. By 2013, this gap had narrowed, with rates of low education being 16% and 23%, respectively. (As an aside, it is worth noting that – whereas in 1979 women had, on average, lower levels of education than men – this was no longer the case in 2013.)

Some evidence for the fall in employer demand for low-skilled workers comes from the fact that the wages of low-skilled individuals grew less quickly between the late 1970s and the mid-1990s than the wages of higher-skilled individuals. Banks et al. (2002) show that the wages of men aged 50 and over rose less quickly than the wages of younger workers between the late 1970s and the mid-1990s, and that, over this period, the wages of the lowest-skilled older men rose particularly slowly. In the absence of a change in the supply of older workers, this suggests that employer demand for older, low-skilled workers relative to younger and/or more skilled workers fell. Desjonquieres, Machin and Van Reenen (1999) argue that this was because of skill-biased technological change, which Schmitt (1995) suggests reflected an increase in demand for skilled labour across all industries, rather than a shift in industrial composition from low- to high-skilled industries.

However, if changes in demand were the whole story, one would expect the fall in wages – noted above – to have mitigated any fall in employment. Figure 2.3 shows that the employment of older men with all levels of education (and particularly those with low education) fell sharply up to the mid-1990s.³ While this is certainly not conclusive evidence, it suggests that changes in labour supply may also have been important over this period. Furthermore, if declining demand for low-skilled workers (perhaps due to skill-biased technological change) was a principal driver of declining employment of older workers up to the mid-1990s, it raises the question of what changed at that point to cause employment rates to rise again. We return briefly in Chapter 3 to examine the occupational composition of the workforce over more recent years, but it seems likely that supply side factors were important in explaining both the decline and the subsequent growth in employment of older men.

Policy changes

Government policy, to some extent, played a role in affecting demand for older workers over the last few decades. In the 1980s, there were a number of government policies explicitly designed to encourage employers to substitute younger workers for older workers – such as the Job Release Scheme, which operated between 1977 and 1988. Banks et al. (2010) find tentative evidence that this scheme did reduce employment rates of eligible older men.

Changes in supply of older workers

Two key factors have been identified as having affected the supply of older (in particular, male) workers from the early 1980s onwards: the availability and

³ Figure B.1 in Appendix B shows that this was also true for low-educated older women, who saw much smaller increases in employment rates during the 1980s and 1990s than were seen among mid- and high-educated women. The employment rate of high-educated women aged 50–64 increased by 13 percentage points between 1986 and 2013, whereas that for low-educated women showed a 5 percentage point increase up to 2003 but then fell back. Beatty, Fothergill and Powell (2008) point out that the fall in employment among men up to the mid-1990s may have increased competition faced by women for certain (particularly low-skilled) jobs.

generosity of occupational pensions and disability benefits. Both of these affected the attractiveness of not working to both older men and older women.

Occupational pensions

Pensions affect employment rates of older workers in two ways that might help explain the changes in employment rates seen up to the mid-1990s.⁴ First, pensions provide an additional source of wealth. All else being equal, this will tend to encourage pension members to retire earlier, as wealthier people tend to choose to consume more leisure – this is known as a wealth effect. Second, pensions can provide an incentive to remain in work if an individual has the possibility of accruing higher future income by continuing to contribute for another year – this is called the accrual effect. How strong this accrual effect is will depend on how much an individual's future pension income is increased and how this compares to the pension income forgone by not retiring immediately.

Defined benefit pensions – that is, ones in which the pension received is some function of salary and years of scheme membership – are typically structured in such a way as to provide strong incentives to remain a member up to the 'normal pension age' and then sharp incentives to retire thereafter. In contrast, pension income under defined contribution schemes depends on the amount contributed and investment returns earned on those contributions, as well as the rate at which individuals can purchase an annuity.⁵ These schemes tend not to create any sharp financial incentives for individuals to retire at specific ages.

Stock and Wise (1990) showed that older workers in the United States did respond to these financial incentives (both accrual incentives and wealth effects) and are more likely to retire at the point at which they maximise their defined benefit pension rights, rather than leaving earlier or choosing to work for longer. Blundell, Meghir and Smith (2002) show that this was also true for older men in Britain in the late 1980s and early 1990s.⁶ Tanner (1998), using the same dataset, showed that men who were members of occupational pension schemes were more likely to retire 'early' (i.e. between the ages of 55 and 64) than non-members.⁷

⁴ Between the late 1960s and the late 1980s, by far the predominant form of private pension was occupational pensions provided by employers. Membership of personal pensions has increased sharply since the late 1980s. However, in understanding the effect of pensions on labour force participation up to the mid-1990s, occupational pensions will be far more important than personal pensions.

⁵ Reforms announced in Budget 2014 removed the requirement to purchase an annuity with accumulated defined contribution pension funds. However, during the period of time considered in this report, this requirement still applied to most defined contribution pension holders.

⁶ Blundell, Meghir and Smith (2002) did not include older women in their analysis.

⁷ Since her approach is not structural, this finding could be driven by endogenous selection into occupational pension scheme membership. However, she argues that pension membership can be treated as largely exogenous because the vast majority of occupational pension scheme members chose to join the scheme before age 45, when (arguably) they would not yet have formed clear preferences over the timing of their retirement.

These papers provide evidence that individuals did respond to the financial incentives provided by their pensions and that the net effect of this seems to have been to cause occupational pension scheme members to retire earlier than non-members. For this to have been an important factor in explaining the declining employment rates of older men, it must also have been the case that pension membership was becoming more prevalent and/or that the value of pensions provided was increasing over this period. This is exactly what happened over this period: pension coverage rose and the generosity of occupational pensions grew among those approaching retirement in successive years.

Among men reaching state pension age in the second half of the 1960s, just under half received some income from an occupational pension scheme; this compares to 68% of those who reached state pension age in the early 1990s (Johnson and Stears, 1995).⁸ Johnson and Stears (1995) also find that the average income received from occupational pensions increased in real terms among those who received any occupational pension income – from £44 per week for pension members in the earlier cohort to £87 per week for the later cohort (in 1995 prices). Between 1979 and 1994–95, pensioner income from occupational pensions nearly doubled as a share of national income – due to increases in both coverage and generosity (Pensions Commission, 2004).⁹

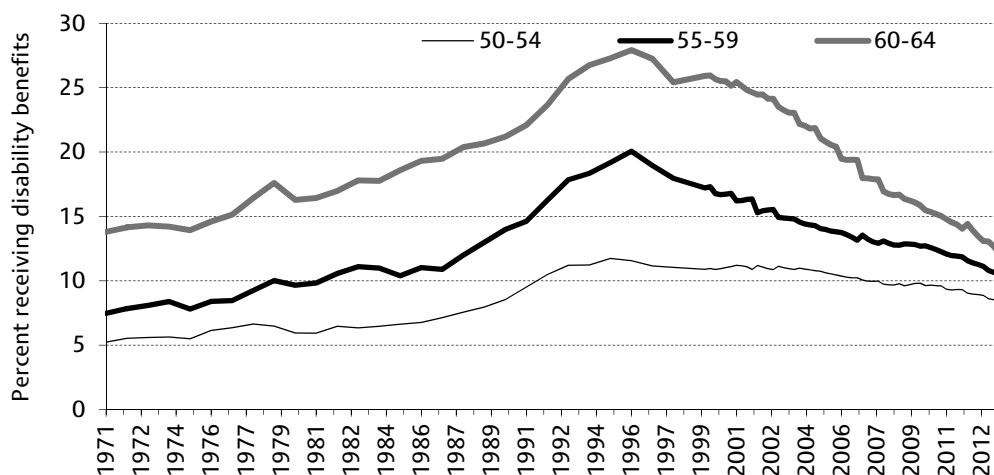
Another way in which occupational pensions can affect employment of older workers is through employers' use of early retirement 'windows' to incentivise older workers to leave employment during periods of unanticipated or temporary declines in demand for them – see Disney (1996) for a discussion. Between the 1970s and early 1990s, many employers did just that (Disney, 1999).

While the growing importance of occupational pensions, and the use of early retirement windows, may explain some of the trend towards lower employment rates over this period, Tanner (1998) suggests that it does not explain the whole picture. She points out that, looking at the period between 1988–89 and 1994, the trend towards earlier retirement was common to those with and without an occupational pension. This likely reflects a number of the other factors identified in the rest of this section, which may well have affected non-pension members more significantly.

⁸ These figures correspond to coverage among the 1900–04 cohort and the 1925–29 cohort, respectively. Johnson and Stears (1995) show that the change in coverage was larger for women – rising from 2% among married women born in 1900–04 to 23% for women born in 1925–29 (and from 19% to 48% for single women in these cohorts).

⁹ Lower inflation in the 1980s and the introduction of compulsory indexation in 1987 was a significant driver of this increase in pension payments relative to national income (Pensions Commission, 2004).

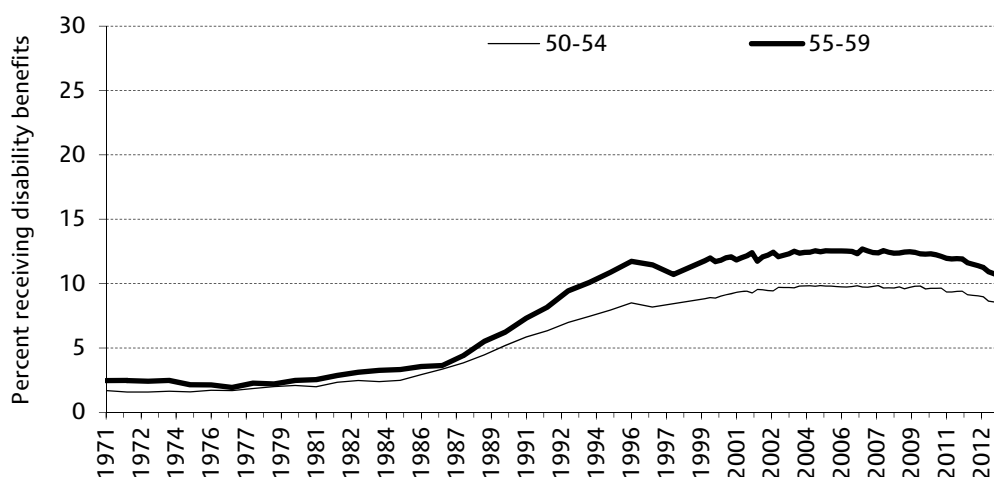
Figure 2.4. Receipt of disability-related benefits among older men



Note: Figures show the percentage claiming invalidity benefit, incapacity benefit or employment and support allowance.

Source: Exhibit 3 of Banks, Blundell and Emmerson (2014).

Figure 2.5. Receipt of disability-related benefits among older women



Notes: As Figure 2.4.

Source: As Figure 2.4.

Disability benefits

Another factor affecting the supply of older workers – particularly those with lower skills – has been the availability of disability-related benefits. As Figure 2.4 shows, trends in receipt of disability-related benefits among older men broadly mirror those in employment over the last 40 years.¹⁰

¹⁰ Trends in receipt of disability benefits among women – shown in Figure 2.5 – are slightly different to those for older men, with the rates continuing to grow after 1995, albeit at a slower rate than prior to that. This continued growth beyond 1995 likely reflects the effect of rising eligibility for these benefits among successive cohorts of women, as labour force attachment grew (see Section 2.2), which offset the downward pressure on receipt from reforms to the benefit rules.

Between the early 1970s and the mid-1990s, rates of receipt of disability benefits among older men rose sharply (e.g. from 13.8% of men aged 60–64 in 1971 to 27.9% of this group by 1996). This increase does not appear to be related to trends in the health of the older population (Banks et al., 2011) nor were there any major changes to the eligibility rules for disability benefits over this period. However, there was an increase in the generosity of disability-related benefits relative to unemployment benefits between the mid-1980s and mid-1990s (Faggio and Nickell, 2003), which might explain the more rapid growth in activity explained by sickness and disability compared to that explained by unemployment – shown in Figure 2.2. This difference fell back again later in the 1990s.

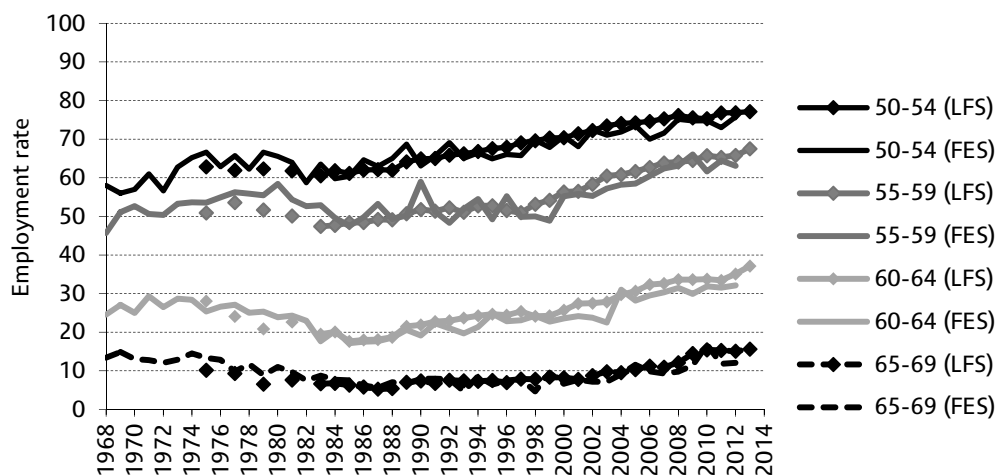
Until 1980, the amount of sickness benefits received was related to an individual's previous earnings. However, from 1980 onwards, disability-related benefits have been paid at essentially a flat rate in the UK – meaning that they provide a higher level of earnings replacement for low earners than for high earners. This suggests that the availability of disability benefits should have a greater effect on the labour supply of low-skilled rather than high-skilled workers (Banks, Emmerson and Tetlow, 2014). The level of disability benefits has declined over time relative to average earnings – from a high of 25% of average earnings in the late 1970s to just 15% in the early 2000s (Banks, Emmerson and Tetlow, 2014).

The declining labour market opportunities for low-skilled workers up to the mid-1990s – discussed above – will have increased the attractiveness of these benefits. Disney and Webb (1991) conclude that prevailing labour market conditions seem to have explained the trends in disability-related benefit receipt during the 1970s and 1980s. Benítez-Silva, Disney and Jiménez-Martín (2010) confirm this finding using more recent data covering both men and women over the period from 1992 to 2006 in Britain. They find that, over this period, there was a positive relationship between local unemployment rates and disability claims, which was not explained by an association (or causation) between unemployment and poorer health. The period from the mid-1990s to 2006 was associated with falling unemployment, which suggests that at least some of the fall in disability benefit receipt from 1995 onwards will have been explained by improving labour market opportunities. There were also significant reforms to disability benefits in 1995 and in the early 2000s. These are discussed in Chapter 3.

2.2 Female employment since the late 1960s

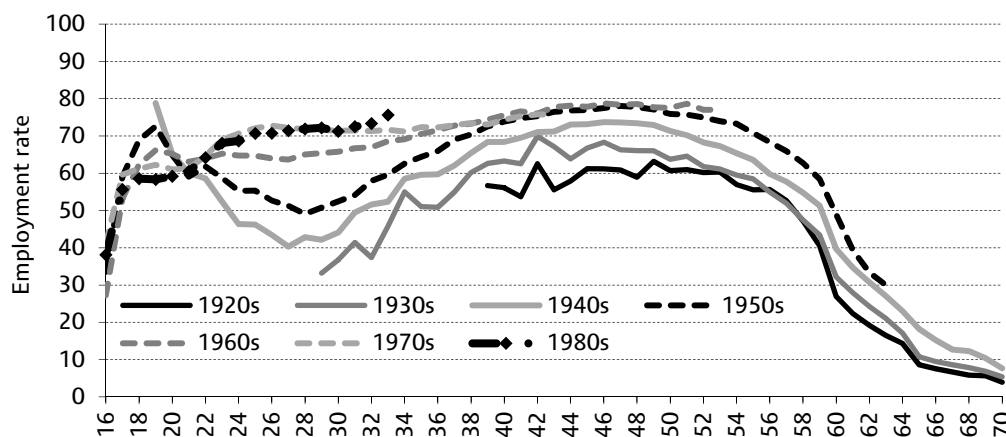
While women have been affected by some of the same demand and supply changes as men, there have also been some factors that have affected only the labour force participation of women. In this section, we focus on discussing those factors that have principally affected women's (and not men's) labour force participation.

Figure 2.6. Employment rates of older women, 1968–2013



Source: As Figure 2.1.

Figure 2.7. Employment rates of successive cohorts of women, by age



Source: Family Expenditure Survey (1968–2012) and LFS (1975–2013).

A very important factor in explaining changes in employment rates over time for women is that successive cohorts of women have been differentially affected by major legislative reforms, which have opened up greater employment opportunities to women, and the gradual adoption of labour-saving devices in the home, which have increased potential market labour supply among women.

Employment rates of older women have shown a rather different trend over time from that seen for men, as shown in Figure 2.6. Although the employment rates of older women did fall during the recession of the early 1980s (albeit not as much as they fell for men), there has been a clear underlying trend for successive cohorts of older women to have greater labour market attachment than their predecessors. This is shown in Figure 2.7, which shows the employment rate at different ages for women born in different decades. This shows that the employment rate of successive cohorts of women at each age tends to be higher than for the previous cohort – with particularly large differences apparent

between ages 25 and 35 and between ages 50 and 60. This has contributed to a major narrowing of the gender employment gap at older ages; the gap between male and female employment rates at ages 55–59 has narrowed from 46 percentage points in 1968 to just 7 percentage points in 2013.

Legal and cultural changes have been important forces behind the increase in female employment. Major legal changes to support gender equality in pay and employment included the Equal Pay Act 1970 (ratified 1975), which prohibits unequal treatment of workers in terms of pay and conditions based on sex, while the Sex Discrimination Act 1975 introduced protection for both men and women against discrimination based on gender.

Equally significant from the perspective of employment levels were the Maternity Rights Acts of 1973 and 1993, which made job loss or demotion as a direct result of childbearing illegal, and the Employment Protection Act 1979 which established the right to maternity leave. Between 1979 and 1996, the proportion of women returning to the same employer after childbirth increased from 18% to 69% for those working full-time, and from 37% to 64% for those working part-time (McRae, 1997). More recently, a range of family-friendly policies have helped strengthen the labour market attachment of women with young children, including the introduction of a Right to Request Flexible Working (introduced for parents of children under 6 in 2003, and expanded to all employees in June 2014) and a significant expansion of childcare provision.

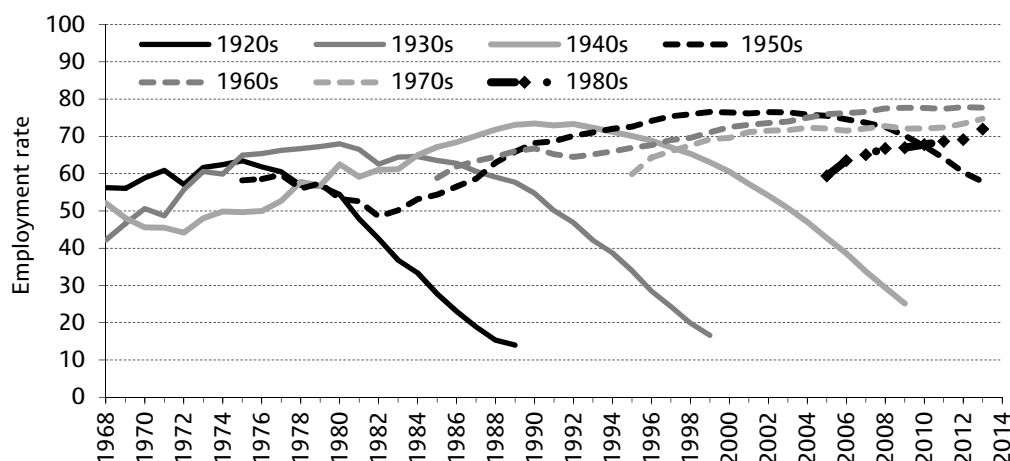
These legislative changes will have had only limited effect on the employment prospects of women who were already part way through their working life when the reforms were enacted, in particular those who were already beyond their childbearing years. In contrast, these reforms had a significant effect on those who were entering the labour market and/or seeking to take maternity leave after these reforms were enacted. This is shown by Figure 2.7, which shows how employment rates at each age differ for women born in different decades, and by Figure 2.8, which shows how employment rates changed over time for women born in different decades.

Figure 2.7 shows that employment rates were below 50% at ages 25–35 for women born in the 1940s. Employment rates at these ages increased substantially among successive cohorts, with the 1960s cohort seeing employment rates of around 65% at these ages and the 1970s cohort having employment rates of around 70%. This pattern of increases across successive cohorts appears to have ceased in more recent years, with the 1980s cohort having very similar employment rates up to age 30 as the 1970s cohort.¹¹

Figure 2.8 shows that the highest employment rate seen for the 1920s cohort was in 1975 when 64% of them were working. Labour market participation increased

¹¹ It is worth noting, however, that the 1980s cohort is observed at ages 25–30 in the years 2005–13, which largely coincides with the recent recession. This may have depressed the employment rates of this cohort at these ages.

Figure 2.8. Employment rates of successive cohorts of women, by year



Source: Authors' calculations based on Family Expenditure Survey (1968–2012) and LFS (1975–2013).

across successive cohorts through to those born in the 1950s, who had a maximum employment rate of 77% in 1999. Among later cohorts, employment rates do not appear to have risen much further (e.g. the maximum employment rate among the 1960s cohort was 78% in 2012 and 2013).

This greater labour market attachment is now starting to feed through into higher employment rates at older ages, as the cohorts who benefitted from the major legislative reforms enacted in the 1970s grow older. For example, whereas employment rates at age 60 were only around 30% for women born in the 1920s and 1930s (i.e. in the 1970s and 1980s), the employment rate was around 40% for women born in 1940s (i.e. in the 1990s) and increased even further (to around 50%) for the 1950s cohort.

As well as changes to the legal protections for female workers, there have also been other factors that increased the labour supply of women during the 20th century. Some of the factors that have been identified as underpinning the trend towards growing female labour force participation are: the diffusion of labour- and time-saving household technologies; the increasing availability of contraceptive methods; and improvements in working conditions, which made work more attractive for women. Most of the existing research into these factors has focused on evidence from the United States. However, many of the factors identified are likely to apply equally well in the UK. For a longer discussion of the literature on factors affecting the demand for and supply of female workers, see Pissarides et al. (2005).

3. Changes in Employment Rates of Older People since the mid-1990s

Considerable attention has been devoted to trying to understand the steady decline in employment rates of older men from the end of the 1960s to the mid-1990s. There has been somewhat less attention paid to what is now nearly a 20-year period over which employment rates of older men have risen steadily and the employment rates of older women have increased at a somewhat faster rate than was seen previously. In this chapter, we summarise the existing evidence and present new evidence on factors that have affected employment rates of older men and women since the mid-1990s. This is a trend that was only somewhat moderated during the recent recession. We focus in particular on the period from 2002–03 to 2012–13, when rich micro data from ELSA are available to help us explore these trends in more detail. Where possible, we also discuss what might happen over the next 10 years.

In part, the increase in employment rates over the last two decades reflects the reversal of some factors that contributed to the earlier decline. However, there also seem to have been some new factors at play.

3.1 Demand for older workers

Economic growth and changes to industrial composition

From the mid-1990s, employment rates of older men started to rise, at a time when the UK economy was growing strongly overall. This cyclical upturn was no doubt important for raising the employment rates of older men. There is, however, some disagreement about whether this had a greater effect on more- or less-educated people: Disney and Hawkes (2003) find some evidence that the effect was slightly greater for more-educated older men during the 1990s, while Banks and Blundell (2005) conclude that the effect was larger for the low-skilled.

Disney, Ratcliffe and Smith (forthcoming), using data from 1991 to 2008 on those aged 50–69, find that local labour market conditions affected employment rates of older people. Specifically, they find that employment of low-skilled workers increases when unemployment rates fall, while those with an employer-provided pension are more likely to work when wages are rising. Thus, they conclude that low unemployment and rising earnings during the boom years delayed retirement.

Disney and Hawkes (2003) also note that the shift in industrial composition towards the service sector, which continued through the 1990s and 2000s, may have benefitted older workers. This is because these jobs place greater emphasis on interpersonal skills (which accumulate with experience) and rely less on

physical functioning (which tends to decline with age). These changes may also have increased the availability of jobs that are less physically demanding.¹²

Labour demand and the recession

The most recent recession has been different from the two previous ones, with employment rates of older workers falling much less than in previous recessions (as shown in Figures 2.1 and 2.6). For both younger and older workers, the recent recession has been unusual in being characterised by a relatively small fall in employment but a significant fall in real hourly wages. However, in common with previous recessions, employment rates of older workers have declined by less than employment rates of younger workers (Disney, Ratcliffe and Smith, 2011).

The puzzle of falling real wages but little decline in employment during the recent recession has been termed the ‘productivity puzzle’. One set of explanations that have been put forward to explain this relates to changes in labour supply during the recent recession: these include changes to policy that coincided with the recession, and shocks to (pension and non-pension) wealth resulting from the financial crisis (Blundell, Crawford and Jin, 2014). We describe these in the following sections.

3.2 Pensions

Relationship between pension incentives and employment

As mentioned in Chapter 2, pensions provide two types of financial incentives that can affect when pension members choose to retire. Banks, Emmerson and Tetlow (2014), using data from 2002–03 to 2010–11, find that the retirement behaviour of older men in England continued over this period to be responsive to the wealth and accrual incentives provided by private pensions. They also examined the behaviour of older women, who had been excluded from an earlier analysis by Blundell, Meghir and Smith (2002), and found that they too respond to financial incentives from pensions.

Banks, Emmerson and Tetlow (2014) investigate whether the response to financial incentives differs across groups in better and worse health and between those with different levels of education. They find a statistically and economically significant effect of financial incentives on retirement behaviour for all health groups and for all levels of education and find that they cannot reject that the responses are the same for each group.

¹² At first glance, this argument may seem at odds with the evidence cited in Chapter 2 that the shift from manufacturing to services adversely affected the employment of older men in the 1970s and 1980s. However, the two arguments can be consistent with one another. During the initial phases of the industrial shift, older men (who had already spent many years in the manufacturing sector) may have been adversely affected as their industry declined and they struggled to retrain and find employment in the service sector. However, in more recent decades, older men are more likely to have already spent a large part of their careers in the service sector and thus the fact that service sector jobs are well suited to older workers may allow them to continue working for longer.

The fact that individuals respond to the financial incentives from pensions does not necessarily imply that they retire earlier than they otherwise would. The wealth effect of pensions will tend to cause people to retire earlier – all other things equal, if you have more wealth (as a result of having a pension), you will tend to choose to retire earlier. However, the accrual effect could lead to earlier or later retirement, depending on the particular features of the pension scheme – in particular, the normal pension age. However, as mentioned in Chapter 2, there is some evidence from the 1990s that those with occupational pensions tended to retire earlier than those without.

The evidence from Banks, Emmerson and Tetlow (2014) suggests that financial incentives from pensions were still an important factor in determining the timing of retirement in the 2000s. However, it can only explain *changes in* the timing of retirement over this period if the coverage of pensions and/or financial incentives provided by them also changed over this period. The rest of this section presents evidence on this question.

Changes to pension coverage

Chandler and Tetlow (2014) show that, among men who reached state pension age (i.e. age 65) in the mid-2000s, 85% had some form of private pension. They find a similar (82%) level of pension membership among men who are reaching state pension age in the mid-2010s. This compares to 68% receiving some occupational pension income among those who reached state pension age in the early 1990s (Johnson and Stears, 1995).

The growth in pension membership among women has also been significant since the early 1990s. Johnson and Stears (1995) found that just 23% of married women and 48% of single women who reached state pension age (i.e. age 60) in the early 1990s received an income from an occupational pension. Among women who reached age 60 in the mid-2000s, this had risen to 59% and it rises further to 68% among women who will be reaching age 60 in the mid-2010s (Chandler and Tetlow, 2014).

Taken together, this evidence suggests that pension coverage (and the growth in private pension wealth that probably accompanied this) appears to have increased fairly continuously among those approaching retirement from at least the end of the late 1960s up to 2012–13. Therefore, if it is the case that the rising prevalence of occupational pensions was an explanation for declining labour supply of older people up to the mid-1990s (as discussed in Chapter 2), we might expect that this should have continued to be the case through the late 1990s and into the 2000s.¹³

¹³ It is worth noting, however, that pension coverage is lower among men currently in their 50s who will reach retirement age in the next decade. For example, 73% of 50–54-year-old men were members of a private pension in 2012–13 (see Table 4 in Chandler and Tetlow, 2014).

However, there are some other factors relating to the details of pensions that have also changed over the last two decades, which may tend to act in the opposite direction. We discuss these in the remainder of this section.

(We return in Section 3.3 to discuss what effects unexpected declines in wealth – including pension wealth – during the financial crisis may have had on employment rates.)

Changes to pension incentives

The nature of pensions offered by employers has changed over the last 25 years. Defined contribution pensions have become more common, while defined benefit pensions have declined. The latter typically provide sharp financial incentive to draw a pension at a particular age, while the former do not.

Chandler and Tetlow (2014) show that, among men who reached state pension age in the mid-2000s, 51% had a defined benefit pension; this fell to 47% among men who reached state pension age a decade later. Among women reaching age 60, the prevalence of defined benefit pensions has been quite stable over the last decade, while the prevalence of defined contribution pensions has increased. These changes in pension coverage are probably not large enough on their own to explain much of the change that has been seen in employment rates at older ages.

We would expect changes in the prevalence of defined benefit pensions to have been much more marked among younger age groups,¹⁴ because many employers have closed defined benefit pension schemes to new members, while existing employees have kept their accrued defined benefit entitlements and, in some cases, have also been able to continue accruing further entitlements. Therefore, it will take a bit more time before we see the full effect of the decline in defined benefit pension schemes over the last quarter of a century among people moving into retirement.

The lack of any significant decline in defined benefit pension coverage among those approaching retirement since the turn of the century suggests that the shift from defined benefit to defined contribution pensions is not, on its own, enough to explain much (if any) of the changes in employment patterns among older people that have been seen over this period. However, there have been some other changes to defined benefit pensions since the late 1990s that may provide more of an explanation.

A number of regulatory, tax and accounting changes made during the 1980s and 1990s increased the cost to employers of providing defined benefit pensions and made it more difficult for private sector employers to finance generous early retirement packages. Furthermore, lower inflation and rising life expectancy over

¹⁴ Authors calculations using data from the Annual Survey of Hours and Earnings for 1997 and 2013 (see ‘Table P1 – Pension Type by Age Group and by Gross Weekly Earnings Bands’, available in each annual release here: <http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings-pension-tables/index.html>).

this period also tended to make these pension promises more costly.¹⁵ Although the underlying cost to firms of meeting their pension commitments was increasing through the 1980s and early 1990s, exceptional equity market returns during this period enabled many firms to ignore these changes. However, from the mid-1990s the necessary adjustment started to take place in the form of less generous defined benefit schemes, and a shift to defined contribution schemes, with this trend accelerating with the collapse in the value of pension assets as equity markets crashed in the early 2000s.

The rising cost of defined benefit pension provision has made it less attractive for employers to offer early retirement incentives through these schemes to address changes in labour demand. Furthermore, stronger economic growth since the mid-1990s may also have reduced employers' desire to cut back their workforce in this way, even in the absence of the cost increase. As a result, it is likely that fewer older workers have been offered these kinds of incentives to 'retire' in recent years than was the case in earlier decades. However, we are not aware of any comprehensive evidence of this fact.

Public sector employers have largely been immune from these growing cost pressures that have affected private employers offering defined benefit pensions. However, other reforms in the public sector have tended to reduce the availability and generosity of early and ill-health retirement provisions. Specifically, there have been a number of reforms that sought to make the cost of these programmes more apparent to the individual employer, rather than being borne by the Treasury. For example, Crawford and Disney (2014) examined the effect of changes to the way that early retirement on the grounds of ill-health was financed for police officers. Since the mid-2000s, the employing police force has been responsible for bearing more of the cost of ill-health retirement than they previously were, rather than the burden falling solely on the Treasury. They find that this did lead to a reduction in the prevalence of early retirement.

Drawing a pension and working

The preceding discussion – and all of the literature that has used the Stock and Wise (1990) methodology for assessing the relationship between financial incentives from pensions and retirement behaviour – has implicitly assumed that drawing a pension is synonymous with stopping work. However, this is increasingly not (necessarily) the case.

Prior to 1989, receipt of state pension income was subject to an 'earnings test' (i.e. state pension income was reduced if one had earned income above a certain level). Disney and Smith (2002) find that the abolition of this earnings test led to an increase in employment of people aged over the state pension age.

¹⁵ See Pensions Commission (2004), annex to Chapter 3. Also see Disney and Hawkes (2003).

Until 2006, it was not possible to work for an employer while also receiving a pension from them. This meant that older people had to (at the very least) change employer if they wanted to start drawing their occupational pension. For many, this may well have caused them to stop working altogether, rather than incur the cost of searching for another job. This restriction was removed in October 2006. This should have reduced the link between incentives to draw a pension and incentives to retire, and thus may have increased employment rates of older workers who have occupational pension rights, although we are not aware of any papers that have tested this hypothesis.

Pensions and the financial crisis

The recent financial crisis has had two effects that might have increased employment of older people. First, for those who had defined contribution pension assets invested in the stock market, the fall in asset prices that occurred during the crisis may have increased the incentive to continue working. This would be true if it imposed a permanent negative wealth shock. It might also be true even if the shock was only temporary: if individuals were (aside from their pension assets) credit constrained, they may have had an incentive to continue working while they waited for their pension assets to increase in value again, to avoid crystallising the wealth loss by selling their pension assets at the bottom of the market. In Section 3.3, we discuss what evidence there is on how these wealth shocks, and shocks to other types of wealth, affected labour supply of older workers.

The second factor that affected potential pension incomes during the financial crisis, and thus may have affected employment rates, was a sharp fall in annuity rates after 2008. This will have imposed a temporary (or possibly permanent) wealth loss on anyone with a non-annuitised defined contribution pension.¹⁶ To our knowledge, no one has examined how this affected labour supply.

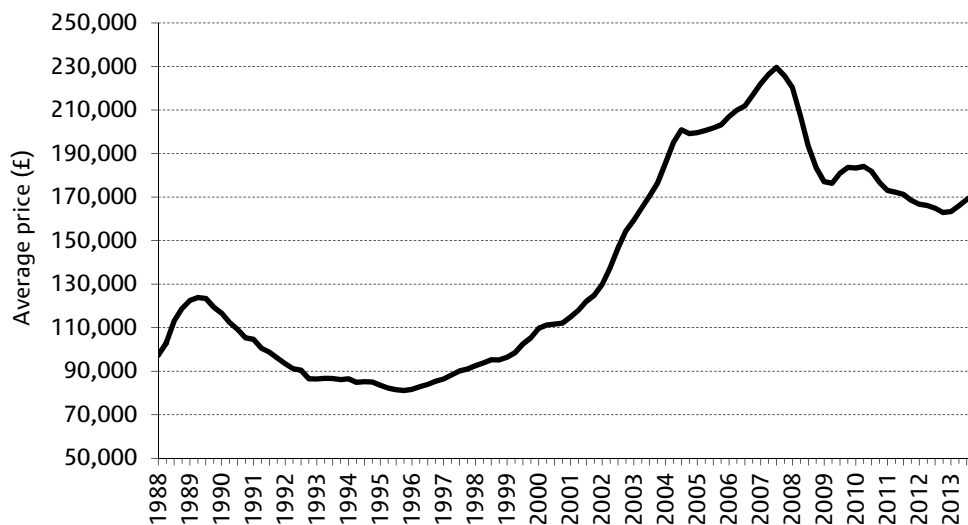
3.3 Wealth

Changes in wealth prior to the financial crisis

The period from the late 1990s until the start of the financial crisis and recession saw rapid growth in asset prices, particularly house prices, in the UK. Figure 3.1 shows that average real house prices in the UK more than tripled between 1995 and 2008. Table 3.1 provides some evidence of the increase in total private wealth during the 2000s. This table shows levels of total net private wealth (measured in 2013 prices) held by those aged between 52 and 59 in the two

¹⁶ The reforms announced in Budget 2014, removing the requirement from many people to purchase an annuity with their defined contribution pension assets, will change how such a drop in annuity rates will affect behaviour in future. However, behaviour up to March 2014 will have been driven by the previous legislative framework, because the Budget 2014 reforms were, it appears, entirely unanticipated by pension scheme members.

Figure 3.1. Average UK house prices since 1995 (2013 prices)



Note: Average of the Nationwide and Halifax quarterly house price indices, deflated using the CPI all-items index, taking 2013Q1 as the base.

Source: Chandler and Disney (2014).

years. The measure of wealth shown includes all private wealth held – including property wealth, financial assets, physical assets (such as antiques), business assets, and private pensions – net of any outstanding secured and unsecured debts, as well as the value of state pension entitlements. This measure is calculated at the ‘benefit unit’ level (where a ‘benefit unit’ is defined as being an individual, their partner and any dependent children).

Table 3.2 shows that total net wealth increased significantly over this period both for couples and for single men and women, and across the wealth distribution. Median wealth among couples increased from £571,000 in 2002–03 to £686,000 in 2006–07, an increase of 20%. Median wealth also increased for single men and women over the same period, from £244,000 to £282,000 for men, and £219,000 to £237,000 for women, increases of 16% and 8%, respectively. The rate of growth was faster towards the bottom of the wealth distribution, with the 25th percentile of wealth for couples increasing by 25%, compared 9% at the 75th percentile.

Standard economic models would suggest that (unexpected, permanent) increases in wealth would cause a reduction in labour supply, because wealthier individuals choose to consume more leisure and thus work less. This would suggest that labour supply of older people would have fallen during the 2000s. Banks and Blundell (2005) suggest that the wealth effect from the higher value of pension wealth may be one explanation for the relatively slow growth in employment of high-educated older men in the late 1990s, despite the improved labour market opportunities mentioned earlier. However, Disney, Ratcliffe and Smith (forthcoming) find no evidence of a significant ‘wealth effect’ on the timing of retirement during the 2000s. This latter result is in keeping with the findings

Table 3.1. Total net wealth among men and women aged 52–59, in 2013 prices

Wealth, £ (thousands)	2002–03	2004–05	2006–07	2008–09	2010–11
Couples (mean)	758.1	853.4	879.4	937.4	982.4
25 th percentile	357.0	430.6	445.8	481.0	505.4
Median	571.0	644.6	686.0	738.4	747.5
75 th percentile	939.6	978.6	1,021.8	1,098.9	1,155.8
Single men (mean)	378.8	349.1	373.7	465.1	532.7
25 th percentile	99.5	116.6	130.5	166.5	164.8
Median	244.1	268.0	282.0	334.1	292.8
75 th percentile	444.5	465.2	507.3	564.0	626.3
Single women (mean)	347.5	366.7	335.6	393.3	480.0
25 th percentile	96.9	109.1	99.8	138.9	146.4
Median	218.7	269.5	237.4	269.7	293.6
75 th percentile	476.3	461.7	476.7	485.2	571.3

Note: Sample is those aged 52–59 in each wave. Prices are deflated using CPI for the second year of each wave (i.e. CPI in 2011 for the 2010–11 wave).

Source: Authors' calculations using data from the ELSA, 2002–03 to 2010–11.

of a more extensive empirical literature examining labour force participation and wealth effects in the United States (see, for example, Coile and Levine, 2006).

Wealth and the financial crisis

One plausible explanation for the apparent rise in labour supply among older men and women following the recent recession is the effect of the negative wealth shocks experienced, particularly by those older households who had a substantial proportion of their wealth exposed to house price and/or equity market falls, including stocks indirectly held through defined contribution pension funds. Blundell, Crawford and Jin (2014) find tentative support for this explanation – they observe that those who experienced the largest falls in housing wealth were more likely to remain in employment than those who experienced smaller shocks (conditional on other characteristics). However, they find no evidence of a relationship between financial wealth losses and employment. Crawford (2013) also finds no relationship between wealth losses during the crisis and planned retirement date.

We would only expect to see individuals adjusting their retirement behaviour if these wealth shocks were expected to be permanent. Therefore, one reason that these papers find little evidence of a response could be simply because people thought these shocks were temporary. However, the lack of evidence of

significant wealth effects on labour supply during the crisis is consistent with the findings of Disney, Ratcliffe and Smith (forthcoming) looking at the preceding period of rising asset prices; these earlier asset price rises (including the large rise in house prices shown in Figure 3.1) are arguably likely to have been seen as permanent.

3.4 Health and disability

Two factors relating to health might help to explain the upward trend in employment of older people during the 2000s. First, health has improved on average (at a given age) since the turn of the century, continuing a trend that began before that. Second, the relationship between health and employment may also have changed. We discuss these in turn.

Changes in health, 2002–03 to 2012–13

It is well known that mortality rates at a given age have been declining for many decades (see, for example, Banks et al., 2011). This is one indication that health has been improving. However, mortality is a crude indicator of health, particularly when we are interested in how individuals' ability to work may have changed over time. In this section we describe a number of more detailed measures of health observed in ELSA and how these have evolved over time.

Table 3.2 shows the prevalence of one measure of poor health – that is, the fraction of people (aged 52–59) who report that their health limits the kind or amount of work that they could do, if they wanted to.¹⁷ In 2004–05, 23.8% of men aged 52–59 reported that this was the case. This fell to 20.4% in 2012–13. Among women, the prevalence of work-limiting disabilities fell from 25.5% in 2004–05 to 21.0% in 2012–13.

Work-limiting disabilities are more prevalent among low-educated men and women than among more highly educated men and women. The prevalence of work-limiting disabilities has also declined more among mid- and high-educated men and women than it has among low-educated men and women. In fact, if anything, there appears to have been an increase in work-limiting disabilities among low-educated women. This suggests that there may be heterogeneity across education groups in how changes in health have been affecting labour force participation over time. Figures 2.3 and B.1 showed that employment rates of low-educated men and women aged 50–59 actually declined between 2003 and 2013, unlike those for mid- and high-educated men and women of the same age. The differences in improvements in health described in Table 3.2 could be one explanation for this; other factors discussed in this chapter are also likely to have been important.

¹⁷ We restrict our attention to those aged 52–59 because the second and fifth waves of ELSA were only representative of those aged 52 and over.

Table 3.2. Prevalence of work-limiting disabilities over time (ages 52–59)

	2004–05	2006–07	2008–09	2010–11	2012–13
Men	23.8	23.6	20.6	19.9	20.4
Low education	33.9	36.6	33.7	33.9	31.9
Mid education	22.1	26.0	21.7	20.4	25.4
High education	16.8	15.7	12.3	11.7	11.2
Women	25.5	24.0	23.9	22.6	21.0
Low education	31.2	33.5	36.1	34.5	37.4
Mid education	21.1	21.1	20.5	18.1	17.3
High education	22.6	17.0	15.6	16.6	13.2

Note: In 2004–05 and 2010–11, the sample is only representative of those aged 52 and over.

Source: Authors' calculations using data from the ELSA, 2004–05 to 2012–13.

The measure of 'work disability' presented in Table 3.2 suffers from some drawbacks, however. First, it may be subject to justification bias – that is, whether or not someone reports their health condition as 'work-limiting' might depend in part on whether or not they are claiming disability benefits.¹⁸ Second, whether a particular health condition limits the kind of work someone can do also depends on what sort of jobs are available and whether employers are able and willing to make adaptations to the job. Therefore, individuals' responses to these questions may also be affected by how the nature of jobs (and, possibly, employers' attitudes) differs across groups and how this has changed over time.

There are numerous other ways of measuring health, some of which are more 'objective' than the self-reported measure of 'work disability' presented in Table 3.2 (e.g. whether someone has been diagnosed with a specific medical condition). Figures 3.2 and 3.3 show (for men and women, respectively) how health has changed over time (and how it varies with age) using a more comprehensive measure of health than that used in Table 3.2. In Figures 3.2 and 3.3, all individuals are grouped according to their 'health rank' within the age group 50–74. We rank individuals by defining a single 'index' of health, based on 23 separate measures of health. The 23 health measures included cover both objective measures (such as having been diagnosed with arthritis) and subjective measures (such as self-defining your health as excellent or poor). The index applies a different 'weight' to each of these health measures to construct a single measure of health that we can use to rank all individuals.¹⁹ This approach has the advantage of allowing us to compare people with different levels of health (rather

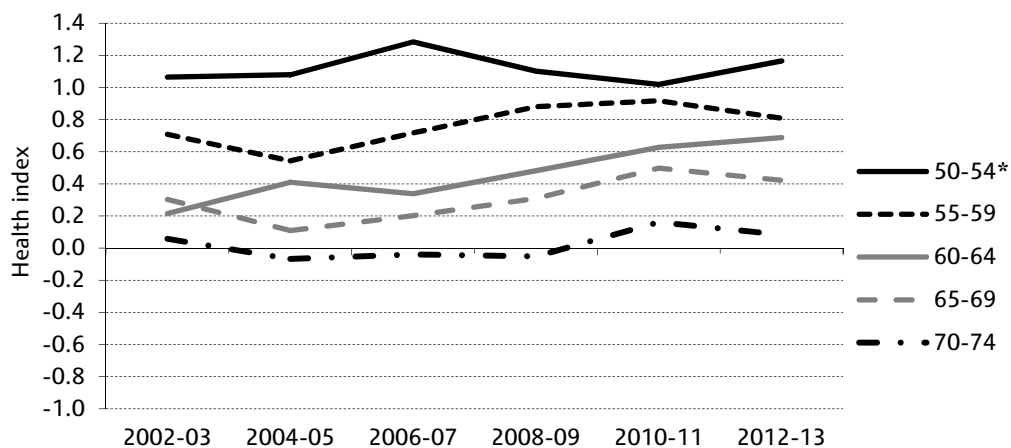
¹⁸ For a brief discussion, see Banks et al. (2011, p.1).

¹⁹ The weights are estimated using a statistical technique known as a principal components analysis. This method is based on an approach originally used in Poterba, Venti and Wise (2011). The health index can be regarded as an 'underlying' measure of true health, which is partially revealed by various specific questions about aspects of an individual's health. To construct the index, we use responses to 23 questions about health from ELSA and obtain the first principal component of these indicators of health. The first principal component is the weighted average of the health indicators, where the weights are chosen to maximise the proportion of the variance of the health indicators that can be explained by the first principal component. Further information on the construction of this index and the factor loadings can be found in Banks, Emmerson and Tetlow (2014).

than the binary comparison between those who report a work-limiting disability or not, as in Table 3.2). The downside of this measure is that there is no natural interpretation of the units of this index – it is simply a way of ordering all individuals from the least healthy to the healthiest.

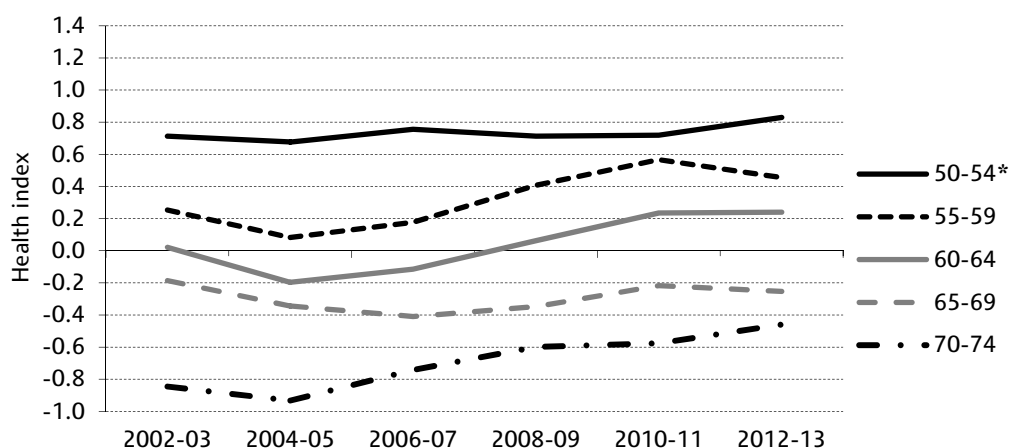
Figures 3.2 and 3.3 show that health at a given age is, on average, worse among women than men, and that (as one would expect) health declines, on average, with age. These figures also show that, at a given age, health has improved over time. In particular, it appears that the health of men aged 55–59 was somewhat better in 2012–13 than it had been in 2002–03; the same also appears to be true for women aged 70–74.

Figure 3.2. Changes in health over time (men)



Note: * In 2004–05 and 2010–11, the sample is only representative of those aged 52 and over.
Source: Authors' calculations using data from the ELSA, 2002–03 to 2012–13.

Figure 3.3. Changes in health over time (women)



Note: As Figure 3.2.
Source: As Figure 3.2.

To the extent that health limits older people's ability to work, their productivity while at work (and thus their wage) and/or the (psychological, monetary or health) cost to them of working, this improvement in health over the last decade should have increased labour supply among this group.

Improvements in health are not a new phenomenon; they have been happening for decades. Therefore, while improvements in health might explain some of the increase that has been seen in employment rates of older people since the mid-1990s, it cannot explain why employment rates of older men declined up to the mid-1990s and then started to increase. Part of the explanation could be that the relationship between health and employment has changed over time.

It is possible that changes in industrial composition mentioned in Section 3.1, in particular the shift towards services, may have increased the availability of jobs that are not physically demanding. If this is the case, then we might expect to see a higher level of employment even without any change in underlying health.

Reforms to disability benefits

One important factor that may have affected the relationship between health and work since the mid-1990s is the reforms that have taken place to publicly provided disability benefit programmes. These reforms were explicitly designed to reduce the number of people receiving these benefits by reducing the number of non-disabled or less disabled people claiming them.

A major reform was enacted in 1995 in direct response to the rapid increase in disability benefit claims over the preceding decades. This reform changed the eligibility criteria – in particular, instead of applicants being judged based on their ability to perform 'suitable work', they were instead judged on their ability to perform 'any work'. This more stringent test led to a sharp decrease in the fraction of older men receiving disability benefits (and a slowing down of the rate of increase for older women) – mainly through a reduction in the on-flow, rather than an increase in the off-flow. Figure 2.4 showed that this reform coincided with a sharp reversal of the trend towards a growing rate of disability benefit receipt among older men, suggesting that the 1995 reform did have an effect on rates of disability benefit claims among older men.

Following the major reforms to disability benefits in 1995 (described in Chapter 2), there was a second major set of reforms in the mid-2000s. These both increased the stringency of the test to qualify for disability benefits and also introduced new requirements for claimants to take part in activities to help them return to work, if they were judged to be able to do this. In other words, these reforms sought to increase the off-flow as well as to reduce the on-flow to disability benefits.²⁰ The impact of these changes was less evident in Figures 2.4 and 2.5 than the reform in 1995 appears to be. However, the enactment of these

²⁰ A more comprehensive description of reforms to disability-related benefits in the UK is provided in Banks et al. (2011).

reforms (which might have been expected to accelerate the reduction in disability benefit claims) in 2008 coincided with the onset of the recession (which may have increased disability benefit claims, as a result of reduced labour market opportunities).

Rates of disability benefit receipt did continue to decline from the mid-2000s and Banks, Blundell and Emmerson (2014) find that this is true for all education groups. They find that, among women, the data show a steady increase in the proportion of benefit recipients who are severely disabled. For example, in 2008 they find that 15% of female disability benefit recipients had no disabilities (using their definition of a disability) but that this had fallen to just 4% by 2012–13. In contrast, they find that the composition of older male recipients – in terms of their level of disability – seems to have remained quite stable over time, despite the declining prevalence of receipt. In other words, this suggests that the reforms may have had the desired effect among women – of only affecting the least disabled claimants – but that may not have been the case among men.

It is difficult to attribute the significant changes in employment rates from the 1990s onwards causally to these changes in disability benefits, and no study in the UK, to our knowledge, has robustly established this. Disney, Emmerson and Wakefield (2003) fail to find evidence of a significant relationship between the 1995 reforms and a change in the relationship between health shocks and retirement. However, they suggest caution in interpreting their results, owing to potential difficulties in identifying the effect of the reform in their framework. Comparing changes in disability benefit receipt and changes in employment rates within subgroups, Banks, Blundell and Emmerson (2014) suggest that – for the most recent period – some caution should be exercised in interpreting the coincident trends in falling disability benefit receipt and rising employment as being evidence of a causal relationship. They find that there is no systematic relationship between the size of the decline in disability benefit receipt within a group and the size of the increase in employment rates among the same group.

The correspondence of the trends in disability benefit receipt and employment over a long time period remains very striking. A robust assessment of the effect of the 1995 reforms on employment rates is notable by its absence from the literature; however, such an assessment is somewhat constrained by a paucity of data.

Although there is no conclusive evidence that, overall, these policy reforms affected employment rates of older people, there is some evidence on the impact of specific policies from the original piloting of these programmes. In particular, Adam, Bozio and Emmerson (2010) examined the impact of the ‘pathways to work’ pilots, which compelled disability benefit claimants to engage in activities to help them manage their health conditions, and thus allow them to return to work – this was subsequently rolled out across the country as part of the latest round of reforms. They found that the reform was effective at moving people off benefits and, to a lesser extent, into paid work. A full evaluation of the effect of the national roll out of these reforms and how important they have been in

explaining the trends in employment remains something of an open question for future research.

To the extent that they are important, these changes to disability benefit policy are likely to be a more important factor in explaining the employment trends seen among low-educated individuals than among higher-educated groups. Banks, Blundell and Emmerson (2014) find that those with the lowest levels of education are around four times more likely than the most educated to be receiving disability benefits. While this difference is in part explained by differences in health between these groups, they also show that there are differences between education groups, even among individuals with a similar level of disability. They find that the decline in rates of disability benefit receipt during the 2000s was sharper among low-educated men than among high-educated men.

Outlook for the future

The health of older people in the UK, as measured in a number of different ways, has improved steadily over time, and it seems likely that this trend will continue in future. However, there remain large differences in health between individuals of a given age. Emmerson, Heald and Hood (2014) project that the proportion of men and (particularly) women aged 65–84 who are in good health will continue to increase over the next decade, with this coming largely from a decline in the proportion who will have middling health (rather than a reduction in the proportion experiencing the worst health). Those in better health are more likely to be in work (Chandler and Tetlow, 2014) and less likely to exit work than those in worse health (see Chapter 4). Therefore, improvements in the health of the older population may well feed into higher employment rates at older ages in future (as suggested by Emmerson, Heald and Hood, 2014).

3.5 Policy changes

In contrast to policies enacted in earlier decades, which had explicitly encouraged employers not to employ older workers (discussed in Chapter 2), from the mid-1990s, policy shifted towards encouraging employment of older workers, through anti-discrimination legislation and active welfare-to-work policies. The policy to increase the state pension age for women (and, in future, men) has also increased the labour supply of older people.

Anti-age discrimination

Between 1999 and 2006, a voluntary Code of Practice on Age Discrimination was put in place and in 2006, following a European Commission Directive, mandatory retirement before age 65 was made illegal, all employees were given the right to request working beyond age 65, and age discrimination was banned in recruitment, promotion and training. Following a further European court ruling,

from April 2011 employers have been prohibited from imposing any mandatory retirement age.²¹

A number of studies have looked at the effect of anti-age discrimination policies in the United States that were enacted through the 1960s, 1970s and 1980s, exploiting the fact that different states introduced different policies at different times. These policies differed in terms of which age groups they affected, how rigorously they were enforced, and whether they applied to hiring decisions, firing decisions, or both. Neumark and Stock (1999) used data covering a wide range of these reforms and used regional and time variation in policies to identify their effect. They found that, on average, these anti-age discrimination policies increased the employment rate of 'protected' workers who were aged 60 and over by just over 6 percentage points, and by just under 1 percentage point for 'protected' workers aged under 60. These effects did not vary significantly in areas where they were coupled with strong enforcement compared to areas where enforcement was weak.

To our knowledge there has been no evaluation of the effect of anti-age discrimination legislation in the UK. However, since only a minority of workers felt constrained by the compulsory retirement ages that they faced prior to the legislative change, the effects may have been small. For example, Emmerson and Tetlow (2006) found that just 8% of workers aged 52–59 said that they would like to work beyond the compulsory retirement age that they faced.

Flexible working

From June 2014, all employees have had the right to request flexible working arrangements, which may be especially attractive to older workers. These legislative changes may either reflect a shift in employer attitudes that had already started or they could force a change in behaviour. Either way, they could mean that employers' demand for older workers (and the nature of jobs available) may be different now and in future than they were previously.

There is some evidence that, prior to the reform, there was demand among older people for greater flexibility in their working arrangements. For example, Emmerson and Tetlow (2006) report, based on data from 2004–05, that 19% of employees aged between 52 and the state pension age who did not have any work-limiting disability would have liked to work fewer hours or to job share, while 8% of this group reported that they would like more flexible hours of work. (These groups are not mutually exclusive – respondents could report more than one desired adaptation to their working conditions.)

²¹ Lazear (1979) argued that these types of anti-age discrimination policies could actually reduce economic efficiency, as they prevented employers from using back-loaded long-term incentive contracts – that is, ones which encouraged the retention of staff by paying younger workers less than their marginal product and older workers above their marginal product. He argued that prohibiting involuntary retirement based on age alone would result in older workers 'enjoy[ing] a small once-and-for-all gain at the expense of a much larger and continuing efficiency loss that affects all workers and firms adversely'. However, since job turnover has increased over recent decades and employees' tenure with each firm has declined, it seems likely that any potential efficiency loss of this sort would be considerably smaller now than when Lazear was writing.

This is suggestive evidence that there may have been a group who would have benefitted from the recent changes. However, it is too early to know whether this policy change will substantively affect employment of older workers.

In Chapter 4, we look in more detail at how common it has been, over the last decade, for older people to reduce their hours of work or to work part-time as they approach retirement, even before the legal requirement for employers to consider requests for flexible working was introduced.

Increasing the female state pension age

The increase in the female state pension age (from age 60 in March 2010 to age 66 in March 2020) has been found to have had a positive effect on the labour supply of older women and also of their husbands. Cribb, Emmerson and Tetlow (2014) find that the increase in the female state pension age from 60 to 62, which was legislated for in 1995, increased the employment rate of women aged 60 and 61 between 2010 and 2014 by 6 percentage points.

Cribb, Emmerson and Tetlow (2013) find that a small part of the increase in employment rates of older men can be explained by this increase in the female state pension age. In other words, it appears to have had a positive knock-on effect on the labour supply of these women's husbands.

With the female and male state pension ages set to increase to age 66 by 2020, labour supply of older men and women is likely to increase further over the next decade. Emmerson, Heald and Hood (2014) project that (in large part as a result of the increases in state pension age) employment rates of men and women in their early and mid-60s will increase significantly over the period up to 2022–23, with the employment rate of women aged 60–64 projected to equalise with that of men of the same age.

3.6 Summary

A number of trends in the late 1990s and early 2000s are likely to have contributed to rising supply of and demand for older workers. The expansion of the service sector may have benefitted older workers, and improvements in health are likely to have made older people better able to work. There were also some factors that, on their own, should have driven lower employment rates. Higher wealth among successive cohorts, in part resulting from higher prevalence of occupational pension schemes (especially among women), but also from rapid increases in non-pension (mainly housing) wealth, would tend to depress labour supply and encourage earlier retirement. However, all of these were trends that had begun much earlier; they cannot explain the turnaround in older male employment rates that occurred in the mid-1990s. We must look elsewhere for an explanation.

Part of the answer probably comes from changes in labour demand. Strong economic growth from 1995 to 2007 contributed to the rise in employment

among older people over this period, which marked something of a change from the periods of weak economic performance in the early 1980s and early 1990s. Anti-age discrimination has also been strengthened since the mid-1990s, which may have removed some barriers to older people finding employment.

For those covered by occupational defined benefit schemes, a number of factors have contributed to making it more expensive for employers to offer generous early retirement or ill-health retirement packages, which has reduced the number of people being incentivised to leave their jobs early. A reform in 2006 to allow people to draw a pension while continuing to work for the same employer has also – in theory at least – weakened the relationship between incentives to take a pension and incentives to leave work.

Some factors affecting labour supply have also changed since 1995. A significant reform to disability benefits in 1995 may have contributed to reducing exits from the labour market through that route, although there is no firm evidence that this was the case. Further reforms in the mid-2000s seem to have reduced disability claims further, although it is somewhat less clear whether this has translated into an increase in employment rates.

A number of factors during the recent financial crisis and recession may have contributed to an increase in labour supply among older workers at that time, which may help to explain some of the ‘productivity puzzle’ in the UK. Increases in the female state pension age from April 2010 onwards have led to significant increases in labour supply among affected older women and their husbands. While reductions in wealth as a result of falling asset prices might have been expected to have increased labour supply, there is only weak evidence that this was the case.

Looking forward, some factors may continue to boost labour supply among older people. Improvements in average health are likely to continue. It will also become increasingly common for those approaching retirement to have defined contribution, rather than defined benefit, pension schemes; the different incentives provided by these types of pension schemes (and potentially differences in the levels of wealth held in them) may affect retirement behaviour. Since June 2014, it has also been a legal requirement for employers to consider requests for flexible working from all employees. If this increases the possibilities for reducing hours or adapting work patterns in other ways to accommodate the needs of older people better, then this could also contribute to an increase in labour force participation, although not necessarily in total hours worked.

For many individuals, ‘retirement’ is already a gradual process, perhaps entailing reductions in hours of work, a switch from employment to self-employment, and sometimes re-entry to the labour market after a period out of work. In the next chapter, we describe the pattern of retirement over the last decade and how this has differed across various groups.

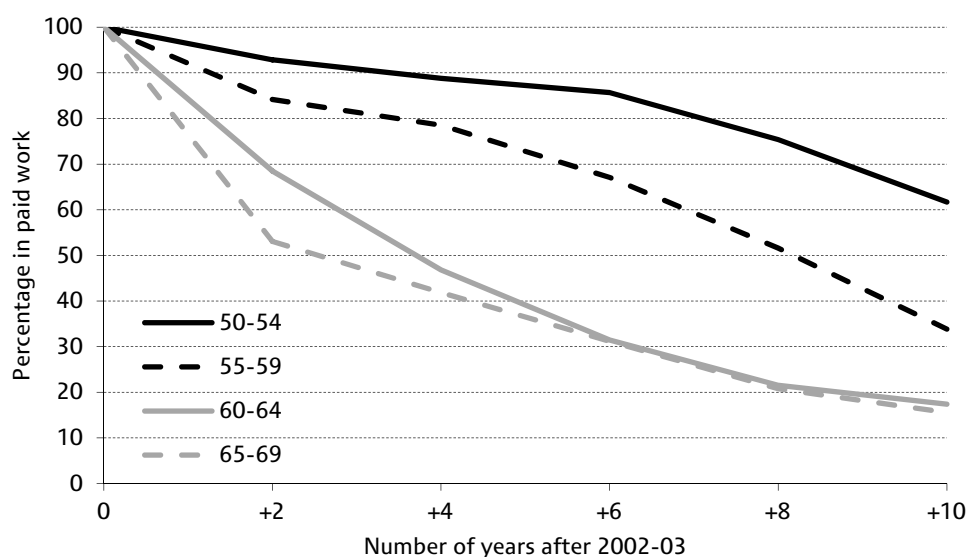
4. The Nature of ‘Retirement’: 2002–03 to 2012–13

The process of ‘retirement’ looks very different for different people. For some, leaving work is a fairly rapid and permanent transition, whereas for others it is more gradual, involving periods spent working part-time, and/or periods of self-employment.

In this chapter, we use the detailed longitudinal information available from ELSA to look at individuals’ transitions out of work over the 10-year period from 2002–03 to 2012–13. The major advantage of this survey is that we are able to follow the same individuals over this period, so we can see how their employment situation changes from one period to the next, and how this is related to various characteristics, such as health and wealth.

We look at three aspects of this transition: exiting work, reducing hours and returning to work. We are primarily interested in examining the characteristics that are associated with each type of transition.

Figure 4.1. Exits from paid work among men: percentage of those initially working who are still working in later years



Note: Sample is restricted to the ‘balanced panel’ (i.e. core wave 1 sample members who respond in all six waves). Weighted using wave 6 longitudinal weights.

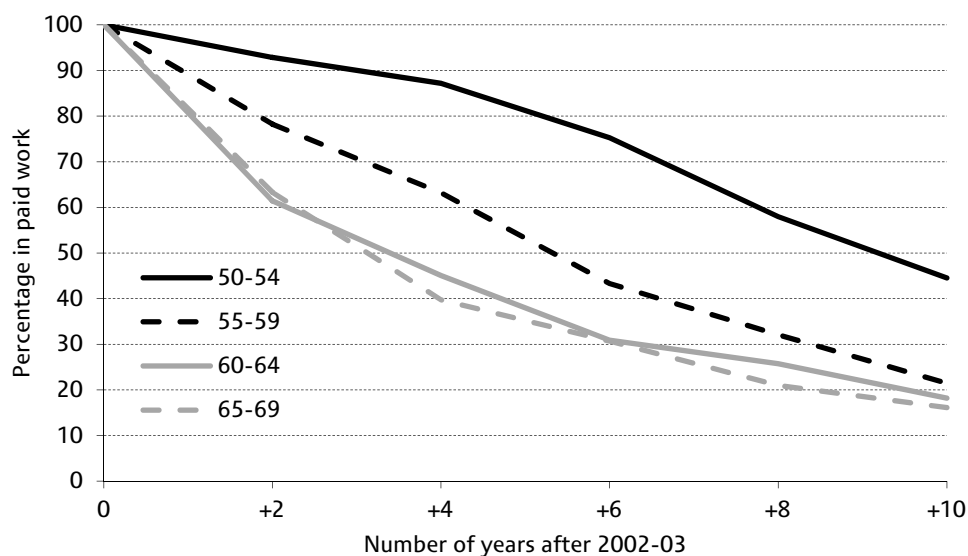
Source: Authors’ calculations using data from waves 1–6 of ELSA.

4.1 Exiting work

In this section, we focus on the trajectories of people who are initially in paid work when they are first observed in ELSA in 2002–03, and who are then tracked over a 10-year period. It is important to remember that, for certain groups (e.g. the oldest, or the least healthy), a large proportion will already have exited the labour market.²² As such, our focus in this section is on whether, conditional on being in work at a certain point in time, different groups exit the labour market at different rates.

Figures 4.1 and 4.2 show what proportion of those who were in paid work in 2002–03 were still in work in subsequent waves of ELSA.²³ This tells us something about the speed with which people exit the labour market. So, for example, the solid black line in Figure 4.1 shows that, of men aged 50–54 who were in paid employment, around three-in-five were still working 10 years later, when this group were aged 60–64. Unsurprisingly, the rate of exit is higher for older age groups: while three-in-five men aged 50–54 initially in work were still working 10 years later, this is true of just a third of those initially aged 55–59. The rate of exit is faster for women than for men: of those women initially aged

Figure 4.2. Exits from paid work among women: percentage of those initially working who are still working in later years



Note: As Figure 4.1.

Source: As Figure 4.1.

²² Chandler and Tetlow (2014) provide a detailed description of how employment rates differed across various groups in 2012–13.

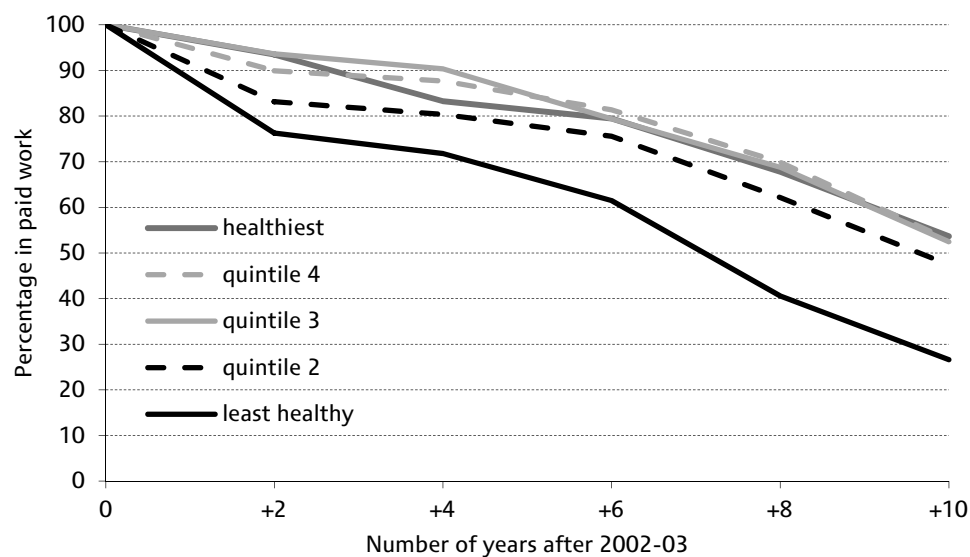
²³ Figure B.1 in Appendix B shows figures for men and women combined, including analysis for those in work and initially aged 70–74. It is not possible to look at the latter age group for men and women separately due to small sample sizes.

50–54 and working, around 45% were still working 10 years later, compared to around 60% of men of the same age. Health and retirement

Health is strongly associated with labour force participation of older people. Those in poor health are less likely to be in work, even at the age of 50, than those in better health. For example, among those aged 50–54, just 41% of those in worst health are working full-time, with a further 9% working part-time, compared with 76% and 17% among those in the healthiest quintile (Chandler and Tetlow, 2014). They also exit the labour force more quickly, as Figures 4.3 and 4.4 show (for men and women, respectively). These figures show exits from paid work for five groups of people initially aged 50–59, where these groups are defined based on the 'health index' described in Section 3.4. The quintiles are defined based on all individuals between the ages of 50 and 59, regardless of whether or not they are working.

Of men who are initially working and who are among the least healthy fifth within their age group, 70% had exited work 10 years later, compared to around 50% for those who were initially healthier. There is little difference between the exit rates among the healthier four groups. The difference between the least healthy quintile and the rest is broadly similar for women.

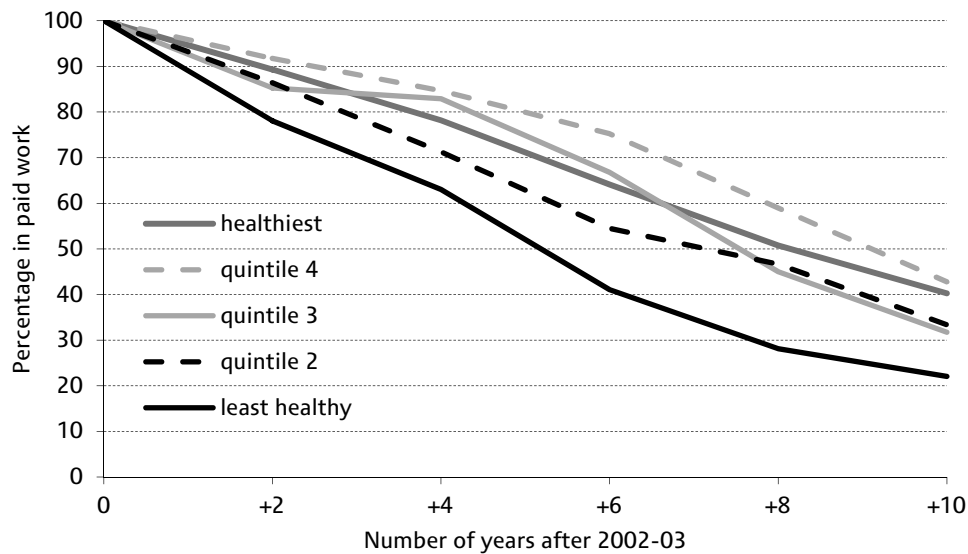
Figure 4.3. Exits from paid work, by initial health (men aged 50–59)



Note: Sample is restricted to the 'balanced panel' only (i.e. core wave 1 members who respond in all six waves). Weighted using wave 6 longitudinal weights.

Source: Authors' calculations using data from ELSA, 2002–03 to 2012–13.

Figure 4.4. Exits from paid work, by initial health (women aged 50–59)



Note: As Figure 4.3.

Source: As Figure 4.3.

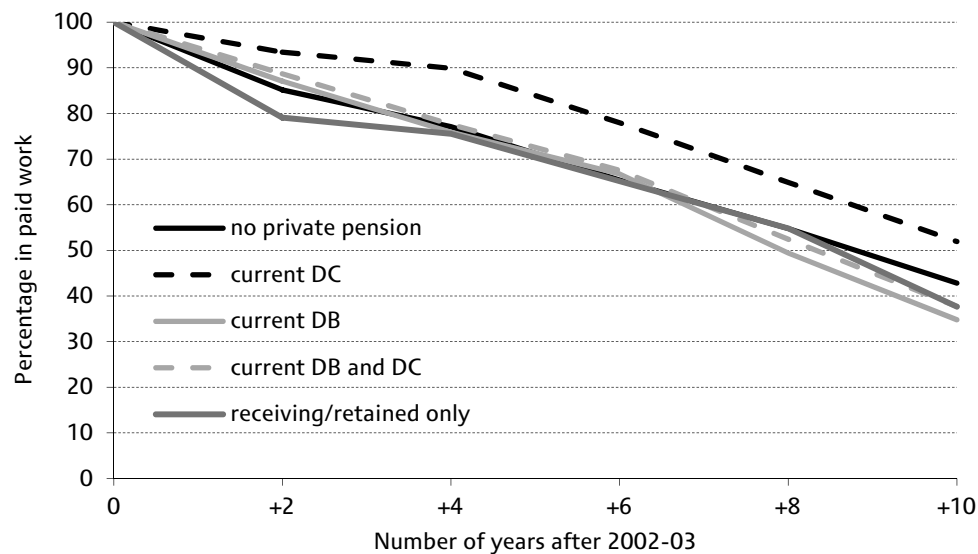
Private pensions and retirement

As described in Chapter 2, different types of private pensions provide different incentives to retire at different ages. Figure 4.5 shows that there is indeed some variation in the patterns of exit from work across individuals with different types of pension.²⁴ In the figure, individuals are divided into those with no private pension at all, those with a defined contribution pension that they are currently contributing to (or could contribute to), those with a defined benefit pension scheme that they are currently contributing to (or could contribute to), those with both types of current private pension, and those who have no current pension but do have a pension from which they are already receiving an income or in which they have retained rights.

There are some notable differences in the rate at which people exit work depending on their private pension status. Figure 4.5 shows that, over a 10-year period, those who only had a defined contribution pension or no private pension at all were the least likely to retire. In contrast, those with a defined benefit pension were the most likely to retire. Of those who were initially working and aged 50–59, 52% of those with only a defined contribution pension were still working 10 years later, compared to 43% of those with no private pension, and 35% of those with only a defined benefit pension. We explore the relationship between pension incentives and retirement in more depth in the next section.

²⁴ Due to the small sample size (<30) for men in the 'current DB and DC' group, we have grouped men and women together. Separate data for groups >30 are displayed in Figures B.3 and B.4.

Figure 4.5. Exits from paid work, by private pension status (men and women aged 50–59)



Note: A current pension is defined as a private pension to which an individual (or their employer) is contributing or to which they could contribute if they wanted. Pensions whose status (current, receiving or retained) is unknown, or where individuals have transferred their rights to another scheme or stopped receiving a pension from a given scheme, are excluded from the analysis. The sample here is restricted to the 'balanced panel' only. Weighted using wave 6 longitudinal weights.

Source: Authors' calculations using data from ELSA, 2002–03 to 2012–13.

Pathways to retirement

While Figures 4.1–4.5 tell us something about the rate at which older workers exit employment, they do not give a complete picture of the range of employment states which individuals can experience on their way to retirement. Table 4.1 looks at the employment experiences of those initially aged 50–59 who transition from being full-time employees to being inactive over a 10-year period. The columns do not sum to 100%, because one individual could experience more than one state on the way to retirement – such as a period of part-time work and a period of unemployment. Of those initially aged 50–59 in the first wave of ELSA who were working full-time, 50% of men and 65% of women had left work over the following 10 years. The statistics presented in Table 4.1 exclude those individuals who had not left work by 2012–13, and exclude anyone who was not working or was working part-time in 2002–03.

We find that, of those initially working full-time, just over a quarter will have a spell of part-time employment (or part-time self-employment), 5% will have a period of self-employment (either full- or part-time), and 7% will spend time unemployed. Two-thirds transition directly from full-time employment to inactivity. Women are more likely to spend a transitional spell working part-time. (This is in addition to the fact that the majority of working women aged 50–59 are already working part-time, and so are excluded from the sample analysed in

Table 4.1. Pathways to retirement, among those who are initially full-time employees

Percentage who experience the following states on their way to 'retirement'	Men	Women	All
Part-time employee	17	32	24
Full-time self-employee	3	1	2
Part-time self-employee	3	4	3
Unemployed	10	3	7
Full-time employee only	68	60	65
Sample	328	273	601

Note: The sample for analysis here is those people who are aged 50–59 and are full-time employees in 2002–03, who are not working in wave 6, and who are in the 'balanced panel' (i.e. respond in each of the six waves). The categories shown are not mutually exclusive, and do not sum to 100%. Unemployment is defined using self-reported status. 'Part-time' is defined as those working fewer than 30 hours a week. 'Full-time employee only' refers to going from being a full-time employee to inactivity, and not returning to paid work over the period. Figures are weighted using longitudinal weights.

Source: Authors' calculations using data from ELSA, 2002–03 to 2012–13.

Table 4.1.) Women are also less likely than men to experience a period of self-employment or unemployment.

4.2 Reducing hours of work

In Section 4.1, we have shown that a significant minority of those who 'retire' from full-time work experience a period of part-time employment or self-employment before stopping work altogether. In this section, we look in more detail at whether and to what extent individuals reduce their hours of work towards the end of their careers. We look at what types of individuals are more likely to cut their hours of work and whether this happens within the same job or by people moving to a new job. We draw heavily here on, and reproduce analysis from, Banks, Blundell and Emmerson (2012). We focus here just on those people who are observed working in two consecutive waves of the ELSA survey.

Univariate analysis of reductions in hours of work

Of those initially aged between 50 and 69 who are still in work two years later, the average change in hours worked is a reduction of 1.73 hours a week, as Table 4.2 shows. This is a reduction from initial average weekly hours of 35.2. The average decline in hours worked is slightly larger among men (2.05) than women (1.45), although from a higher initial level (40.9 hours a week, compared to 29.9 hours).

There is, however, considerable variation around this mean change. As Table 4.3 shows, a significant minority of those who stay in work actually increase their hours of work, rather than reduce them, as they get older. For example, among all

Table 4.2. Hours and changes in hours worked among those aged 50–69

Hours per week	Initial hours	Change in hours	Sample size
All	35.2	–1.73	7,544
Of which:			
Stay in same job	35.0	–1.13	5,980
Move job	35.8	–4.03	1,564
Of which:			
Move to self-employment	37.2	–8.51	197
Remain employee	35.6	–3.38	1,367
Of which:			
Same employer	36.6	–2.28	408
Change employer	35.1	–3.85	959
Men	40.9	–2.05	3,604
Of which:			
Stay in same job	41.0	–1.26	2,800
Move job	40.4	–4.78	804
Of which:			
Move to self-employment	41.3	–9.66	123
Remain employee	40.2	–3.90	681
Of which:			
Same employer	40.9	–3.05	178
Change employer	40.0	–4.19	503
Women	29.9	–1.45	3,940
Of which:			
Stay in same job	29.7	–1.02	3,180
Move job	30.9	–3.23	760
Of which:			
Move to self-employment	30.4	–6.59	74
Remain employee	31.0	–2.87	686
Of which:			
Same employer	33.3	–1.68	230
Change employer	29.8	–3.47	456

Note: Based on changes in hours worked between consecutive waves of ELSA, using waves 1–5. Sample is all aged 50–69 who are employees at baseline and are still working at the next wave. Source: Table 3a of Banks, Blundell and Emmerson (2012).

Table 4.3. Distribution of change in hours worked, those aged 50–69

% of sample	Change in hours					Sample size
	≤-5	-4 to -2	-1 to +1	+2 to +4	≥5	
All	24.3	9.0	45.1	8.0	13.7	7,544
Of which:						
Stay in same job	20.6	9.1	49.7	7.9	12.7	5,980
Move job	38.1	8.6	27.5	8.2	17.5	1,564
Of which:						
Move to self-employment	55.3	4.1	11.7	4.6	24.4	197
Remain employee	35.6	9.3	29.8	8.8	16.5	1,367
Of which:						
Same employer	25.7	8.1	42.9	8.8	14.5	408
Change employer	39.8	9.8	24.2	8.8	17.4	959
Men	26.7	8.8	42.1	8.0	14.4	3,604
Of which:						
Stay in same job	22.3	9.1	46.8	8.1	13.6	2,800
Move job	42.0	7.6	25.6	7.6	17.2	804
Of which:						
Move to self-employment	55.3	4.1	12.2	7.3	21.1	123
Remain employee	39.6	8.2	28.0	7.6	16.4	681
Of which:						
Same employer	29.8	7.9	43.3	7.9	11.2	178
Change employer	43.1	8.3	22.7	7.6	18.3	503
Women	22.0	9.1	47.8	8.0	13.1	3,940
Of which:						
Stay in same job	19.2	9.0	52.2	7.7	11.9	3,180
Move job	33.9	9.7	29.5	8.9	17.9	760
Of which:						
Move to self-employment	55.4	4.1	10.8	0.0	29.7	74
Remain employee	31.6	10.3	31.5	9.9	16.6	686
Of which:						
Same employer	22.6	8.3	42.6	9.6	17.0	230
Change employer	36.2	11.4	25.9	10.1	16.4	456

Note: Based on changes in hours worked between consecutive waves of ELSA, using waves 1–5. Sample is all aged 50–69 who are employees at baseline and are still working at the next wave. Source: Table 3a of Banks, Blundell and Emmerson (2012).

those aged between 50 and 69 who remain in work, just over one-in-five (21.7%) increase their hours of work by at least two hours per week. This compares to one-third (33.3%) who reduce their weekly hours of work by two hours or more. Women are slightly more likely than men not to change their hours of work – 47.8% of women who remain in work report a change of no more than one hour per week, compared to 42.1% of men.

Tables 4.2 and 4.3 also show that changes in hours of work appear to be associated with changing jobs. Of those who remain in work, one-in-five changes job.²⁵ Of those who change jobs, almost three-in-four change their hours of work, compared to half of those who remain in the same job. On average, those who change jobs reduce their hours of work by more than those who stay in the same job (an average reduction of 4.03 hours a week, compared to 1.13 hours). The average reduction in hours is even larger among those who move to self-employment (8.51 hours, or a reduction of 23% in initial working hours), and particularly so for men who move to self-employment (9.66 hours, which again equates to a 23% reduction).

The data presented here are based on the behaviour of older people between 2002–03 and 2010–11. This predates the recent extension of the right for all workers to request flexible working arrangements from their employer, which until June 2014 was only available to those with dependent children. It will be important to monitor what effect this new provision has on older workers' hours of work and movement between jobs and employers.

Table 4.4 shows an alternative way of looking at the relationship between reductions in hours worked and job changes. This table shows the prevalence of reductions in hours worked conditional on someone changing jobs or not, and vice versa. There are interesting differences between those with different levels of education. Among those who reduce their hours of work by five or more hours per week, one-in-three are seen to change jobs at the same time. However, this is more common among those with the lowest levels of education than the highly educated. As Table 4.4 shows, 35% of those with low education who reduced their hours also changed jobs, compared to 30% of those with high education.

Among those who do not move jobs, just over one-in-five (21%) reduce their hours of work. This is much more common among the high educated (26%), than among low or mid educated people (18% and 17%, respectively).

These results are suggestive evidence that those with high education may have greater opportunities to negotiate a reduction in their hours of work while remaining with their current employer, while those with low education may have to have to seek a new job in order to reduce their hours (with all the associated costs of changing jobs).

²⁵ A job change is defined as either changing employer or changing the role carried out for the same employer.

Table 4.4. Job moves and changes in hours worked, by education level (all aged 50–69)

	All	Low education	Mid education	High education
A: Stay, no reduction in hours	62.9	65.9	65.3	58.7
B: Move, no reduction in hours	12.8	12.1	14.1	12.3
C: Stay, reduce hours	16.4	14.4	13.5	20.2
D: Move, reduce hours	7.9	7.6	7.1	8.8
	100.0	100.0	100.0	100.0
Probability of:				
Moving, given no reduction $B/(A+B)$	0.17	0.16	0.18	0.17
Moving, given reduction $D/(C+D)$	0.33	0.35	0.34	0.30
Reduce hours, given no move $C/(A+C)$	0.21	0.18	0.17	0.26
Reduce hours, given move $D/(B+D)$	0.38	0.38	0.33	0.42

Note: Based on changes in hours worked and job changes between consecutive waves of ELSA, using waves 1–5. Reduction in hours is defined as a reduction in usual hours of five or more per week. A job move is defined as any change in job, whether at the same employer, a move to a different employer or a move to self-employment. Sample is all aged 50–69 who are employees at baseline and are still working at the next wave.

Source: Table 1b of Banks, Blundell and Emmerson (2012).

Multivariate analysis of reductions in hours of work

Tables 4.2–4.4 present some interesting descriptive analysis, highlighting the correlation between changes in job (in particular, moves to self-employment) and reductions in hours, and how these vary between men and women and for those with different levels of education. However, some of these factors may be correlated with one another (e.g. men are more likely to move into self-employment). So, in Table 4.5 we present results from a multivariate analysis of the factors associated with reducing hours of work.

The table shows that those who are older are more likely to reduce their hours of work than younger individuals – for example, each additional year of age is associated with a 0.20 hour per week reduction in hours for men and 0.31 hour per week reduction for women, among those who remain in paid work. Even controlling for other factors, those with high levels of education are more likely than the low-educated to reduce their hours of work. However, looking at the subgroups, this effect is only statistically significant for women and those in their 50s. The physical nature of the job – whether it is sedentary, standing or physical – is not found to be significantly associated with changing hours of work.

Changing jobs and changing employer are found to be statistically significantly associated with a reduction in hours worked, after controlling for a range of other factors. Across all those aged between 50 and 69 who remained in work, those who changed job on average reduced their hours of work by 1.29 hours per week more than those who did not change job. Those who also changed employer reduced their hours of work by a further 1.46 hours per week on average, while those who moved to self-employment reduced their hours by an additional 4.44 hours a week. The association between changing employer and reductions in hours is only statistically significant for women and those with low education, while the association with moving to self-employment is only statistically significant for the highly educated and not for the low- and mid-educated. Highly educated individuals achieve a drop in hours worked of 9.22 hours per week when they move to self-employment.

These results raise some interesting questions, which we cannot definitively answer with the analysis presented here, but should be priorities for further research. The low-educated are only found to reduce their hours of work when they change their employer; an interesting question is whether this reflects a choice on the part of employees or reflects rigidities in the labour market – that low-educated employees are unable to negotiate desired reductions in hours with their own employer.

Table 4.5. Multivariate models for change in weekly hours

	All	Men	Women	50–59	60–69	Low education	Mid education	High education
Female	0.71	–	–	1.34**	–5.50**	–0.69	1.60*	1.28
Age – 50	–0.18**	–0.20**	–0.31***	–0.12	–0.40**	–0.38***	–0.09	–0.12
60 ≤ Age ≤ 69	–0.69	–0.58	1.02	–	–	1.03	–1.79	–0.92
Age * Female	–0.15	–	–	–0.28**	0.49*	0.21	–0.24*	–0.37*
Mid education	0.02	–0.03	0.05	0.15	–0.34	–	–	–
High education	–0.90***	–0.44	–1.44***	–0.81**	–1.04	–	–	–
Poor health	0.21	0.20	0.22	0.21	0.14	–0.55	0.77*	0.28
Standing job	–0.01	0.31	–0.16	0.05	–0.06	0.49	0.57	–0.77
Physical job	0.17	0.24	0.29	0.20	0.12	0.22	0.13	0.44
Any job change	–1.29**	–2.03**	–0.74	–0.93	–3.47**	–1.51	–1.51*	–0.99
Change employer	–1.46**	–0.91	–1.83**	–1.13*	–2.04	–2.66**	–0.53	–1.33
Move to self-employment	–4.44***	–5.28***	–3.00**	–2.64***	–8.36***	1.89	–0.25	–9.22***
Constant	–0.37	–1.34	1.01	–0.78	1.78	0.94	–1.21	–1.59*

Note: Columns of the table correspond to subsample models. All models include controls for marital status and an interaction between female and the indicator for age being between 60 and 69. Sample is all aged 50–69 who are employees at baseline and are still working at the next wave. *, ** and *** denote that a coefficient is statistically significantly different from zero at the 10%, 5% and 1% levels, respectively.

Source: Tables 5a and A1 of Banks, Blundell and Emmerson (2012).

4.3 Returning to the labour market

In most of this report we have focused on whether or not people are in paid employment, taking inactivity in this sense as a proxy for retirement. However, some older people do return to work after periods of inactivity. In this section we examine how common it is for older people to return to work, and whether this is correlated with any particular characteristics. Meghir and Whitehouse (1997) provide an examination of this question using earlier data from the 1988–89 British Retirement Survey. Kanabar (2013) provides further analysis using the first four waves of ELSA.

We find that 4.3% of those aged between 50 and 69 who are inactive return to work over a two-year period, as Table 4.6 shows. As one would expect, the probability of returning to work declines significantly with age: 11.1% of those initially aged 50–54 and not working were in work two years later, compared to 1.8% of 65–69 year olds.

Men are more likely than women to enter work after a period of inactivity at older ages, with the proportion who return to work between waves at 5.3% and 3.6%, respectively. In addition, we find that higher levels of education are correlated with a greater chance of returning to work among both men and women, although the relationship for men is not monotonic.

We also find that the employment and caring status of partners is significantly correlated with the chances of returning to work after a period of inactivity. Among those with a partner in continuous employment, 10.7% return to work, and this increases to 18.8% among those whose partner starts working between periods. This compares to just 3.2% among those with no partner, and 2.2% among those whose partner is inactive in both periods. Those whose partner is receiving care are also less likely than other people with partners to return to work, 2.3% compared to 5.1% across all those with a partner who does not receive care.

We might also expect the likelihood of returning to work to depend on an individual's health. However, we also know that health declines with age. Figures 4.6 and 4.7 show the prevalence of returns to work among those with different levels of health. For the purposes of these figures, health quintiles are defined across all those aged 50–69. This is done (rather than defining health quintiles within age group) so that we can compare entry rates across different age groups for people with broadly similar levels of health.

These figures show that, for both men and women, the probability of returning to work generally increases with initial health level, although the healthiest quintile is typically found to be less likely to return to work than those in the fourth quintile. This pattern holds for most age groups. For example, 21% of 55–59 year old men who are not working and are in the second healthiest quintile had entered work within two years, compared to 3% among the least healthy and

Table 4.6. Pathways to retirement: proportion of those aged 50–69 who are not working and return to work in the subsequent wave

	Men	Women	All	Sample size
Initial age				
50–54	12.2	10.5	11.1	857
55–59	11.4	6.1	8.0	2,301
60–64	4.6	3.0	3.6	4,154
65–69	2.3	1.3	1.8	5,132
Partner work status				
No partner	4.2	2.6	3.2	3,728
Starts working	20.3	17.6	18.8	160
Stops working	5.0	3.7	4.2	693
Keeps working	13.7	8.8	10.7	1,945
Continues not working	2.8	1.7	2.2	5,813
All with partner	5.2	3.5	4.5	8,835
Education				
Low	3.3	2.7	2.9	5,329
Mid	6.0	3.8	4.6	3,646
High	6.7	4.8	5.7	3,438
Partner care status				
Partner, no care	6.6	4.3	5.1	7,015
Partner receives care	2.7	1.9	2.3	1,929
All	5.2	3.5	4.2	12,444

Note: The listed sample is all those who are ‘inactive’ in one wave and report their status in the next wave, summed across all six waves. Results are pooled across all six waves to give a larger sample size. The sample is slightly smaller for results split by education because those who are still in education are excluded.

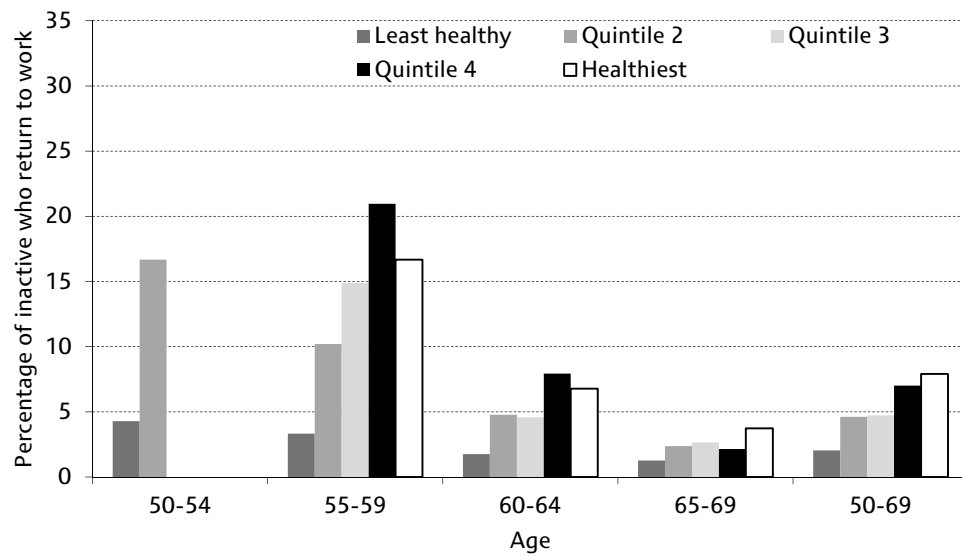
Source: Authors’ calculations using data from waves 1–6 of ELSA.

17% among the most healthy. The average entry rate for men aged 55–59 is 11% (shown in Table 4.6).

Figures 4.6 and 4.7 also highlight the additional relationship between age and the probability of returning to work, even conditional on initial health level. For people of broadly the same health (i.e. within the same health quintile), the probability of returning to work from one wave to the next declines significantly with age. For example, a man aged 55–59 who is among the healthiest fifth of the population has a 17% chance of returning to work, compared to a 4% chance for men aged 65–69 with a similar level of health.²⁶

²⁶ Although men in the top health quintile aged 65–69 are more likely to experience a deterioration in their health between periods than those aged 55–59 (35% compared to 32%), this difference is too small to explain the difference in the likelihood of returning to work.

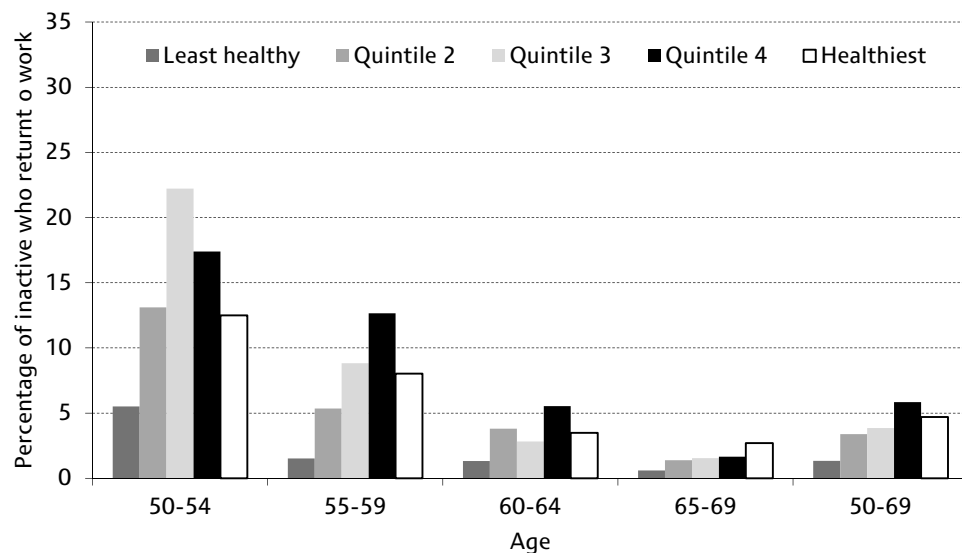
Figure 4.6. Returns to work by initial health status and age, men



Note: Sample is all those who are 'inactive' in one wave and report their status in the next wave. Results are pooled across all six waves to give a larger sample size. No result is reported for men aged 50–54 in the third, fourth and fifth health quintiles because of insufficient sample size. Health quintiles are defined across the 50–69 age group across all waves, such that an individual in the 'least healthy' quintile in a given period is among the least healthy 20% of all respondents aged between 50 and 69 across six waves of ELSA.

Source: Authors' calculations using data from ELSA, 2002–03 to 2012–13.

Figure 4.7. Returns to work by initial health status and age, women



Note: As Figure 4.6.

Source: As Figure 4.6.

Finally, we can look at how a change in one's health status affects the chances of returning to work. A change in health is defined as moving to a different quintile of the health distribution from one wave to the next. Table 4.7 shows that those who experience a change in their health (either an improvement or a deterioration) are more likely than those who experience no change to re-enter work at the same time. The group with the highest probability of moving into work are those who experience a health improvement. The observation that those who experience health deterioration are more likely than those who experience no change in their health to have entered work is, perhaps, surprising. We cannot, from this simple analysis, identify the direction of causation. That is, it could be that a change in health leads people to start working, or that starting work causes a change in health, or there could be some third factor associated with both. The effect of work on health at older ages is a topic of much debate in the literature, with some papers concluding that retirement is harmful to health (Casscells et al., 1980; Gonzales, 1980; Minkler, 1981), while others conclude the reverse (Ekerdt, Bosse and LoCastro, 1983; Charles, 2002; Neuman, 2008; Coe and Lindeboom, 2008; Coe and Zamarro, 2011). We leave a more complete examination of this question in the UK for future research.

Table 4.7. Returns to work by change in health status (ages 50–68)

	Men	Women	All	Sample size
No change	5.3%	3.3%	4.1%	6,464
Deterioration	7.0%	4.4%	5.3%	2,243
Improvement	7.0%	5.9%	6.3%	1,637
All	5.9%	4.0%	4.7%	10,344

Note: As Figure 4.7. We exclude those who turn 70 or over between waves because we have defined health quintiles among the 50–69 age group only (this means we do not include anyone initially aged 69, and exclude some people initially aged 67 and 68). As a result, the sample is smaller than that reported in Figure 4.7. The results reported in the 'All' row are slightly higher than the results in the 'All' row in Table 4.6, which likely reflects the fact that the oldest people have been excluded in this analysis.

Source: As Figure 4.7.

4.4 Summary

It is widely acknowledged that retirement is increasingly becoming a gradual process rather than a discrete event. In this section we have used the detailed longitudinal information available from ELSA to look at three aspects of individuals' varied transitions into retirement: exiting work, reducing hours and returning to work.

The rate at which individuals exit employment is affected by their health and pension status. Those in worst health who are still working at age 50–59 (already fewer than half of those in worst health) are much less likely to be in work 10 years later than those who are in better health. Pension membership also seems to affect the pace of exit from work, with individuals who only have a current defined contribution pension much more likely to be in work 10 years later than those who only have a defined benefit pension.

Reducing hours of work seems to be more common among those who change jobs (either within the same employer or by also changing employer) than among those who remain in the same job. For educated people, switching to self-employment, in particular, is associated with a large and significant cut in average hours of work. This sheds some interesting light on the growing role of self-employment among older people over recent years.

Finally, we demonstrate that 'retirement' is far from an absorbing state: many people in their 50s, and even some in their 60s, return to work after a period out of the labour market. The likelihood of returning to work after a period of inactivity is higher among those whose partner is in paid work and those with more education and, unsurprisingly, is lower among those with worse health.

5. Conclusion

Employment rates among those aged 50 and over have undergone significant change over the past 50 years. From the 1960s to the mid-1990s, employment rates among older men declined dramatically. For example, 80% of men aged 60–64 were in paid work in 1968, compared to just 43% in 1993. From the mid-1990s, employment among older men increased steadily, falling only slightly during the recent recession – though remaining significantly below levels in the late 1960s. Employment among older women, however, has increased almost continuously throughout this period, and if anything the rate of increase among older women has been slightly higher since the 1990s.

Explanations for the initial decline in male employment to the mid-1990s can be broadly grouped into factors affecting the demand for and supply of older workers. On the demand side, the recessions of the early 1980s and (to a lesser extent) early 1990s had a lasting effect on employment rates. In addition, falling demand for low-skilled relative to high-skilled workers had a large impact on older people who typically had lower levels of education than younger people, while older men were also affected by shifts in industrial composition from manufacturing to services. On the supply side, rising coverage of occupational pensions, combined with employers' use of generous early retirement packages, may have contributed to the trend towards earlier retirement, while disability benefits increasingly seem to have served as an alternative route to early retirement.

For women, these downward pressures were more than offset by substantially higher labour force attachment among successive cohorts of women. There was a particularly marked difference in labour force participation between those who entered the labour market after the significant reforms to equal pay and maternity provision legislation in the 1970s and those who had come before.

Explanations for the more recent rise in employment among older men (and the more rapid increase in employment among older women) can also be viewed in terms of demand and supply side factors. On the demand side, the continuing shift towards services may have increased employment opportunities for older workers, by increasing the availability of jobs that emphasise interpersonal skills and are less physically demanding, while changes in employment law may have made flexible working more widely available. On the supply side, rising wealth from pensions and other assets (particularly housing) might have been expected to reduce employment among older workers. As such, we have to turn to other factors in order to explain the more recent increase: in particular, continued improvements in health through the 1990s and 2000s, major reforms reducing the on-flow to disability benefits in 1995, and rising costs deterring employers from using generous early retirement packages.

Although there are a number of plausible explanations for the recent rise in employment among older people, in a number of cases these theories have not

yet been subjected to a more rigorous analysis. For example, evidence on the impact of reforms to disability benefits since the mid-1990s remains inconclusive; we are not aware of any detailed evidence documenting the shift away from generous early retirement packages used by employers; and there has been no thorough evaluation of the effect of anti-age discrimination legislation on employment in the UK.

While much of this report has focused on understanding long-term trends in the proportion of older people who are in some form of paid employment or self-employment, we have also sought to shed light on the varied ways in which individuals have been 'transitioning' into retirement in the 2000s. We find that almost a quarter of those who exit full-time employment experience a period of part-time work before they fully 'retire', while a smaller group will spend a period in self-employment. Reducing hours of work seems to be more common among those who change jobs (either with the same employer or by changing employer) than among those who remain in the same job. For educated people, switching to self-employment in particular is associated with a large and significant cut in average hours of work. Finally, we find that leaving paid work at older ages is far from an absorbing state: many people in their 50s, and even some in their 60s, return to work after a period out of the labour market.

A. Data

This report is based on data from three surveys: the Labour Force Survey (LFS), the Family Expenditure Survey/Expenditure and Food Survey (FES/EFS) and the English Longitudinal Study of Ageing (ELSA). In this Appendix, we briefly describe the surveys. Definitions of key variables are provided in the text.

A.1 Labour Force Survey

The LFS is a large quarterly survey of households living at private addresses in the UK, and it collects information on issues relating to the UK employment and the labour market. The LFS is intended to be representative of the whole population of the UK, and the sample design currently consists of around 44,000 responding households in every quarter. The LFS uses a rotational sampling design, in which a household is retained in the sample for a total of five consecutive quarters and is then replaced. Information about employment status is asked in each wave, but details of earnings and income are requested only in the first and fifth waves.

A.2 Family Expenditure Survey/Expenditure and Food Survey

The FES/EFS is an annual, cross-sectional survey that records detailed information on household and personal incomes and expenditure patterns for around 6,500 households. Surveys are conducted throughout the year. The data are collected by the Office for National Statistics (ONS). The Family Expenditure Survey (FES) ran from 1961–2001. From 2001, the FES and the National Food Survey (NFS) were replaced by a new survey, the Expenditure and Food Survey (EFS), which subsequently became the Living Costs and Food Survey (LCF) from 2008.

A.3 English Longitudinal Study of Ageing

ELSA is a longitudinal survey collected from a representative sample of the household population aged 50 and over in England. The survey contains a wealth of information, with a range of subjective and objective measures relating to, for example, work and retirement, incomes and wealth, health and disability, social interaction, and well-being.

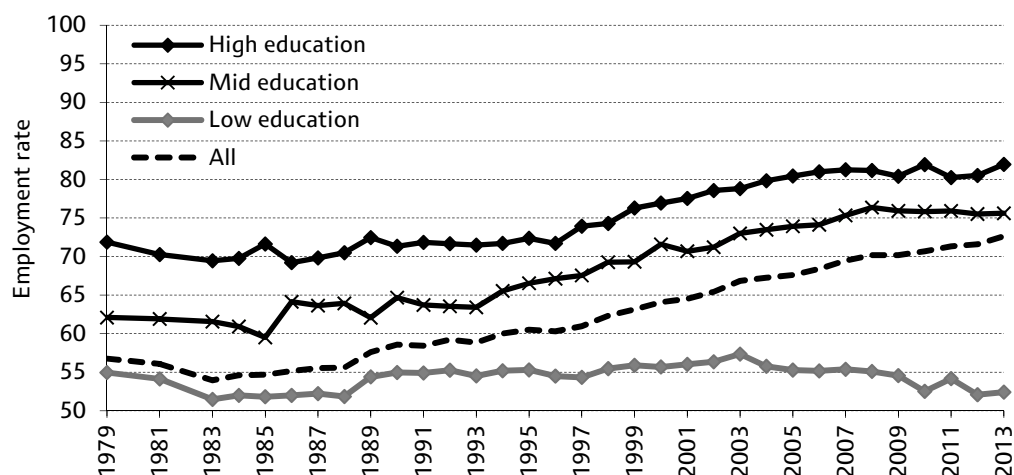
Six waves of ELSA data are now available, with data collected at two-year intervals between 2002–03 and 2012–13. The original core ELSA sample was drawn in 2002–03 in such a way as to be representative of the household population aged 50 and over. Since this first wave, there have been three ‘refreshment’ samples: a sample of people aged 50–53 in 2006–07 (wave 3); a sample of people aged 50–75 added in 2008–09 (wave 4); and a sample of people

aged 50–55 added in 2012–13 (wave 6). These refreshment samples aim to maintain a decent sample size because some participants have died or dropped out of the survey, and to add new cohorts at the youngest ages. It is worth noting that, in those years where there was not a ‘refreshment’ sample (2004–05 and 2010–11), the core sample will not include anyone aged 50–51, and is effectively representative only of the population aged 52 and over. Most of the analysis in this report uses all ‘core’ sample members from each wave for whom the relevant information (i.e. responses to particular questions) is available. For some analysis of retirement patterns, we focus our attention on respondents to wave 1 who continue to respond to the survey in each of the five subsequent waves.

Two types of analysis are possible using ELSA: cross-sectional and longitudinal. We use cross-sectional analysis in Chapter 2 in order to describe how employment rates, hours of work and earnings differ across various groups. In Chapter 4, we exploit the longitudinal dimension of ELSA in order to study the process by which individuals move from paid work to retirement. Most of the analysis is weighted using either cross-sectional or longitudinal weights (as appropriate), in order to ensure that the sample is representative of the population aged 50 and over.

B. Additional Figures

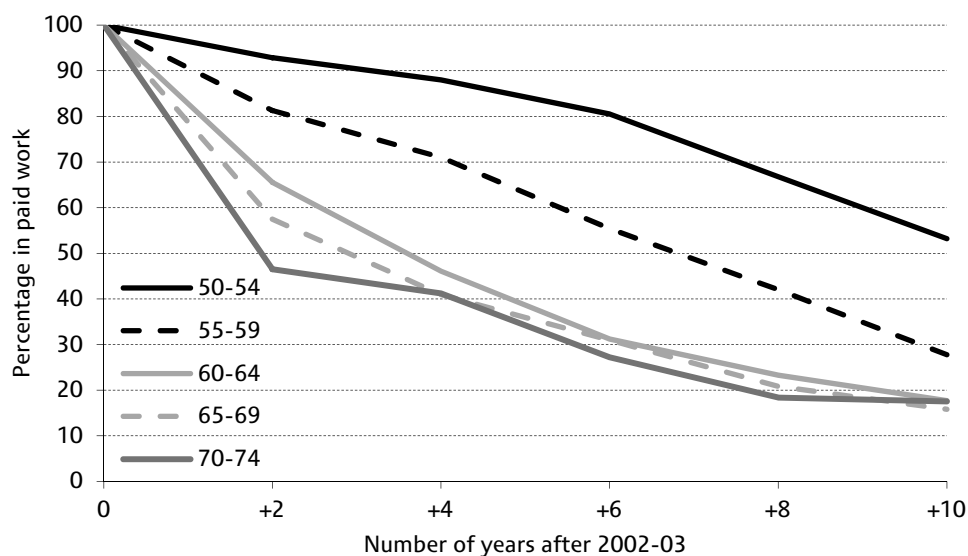
Figure B.1. Employment rates of older women, by education (women 50–59)



Note: As Figure 2.3.

Source: As Figure 2.3.

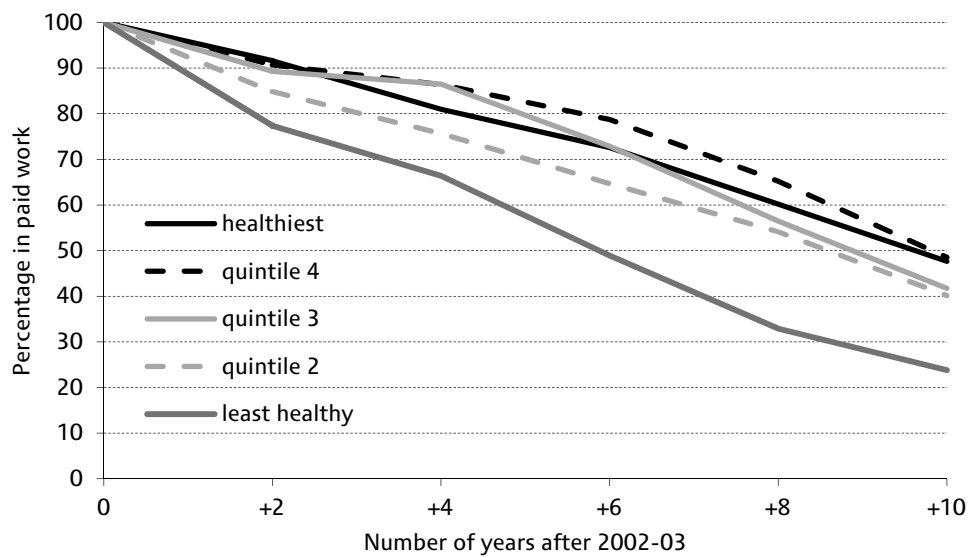
Figure B.2. Exits from paid work among men and women: percentage of those initially working who are still working in later years



Note: Sample is restricted to the ‘balanced panel’ (i.e. core wave 1 sample members who respond in all six waves). Weighted using wave 6 longitudinal weights.

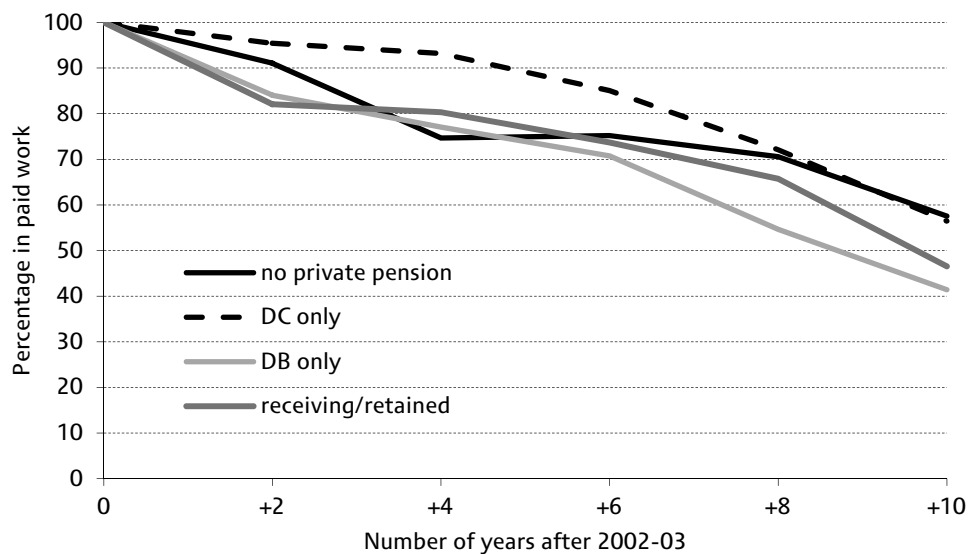
Source: Authors’ calculations using data from waves 1–6 of ELSA.

Figure B.3. Exits from paid work among men and women initially aged 50–59, by initial health



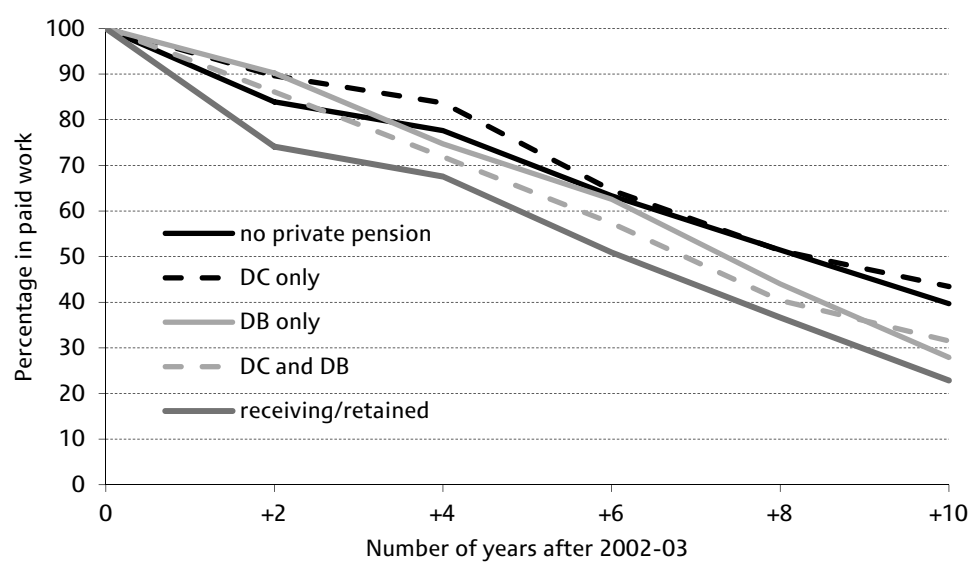
Note: Sample is restricted to the 'balanced panel' (i.e. core wave 1 sample members who respond in all six waves). Weighted using wave 6 longitudinal weights.
Source: Authors' calculations using data from waves 1–6 of ELSA.

Figure B.4. Exits from paid work among men initially aged 50–59, by private pension status



Note: Sample is restricted to the 'balanced panel' (i.e. core wave 1 sample members who respond in all six waves). Weighted using wave 6 longitudinal weights. No data are reported for the 'DC and DB' group because the sample is too small (<30).
Source: Authors' calculations using data from waves 1–6 of ELSA.

Figure B.5. Exits from paid work among women initially aged 50–59, by private pension status



Note: As Figure B.4.

Sources: As Figure B.4.

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