

2. Extending working lives

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The analysis in this chapter shows that:

- Employment at older ages has been increasing in recent years. Younger cohorts have higher employment rates at each age than their predecessors.
 - Most of this increase seems to have come from increases in full-time work rather than increased prevalence of part-time working.
 - Later cohorts are not only more likely to be in work in their 50s and early 60s than previous cohorts were, but also more likely to expect to continue to work at older ages.
 - Self-reported chances of remaining in work are strongly correlated with subsequent outcomes. This suggests that higher expectations of remaining in work amongst the later cohorts could well translate into higher employment rates at older ages in the future.
- One policy change that would be expected to encourage greater labour market participation beyond age 60 is the increase in the female State Pension Age from 60 to 65. However, the evidence here suggests that knowledge of this change is low amongst those who will be affected, though those who were working in 2006 were somewhat better informed than those not working.
- There is evidence that men, in particular, respond to the financial incentives for retirement provided in their private pensions. Analysis in this chapter shows that men (though not women) who are members of defined benefit pension schemes are more likely to quit full-time work than those who are members of defined contribution schemes.
- Pre-existing health conditions are not significantly associated with subsequent movements out of work. This is perhaps not surprising given that these individuals were working in spite of their health condition in the first place. However, the onset of new major health conditions is associated with a greater probability of leaving full-time work and a lower probability of ‘phasing’ retirement.
- There is evidence of complementarities in leisure amongst couples.
 - Individuals with working partners are significantly less likely to leave full-time work than those with non-working partners.
 - However, men whose partner then subsequently retires are much more likely to also leave full-time work.

- Those individuals of working age but out of work are more likely to return to work if their partner is working than if their partner is not working.
- Both men and women are more likely to be working after State Pension Age if their partner is working, regardless of the age of the partner.
- Those who re-enter work are much more likely to have only been out of work for a relatively short period of time. This is particularly true for men. Those who have been out of work for a long time are very unlikely to start working again.
- Work disability:
 - Amongst those working and not reporting a work disability, onset of work disability is higher for men, for part-time workers, for those with pre-existing major or minor health conditions, for those with the onset of a major condition and for those at the bottom of the wealth distribution.
 - Work disability is by no means a permanent state of affairs. Over one-quarter of those reporting a work disability in 2004 reported no work disability two years later. But ‘recovery’ from work disability is not random. Those who are working, those who have no major health conditions and those at the top of the wealth distribution are most likely to experience only transitory work disabilities.
 - Whilst it is true that work disability increases with age, even at older ages the proportions reporting that the degree to which their health limits ability to work is either severe or extreme are very low. Amongst those aged 70+, two-thirds say that they are either not limited or only mildly limited in the type or amount of work they could do.
 - There are strong patterns in individuals’ subjective assessments of work disability. Different socio-economic groups, and those with different health statuses, assess situations differently in terms of people’s ability to work. However, these reporting differences do not explain the socio-economic differences in work disability found above.

2.1 Introduction

Increasing life expectancies, the post-war ‘baby-boom’ generation reaching retirement age and declining birth rates mean that the UK, in common with other developed economies, faces the prospect of a rapidly growing aged population relative to the working-age population over the next few decades. However, it is well known that it is the economic dependency ratio – the ratio of economically inactive to economically active individuals in the population – rather than the old-age dependency ratio that plays a more central role in determining an economy’s ability to deal with the pressures of population ageing. As such, the participation of older working-age adults in the paid

labour market has become a policy issue of central importance. The government's commitment to Public Service Agreement 17 (to 'tackle poverty and promote greater independence and well-being in later life') explicitly recognises the employment rate of those aged between 50 and 69 as one of the key indicators of progress against this target.¹

The drivers of employment at older ages are complex. Important factors influencing participation in paid work at older ages include the financial incentives in both public and private pension schemes, wage opportunities and preferences for work. Wage opportunities and preferences for work may both be affected by health and physical and cognitive functioning because these may impact on an individual's mental and physical ability to do certain types of work. Understanding how policy can best support working at older ages requires an understanding of how these various factors affect the employment decisions of older workers and how they react to the incentives and constraints they currently face. With many policies aimed at improving the provision of retirement income and increasing participation in the labour market by older individuals coming into force over the next few years, now is a good time to take stock of what existing evidence from ELSA can tell us about patterns of work at older ages. This chapter sets out the key longitudinal patterns in work at older ages and the way these patterns link to health and functioning, job type and pension arrangements, socio-economic position and family circumstances.

Three elements of the ELSA data are particularly important in understanding work patterns for older working-age adults, and each of these is brought out in what follows. First, and crucially, ELSA is a longitudinal study and hence allows us to track trajectories over time, look at movements into and out of work with age, and control more successfully for unobserved differences between individuals (although, in this last dimension, the ELSA sample is still somewhat limited by covering only a relatively short period of time). Second, the detailed information on specific health conditions and subjective assessments of work disability (both of an individual's own situation and of hypothetical individuals) allow us to investigate the links between health and work in some detail. Finally, ELSA data are internationally comparable, which allows us to look at how outcomes in England compare with outcomes in other countries, where the various social and economic institutions may produce different incentives to remain in, or to leave, paid work.

Section 2.2 presents the evidence from ELSA on how the cross-sectional employment rates and expectations of future working amongst those aged 50 and over in wave 3 compare with what was observed amongst those aged 50 and over in wave 1. Sections 2.3 and 2.4 use the panel element of the ELSA survey to examine the factors correlated with subsequent employment trajectories for those who were working or not working initially. Section 2.3 looks at the extent to which financial incentives, health, and socio-economic and family circumstances are associated with withdrawal from full-time work and, amongst those who leave full-time work, who it is that moves out of work entirely and who experiences a more gradual withdrawal from work (in other

¹ See annex C of HM Treasury (2007).

words, moving first into part-time work). Section 2.4 looks at the factors associated with returns to work at older ages and Section 2.5 looks specifically at the characteristics of those who remain in work beyond the State Pension Age (SPA).

One major factor that affects individuals' ability to work at older ages is their health. Section 2.6 therefore examines in greater detail the issue of work disability at older ages and looks at transitions in work disability and employment between 2004 and 2006. The section also considers whether the patterns observed in the data are affected by the nature of subjective reporting differences across individuals of different types. Section 2.7 concludes.

2.2 Cohort differences in working and expectations of working

Between the late 1960s and the mid-1990s, employment rates of older men declined in the UK – a pattern also seen in many other European countries and in the US (see Gruber and Wise [2007]). Since the mid-1990s, however, employment rates of older men in the UK have increased and this, coupled with higher labour market participation amongst later cohorts of women, means that employment rates of those aged over 50 have increased markedly over the last decade. This is a pattern not seen more generally in the population, with employment rates at younger ages not having increased as sharply over the same period (see, for example, Office for National Statistics [2007]). These patterns of employment rates for older individuals can also clearly be seen in the ELSA sample when comparing the wave 1 and wave 3 cross-sections. Table 2.1 shows that employment rates amongst men in the ELSA sample aged between 50 and 69 were higher in wave 3 than in wave 1 and that this is true within each five-year age group. The same is true for women aged between 50 and 64. These differences are statistically significant only for men and women aged between 50 and 64. Most of the increase in employment has come from increased participation in full-time work (that is, people working at least 30 hours a week) rather than from increased prevalence of part-time working amongst this age group. Employment rates amongst those over the SPA are discussed in more detail in Section 2.5.

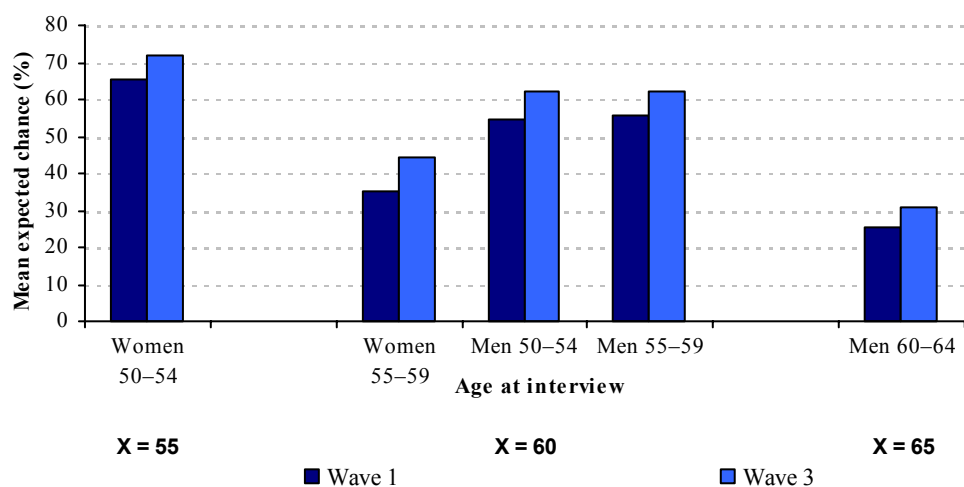
Notes to Table 2.1: Unweighted. Excludes some individuals who did not report hours worked.
^a The omission from the wave 3 sample frame of those born between 1 March 1952 and 28 February 1953 means that the employment rates reported for those aged between 50 and 54 in wave 3 are not directly comparable to the figures for wave 1. The omission of this group introduces three patterns of bias into the figures in this table. First, reported employment rates amongst those aged 50–54 are biased upwards (due to the omission of some of the oldest potential members of this group). Second, the average employment rates reported for all those aged under SPA are biased downwards – this is because the 50- to 54-year-old age group, who have on average the highest employment rate, is weighted less heavily in this aggregate statistic because the sample size in this age group is smaller. Third, the average employment rate across all age groups is also downwardly biased, for the same reason.

Table 2.1. Percentage in full-time and part-time paid work, wave 1 and wave 3, by age at interview and sex

	Wave 1 (2002–03)			Wave 3 (2006–07)			Wave 1 sample size	Wave 3 sample size
	Full- time	Part- time	All	Full- time	Part- time	All		
	%	%	%	%	%	%		
Men	33.7	6.5	40.2	36.3 ^a	7.2 ^a	43.5 ^a	5,127	4,154
50–54	78.7	4.6	83.4	82.3 ^a	4.4 ^a	86.7 ^a	883	678
55–59	65.5	7.3	72.8	69.4	8.0	77.4	1,003	827
60–64	37.2	9.9	47.1	44.7	11.5	56.2	790	705
65–69	6.9	8.9	15.8	7.1	11.1	18.2	797	566
70–74	2.8	7.3	10.1	3.2	6.3	9.5	672	536
75–79	2.0	2.8	4.8	1.0	5.4	6.4	497	391
80+	0.0	1.0	1.0	0.0	1.1	1.1	485	451
All men under SPA	61.5	7.2	68.7	65.5 ^a	8.0 ^a	73.5 ^a	2,676	2,210
All men over SPA	3.4	5.7	9.1	3.1	6.3	9.5	2,451	1,944
Women	15.6	15.4	31.0	17.7 ^a	16.6 ^a	34.3 ^a	6,166	5,099
50–54	45.0	29.6	74.6	48.8 ^a	30.0 ^a	78.8 ^a	1,068	929
55–59	32.1	28.3	60.4	34.6	31.1	65.6	1,156	940
60–64	9.4	19.9	29.3	13.7	22.0	35.7	869	765
65–69	2.3	10.3	12.6	1.8	10.2	12.0	906	650
70–74	0.4	3.8	4.2	0.7	4.9	5.6	795	609
75–79	0.3	1.3	1.7	0.8	1.0	1.7	595	525
80+	0.1	0.3	0.4	0.0	0.6	0.6	777	681
All women under SPA	38.3	28.9	67.2	41.6 ^a	30.6 ^a	72.2 ^a	2,224	1,869
All women over SPA	2.8	7.8	10.5	3.9	8.5	12.3	3,942	3,230
All	23.8	11.3	35.2	26.1 ^a	12.4 ^a	38.4 ^a	11,293	9,253
50–54	60.3	18.3	78.6	62.9 ^a	19.2 ^a	82.1 ^a	1,951	1,607
55–59	47.6	18.5	66.1	50.9	20.3	71.1	2,159	1,767
60–64	22.7	15.1	37.8	28.6	16.9	45.5	1,659	1,470
65–69	4.5	9.6	14.1	4.3	10.6	14.9	1,703	1,216
70–74	1.5	5.4	6.9	1.8	5.6	7.4	1,467	1,145
75–79	1.1	2.0	3.1	0.9	2.8	3.7	1,092	916
80+	0.1	0.6	0.6	0.0	0.8	0.8	1,262	1,132
All under SPA	51.0	17.0	68.0	54.5 ^a	18.3 ^a	72.9 ^a	4,900	4,079
All over SPA	3.0	7.0	10.0	3.6	7.7	11.2	6,393	5,174

Notes: See previous page.

Figure 2.1. Expectations of being in paid work after age X, wave 1 and wave 3, by age at interview and sex



Notes: Unweighted. Excludes those individuals who did not give a valid response to questions about expectations of working in future. The omission from the wave 3 sample of those born between 1 March 1952 and 28 February 1953 means that the ‘Women 50–54’ and ‘Men 50–54’ groups exclude those who were approximately age 54 at the time of the wave 3 interview.

Whilst these trends across time and between cohorts are also evident in other data, such as the Labour Force Survey,² one of the strengths of ELSA is that it allows an examination of how these trends are associated with individuals’ expectations. The differences in employment rates across the earlier and later cohorts have also been accompanied by differences in expected chances of continuing to be in employment at older ages. All respondents to ELSA aged under the SPA are asked what the chances are that they will be in work after they reach some age which is slightly above their current age. It is worth noting that for women aged between 55 and 59 and men aged between 60 and 64, this question asks about the chances that they will be working after reaching SPA. Figure 2.1 shows that, compared with the individuals of a particular age who were interviewed in wave 1, those of the same age interviewed in wave 3 (who were therefore born approximately four years later) on average reported significantly higher chances of being in paid work at older ages. For example, women aged between 55 and 59 in wave 1 reported on average a 35.3% chance of being in paid work after age 60, compared with an average reported chance of 44.2% for women aged between 55 and 59 who were interviewed in wave 3. The differences in mean expected chance between waves 1 and 3 shown in Figure 2.1 are statistically significant for all the groups.

Whether or not these higher reported expectations of remaining in work will actually translate into higher employment rates amongst future older individuals depends on the extent to which these expectations turn out to be correlated with outcomes. It is not, of course, yet known whether those

² See, for example, Office for National Statistics (2007).

interviewed in 2006–07 are right about their future chances of continuing to work, and these individuals could be subject to a variety of unanticipated events over the next few years that may change their plans for retirement. However, one can draw some inference about the relationship between expectations and outcomes from the employment outcomes of those who were interviewed in wave 1 and then followed up in wave 3.

In wave 1, four groups of respondents were asked to estimate what the chance was of their being in work after an age which they then ‘crossed over’ before they were interviewed again in wave 3. Table 2.2 shows the percentage of these groups who were in employment in wave 3 by their self-reported chances in wave 1 of being in paid work at age 55 (for women aged 51–54 in wave 1), age 60 (for men and women aged 56–59) or age 65 (for men aged 61–64). In wave 3, nearly three-in-five of those men who had been aged between 56 and 59 in wave 1 were actually in work. However, this proportion is much higher (about four-in-five) amongst those who in wave 1 reported more than a 60% chance of being in work beyond age 60 and much lower (only about one-in-nine) amongst those who had reported in wave 1 that there was no chance they would be in work after age 60. Similar patterns can be seen for the other groups. This suggests that expectations of working are strongly correlated with subsequent outcomes and so the higher expectations of working reported by the younger cohorts in ELSA (see Figure 2.1) may well translate into higher employment rates as they age than have been seen amongst their predecessors.

Table 2.2. Percentage in paid work in wave 3, by age in wave 1, sex and self-reported expectation in wave 1 of working at age 55/60/65

Participants in wave 1 who reach age 55/60/65, excluding proxies

Age at wave 1:	Men		Women		All
	56–59	61–64	51–54	56–59	56–59
	%	%	%	%	%
Chance of working after 55/60/65:					
0%	11.2	4.6	15.9	9.7	10.2
1–39%	34.4	22.1	45.2	33.3	34.0
40–60%	63.2	[36.1]	60.3	45.7	54.3
61–99%	83.1	[48.9]	87.8	67.3	76.5
100%	80.1	[52.2]	89.6	72.1	77.1
<i>All</i>	<i>58.0</i>	<i>20.4</i>	<i>69.5</i>	<i>36.5</i>	<i>46.6</i>
Sample size	521	416	701	594	1,115
<i>Mean chance reported in wave 1 of being in work after age 55/60/65</i>	<i>56.9</i>	<i>26.8</i>	<i>66.3</i>	<i>36.0</i>	<i>45.8</i>

Notes: Unweighted. Chance of working after age 55 shown for women aged 51–54 in wave 1, chance of working after age 60 shown for men and women aged 56–59 in wave 1 and chance of working after age 65 shown for men aged 61–64 in wave 1. Excludes those who did not report a chance of working in later life.

Knowledge of changes to the State Pension Age for women

One reason why the younger women in ELSA might expect to work for longer than the earlier cohorts of women is that they will be affected by the increase in the female SPA that will be phased in for those born between 6 April 1950 and 5 April 1955. Currently, the age at which a woman can start drawing her state pension is 60; this will increase for those born after 5 April 1950. Therefore, those women aged approximately 56 or under at the time of their 2006–07 interview may report higher chances of remaining in work at older ages because they know they will have to wait longer than older cohorts did before they can start drawing their state pension. However, factoring this into their work expectations requires that women are aware of the way in which they will be affected.

New questions included in the 2006–07 questionnaire probed the degree to which women were aware of the changes to the female SPA. Amongst those who will still have a SPA of 60 (that is, those born before 6 April 1950), knowledge of the true SPA is very high – four-in-five of these women knew that they would reach the SPA at 60 (see Table 2.3) and this proportion does not seem to vary according to whether women are working or not. The remainder of this age group either did not know what their SPA was or thought, incorrectly, that they would be affected by the increase in the female SPA. However, only about a third of those who will have a SPA of somewhere between 60 and 65 knew how they would be affected. This proportion is significantly higher (39.8%) amongst those who were in paid work than amongst those who were not working (of whom just 21.1% knew how they would be affected).³ One-in-three of those born between 6 April 1950 and 5 April 1955 thought that their SPA would still be 60, about one-in-six thought that their SPA would be increasing all the way to 65 and a further one-in-seven had no idea what their SPA would be.

For women born during this five-year period, working out exactly what their SPA will be is quite complicated – women born a month apart have SPAs that are a month different. So it is perhaps not so surprising that there is some uncertainty amongst this group about their true SPA. However, knowledge of the SPA does not seem to be much higher amongst those born after 5 April 1955, for all of whom the SPA will simply be 65. More women in this group either think their SPA will still be 60 or have no idea at all what it will be (43.4%) than actually know correctly that their SPA will be 65 (39.3%). As for the slightly older group, knowledge of the actual SPA is significantly higher amongst women who are in paid work than for those who are not: 42.9% of women in this age group who were in paid work know that their SPA will be 65, compared with just 26.5% of those not in paid work. Meanwhile, only 20.6% of those in paid work still think that their SPA will be 60, compared with 40.8% of those not in paid work. These findings are in line with other evidence on the knowledge of SPA changes amongst the women who will and will not be affected (Murphy, 2004).

³ These differences are predominantly offset by a correspondingly lower (higher) proportion of those in paid work (not in paid work) thinking that they will still be able to draw a state pension from age 60.

Table 2.3. Women’s self-reported State Pension Age, by actual State Pension Age and work status

Women aged under SPA in wave 3

	Self-reported State Pension Age:				Sample size
	Don’t know	60	Between 60 and 65	65	
	%	%	%	%	
Actual State Pension Age:					
Age 60	6.5	79.7	9.3	4.6	679
<i>Of which:</i>					
Working	6.7	79.2	9.5	4.6	432
Not working	6.1	80.6	8.9	4.5	247
Between 60 and 65	14.5	33.6	35.4	16.5	732
<i>Of which:</i>					
Working	13.9	30.3	39.8	16.0	561
Not working	16.4	44.4	21.1	18.1	171
Age 65	18.3	25.1	17.4	39.3	219
<i>Of which:</i>					
Working	17.1	20.6	19.4	42.9	170
Not working	[22.5]	[40.8]	[10.2]	[26.5]	49

Notes: Unweighted. Those with a SPA of 60 were aged between 56 and 59 when interviewed in wave 3; those with a SPA between 60 and 65 were aged between 51 and 57; those with a SPA of 65 were aged between 50 and 52. As discussed elsewhere, the wave 3 refreshment sample omitted those born between 1 March 1952 and 28 February 1953. These individuals have a SPA of between 62 and 63 – consequently, the ‘Between 60 and 65’ group shown in this table is not representative of all women whose SPA is between 60 and 65. However, given that this entire group is heterogeneous in terms of number of years away from SPA and degree to which they are affected by the SPA change, it is unclear that the omission of the one-year cohort results in a particular negative or positive bias to the distribution of reported knowledge shown here.

The analysis above shows that there are therefore some women who may be expecting to receive a state pension earlier than they actually will and who may therefore be underestimating the extent to which they will need to continue working.⁴ However, there is also another (albeit smaller) group who seem to be expecting to receive their state pension later than they actually will. This group may therefore be overestimating the extent to which they will need to continue working.

The value of longitudinal data in this context is that these women, who were and were not aware of changes being made to the SPA, will be followed through later working life and into retirement. Future waves will allow an examination of whether knowledge of the female SPA increases as women get

⁴ The higher SPA also means that women will continue to be able to accrue additional entitlement to state pension income after they reach age 60. Therefore, women who have not accrued full entitlement to state pensions by the age of 60 will experience a greater reward to working beyond 60, as well as potentially greater need to, than the cohorts who have a SPA of 60.

closer to retirement age, though of course all the women interviewed here are already no more than 15 years younger than SPA. Using future waves of the survey, researchers will also be able to examine whether or not (other things being equal) the outcomes for those with greater awareness differ from those for women with less awareness of these changes.

2.3 Why and how do older workers stop working?

A number of factors are likely to be important in determining when people choose to stop working. Knowing what factors influence individuals when they make decisions about work at older ages is important for assessing which policies might be most effective in encouraging older individuals to remain in or return to work. Furthermore, it is useful for predicting how older individuals will respond to changes that have already begun, such as reduced morbidity in younger old age, the changing generosity of state pensions and the greater labour force attachment of later cohorts of women.

Previous work using evidence from the UK and elsewhere suggests that, amongst other things, financial incentives, family and socio-economic circumstances, and health are all important in determining exactly when older people stop working (see, for example, Disney, Meghir and Whitehouse [1994] and Disney, Emmerson and Wakefield [2006]). With three waves of ELSA data, we have now observed individuals' work status over a four-year period and have sufficient observations of individuals moving between full-time work, part-time work and not working to begin to say something about what circumstances and events are associated with withdrawal from the labour market as people get older and (equally as important when considering the issue of extending working lives) what factors are associated with returning to work at older ages and remaining in work beyond the SPA. The latter are explored in Sections 2.4 and 2.5. The analyses in this section and Section 2.4 use as the baseline those who were observed in wave 1 in a particular state (specifically, working full-time for the analysis in this section and not working for the analysis in Section 2.4) and who were observed again in either or both of waves 2 and 3. The analyses in these two sections do not weight the data, as the multivariate specifications, in any case, control for the factors for which weights would seek to correct.

For the interested reader, Box 2.1 provides a brief description of the construction of some of the outcome measures and covariates included in the multivariate analysis presented in Sections 2.3–2.6 (focusing on those whose definition may not be immediately apparent). Those readers simply wishing to focus on the significant messages emerging from the analysis may skip this and move straight to the text surrounding the following tables.

Box 2.1. Outcomes and covariates

'Phased' retirement

We define individuals as having a 'phased' retirement if in either wave 2 or wave 3 they are observed to work part-time (having worked full-time in wave 1). To the extent that individuals have had part-time jobs between waves that we do not observe, this measure will be an underestimate of the number of individuals who have actually 'phased' their withdrawal from work. However, the number of respondents (at both waves 2 and 3) who reported having had another job between interviews, which was different from the one they were doing when last interviewed, is small. There may, of course, be some further individuals who reduced their hours while remaining in the same job. Further analysis of 'phased' retirement, including looking in more detail at the length of time individuals spend in part-time jobs, should be possible in the future using data from the ELSA retrospective interview.

BMI

We estimate wave 1 (or 'baseline') BMI by using a linear interpolation between the observed BMI at HSE and in wave 2 (accounting for differences in the length of time between the HSE and wave 2 interviews). In cases where an individual was not observed at either HSE or wave 2, we use the one available measure of BMI as 'baseline' BMI. Where change in BMI is controlled for, this is defined as the change between wave 1 and wave 2.

Education

We distinguish three categories of educational attainment. Low education refers to individuals who completed only the compulsory level of schooling (this varies slightly by age, due to historic changes in legislation). High education refers to those who remained in full-time education beyond age 18. Mid education covers all those not falling into the first two categories.

Pension types

We control for membership of and receipt from certain types of private pension schemes. Defined benefit (DB) pensions are those from which the pension ultimately received depends on some function of the tenure in the scheme and final salary. Defined contribution (DC) pensions are those from which the pension ultimately received depends on the value of contributions paid into the fund and the investment return on the fund.

Health

We focus in this chapter on doctor-diagnosed health conditions. Where sample sizes and incidence of health conditions are sufficiently large, we control for various types of conditions (such as cardiovascular disease [CVD], arthritis and osteoporosis) separately. In other cases, we simply include an indicator for having any doctor-diagnosed condition. We define having a condition as ever having reported the condition during an ELSA (or HSE) interview.

Self-reported work disability

Section 2.6 examines the issue of self-reported work disability. The measure used is yes/no responses to the question 'Do you have any health problem or disability that limits the kind or amount of paid work you could do, should you want to?'

Work disability vignettes

To assess the potential impact on self-reported work disability of differences in individuals' subjective assessment of work disability, 'anchoring vignettes' were introduced into the self-completion questionnaire for a random third of the ELSA sample at wave 3. Individuals were presented with scenarios about hypothetical people and asked to give an assessment of the degree to which the individual described is limited in the kind or amount of work that he or she can do. The response options are: not limited, mildly limited, moderately limited, severely limited and extremely limited.

Factors associated with leaving full-time work

Emmerson and Tetlow (2006) show that (without controlling for any other factors) of those who were in full-time work in wave 1, women and older individuals were more likely to move into part-time work or out of work altogether over the following two years than men or younger individuals. Table 2.4 presents multivariate analysis of characteristics associated with movements out of full-time work⁵ over the four-year period between wave 1 and wave 3. Two alternative specifications are shown – the left-hand panel includes only those characteristics measured in wave 1, while the right-hand panel includes in addition certain changes in status between wave 1 and wave 3. For example, one of the changes controlled for is whether an individual’s partner left work over this four-year period. These changes are likely to be jointly determined with the change in work status. For instance, the finding that those who experience the onset of a major health condition are more likely to have left full-time work (odds ratio of 2.307 in the fourth column) could reflect individuals leaving work in response to a deterioration in their health, but it could equally suggest causation in the other direction.

Table 2.4. Multivariate analysis of factors associated with leaving full-time work between wave 1 and wave 3

All aged under SPA working at least 30 hours per week in wave 1

	Baseline controls only		Including changes in status between wave 1 and wave 3	
	Odds ratio	p-value	Odds ratio	p-value
Women 50–54	2.853	<0.001	3.253	<0.001
Men 55–59	1.805	0.001	1.645	0.004
Women 55–59	2.781	0.001	3.115	0.001
Men 60–64	5.732	<0.001	4.779	<0.001
Reached SPA	3.312	<0.001	3.334	<0.001
Physically active job	0.893	0.42	0.902	0.47
Job tenure	1.018	0.002	1.015	0.008
Self-employed (women)	1.829	0.068	1.775	0.087
Self-employed (men)	0.930	0.73	0.976	0.91
Low education	1.093	0.60	1.045	0.80
Mid education	0.926	0.63	0.918	0.60
Couple	1.490	0.086	1.631	0.039
DB pension (women)	1.163	0.50	1.169	0.50
DB pension (men)	2.236	<0.001	2.227	<0.001

Continues

⁵ In this chapter, we define full-time work as being at least 30 hours a week. This is in contrast to the Census, which will define those working exactly 30 hours a week as being part-time rather than full-time.

Table 2.4 continued

	Baseline controls only		Including changes in status between wave 1 and wave 3	
	Odds ratio	p-value	Odds ratio	p-value
Past private pension (women)	0.913	0.81	0.844	0.66
Past private pension (men)	2.366	<0.001	2.471	<0.001
No private pension	1.211	0.35	1.174	0.44
Lowest wealth	0.704	0.16	0.714	0.18
Quintile 2	0.812	0.26	0.816	0.28
Quintile 4	1.128	0.47	1.144	0.43
Highest wealth	1.152	0.43	1.243	0.23
Mild CVD	1.152	0.26	1.113	0.42
Severe CVD	1.101	0.79	1.255	0.53
Arthritis / Osteoporosis	1.002	0.99	0.974	0.87
Asthma / Lung disease	1.073	0.70	1.150	0.45
Psychiatric problem	1.495	0.068	1.472	0.082
Other health condition	0.891	0.75	0.922	0.83
Underweight (BMI<20)	1.101	0.83	1.084	0.86
Overweight (BMI 25–29.9)	0.945	0.70	0.934	0.64
Obese (BMI 30+)	0.899	0.53	0.942	0.73
Partner working in wave 1	0.658	0.014	0.506	<0.001
Partner's age difference	1.020	0.21	1.011	0.50
Partner over SPA	0.619	0.072	0.615	0.072
Partner has a doctor-diagnosed health condition	0.866	0.29	0.823	0.17
Onset of major health condition			2.307	0.001
Onset of minor health condition			1.085	0.65
Change in BMI			0.972	0.62
Partner experiences onset of major health condition			1.055	0.86
Partner experiences onset of minor health condition			1.005	0.98
Partner retires (women)			1.345	0.31
Partner retires (men)			3.038	<0.001

Notes: Sample size = 1,634. Unweighted. Reference group is single men aged 50–54, sedentary job, not self-employed, with a defined contribution pension, middle wealth quintile, no health problems, normal weight (BMI between 20 and 24.9), and no health changes between 2002 and 2006. Minor health conditions comprise hypertension, diabetes and arthritis (although arthritis can be very serious in some cases, we have classified it here as a minor condition). Major health conditions comprise angina, heart attack, congestive heart failure, stroke, lung disease and cancer. Mild cardiovascular disease (CVD) covers hypertension, heart murmurs, abnormal heart rhythm and diabetes. Severe CVD covers heart attack, congestive heart failure and stroke. Odds ratios that are statistically significantly different from 1 at the 5% significance level are shown in bold. The bottom wealth quintile comprises those with total net benefit-unit non-pension wealth up to £15,000 (in 2002–03 prices); quintile 2 is £15,000–£92,000; quintile 3 is £92,000–£165,000; quintile 4 is £165,000–£292,000; quintile 5 is over £292,000.

In this multivariate analysis, and subsequent multivariate analyses in this chapter, where we found significant differences between men and women, we have included interaction terms between the characteristic and the sex of the individual – these interactions are indicated in the tables by the word ‘women’ or ‘men’ (as applicable) in parentheses after the variable name. All other potential interaction terms have been excluded.

The figures shown in the second and fourth columns of Table 2.4 are odds ratios relative to the reference group, which is single men aged between 50 and 54, with a high level of education, employed in a sedentary job, with a defined contribution pension, in the middle wealth quintile, with no health problems, of normal weight (Body Mass Index [BMI] between 20 and 24.9) and (for the fourth column) with no change in health or BMI between 2002 and 2006. So, for example, the figure of 2.853 in the first row of the second column indicates that women aged between 50 and 54 were nearly three times as likely as men of the same age to leave full-time work over the four-year period. The figures in the third and fifth columns show the p-values for these odds ratios. Odds ratios that are statistically significantly different from 1 at the 5% significance level are shown in bold in Table 2.4. This convention also applies to other tables in this chapter where odds ratios are presented.

Even after controlling for other characteristics, the higher likelihood of moving out of paid work for women and those who are older, which was found by Emmerson and Tetlow (2006), remains. When controlling only for characteristics measured in wave 1, women aged between 50 and 54 are found to be 2.9 times as likely as men of the same age to leave full-time work (and start working either part-time or not at all). Meanwhile, men aged between 60 and 64 are nearly six times as likely as men 10 years younger to do so.

As has been explored in more detail by Banks, Emmerson and Tetlow (2007), pension arrangements are significantly associated with exits from full-time work, particularly for men. Men with defined benefit pensions are more likely than men with defined contribution pensions (and those with no private pension) to leave full-time work. Banks, Emmerson and Tetlow (2007) show that individuals (particularly those in good health) respond to the financial incentives provided by state and private pensions, some of which provide strong incentives to retire at particular ages. That reaching the SPA is a strong predictor of exit from full-time work is likely to reflect both the financial incentives provided by receipt of the state pension and also social norms around SPA as an indicator of the appropriate age to retire.

Self-employed women are found to be more likely than employees to quit full-time work. However, controlling for other characteristics, self-employed men are no more likely to do so. This could reflect differences in the type of self-employment that men and women are engaged in and the type of work that self-employed women do compared with female employees.

Conditional on being in full-time work in 2002, pre-existing health conditions are not associated with a higher likelihood of leaving paid work. Furthermore, those who are overweight or obese are no more likely to leave full-time work – this is despite the fact that, in Chapter 7, Zaninotto, de Oliveira and Kumari show (unconditionally) that high BMI in wave 0 is associated with significantly greater onset of back pain and shortness of breath between waves

1 and 3, which might be expected to make working more difficult. However, those who experienced the onset of a major health condition between wave 1 and wave 3 were more than twice as likely to leave full-time work over that period. This is also consistent with the analysis of Chapter 3. As will be discussed in more detail in Section 2.6, the onset of major conditions is strongly associated with an increased likelihood of reporting having a work disability as well as with leaving work. However, the onset of minor conditions is not associated with an increase in reported work disability (see Section 2.6) or with an increased likelihood of leaving full-time work (see Table 2.4). There is also no significant relationship between partner's health or changes in partner's health and leaving full-time work. This was investigated separately for men and women but neither are found to be more likely to leave work if their partner becomes ill. This may reflect the offsetting demands of having an ill spouse: potentially, household income will have fallen and medical costs increased, requiring the individual to work more; on the other hand, there may be pressure to reduce hours of work in order to take on caring responsibilities.

We find here that simple indicators of changes in partner's health are not associated with changes in full-time working. We do not attempt to investigate further the issue of caring responsibilities (either caring for partners or caring for other dependent adults) and work patterns. Such considerations are likely to form an important part of the explanation for changes in work patterns at older ages, at least for some individuals. However, given the complex and conflicting pressures that dependent adults are likely to place on a family's time and resources, this issue is difficult to investigate without a more specific hypothesis about health and the demand for caring. Hence we leave this as a topic for future research focused specifically on this issue.

There is, however, evidence of complementarities in leisure within couples. Those who had a partner who was working in wave 1 and remained in work were significantly less likely to leave full-time work than those whose partner was not working. However, men whose partner retired between wave 1 and wave 3 were more likely to leave work than those whose partner had not originally been working. This suggests that partners tend to retire together. Further indications of this are provided in Section 2.4 (which shows that those with a working partner are also more likely to return to work) and were also found by Banks, Blundell and Casanova (2007), who show that men are more likely to retire when their wives reach the SPA in the UK than in the US.

Factors associated with 'phased' retirement

In recent years, part-time working has become more prevalent, though (as Table 2.1 shows) it remains far more common amongst women than amongst men. However, the proportion of workers working part-time as opposed to full-time increases with age, and beyond age 65 part-time work is more prevalent than full-time work for both men and women. Recent changes to legislation have attempted to make it easier for older workers to withdraw more gradually from paid work – notably the ability, since October 2006, for individuals to continue to work for an employer whilst being paid an occupational pension by that same employer.

Enabling older individuals to gradually reduce their hours of work may allow them to continue working for longer than would be the case if they were required to continue working full-time. It could therefore be a useful instrument in increasing the employment rate of older individuals. We now present some preliminary analysis of those who left full-time work between wave 1 and wave 3, to see what factors are associated with experiencing a ‘phased’ retirement. That is, we conduct a multivariate analysis of the factors associated with moving into part-time work prior to stopping paid work altogether as opposed to moving straight from full-time work to not working at all. In a similar way to Table 2.4, Table 2.5 presents odds ratios for whether an individual experienced a ‘phased’ retirement, conditional on them having left full-time work between wave 1 and wave 3. These are the odds of a particular group having a ‘phased’ retirement expressed relative to the odds amongst the reference group – single men aged between 50 and 54, with a high level of education, employed in a sedentary job, with a defined contribution pension, in the middle wealth quintile, with no health problems, of normal weight (BMI between 20 and 24.9) and (for the fourth column) with no change in health or BMI between 2002 and 2006. Odds ratios that are statistically significantly different from 1 at the 5% significance level are shown in bold in Table 2.5. The left-hand panel presents odds ratios controlling only for characteristics measured at wave 1; the right-hand panel additionally includes some measures of other changes that occurred between waves 1 and 3. As mentioned earlier, these latter characteristics are more likely to be jointly determined with the change in work status.

Table 2.5. Multivariate analysis of factors associated with ‘phased’ retirement

All aged 50 to SPA who left full-time work between wave 1 and wave 3

	Baseline controls only		Including changes in status between wave 1 and wave 3	
	Odds ratio	p-value	Odds ratio	p-value
Women 50–54	4.100	0.001	2.462	0.039
Men 55–59	1.014	0.97	0.984	0.96
Women 55–59	1.385	0.52	0.855	0.77
Men 60–64	1.149	0.77	1.202	0.71
Reached SPA	0.994	0.99	0.975	0.95
Physically active job (women)	2.004	0.11	1.934	0.14
Physically active job (men)	0.633	0.11	0.698	0.23
Job tenure	0.972	0.002	0.974	0.005
Self-employed	1.792	0.048	1.813	0.051
Low education	0.887	0.68	0.920	0.78
Mid education	0.783	0.36	0.781	0.37
Couple	1.376	0.40	1.297	0.51
DB pension	0.661	0.11	0.660	0.125
Past private pension	1.033	0.92	1.053	0.88
No private pension	0.950	0.88	1.056	0.87

Continues

Table 2.5 continued

	Baseline controls only		Including changes in status between wave 1 and wave 3	
	Odds ratio	p-value	Odds ratio	p-value
Lowest wealth	1.618	0.26	1.528	0.33
Quintile 2	0.777	0.45	0.743	0.39
Quintile 4	2.285	0.004	2.143	0.010
Highest wealth	1.508	0.17	1.389	0.29
Mild CVD (women)	1.232	0.54	1.614	0.19
Mild CVD (men)	0.661	0.12	0.614	0.089
Severe CVD	0.403	0.17	0.377	0.14
Arthritis / Osteoporosis	0.956	0.86	1.091	0.74
Asthma / Lung disease	0.548	0.059	0.474	0.026
Psychiatric problem	1.330	0.42	1.346	0.43
Other health condition	0.535	0.32	0.563	0.36
Underweight (BMI<20)	2.626	0.20	2.390	0.27
Overweight (BMI 25–29.9)	0.938	0.79	0.914	0.73
Obese (BMI 30+) (women)	0.392	0.025	0.310	0.008
Obese (BMI 30+) (men)	0.961	0.91	0.965	0.92
Partner working in wave 1	1.464	0.16	1.906	0.031
Partner's age difference	1.000	0.99	1.006	0.83
Partner over SPA	0.821	0.61	0.723	0.41
Partner has a doctor-diagnosed health condition	0.863	0.53	0.878	0.59
Onset of major health condition			0.336	0.009
Onset of minor health condition (women)			4.002	0.012
Onset of minor health condition (men)			0.606	0.22
Change in BMI (women)			1.295	0.076
Change in BMI (men)			0.766	0.074
Partner experiences onset of major health condition			1.748	0.23
Partner experiences onset of minor health condition			0.720	0.32
Partner retires between waves 1 and 3			0.584	0.062

Notes: Sample size = 551. Reference group and other notes as Table 2.4.

In keeping with the observation that (in cross-section) more women than men work part-time, Table 2.5 shows that women aged between 50 and 54 are more than four times as likely to phase their retirement as men of the same age. Emmerson and Tetlow (2006) found that, unconditionally, women aged 55–59 are more likely than men of the same age to phase their retirement. However, once we control for other characteristics in Table 2.5, we find no evidence that

the likelihood of a ‘phased’ retirement is any greater for women than for men in this age group.

Longer job tenure, perhaps reflecting that the job an individual was doing was their ‘career’ job, is associated with a lower probability of having a ‘phased’ retirement. This is a finding that may well, in the future, be affected by changes in policy that have now come into force. During the period covered by the first three waves of ELSA (2002 to 2006), individuals were not allowed to work for an employer who was paying them a pension. As mentioned above, this legislation was changed in October 2006. A key question will be whether, in future waves of ELSA, patterns of ‘phased’ retirement change as it becomes increasingly possible for individuals to cut back on hours of work whilst remaining with the same firm and drawing an occupational pension to supplement their earnings. The self-employed, who are likely already to have the greatest degree of control over the number of hours they work, are much more likely (about 1.8 times as likely as employees) to phase their retirement rather than leave paid work totally.

Virtually none of the health conditions considered in Table 2.5 (with the exception of asthma and lung disease) is significantly associated with being more or less likely to phase retirement, and nor is BMI amongst men. Amongst women, those who are obese are found to be less likely to phase their retirement. That most of the health conditions are not significantly related to gradual retirement is perhaps not surprising since all these individuals were working full-time in wave 1 in spite of these pre-existing health conditions. Therefore, in the absence of significant deteriorations in their health, it is not surprising that these individuals seem to behave in a similar way to initially completely healthy full-time workers. As we see in the right-hand panel of Table 2.5, however, just as the onset of a major health condition was found (in Table 2.4) to be significantly associated with moving out of full-time work, it is also associated with being more likely to quit work altogether rather than move into part-time work. Amongst women, however, ‘phased’ retirement is significantly positively related to the onset of minor health conditions (such as hypertension).

2.4 Why do older people go back to work?

With nearly four-in-ten men and nearly half of women aged between 50 and 69 out of work, encouraging and enabling individuals to go back to work will be as important as encouraging those in work to stay in work in the drive to raise employment rates amongst this age group. This section examines the factors associated with returning to work prior to SPA, while the next section examines the factors associated with working beyond the SPA.

Table 2.6 presents multivariate analysis of the factors associated with individuals entering work in their 50s and early 60s. Two alternative specifications are presented. The left-hand panel includes only covariates measured at wave 1. The right-hand panel includes the baseline characteristics plus measures of other changes that occurred between waves 1 and 3, which (as discussed above) are more likely to be jointly determined with the change in work status.

Table 2.6. Multivariate analysis of factors associated with returning to work between wave 1 and wave 3

All aged under SPA not working in wave 1

	Baseline controls only		Including changes in status between wave 1 and wave 3	
	Odds ratio	p-value	Odds ratio	p-value
Women 50–54	0.247	0.035	0.249	0.040
Men 55–59	0.865	0.72	0.900	0.80
Women 55–59	0.223	0.042	0.230	0.050
Men 60–64	0.609	0.38	0.584	0.35
Reached SPA	0.739	0.49	0.754	0.52
Low education	0.796	0.53	0.859	0.68
Mid education	0.980	0.95	1.021	0.95
Couple (women)	1.664	0.36	1.893	0.27
Couple (men)	0.521	0.19	0.674	0.44
Receiving private pension income	0.881	0.65	1.009	0.97
Lowest wealth	2.457	0.056	2.685	0.038
Quintile 2	2.249	0.074	2.322	0.067
Quintile 4	1.666	0.25	1.578	0.31
Highest wealth	1.521	0.34	1.478	0.38
Has a doctor-diagnosed health condition	0.863	0.56	0.813	0.43
Underweight (BMI<20)	0.289	0.26	0.295	0.27
Overweight (BMI 25–29.9)	1.278	0.40	1.157	0.62
Obese (BMI 30+)	0.859	0.64	0.843	0.61
Partner working in wave 1	3.135	<0.001	3.319	<0.001
Partner’s age difference	1.008	0.79	1.009	0.78
Partner over SPA (women)	0.726	0.66	0.721	0.65
Partner over SPA (men)	2.472	0.073	2.477	0.077
Partner has a doctor-diagnosed health condition	0.825	0.47	0.758	0.32
Never worked	0.455	0.33	0.442	0.32
Years since last worked (women)	0.912	0.002	0.914	0.002
Years since last worked (men)	0.757	<0.001	0.745	<0.001
Partner retires between waves 1 and 3			0.854	0.64
Partner experiences onset of a doctor-diagnosed health condition			0.626	0.21
Change in BMI (women)			1.077	0.60
Change in BMI (men)			0.657	0.023
Onset of a doctor-diagnosed health condition			0.743	0.36

Notes: See next page.

Notes to Table 2.6: Sample size = 927. Unweighted. Reference group is single men aged 50–54, high education, not receiving private pension income, middle wealth quintile, no health problems, normal weight (BMI between 20 and 24.9), zero years since last worked, no health changes between 2002 and 2006 and no change in individual's BMI. Other notes as Table 2.4.

As with Tables 2.4 and 2.5, the figures in the second and fourth columns show the odds ratios. The p-values of these odds ratios are given in the third and fifth columns. The explanatory variables included in this multivariate analysis are slightly different from those used in Section 2.3. We control here for receipt of private pension income rather than current membership of private pension schemes. Also, we control for the length of time since the individual reported that they were last in work or whether they have ever worked before.

What is clear from Table 2.6 is that very few observable characteristics are significantly associated with returning to work. Controlling only for baseline characteristics (left-hand panel), we see that women are significantly less likely than men to return to work.⁶ However, conditional on other characteristics (such as the length of time since they last worked), older men are no less likely than younger men to return to work.

Those whose partners work are three times as likely as those without a partner to start working. As mentioned above, this may reflect the complementarities of leisure within couples. However, there is no significant evidence that a partner retiring between waves 1 and 3 is associated with a lower chance of returning to work.

Emmerson and Tetlow (2006) found that there was some evidence of an inverse-U shape in returns to work across the wealth distribution (particularly for men). This result holds for returns to work over a two-year period and did not control for other factors. However, Table 2.6 shows that once various other factors are controlled for, and transitions are assessed over a four-year period, the inverse-U shape by wealth disappears. In fact, if anything, there is some evidence that those in the bottom two quintiles of the wealth distribution are more likely to return to work than those in the third quintile.⁷

One factor that is highly predictive of returns to work is the length of time since the individual was last in paid work. Each additional year that has passed since they last worked is associated with women being 8.8%, and men 24.3%, less likely to return to work. In other words, the majority of those who return to work at older ages are those who have been out of work for a very short time. One explanation of this could be that human capital deteriorates the longer an individual is out of work and so returning to work becomes more difficult over time. Of course, another explanation is that those who have been out of work a very short time consist of a larger proportion of individuals who

⁶ Women aged between 55 and 59 are not only statistically significantly less likely to return to work than men aged between 50 and 54 (i.e. the reference group) but also statistically significantly less likely to return to work than men aged between 55 and 59.

⁷ In an alternative specification, not presented here, we omitted the controls for years since last worked (which in the specification in Table 2.6 are highly significant predictors of not returning to work). There was then found to be no statistically significant gradient in returns to work by wealth, suggesting that those at the bottom of the wealth distribution have on average been out of work for longer than those further up the wealth distribution.

are actively seeking employment, whilst those who have been out of work for longer are the self-selected sample of individuals who are not actively seeking employment.

2.5 Who works beyond the State Pension Age and why?

Reaching the SPA provides financial incentives to stop working. At this age, individuals are able to start receiving their state pension. If individuals are credit-constrained prior to reaching SPA (that is, if they are unable to run down their savings or borrow against wealth tied up in state pensions prior to reaching SPA), then they may have to work in order to finance their pre-SPA consumption but, upon hitting the SPA, this may no longer be necessary. In addition, upon reaching the SPA, individuals no longer accrue additional entitlement to state pensions through paying National Insurance contributions. However, in addition to financial incentives to retire at the SPA, there are also social norms suggesting that the SPA is the appropriate time to retire. As we saw above, reaching the SPA is a strong predictor of exits from work, and untangling to what extent each of these factors (financial incentives and social norms) is driving this relationship is extremely difficult. However, examining the group of individuals who remain in work after the SPA can give some insight into which groups need or prefer so much to work that they go against these financial incentives and social norms.

Employment rates are low amongst those aged 65–69, fall even further after age 70 and drop almost to zero beyond age 80, as shown in Table 2.1. Pooling the three waves of ELSA data collected so far allows us to exploit more observations of individuals working beyond the SPA in order to examine their characteristics. Once again, the analysis in this section does not weight the data since the multivariate specification controls, in any case, for most of the factors for which cross-sectional weights would seek to control.

Table 2.7 presents multivariate analysis of the characteristics associated with working beyond the SPA for those aged over the SPA in each of the waves of ELSA data.⁸ The second column reports the odds ratios, where odds of being in work are expressed relative to the odds for the reference group – never-married men aged between 65 and 69 with high education and no health problems, observed in wave 1. Indicators are included for which wave of ELSA the individual’s work status was observed in. The odds ratios for these are given at the bottom of Table 2.7 and show that, as we saw in Table 2.1, employment rates are significantly higher in wave 3 than in wave 1.⁹

⁸ Standard errors are estimated by clustering at the individual level.

⁹ The employment rate for wave 3 is also statistically significantly different from that for wave 2 at the 10% level of significance.

Table 2.7. Multivariate analysis of characteristics associated with employment amongst those aged over the State Pension Age

All aged over SPA, pooled cross-sections from ELSA waves 1–3

	Odds ratio	p-value
Women 60–64	1.775	0.156
Women 65–69	0.720	0.414
Men 70–74	0.633	<0.001
Women 70–74	0.326	0.006
Men 75–79	0.433	<0.001
Women 75–79	0.135	<0.001
Men 80+	0.103	<0.001
Women 80+	0.044	<0.001
Divorced women	2.817	<0.001
Divorced men	1.784	0.117
Widowed women	1.240	0.453
Widowed men	0.720	0.403
Low education	0.619	<0.001
Mid education	0.803	0.068
Mild CVD	0.726	<0.001
Severe CVD	0.381	<0.001
Arthritis / Osteoporosis	0.690	0.008
Asthma / Lung disease	0.579	<0.001
Psychiatric problem	0.758	0.010
Other health condition	0.679	0.008
Partner has a doctor-diagnosed health condition, all waves	1.025	0.810
Partner under SPA and working (women)	4.791	<0.001
Partner under SPA and not working (women)	1.339	0.347
Partner over SPA and working (women)	5.424	<0.001
Partner over SPA and not working (women)	0.877	0.654
Partner under SPA and working (men)	5.196	<0.001
Partner under SPA and not working (men)	1.272	0.551
Partner over SPA and working (men)	6.763	<0.001
Partner over SPA and not working (men)	1.003	0.993
Wave 2 (2004–05)	1.085	0.112
Wave 3 (2006–07)	1.182	0.005

Notes: Sample size = 16,570. Reference group is never-married men aged 65–69, with high education, no health problems, observed in wave 1.

The other variables controlled for in this analysis are indicators of age and sex, education, doctor-diagnosed health conditions, family type, and partner’s health and work status (where relevant). Specifically, for single individuals we include indicators of whether they were never married, are divorced or are widowed; for couples we include full interactions between the sex of the individual, their partner’s work status and whether their partner is above or below SPA. The reference group is those who have never been married.

Of those over the SPA, the group whose members are most likely to be in paid work, other things being equal, is women aged between 60 and 64. However, their odds of being in work are not statistically significantly different from those for the reference group (men aged between 65 and 69), though they are statistically significantly higher than the odds for women aged between 65 and 69. Although Table 2.1 shows that, unconditionally, employment rates are lower amongst women aged between 65 and 69 (at 12.0%) than amongst men of the same age (at 18.2%), once we control for other factors in Table 2.7 it can be seen that the likelihood of working for women aged between 65 and 69 is not statistically significantly different from that for men of the same age. In other words, the differences in the raw employment rates for these groups are explained by other observable characteristics.

Educational attainment is strongly related to employment at these older ages. Those with only minimum educational attainment are about 40% less likely to be in paid work than those who have high education qualifications. This may well reflect the types of jobs available to individuals with higher qualifications compared with the jobs open to those with only minimal qualifications. Health also seems to play an important role in determining work status amongst this age group. Those without any health problems are far more likely to be in work – those with severe cardiovascular conditions are less than half as likely to be in work as those without such conditions. BMI is not controlled for in the specification as it was not measured in wave 3.

Family structure also seems to be strongly related to work status. Individuals in couples are far more likely to be in work if their partner is also working. This is equally true for men and women and regardless of whether the individual's partner is aged above or below the SPA. Amongst single people, the one group for whom employment rates are significantly higher is divorced women – they are nearly three times as likely to be in work as those who have never been married.

2.6 Work disability

Understanding the effect that an individual's health has on his or her ability to work, and how such effects differ across the population and across job types, is central to an understanding of the policy options for extending working lives.¹⁰ In the ELSA wave 2 interview (2004–05), all individuals, regardless of their age and whether or not they were working, were asked the 'standard' self-reported work disability question, i.e. whether their health limited the type or amount of work that they could do. As part of the core interview, the

¹⁰ Of course, labour market outcomes are a consequence of both demand for and supply of labour – ability and willingness to work need to be analysed in the context of the wage offers available to individuals. A full analysis would therefore need to account for the demand for labour by firms and any effect that changing health with age may have on individuals' productivity and hence the distribution of wage offers they receive. But such an analysis would typically need more structure, combined with data from employees and employers, and/or more information on labour market search activity, in addition to the information analysed here. Nevertheless, understanding the jointly evolving dynamics of health, work disability and employment outcomes is a valuable exercise in its own right.

question was repeated at wave 3 and it will continue to be repeated in future waves. In addition, in 2006 a random third of the wave 3 sample were given a module of questions based around a set of ‘anchoring vignettes’. These latter questions aim to aid understanding of individual differences in the perception and reporting of common health conditions in terms of their effects on ability to work. In what follows, we begin by looking at work disability and employment dynamics in the whole sample, i.e. changes over the two-year period between 2004–05 and 2006–07. We then move on to consider some brief cross-sectional analysis from the wave 3 vignette subsample that allows a more detailed understanding of the nature of differences in subjective work disability across individuals and the degree to which these may be affecting the results of our previous analysis.

Work disability and employment dynamics

Analysis of the ELSA wave 2 data revealed high rates of self-reported work disability in all age groups of the ELSA sample, particularly amongst the lowest wealth groups (Emmerson and Tetlow, 2006). But work disability is not a permanent condition, nor are its consequences always the same in terms of whether individuals do any paid work.¹¹ Table 2.8 presents summary evidence from the ELSA sample on transitions in work disability and employment. Looking initially at all those who report a work disability at wave 2, 28.9% report no work disability two years later, compared with an ‘onset’ rate of 15.7% amongst the (bigger) group of those with no work disability initially. But such statistics are not the whole story, particularly since they are statistics relating to all age and employment status groups.

Table 2.8. Work disability and employment status in wave 3, by status in wave 2

	2006 status:				N	
	Not work disabled		Work disabled			
	Working	Not working	Working	Not working		
	%	%	%	%		
2004 status:						
Not work disabled	35.7	48.6	2.4	13.3	100%	4,849
<i>Of which:</i>						
Working	79.5	12.6	5.2	2.8	100%	2,078
Not working	2.9	75.6	0.3	21.2	100%	2,771
Work disabled	5.7	23.2	5.2	65.9	100%	2,274
<i>Of which:</i>						
Working	39.6	10.6	33.5	16.4	100%	293
Not working	0.7	25.1	1.0	73.3	100%	1,981

¹¹ For some international evidence on this, see Banks et al. (2007) or Kapteyn, Smith and van Soest (2008), with the latter making particular reference to the role of changes in pain in driving changes in work disability.

Table 2.8 also reports the basic evidence on transitions split by whether individuals were working or not in each of the two waves. The probability that the wave 2 work disability was only temporary is almost twice as high for those who were working (despite their work disability) at wave 2 than for those who were not (50.2% as opposed to 25.8%) – of course, this may reflect, to some extent, the fact that those who were working (in spite of having a work disability) were on average less severely work disabled than those who had a work disability and were not working. Similarly, the onset rate is only just over a third as high amongst those working at wave 2 as amongst those not working (7.9% as opposed to 21.5%). But many of these differences may be driven by other factors that differ between the four groups. To investigate this, we first look at transition rates by key subgroups – sex, age and wealth – and then carry out a simple multivariate analysis.¹²

Table 2.9. Work disability and employment status in wave 3, by sex and status in wave 2

	2006 status:					N
	Not work disabled		Work disabled			
	Working	Not working	Working	Not working		
	%	%	%	%		
2004 status:						
Not work disabled, working						
Female	79.1	14.0	4.1	2.8	100%	986
Male	79.7	11.4	6.1	2.8	100%	1,092
Not work disabled, not working						
Female	2.6	76.2	0.2	21.0	100%	1,666
Male	3.2	74.8	0.5	21.5	100%	1,105
Work disabled, working						
Female	41.3	10.0	31.3	17.5	100%	160
Male	37.6	11.3	36.1	15.0	100%	133
Work disabled, not working						
Female	0.2	25.3	0.7	73.8	100%	1,138
Male	1.3	24.8	1.4	72.5	100%	843

¹² Since about 80% of the sample are followed between 2004–05 and 2006–07, a full analysis would want to account for the possible effects of differential attrition on the measured transitions. Initial investigations of the data suggest that there is indeed a higher attrition rate from the study amongst those reporting a work disability at wave 2. Whilst they are also more likely to die between waves, this does not account for the whole of the difference: 85% of those reporting no work disability and working in 2004 are either successfully followed up or known to have died, compared with only 80% for those who were work disabled and not working (with the other two groups having a rate of around 82.5%). For the analysis in this chapter, we will use the sample present in both waves, which is equivalent to proceeding under the assumption that the distribution of outcomes for the group that are not successfully followed is the same as that for those respondents that remain in the study.

Table 2.10. Work disability and employment status in wave 3, by age band and status in wave 2

	2006 status:				100%	N
	Not work disabled		Work disabled			
	Working	Not working	Working	Not working		
	%	%	%	%		
2004 status:						
Not work disabled, working						
52–54	88.5	5.1	4.9	1.6	100%	452
55–59	83.2	8.9	6.0	1.9	100%	942
60–64	73.3	18.0	4.6	4.1	100%	438
65–69	57.3	35.3	3.3	4.0	100%	150
70+	62.5	24.0	4.2	9.4	100%	96
Not work disabled, not working						
52–54	23.8	60.3	1.6	14.3	100%	63
55–59	9.9	72.8	1.5	15.8	100%	202
60–64	4.0	81.5	0.7	13.8	100%	427
65–69	2.0	80.2	0.2	17.6	100%	658
70+	1.0	72.8	0.1	26.1	100%	1,421
Work disabled, working						
52–54	[41.3]	[0.0]	[52.2]	[6.5]	100%	46
55–59	48.3	4.8	33.1	13.8	100%	145
60–64	32.3	17.7	27.4	22.6	100%	62
65–69	[12.9]	[32.3]	[25.8]	[29.0]	100%	31
70+	–	–	–	–	100%	9
Work disabled, not working						
52–54	5.7	8.6	2.9	82.9	100%	70
55–59	0.4	16.4	3.3	80.0	100%	275
60–64	0.7	21.0	1.7	76.6	100%	291
65–69	0.6	26.5	0.3	72.6	100%	317
70+	0.4	29.3	0.3	70.0	100%	1,028

Table 2.9 presents the same analysis as Table 2.8 but with groups split by sex. Very few differences emerge across the two groups, at least when not controlling for other factors. This is a theme that runs throughout the analysis in this section – whilst there are occasionally differences between men and women, these tend to be in the fractions originally observed in each group at wave 2, not in the distribution of outcomes at wave 3 for each group. Nevertheless, we still control for sex in the models that follow in order to allow for any possible effects.

Table 2.10 presents a simple breakdown of these transition probabilities by five-year age band and it is here that strong differences start to emerge. Some of the systematic differences are, of course, due to well-known factors. The fall with age of the fraction continuing in work even without an onset of disability is just demonstrating the increased likelihood of retirement with age, for example. The sharp fall in re-entry rates with age amongst those with no

work disability in either wave is just further evidence of the results discussed in Section 2.4. But a number of other features are worth mentioning:

- The probability of an onset of disability amongst those working at wave 2 does not vary with age.
- The differences between workers and non-workers are greater than the differences across age groups, reflecting the degree of heterogeneity in the population and the degree to which ‘work’ is an indicator of such differences regardless of age. As an example, the probability of onset of disability amongst non-working 52- to 59-year-olds is greater than the probability of onset of work disability amongst those working aged 65+.
- Amongst those whose work disability is temporary, only very few re-enter the labour market and, for those in work, the probability of staying in work falls with age.

Table 2.11. Work disability and employment status in wave 3, by quintile of total non-pension wealth and status in wave 2

	2006 status:				N	
	Not work disabled		Work disabled			
	Working	Not working	Working	Not working		
	%	%	%	%		
2004 status:						
Not work disabled, working						
Poorest	76.3	10.1	7.6	6.1	100%	198
2	79.7	9.6	7.5	3.2	100%	374
3	80.6	11.9	5.3	2.3	100%	438
4	80.2	12.5	4.5	2.7	100%	511
Richest	78.8	16.2	3.2	1.8	100%	557
Not work disabled, not working						
Poorest	2.8	68.3	0.0	28.8	100%	458
2	1.7	73.4	0.4	24.5	100%	477
3	2.3	73.9	0.4	23.4	100%	560
4	3.2	76.3	0.3	20.2	100%	594
Richest	3.8	83.0	0.4	12.8	100%	682
Work disabled, working						
Poorest	[39.6]	[6.3]	[39.6]	[14.6]	100%	48
2	33.3	11.1	33.3	22.2	100%	63
3	38.5	7.7	32.3	21.5	100%	65
4	50.0	15.0	26.7	8.3	100%	60
Richest	36.8	12.3	36.8	14.0	100%	57
Work disabled, not working						
Poorest	0.3	19.1	0.6	80.0	100%	618
2	0.6	25.0	0.2	74.2	100%	476
3	0.9	26.2	1.4	71.6	100%	348
4	1.0	27.2	1.6	70.3	100%	313
Richest	0.9	37.2	2.2	59.7	100%	226

Finally before we turn to multivariate models, Table 2.11 presents a similar analysis by wealth levels. Much like the differences by sex, the main patterns are somewhat constant across wealth quintiles once we look within groups defined by work status and work disability. The exception to this is a relatively higher rate of ‘recovery’ from work disability (i.e. a higher likelihood of previous work disability being temporary) towards the top of the wealth distribution.

Given the small sample sizes in some of these groups, and the presence of multiple potentially confounding differences across individuals, we finish this part of the analysis by running some very simple multivariate models to summarise these transitions and their statistical significance.

Tables 2.12a and 2.12b look at the onset of disability amongst those who were working and had no work disability in 2004. Table 2.12a looks simply at the likelihood of work disability onset, whilst Table 2.12b looks at the likelihood of a work disability onset coupled with a labour market exit. In both cases, odds ratios from simple logistic models are presented, where the models control for sex, education, marital status, summary work characteristics, age, wealth levels and summary health measures. Further characteristics (such as the health or employment status of the individual’s partner) were investigated and found not to be statistically significant; these characteristics are thus excluded from the models presented here.

Striking patterns emerge in the model for the onset of work disability in Table 2.12a. Onset is substantially more likely for those at the bottom of the wealth distribution and for those either with pre-existing major or minor health conditions (as defined in the Note to Table 2.4) or who experience the onset of a major condition. There is some, albeit less statistically significant, evidence of increased likelihood of onset of work disability for men and those in manual

Table 2.12a. Onset of work disability between waves 2 and 3

Variable	Odds ratio	p-value
Male	1.439	0.060
High education	0.769	0.184
Married	1.298	0.226
Manual job	1.381	0.081
Full-time	0.653	0.029
Age 65–69 at wave 2	0.985	0.943
Poorest wealth quintile	2.316	0.005
Wealth quintile 2	1.572	0.085
Wealth quintile 3	1.234	0.424
Wealth quintile 4	1.212	0.449
Major condition in 2004	1.838	0.056
Onset of major condition, 2004–06	3.096	<0.001
Minor condition in 2004	1.900	<0.001
Onset of minor condition, 2004–06	1.285	0.366

Notes: Sample is individuals aged 52–69, working and not work-disabled in 2004 (N=2,065). Reference group is female, A levels or lower education, single, working part-time in a non-manual job in 2004, age less than 65, top wealth quintile, no major or minor health conditions in 2004 and no onsets between 2004 and 2006.

Table 2.12b. Onset of work disability and labour market exit between waves 2 and 3

Variable	Odds ratio	p-value
Male	0.878	0.705
High education	0.869	0.686
Married	1.369	0.409
Manual job	1.606	0.140
Full-time	0.551	0.076
Age 65–69 at wave 2	1.847	0.053
Poorest wealth quintile	3.460	0.015
Wealth quintile 2	1.768	0.256
Wealth quintile 3	1.460	0.441
Wealth quintile 4	1.837	0.182
Major condition in 2004	3.285	0.012
Onset of major condition, 2004–06	6.162	<0.001
Minor condition in 2004	1.922	0.051
Onset of minor condition, 2004–06	1.903	0.151

Notes: Sample is individuals aged 52–69, working and not work-disabled in 2004 with full work information in both waves (N=1,956). Reference group is female, A levels or lower education, single, working part-time in a non-manual job in 2004, age less than 65, top wealth quintile, no major or minor health conditions in 2004 and no onsets between 2004 and 2006.

jobs, and lower rates of onset for those with higher education. Finally, the odds ratio for whether the individual was originally in full-time work warrants some discussion. It should be remembered that the model looks at work disability onsets *within* the sample of people working in 2004. Hence those in full-time work in 2004 have a reduced risk of subsequent work disability relative to the reference group (which is those in part-time work in 2004), suggesting some evidence of gradual retirement amongst those with declining health and ability to work.

In the model of a joint work disability onset and labour market exit in Table 2.12b, it is apparent that fewer variables significantly predict this more specific outcome. Whilst men were more likely to have an onset of work disability, they are no more likely to have an onset and stop work, suggesting, anecdotally at least, that they are more likely to continue work if they do have an onset of work disability.¹³ Low wealth and poor health remain significant, suggesting a strong role for each in labour market outcomes as well as in disability.

Turning to the other type of transitions (those out of work disability), Table 2.13 provides a simple model to look at the issue of temporary versus ‘permanent’ disability (with the latter being defined as a disability in 2004 that persisted at least until 2006). Once again, some very strong patterns emerge in the data. Lower wealth groups have substantially reduced probabilities of their work disability being temporary, as do those with poor health. On the other

¹³ Ideally, one would want to estimate the model in two stages – with a model for an onset of work disability, and a subsequent model for labour market exit conditional on a work disability onset. With only a single two-year transition, we do not yet have sufficient sample size to estimate the second stage of such a model with any real degree of precision.

hand, those who are working in 2004 (whilst still reporting a work disability) are much more likely to report no work disability two years later, with the results particularly strong for those in full-time work, who are over four times more likely to report no work disability in 2006 than those who were not working originally.

Table 2.13. Odds ratios for no work disability in wave 3 conditional on having a work disability in wave 2

Variable	Odds ratio	p-value
Male	0.817	0.157
High education	0.955	0.783
Married	0.833	0.237
Manual job	1.279	0.262
Full-time at wave 2	4.242	<0.001
Part-time at wave 2	1.847	0.003
Age 65–69 at wave 2	1.117	0.462
Poorest wealth quintile	0.397	<0.001
Wealth quintile 2	0.543	0.005
Wealth quintile 3	0.529	0.005
Wealth quintile 4	0.763	0.216
Major condition in 2004	0.558	0.001
Onset of major condition, 2004–06	0.576	0.016
Minor condition in 2004	0.555	<0.001
Onset of minor condition, 2004–06	0.942	0.808

Notes: Sample is individuals aged 52–69 in 2004 reporting work disability with full work disability information in both waves (N=1,262). Reference group is female, A levels or lower education, single, age less than 65, top wealth quintile, not working in 2004, no major or minor health conditions in 2004 and no onsets between 2004 and 2006.

Table 2.14. Odds ratios for return to work amongst those not working and reporting a work disability in wave 2

Variable	Odds ratio	p-value
Male	2.272	0.051
High education	1.589	0.312
Married	0.766	0.574
Age 65–69 at wave 2	0.850	0.721
Poorest wealth quintile	0.667	0.575
Wealth quintile 2	0.497	0.367
Wealth quintile 3	1.647	0.427
Wealth quintile 4	1.623	0.434
Major condition in 2004	0.238	0.056
Onset of major condition, 2004–06	0.634	0.472
Minor condition in 2004	0.711	0.456
Onset of minor condition, 2004–06	0.254	0.205

Notes: Sample is individuals aged 52–69 in 2004 reporting work disability but not working in 2004 with full work and work disability information in both waves (N=968). Reference group is female, A levels or lower education, single, age less than 65, top wealth quintile, no major or minor health conditions in 2004 and no onsets between 2004 and 2006.

Finally, in Table 2.14 we present a model of the subsequent labour market activity of those who were not working and reported having a work disability in 2004. This model, of course, includes those whose work disability turned out to be temporary, so the effect of recovery from work disability on return to work can be assessed. As we found in Section 2.4 amongst *all* those out of work, what is striking in this model is how little evidence there is of significant predictors of return to work in this (initially work-disabled) group. Only two odds ratios are significantly different from 1: men are 2.3 times more likely to re-enter the labour market than women, and those with a major health condition are about four times less likely than those with no health conditions to return to work.

The example models above are meant only as an illustration of the value of longitudinal data in documenting changes in health, disability and employment. A full longitudinal analysis of joint transitions in work disability and employment outcomes would need to use a more structural model to link two-year changes and control for the initial state in which people are observed.¹⁴ Such an analysis will be possible once further longitudinal observations are made (since at present there is only one observation of a two-year change for each individual as the work disability questions were not included in the wave 1 ELSA instrument); estimation of such a model represents an important avenue for future research.

Nevertheless, a number of themes emerge even from the more reduced-form evidence above. Work disability is far from a permanent state of affairs and there are many transitions in disability status, only some of which are associated with labour market status changes. The persistence of work disability is highly correlated with individual characteristics, as is onset of work disability. Individuals with differing employment statuses and job types also have different onset and recovery rates. Taken together, these findings suggest two things. First, work disability is a complex phenomenon that depends not only on an individual's health and functioning but also on the types of jobs they have (or expect to have) as well as other socio-economic factors. Second, a simple discrete classification of the population into work-disabled or not work-disabled is unlikely to be adequate to understand fully all the various dynamic processes; since recovery rates are systematically different for different groups, a measure of the intensity of work disability may be more powerful in explaining future trajectories.¹⁵ With this in mind, the analysis of the next subsection looks at a special module of questions introduced in the wave 3 ELSA instrument to investigate these issues.

¹⁴ One example of such a model can be found in Banks et al. (2007), who use data from the European Community Household Panel and the US Panel Study of Income Dynamics to look at international differences in work disability and employment dynamics.

¹⁵ This is relevant if one is interested in understanding causal links between trajectories for health and work. If one is simply interested in predicting future recovery from disability, however, the models in this section have shown that controlling for current disability and current work status can capture the main patterns in the data.

The reporting of work disability

Since work disability is a self-reported phenomenon (and disability more generally can be thought to be the product of both individual circumstances and environmental factors), there is a concern that some of the observed differences between individuals in rates of work disability may simply be due to differences in respondents' reporting styles. This issue arises with many studies using self-reported scales and has led to the development of the so-called 'anchoring vignette' methodology whereby respondents are asked to assess the status of a set of hypothetical example individuals. Under the assumption that individuals assess third parties using the same response behaviour as they use when they assess themselves, differences observed between individuals in their assessment of these common hypothetical situations (or 'vignettes') can be used to control for the effects of differences in reporting behaviour in the kind of models specified in the previous subsection.¹⁶

When considering work disability, further consideration also needs to be given to the fact that individuals may report their circumstances differently when given a simple yes/no choice as opposed to being able to describe their disability using a scale of intensity.¹⁷ The analysis of the previous subsection could neither control for, nor investigate, issues to do with the potential variation in severity in work disability in the population.

In 2006, one third of the ELSA sample (allocated randomly) was given a short module of questions containing a set of work disability vignettes. In addition, a work disability question was included which allowed respondents to report the extent to which they had a health condition that limited the type or extent of work they could do on a five-point scale (not limited, mildly limited, moderately limited, severely limited, extremely limited), as opposed to giving a simple yes/no answer. In what follows, we provide some preliminary analysis of these data to illustrate the main issues and the extent to which they may affect our interpretation of the findings in the previous subsection.

We begin by documenting the differences between work disability as measured with the simple two-point scale of work disability used above and the more nuanced five-point scale included in the self-completion questionnaire. Since individuals in the vignette sample were asked both questions at different points in the interview, we can cross-tabulate the responses directly. Table 2.15 shows that almost one-quarter of those who said they had no work disability when asked to give a simple yes/no answer revealed some degree of limitation when asked using the five-point scale, with the vast majority of that group saying they were mildly limited. In addition, if one looks amongst the group of people responding 'Yes' to the two-point scale, one can see great diversity in the intensity of work disability, with one-

¹⁶ This methodology was originally developed for the understanding of political attitudes (see King et al. [2004]), but it has recently been applied to health and work disability (see Kapteyn, Smith and van Soest [2007]).

¹⁷ For descriptive evidence on the different implications of using various response scales in measuring work disability in the US, the UK and the Netherlands, see Banks et al. (2005).

quarter reporting their disability as ‘mild’ and a further quarter reporting ‘severe’ or ‘extreme’ limitation.

There are no strong differences in these patterns between men and women, but Table 2.16 investigates how these two different scales generate a different picture of work disability across the age and wealth distributions. Whilst the broad message of the two questions is overwhelmingly similar – disability varies systematically by age and wealth – the five-point scale reveals that much variation is missed by a two-point scale. The differences across the age and wealth distributions in work disability measured by whether individuals say they are not limited when given the five-point scale is much greater than those when using the two-point scale. And most of the differences in disability across age groups are accounted for by mild or moderate disability.

Table 2.15. Intensity of work limitation, by response to two-point scale work disability question

Degree of work limitation (five-point scale)	Whether respondent reports a work disability (two-point scale)		
	No	Yes	All
Not limited	74.2	9.2	53.7
Mildly limited	19.3	25.1	21.1
Moderately limited	5.3	37.5	15.4
Severely limited	1.1	21.5	7.5
Extremely limited	0.2	6.7	2.3
	100%	100%	100%
N	1,657	762	2,419

Table 2.16. Distribution of responses to two-point and five-point scales for work disability, by age and wealth quintile

	Two-point scale			Five-point scale					
	No	Yes	Not limited	Mild	Moderate	Severe	Extreme		
Age:									
50–54	80.8	19.2	100%	70.2	14.6	7.6	5.4	2.2	100%
55–59	76.8	23.2	100%	67.7	11.9	11.5	7.7	1.2	100%
60–64	71.5	28.5	100%	60.1	17.6	12.1	8.2	1.9	100%
65–69	64.8	35.2	100%	51.3	23.0	17.3	6.3	2.1	100%
70+	57.8	42.2	100%	35.2	30.7	22.3	8.6	3.2	100%
Wealth:									
Poorest	48.7	51.4	100%	33.8	23.7	23.7	13.1	5.9	100%
2	62.4	37.6	100%	46.1	19.9	17.9	11.6	4.5	100%
3	71.9	28.1	100%	57.5	19.6	16.4	5.9	0.6	100%
4	74.2	25.8	100%	61.1	20.7	12.3	4.9	1.0	100%
Richest	81.6	18.4	100%	66.6	21.6	8.1	3.4	0.2	100%

Note: Wealth quintile is net total non-pension wealth quintile in 2006.

Table 2.17. Responses to anchoring vignette: example

	How much is Geoffrey limited in the kind or amount of work he could do?					Total
	Not limited	Mildly limited	Moderately limited	Severely limited	Extremely limited	
All	11.0	47.9	38.2	2.7	0.3	100%
Male	12.4	47.6	37.0	2.7	0.3	100%
Female	8.6	48.5	40.2	2.6	0.1	100%
Age:						
50–54	12.2	51.5	33.1	2.7	0.5	100%
55–59	13.1	49.5	34.6	2.2	0.6	100%
60–64	10.4	46.6	40.1	2.7	0.2	100%
65–69	10.5	49.3	37.6	2.7	0.0	100%
70+	9.7	45.4	41.9	3.0	0.0	100%
Wealth:						
Poorest	11.3	41.2	42.8	4.1	0.7	100%
2	11.0	41.4	43.9	3.4	0.5	100%
3	8.5	48.6	40.7	2.2	0.0	100%
4	10.0	51.0	35.7	3.3	0.0	100%
Richest	15.2	55.7	28.3	0.6	0.2	100%

To assess the degree to which this might be due to different response patterns (and differences in what people think of as ‘mild’ etc.), we can look at the extent of reporting differences in the population when presented with vignettes for work disability. The full set of vignette questions contains nine different questions describing different people and their health. In each case, respondents are asked to assess the degree to which the hypothetical person is limited in their ability to work, using the same five-point scale as above. For example:

Geoffrey suffers from back pain that causes stiffness in his back especially at work but it is relieved with low doses of medication. He does not have any pains other than this generalised discomfort. How much is Geoffrey limited in the kind or amount of work he could do?
[Not limited, Mildly, Moderately, Severely, Extremely]

Table 2.17 shows how answers to this question differ across sex, age and wealth bands. Older individuals assess Geoffrey’s situation as more disabling, as do poorer individuals.

Of course, differences in response patterns across groups should not be taken as evidence that some groups are ‘wrong’ in their assessment of disability whereas others are ‘right’. Indeed, there is a real sense in which disability is a subjective concept, and as such it is ‘perceived’ disabilities that matter in terms of individual choices (over whether to search for a job or whether to seek modifications in their work environment from their employer, for example). To the extent that these perceived disabilities may depend on the types of jobs individuals see themselves as having, or the way in which they view their health and lifestyle, then it may be precisely the group-specific subjective disability rates that are important for policy analysis. Nevertheless, it is interesting to ask how much of the differences in own work disability

observed between groups could be explained by differences in reporting patterns of the type documented in Table 2.17.

Table 2.18 reports estimates from three simple cross-sectional models of work disability. The first uses the simple two-point scale of work disability analysed in the previous subsection. The second creates a two-point scale from the five-point question using only those who say they are ‘not limited’ as the non-work-disabled group. The third creates a similar scale but also including those who say they are mildly limited in the non-disabled group. Each model has two variants, one of which controls for respondents’ vignette reporting behaviour and one of which does not.¹⁸ The analysis shows a number of important features. First, the broad pattern of work disability is unaffected by use of the two-point scale or either of the two scales constructed from the five-point question. Second, whilst controlling for vignette responses adds considerably to the models’ ability to fit the data, inclusion does not eradicate the role of the other control variables. That is, whilst response patterns do differ across groups and are important in explaining work disability responses, they are not responsible for the differences across the age and wealth distributions that are observed in the ELSA sample.

Table 2.18. Multivariate analysis of self-reported work disability, with and without vignette controls for response behaviour

	(1)		(2)				(3)					
	Two-point scale		Five-point scale, 0 vs 1–4				Five-point scale, 0/1 vs 2–4					
	Odds	p-value	Odds	p-value	Odds	p-value	Odds	p-value	Odds	p-value		
Male	1.022	0.827	0.972	0.778	1.043	0.653	0.952	0.607	0.947	0.607	0.887	0.269
55–59	0.447	<0.001	0.440	<0.001	0.374	<0.001	0.489	<0.001	0.434	<0.001	0.422	<0.001
65–69	0.818	0.116	0.818	0.121	0.650	<0.001	0.637	<0.001	0.774	0.063	0.758	0.050
70+	1.119	0.399	1.103	0.467	0.928	0.552	0.866	0.265	0.933	0.630	0.898	0.466
High educ.	0.803	0.076	0.835	0.151	0.682	0.001	0.685	0.001	0.815	0.134	0.848	0.237
Poorest	4.408	<0.001	4.168	<0.001	3.325	<0.001	2.750	<0.001	5.023	<0.001	4.764	<0.001
Quintile 2	2.570	<0.001	2.446	<0.001	2.094	<0.001	2.072	<0.001	3.647	<0.001	3.454	<0.001
Quintile 3	1.661	0.001	1.592	0.003	1.307	0.048	1.123	0.399	2.089	<0.001	2.012	<0.001
Quintile 4	1.535	0.006	1.466	0.015	1.206	0.161	1.131	0.362	1.626	0.007	1.517	0.024
Vignette controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Pseudo R ²	0.059		0.080		0.061		0.078		0.067		0.103	

Notes: Sample is all those interviewed at both wave 2 and wave 3 with vignette supplement at wave 3 (N=2,419). Reference group is female, aged 60–64, less than high education and top wealth quintile. Panel (1) uses the simple yes/no two-point scale. Panel (2) uses a discrete measure of work disability taking the value 1 if the respondent reports mild or greater on the five-point scale and 0 otherwise. Panel (3) uses a discrete measure of work disability taking value 1 if the respondent reports moderate or greater on the five-point scale and 0 otherwise.

¹⁸ There are many possible ways to control for reporting differences, with the most common being to use the vignettes to estimate how the cut-points between mild and moderate, or moderate and severe, for example, depend on individual characteristics, and then use adjusted cut-points to place everybody’s self-reports onto the same benchmark scale. Since we are only interested in one particular question, in this much simpler analysis we simply add dummy variables to capture individuals’ categorical responses to each of the nine vignette questions. Estimation of a full model for reporting behaviour (both for work disability and for subjective health, where the questionnaire also included a module of vignettes) would be a natural direction for future research using the ELSA data.

Our analysis of the reporting of work disability has only been preliminary and should be viewed as only providing background context in which to assess the previous findings. Much further work needs to be done using the vignette methodology in order to assess fully the nature, and impact, of respondent differences in reporting styles. Some of this work will also be targeted towards international comparisons, since work disability vignettes have now been included in a number of ageing studies around the world. But the fact that respondent reporting does not underpin the socio-economic differences in work disability observed in the full ELSA sample is an important point to bear in mind. Similarly, however, the extra information contained in a more nuanced measure of work disability that allows respondents to report the severity of their work limitation may well provide important information for the future. This will be particularly so when researchers and policymakers alike are considering issues relating to the difference between permanent and transitory disability and those relating to employment transitions.

2.7 Conclusions

Trajectories of employment in later life are inherently complex, being both causes and consequences of trajectories in many other dimensions, such as health, functioning and disability, financial circumstances and family situations. Longitudinal analysis provides the best hope for robust evidence on the nature of these relationships, and the younger parts of the ELSA sample, as they move towards State Pension Age and through the early years of their retirement, provide important new evidence in this respect. But a fully robust analysis would require both a structural interpretation of the data and, typically, a long time-series of observations on individuals with which to estimate such a structure. Our goal in this chapter has been less ambitious: we have simply shown some of the key dynamic patterns that are emerging in the relationship between employment transitions, work disability and other factors. Even these simple patterns illustrate the power of analysis based on longitudinal data with sufficient sample size to investigate small and therefore fairly similar groups of older individuals.

The analysis in this chapter has shown that there are systematic patterns in movements out of full-time work across groups of the population and that such movements appear to be predicted in advance by individuals. In addition, whilst ‘phased’ or gradual retirement is still perhaps not as common as it is sometimes perceived to be, there are socio-economic differences in the degree to which individuals can and do use part-time work to ease the transition out of full-time work. Employment rates have been rising in recent years, and respondents’ expectations suggest that this may continue to be the case in the future. However, the particular circumstances surrounding the changing State Pension Age for women seem to be a cause of some confusion. Also, there is a strong and systematic relationship between wealth, employment and work disability, and this relationship is made more acute when one allows for both the temporary versus permanent nature of work disability and a more nuanced understanding of the degree to which individuals are limited in their ability to work. Such differences are not, however, primarily driven by differences in the understanding or reporting of work disability across wealth groups.

Our analysis has only considered transitions between 2002 and 2006. As further longitudinal data on the same individuals become available, our understanding of employment dynamics and outcomes at older ages can only be enhanced. In particular, the ability to follow new younger cohorts, split according to their prior expectations of future work and knowledge of state pension arrangements, in comparison with their older counterparts will yield significant research insights.

The analysis of employment dynamics of older workers will be a key policy issue for many years to come and, as such, the continuing analysis of the longitudinal relationships emerging in the ELSA study must be prioritised. Our analysis has only touched on the links between the various dimensions of life before the State Pension Age – employment, financial circumstances, health and family. As more transitions are observed in future years, we will be able to learn much more about these links and interrelationships.

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